Thesis Report

“Development of a conceptual framework for studying and analyzing food companies in industries in transition: A study of European pork processing companies”

Supervisors:
Jos Bijman, Management Studies, Wageningen UR
Prof. Onno Omta, Management Studies, Wageningen UR

The thesis is written in cooperation with the Landbouw-Economisch-Instituut LEI, Wageningen.

Supervisor: Gé Backus
Acknowledgements

This thesis marks a great achievement of my studies at Wageningen University after long times spend on this project with lots of pleasure. Due to a professional job that I have started before completion of this research project finally the process has put my tenacity to the test. However it is first and foremost the patience and support of the team of supervisors I owe thanks to.

A whole number of people have been an inspiration to me in completing this thesis and provided encouragement and support throughout the process. And I would like to take this opportunity to thank them.

First of all I would like to express my gratitude to my thesis committee: Dr Jos Bijman my daily supervisor, Prof. Onno Omta my research supervisor and Dr Gé Backus and Dr Paul Ingenbleek my supervisor at the LEI. Jos Bijman has been always present throughout my thesis and provided many comments and advices which were very useful. His patience and his critical eye helped me a lot to design my research in a proper scientific approach.

Prof. Omta his interest in my research with a continual guidance and the time spent with me especially during our initial meetings.

Gé Backus and Dr Paul Ingenbleek provided me with a lot of practical guidance, the establishment of valuable contacts to industry experts, resources of the LEI and ultimately with financing of this project.

Finally, a word of thanks goes to my family and friends who were full of consideration for me during this last step of my studies.

Wageningen, 24 February 2008

Matthias Vogelsang
Executive Summary

This thesis report presents the results of the development of a conceptual framework for studying and analyzing food businesses in transition. In the course of development the framework has been applied to the pork processing industry, which has been in a transitional phase. Besides the framework as the major outcome, this report provides the reader with strategic insights into the food industry, particularly the pork processing part of it. Strategic insight is provided on a macro-level via an industry analysis and on a micro-level by conducting descriptive case studies of two large companies from the industry.

Theories from management science and organization research are analyzed with special regard to transition. An industry in transition affects the strategic orientations of companies in an industry. Uncertainty increases regarding the suitability of the resources, decreasing profitability, increasing risk, changing positions, the suitability and focus of strategies, efficiencies of current boundaries and the way of learning that moves from deductive to inductive and emergent learning. The theories have been converged to a theoretical framework that has been tested in the pork processing industry and developed further in interaction with the findings from the industry.

From interviews with experts and the analysis of secondary sources we have learned that the major heritage of the transition in the pork processing industry in North Western Europe is an increasing industry concentration, which has started on a national level and has crossed borders. Factors that have been influencing this development are an increased threat of new entrance primarily due to internationalization, an increase in customer bargaining power due to concentration processes of the European retail sector, an increase in horizontal and vertical competition within the industry and neglecting substitutes such as other meat and meat replacements.

By interviewing managers and analyzing secondary data such as annual reports we have analyzed responses of pork processing companies to the transition. We found that strategy formulation moves towards emergency and induction during transitions and becomes deliberate and deductive again after a transition. New resources enter the mix within an industry; in the case of the pork processing industry this is financing, quality assurance and Supply Chain Management, meanwhile companies (re-)identify key resources and further exploit them. Finding new efficiencies are central to the success to overcome transition. This relates to decisions of firms’ boundaries via integration vs. disintegration, which also grants access to resources and innovations, as well as the alignment of business processes along the value chain via efficient Supply Chain Management. Therefore efficiency enhancing process innovations gain focus of companies, which is in particular the development of tools to coordinate the Supply Chain better. Customer oriented product innovations have started to gain attention, which shows a tendency towards more market orientation. All changes within the elements that are central parts of the transition in the pork processing industry in North Western Europe aim for the clarification of positions and strategies and are supposed to ultimately increase profitability and minimize risk. Positioning in the market alongside with deliberate strategic choices of suitable supply chains to serve thereby appear as new concepts to the North Western European pork processing industry.

The framework that we have developed in the course of the thesis (Figure 26) can be used in practice to gain profound strategic insight into an industry in transition. In addition it provides a first step to a general model for studying and analyzing companies in industries in transition.
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1 Introduction

Keywords for bibliographic searches:
*Industry consolidation, pork processing industry*

As every industry also the food processing industry is subject to change due to a changing (competitive) environment and its determinants. One consequence in the meat industry seems to be an ongoing consolidation process as it has been recently observed. As a result new organizational constructs emerge, taken the recently founded meat company Vion Food Group as an example. Due to current developments (e.g. consolidation) several (sub-) divisions of the food industry seem to be in a transitional phase or have gone through it in the past.

For a long period of time the pork processing industry in North Western Europe has been organized in cooperative structures. Farmers have produced pigs and cooperatives used to be the link between farmers supply and end users demand. During the last 10 years decreasing profitability has lead to an ongoing consolidation and restructuring process of the industry. In the beginnings of the current century the concentration process has gained pace leading to one predominant pork processing company in Germany and the Netherlands, which is the abovementioned Vion Food Group.

In order to understand the recent developments and to draw conclusions for future development the LEI (Landbouw Economisch Instituut) has commissioned this research project aiming for a conceptual framework to be applied in the scope of their research and advisory activities.

The thesis is structured as follows. Starting from a macro perspective, major developments in the food industry and in agribusiness are introduced and discussed in chapter 2. Chapter 3 presents the research design, including research questions and the way to answer them. In the forth chapter, we present the theories involved in this research such as theories on change, on resources, innovations, on competitive forces, on supply chain management and on vertical coordination. From these theoretical approaches we design a conceptual model, framework of our research.

Then the methodology part (chapter 5) explains our data collection procedure for the industry analysis and the case studies.

The next parts consist in presenting and analyzing the data collected, structured into an industry analysis (chapter 6) and case studies (chapter 7). Chapter 8 presents conclusions on the conceptual framework as well as a discussion on the strong and weak points of this research.
2 Drivers for change in European agribusiness

Several external influences, affecting the agro-food industry, can be identified and will be exposed following in order to give an overview which factors are currently discussed among academic and business experts. The factors demand (i.e. chapter 2.1), Technology (i.e. chapter 2.2), Politics (i.e. chapter 2.3) and Globalization have been identified as being central in the actual discussion and will be presented briefly in following sub-chapters with the attempt to answer what they mean and why they are considered to be important.

2.1 Demand

2.1.1 Consumers
Today’s consumers have changed compared to the consumers some thirty years ago. Due to demographic trends such as an increasing number of single individual and dual-income households, the consumer nowadays spends less time for the preparation of meals. But there is also a higher heterogeneity in the consumption. In almost all countries there live minorities whose preferences for food differ most of the times slightly from the domestic main stream and allow new niche producers (RABOBANK, 2005). Also consumers demand for food with reduced saturated fat, cholesterol and sodium. Concerns about nutrition are increasing, which has been observed in the US already in the early 90’s by industry experts (BARKEMA, 1993). In line with increased consumer consciousness for health is an increase of consumption of Functional foods (AKDENIZ ET AL., 2003).

Reaching these new consumer segments needs new specialized products from the industry. For example the US beef industry lost 25 percent of the meat market share to pork and poultry because the industry has not been able to develop a competitive convenient product for consumers (KATZ AND BOLAND, 2000).

Here also other facts such as an increased concern for food safety had an impact on this. The consumers’ reaction on Classical Swine Fever, Foot and-Mouth-Disease or Avian Influenza have shown this to the industry by strong reduced consumption of those products, even when the disease does not impact human health. (RABOBANK, 2005; FEARNE, 1998).

On the part of final consumers demand is shifting towards the covering of pluralistic needs, with special regard to food safety and nutritional health. For the food processing industry this raises the need for innovation and guaranteeing safety. On a company level both items need the joint effort and collaboration of multiple members of a supply chain, as the relatively new scientific discipline supply chain management approaches (BOEHLJE, 1999) referring to logistics, information exchange and vertical control.

2.1.2 Retailers

Food industry, farms and the retail sector are nowadays working closely together. The food industry is targeting consumers’ needs more precisely by eliminating structural layers between producers and consumers. Often observable the retail has taken over the leading role in the value (or supply) chains. A reason for this is their increased market power due to concentration processes in the retail segment of recent years. Regarding the US market share held by the nation’s top four food retailers, from the mid-1990s to 2000, the four-firm concentration ratio (CR4) raised from 17 percent to 34 percent (BARKEMA, ET AL, 2001). In Europe consolidation has gone a similar way. Thus, in almost all industrial countries a small group of companies cover a high market share (AKDENIZ ET AL., 2003).
These grown retail companies are also competing on a global level. With their market power they are able to set prices as facts for the food industry. Only those companies with strong brands or international appearance in various markets can overcome this and are able to negotiate prices on the same level. National or regional brand manufacturers often lack the resources to stand this competition (CULLEN AND WHelan, 1997; DOBSON, 2001). Here also the increase in store or private labels owned by the retailers, raises the pressure on smaller food companies (CONNOR, ROGERS AND BHAGAVAN, 1996).

Recently the bargaining power of retailers has significantly increased. Due to the internationalization of retail companies this is a global issue. The food processing industry needs to react on the shift in power. Strengthening their position in the market can be achieved by using economies of scale and scope and by directly communicating with the final consumer through branding. This direct communication then implicates a stronger focus towards market orientation (DOBSON ET AL., 2001).

2.2 Technology

As in any industry also within the agro-food industry the diffusion of technological progression is of vital interest. On the one hand side new technologies thereby can be seen as one option to satisfy an increasingly demanding consumer. These give the industry the possibility to tailor its products to the consumers needs, where the long living tomato can be seen as an example. On the other hand side companies in the agro-food industry make use of scale and scope effects by improved logistic systems etc, whereas innovative output increasing or cost reducing technologies were developed much earlier than these towards the consumer (BARKEMA, 1993). TRAILL AND MEULENBerg (2002) found that companies that were faster in developing technological skills had a competitive advantage in the market. Boehlje (1999) summarizes these developments as “Biological Manufacturing” with its three dimensions (a) monitoring and tracing “development and/or deterioration of attributes throughout the food chain in real time, (b) “biotechnology and nutritional technology to manipulate the attribute development and deterioration process in plant and animal production and product processing, and (c) intervention technology to intervene with the proper adjustments or controls that will close the gap any time actual performance of a process deviates from potential performance.

Process and product optimizing technologies come from various fields. So ICT, logistic, automatization, improved package and materials are only a few examples.

As in every other industry the early adoption of new production technologies seems to be a crucial success factor in the agro-food industry.

Improving food security in terms of traceability enhances the collaboration in a food chain. Guaranteeing security does often happen by the use of ICT. These tools of a supply chain management raise new questions to companies in these chains, which are often related to their role in a chain (VAN DER VORST ET AL., 2005).

As consequence of shifting consumer demands in food, nutrition and health the technological manipulation of food attributes, of which a popular direction is often referred to as functional food, the food industry is facing an altering competitive situation with regard to new entrants in that business. Evidence comes from the Finnish market, where the food industry is reported to spend less than 2% as a share of turnover into R&D activities whereas comparable figures from the global pharmaceutical industry indicate spending, which is between 20-30%. Taking into account that companies in the latter industry are eager to win market share in functional food, technological progression opens up possibilities for new entrants (BRAENNBACk & WIKLUND, 2001).
2.3 Politics
The influence of policy on the whole agribusiness is enormous. On the farm level subsidies lead to a production not toward the markets' needs but towards a maximization of individual income. So, there is a strong interrelationship between agricultural policy and agro-food chain organization. Even if due to outcomes of the WTO negotiations the amount of subsidies is reduced and direction is changed towards less influence on production decisions, the influence is still large. (BEKKUM AND NILSSON, 2000). Compared to other industries the food industry is facing various policies and laws regarding food safety issues in addition. Continuously the requirements have been increased or more specified in detail. Labelling and transparency regulations are important for production processes and the final product. (DOBSON ET AL., 2003).

For the food processing industry especially the legal regulations on safety issues are of strong influence leading to changed requirements regarding both products and processes.

The direction of political action is clearly directed towards a reduction of market protection. Depending on the origin and therefore the grown structure in a particular market the impact can be huge on companies.

As an example from the sector of interest the German sugar company Südzucker might provide some evidence. Due to an ongoing liberalization process of the European sugar market the company has diversified its business activities in a piecemeal manner. Being traditionally a sugar producing cooperative nowadays the company is active in the domains functional foods, starch, portion pack items, bakery additives, deep-frozen products (pizzas), fruit additives/fruit-juice concentrates and bio ethanol.

2.4 Globalization
As mentioned above, the retailers and also other industries are globalizing more and more. Due to the fall of the Iron Curtain and following on this later on the enlargement of the European Union, the WTO negotiations and Chinas move towards market economy, new markets came up for the companies (OECD, 1999). “Globalisation facilitates the spreading of information such as market studies or new technological trends, but also enables the access to products and processes worldwide. This context is favourable to vertical integration, big companies cover a greater part of the supply chain and the number of mergers and acquisitions grows“ (AKDENIZ ET. AL., 2003).

Basically globalization means to companies in the agro-food chain that the focus on their competitive environment is not on a restricted area anymore but on the whole world. Due to this extension the strategic variability increases. Competition increases and the usages of scale and scope effects, as well as innovations are obvious items becoming crucial in this context to companies.
3 Research Design

As described in chapter 2 we can assume that the pork processing sector being part of the agro-food industry is currently facing various changes. Some of them, especially when occurring together, seem to pose challenges to companies in that business with regard to scale, scope, innovative behaviour, organization and the strategic variety due to a global focus.

Commissioned by LEI (Landbouw Economisch Instituut) underlying research sheds light on causes and effects of change in the pork processing industry in North Western Europe as part of the overall agro-food industry. The LEI as a scientific research institute is situated in an ongoing process of researching themes in relation to environment, agriculture and the whole agro-food chain. Main purposes of conducted research are to secure a profound knowledge base in order to be continuously able to provide advice to governmental and business clients. This research project aims to contribute to the knowledge base of the LEI with special regard to strategic issues in the pork processing industry.

Hence, the selected problem could be summarized, as:

The LEI (Landbouw Economisch Instituut) as a scientific research institute, being part of Wageningen Universiteit and Reserachcentre, needs strategic insight into ongoing developments in the food industry in order to provide advises to governmental and business clients regarding strategic issues in agribusiness with special regard to future decision making.

3.1 Research Objective

Objective of this research is to provide strategic insight in the food industry by developing a theoretical framework for studying and analyzing food businesses in industries in transition. After getting an understanding of the related environmental and company elements and their relationships, a theoretical framework will be firstly developed and secondly tested in the meat industry. The final outcome will be a revised conceptual framework.

3.2 Research Issue

3.2.1 Central Research Questions

In order to achieve previous research objective we need to formulate a few central research questions (Verschuren and Doorewaard, 1999). Therefore these research questions have been derived from the general research objective and its background as described in chapter 2 and can be formulated as follows:

1. What does it mean to a company to compete in an industry in transition?
2. Which are the environmental forces influencing the agro-food industry with special regard to the pork processing sector?
3. How do companies (successfully) respond to the challenges of an industry in transition and how are the factors related?
4. What are the practical opportunities and limitations of applying the theoretical framework (developed in underlying research)?

3.2.2 Research Sub-Questions

In order to answer the central research questions (CRQ) several sub-question can be formulated:

Referring to CRQ 1:
1.1 What does it mean if an industry is in transition?
1.2 What are the challenges for companies facing an industry in transition?

Referring to CRQ 3:
3.1 How do companies respond to a transitional situation of their industry concerning strategy formulation?
3.2 How do companies respond to a transitional situation of their industry concerning their resources and capabilities?
3.3 How do companies respond to a transitional situation of their industry concerning their organisation with special regard to their ownership structure?
3.4 How do companies respond to a transitional situation of their industry concerning innovations?

3.3 Research Framework

(figure on the next page)

In order to structure this research we have developed a research framework as it is shown on the next page. Starting from general trends in the agro food industry as introduced in previous chapter we have further identified theoretical approaches from the field of management sciences which should help us to finding answers to our research questions. Consequently these theories will assist us to develop a theoretical framework which will be operationalized by help of an analysis of the pork processing industry. Having developed the theoretical framework and an understanding of the industry on a macro level we will then go further and analyse empirical information derived from two in-depth case studies. Matching theory with empirical findings will eventually lead to a refined theoretical, then called conceptual, framework, which is the ultimate goal of this research. Evaluating its applicability will add validity to it in the end.
Design and Framework Building

Theory on transformation
- Punctuated equilibrium
- Literature review

Strategic Management
- Strategy Formulation
- Organizational Learning

Resource Based View
- Resources
- Capabilities

Organizational Theory
- Ownership structure

Theory on Innovation
- Products
- Processes

Industry Analysis
- 5-forces
- Supply Chain Management

Where do we assume to find sources of successful replies in companies to transition?

(Draft) Theoretical Framework: "Domains of interest within the agro-food industry" and their theoretical background

(Draft) Theoretical Framework operationalized to the pork processing industry

Empirical Research & Analysis

Case studies 1-2 (implementation + analyses)

Theoretical Framework on companies in markets in transition

Partial input

New Directions/ further research (propositions)

Methodological approach to determine items (Self-tested during the research)

Implications
- Managerial
- On theory

Conclusion

14
3.4 Technical Research Design

3.4.1 Design and framework building

As depicted in the research framework the first product of this research will be a draft theoretical framework that contains domains of interest for the agro-food industry with special regard to transition of markets in which companies from that industry are operating. Therefore diverse trends in the food industry have been identified in a desk research using data from scientific sources as well as sector information. These factors are further used to select theories, which build the basis for the draft theoretical framework. By using state-of-the-art articles from scientific journals and other relevant scientific literature the theoretical framework will be worked out. In order to build up the theoretical framework the key propositions of the different theories will be the starting point.

Using the model of PORTER (1980) as a tool and elements from the theory of supply chain management as a lens, as suggested by BOEHLJE (1999), the European pork industry will be analysed with special regard to changes in that industry. This analysis is necessary to 1) understand the pork processing industry as research unit and 2) enable the researchers to operationalize the draft theoretical framework in a next step in order to conduct the empirical part of the research project.

3.5 Answering the research questions

Four research questions are raised in order to fulfil the research objective. Subsequently sub questions have been formulated in order to deliver an answer to them. The Research Framework shows how the elements are related and what their final outcome will be. This section refers to the procedure regarding the way the research questions will be answered in more detail.

Research question 1 asks: “What does it mean to a company to compete in an industry in transition?” Above a background on changes in the agro-food industry has been worked out. Taking this background managerial items have been identified that might have the ability to answer the threats companies are facing. Theories have been introduced, which are selected according to their explanatory value regarding the background. In a next step these theories will be composed to a theoretical framework, starting up with their key propositions. By converging these propositions taking the consequences and related factors into account first relationships between the items will be established.

In a second step research question 2 (“Which are the environmental forces influencing the agro-food industry with special regard to the pork processing sector”) aims to analyse the industry of interest. The five-force model of PORTER (1980) and elements from supply chain management will be used to analyse the industry. Aside from scientific contributions, market reports and expert interviews will be used to deliver a holistic picture of the industry. Having an overview of the industry the theoretical framework will be operationalized by filling the items as far as they are abstract with sector related content.

Research Question 3 (“How do companies (successfully) respond to the challenges of an industry in transition and how are the factors related?) will be answered in the empirical part of underlying research. From the theoretical part we know which challenges companies are facing and how they might answer. In this research especially the choice of theory gives some indication in that direction. In this phase of the research the theoretical framework will
be used as an assumed construct. Either it will be confirmed or adjusted in this empirical part. Case Study research has been identified as the appropriate research strategy. Quantitative as well as qualitative sources will be used. Analysing the annual reports appears to be a good starting point. Additionally press releases will be used to figure out statements of the management.

Finally research question 4 presents a discussion on the methodology used in order to conceptualize the framework that will have been developed.

3.6 Limitations

Companies that are doing business in the agro-food industry are the units of analysis in this research. Special attention thereby will be paid towards companies in the sub-unit of pork processing companies.

Companies in this research are understood to be food processing companies with special focus on pork processing businesses. Therefore the generalisability of the findings is restricted to that kind of companies.

Several domains have been identified, where it is assumed that change in a company takes place as a consequence to the changes in their industry. However these domains might be not complete in their explanatory value. Environment, Organization and Leadership are the central elements for strategy making according to Mintzberg et al. (1998). Research Question 2 is focusing on the environment whereas Questions 1 and 3 are related to external influences and their consequences on strategic dimensions of the organization. Leadership as an important strategic element is left out in that research, because we will be focusing on outside-in relations rather than on pure inside or inside-out relations of the organization. Related aspects may rise up during the empirical part of that research.
4 Theoretical Framework

This chapter introduces and presents a literature review on a collection of theoretical views and aspects that we find useful in relation to an industry in transition. Each theoretical perspective has implications for transition; which are respectively presented in a subchapter, answering the central question: What can we learn from each theoretical perspective employed about an industry in transition? Implications for the framework, centering “an industry in transition” have been discussed and derived following. At the end of every subchapter we give a summarizing overview, containing the issue that is affected by transition from that particular perspective, causes (which indicates why this issue is subject to transition and how transition is influenced by it), and consequences for companies and managerial implications (see Tables 1 – 6).

We have chosen theoretical approaches from the fields of organizations research and management research. Organizations Research thereby is our starting point in order to learn more about organizational change, which is caused by internal as well as external factors. External factors refer to the market and competition side of a company and will be presented broadly, since many aspects are considered to be related to an industry in transition. Therefore we employ state of the art literature form management research. Internal factors do often refer to behavioral aspects of a company and are regarded as recursively leading to the necessity of radical change. Internal factors will not be emphasized as part of this theoretical framework.

The chapter is structured as follows. Chapter 4.1 introduces the concept of organizational change and its causes and consequences. Chapter 4.1.1 regards its patterns and its relation to organizational learning and strategy formulation, supplemented by the view on organizational change as a punctuated equilibrium (chapter 4.1.2), which reveals the distinctions between two fundamental phases where companies can be found and introduces especially the behavioral components of radical change. Chapter 4.1.3 then puts the theoretical aspects into perspective of transition. This structure, firstly presenting theoretical aspects and secondly highlighting the relation to transition, is representative for all seven theoretical perspectives.

Chapters 4.2 until 4.4 review state of the art literature in management research of the last 25 years. Our theory selection has been stimulated by the central premise that “strategy represents a fundamental congruence between external opportunity and internal capability” (Mintzberg, 1990). It starts in chapter 4.2 with the “inside-out” perspective on competition, represented by the Resource Based View. Chapter 4.2.1 links organizational change with the RBV by suggesting that changing incrementally is a capability. Chapter 4.3 discusses aspects on innovation. The “dominant design of management research” (Herrmann, 2005), which is the “outside-in” perspective on competition, represented by Porter’s (1980) framework to industry analysis in chapter 4.4 is supplemented in the same chapter by an overview of an “augmentation” by Slater and Olson (2002).

Elements of relations between firms are presented in the chapters 4.5 and 4.6. Chapter 4.5 introduces aspects of Supply Chain Management. In the end aspects of vertical integration are presented in Chapter 4.6, which deals with make-or-buy decisions, hence with vertical coordination and describes eventually the boundaries of the firm. The discussions of the theoretical aspects with its relation to transition have been converged finally and are presented in Chapter 4.7.
4.1 Theoretical Views on Organizational Change

Research on organizational change assumes the existence of both incremental and radical changes. Radical changes according to Romanelli & Tushman (1985; 1994) and Mintzberg and Westley (1992) are determined by the fact that they force an organization to change their strategic orientation and superordinate mindset. For the goal of this research to give strategic insights into the food processing industry and assuming that there are radical changes in the competitive environment affecting companies, it seems to make sense to approach the industry by searching for that extreme radical kind of change since we will get deeper understandings of change in general.

In this subchapter an overview of research on organizational change will be given. Mintzberg and Westley (1992) attempt to converge the existing perspectives on organizational change from a management research perspective towards a holistic construct. Their critics is directed to the piecewise manner change had been investigated so far, prone to touch one level of the organizational being and thus blinding out interlinked effects of change on different levels of an organizations state and direction (Chapter 4.1.1).

Romanelli & Tushman’s (1985) theoretical approach on “organizational evolution” has been derived from models on organisational change from ecological (net mortality driven by environmental selection), adaptation (incremental change creates fit between company and its environment) and transformational (metamophoric change due to fundamentally different stages of industry evolution) perspectives towards a new view on change, where phases of convergence are determined by incremental change punctuated by “short bursts” of radical change (Chapter 4.1.2).

As indicated above Chapter 4.1.3 draws conclusions for the theoretical framework, exposing the relation between organizational change and transition.

4.1.1 Patterns of Change and the Relation to Organizational Learning and Strategy Formulation

Mintzberg and Westley (1992) have investigated “cycles of organizational change” by attempting a holistic approach. They find that change in general is ubiquitous within any kind of organization, but differs in its occurring patterns. Change and stability are both vital to organizations, since never changing can mean to “loose synchronization with its environment”, whereas permanent instability may lead to a lack of efficiency in producing output. The patterns of change identified are subsequently represented as cycles because recurring elements of change have been found.

Organizational change differs in the level on which it occurs and which it affects, briefly in its content. Thereby the authors distinguish between organization as the physical expression of strategy and strategic direction itself. Both categories are divided further into a conceptual level associated with thoughts and a concrete level, whereas the latter one is related to action, as shown in Figure 1. Change can range from “the shift to a market economy in Poland down to the replacement of pens by personal computers for its economists”, which raises the question where change starts and where it ends. Mintzberg and Westley conclude that change can occur at any stage of organizational content and from there on can be either top-down or bottom up or any kind of combination.

Three approaches of organizational change within organizations have been identified as most important, which are procedural planning, visionary leadership and inductive learning. These approaches differ in their degree of formality, their direction of procedure and the direction of how organizational contents are concerned.
Procedural Planning is the most formal kind of change, often also referred to as strategic planning or organizational development. It is said to be directed top-down and follows deductive patterns. Its formality and programmatic character indicates that state and direction of the conceptual level have to be clear and known, since procedural planning deals with “programming consequences”, which subsequently approaches on a more concrete level of an organization.

Visionary leadership can cause change also in a top-down directed manner, but is characterized by informality. A single leader who is often the CEO develops a new dimension of the cooperation and its environment, which is often referred to as vision. Consequently this changed vision gets implemented into operations, whereas this is considered to happen emergently which characterizes the informality of this approach. However the chance of failure is thought to be high, since resistance by subordinate levels in the hierarchy might block the change, based on their internalized visions.

Inductive Learning is the most informal and the most unpredictable approach to change. It can occur on any kind of level within the organization and has the ability to approach as well concrete as conceptual levels. Dependent on the level it appears, the direction it is forwarded will be determined. Findings in a production plant that induce change tend to swarm through on organization hierarchical bottom up, whereas lessons learned by the top management are rather to seep through by a top-down movement.

Presented to be substitutes Mintzberg and Westley come up with the complementary character of these three approaches explained above since a holistic view on organizational changes reveals all elements to be existent somewhere in the process. These elements occur in a consecutive manner, which makes the authors presenting it in cycles. Thus the phases learning, as a realization of a new situation, shift in the way of thinking and perceiving the environment and setting the consequences into action in a planned manner are elements that are integral part of all complete change processes.

Incomplete change processes are those that lack one of the aforementioned elements, which makes Mintzberg and Westley describing them as “informal”, when planning is missing, or “implicit”, when there is no change in vision. “Imported change processes” describe the adoption of external learning, which is categorized as “mindless” if this learning leads to a change without changing the vision, which is illustrated by the pure absorption of concepts, such as total quality management.

Further, change is described as taking form of episodes, as distinctive periods. Triggered by changes in the external or internal context of an organization, change passes through different phases in an organization. These episodes have different pace and dimension, but two kinds of them can be identified as either “Turnaround” or “Revitalization”.

**Figure 1**

<table>
<thead>
<tr>
<th>Contents of organized change</th>
<th>Change in organization (state)</th>
<th>Change in strategy (direction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>more conceptual (thought)</td>
<td>culture</td>
<td>vision</td>
</tr>
<tr>
<td>more concrete (action)</td>
<td>structure</td>
<td>positions</td>
</tr>
<tr>
<td></td>
<td>systems</td>
<td>programs</td>
</tr>
<tr>
<td></td>
<td>people</td>
<td>facilities</td>
</tr>
</tbody>
</table>

Source: Mintzberg and Westley (1992)
Turnaround change, including as well operational as strategic changes, is characterized as a relatively rapid episode, determined by rather top-down induction and deliberate evolvement directed more to the strategic dimension of an organization.

The revitalizing kind of change though is described as rather on the long term and more variable in its origin and the direction it is targeted on. The latter kind of change approaches rather an organizations’ state. Regarding the two kinds of change as stereotypes, it can be said that the process of revitalizing is more determined by inductive learning, whereas turnaround kind of change is guided by procedural planning or visionary leadership which makes up its rather top-down directed nature. However, Mintzberg and Westley state that other ways of direction and learning are possible as well.

Organizations as dynamic constructs go through different, recurring stages in their lifetime. The first phase of building up is a phase of constant turbulence, where an organization has to find its position and the way to get there. There might be an “entrepreneurial” or an “umbrella” kind of strategy (cf. Mintzberg and Waters, 1985), which gets fine-tuned and firmed, basically by inductive learning.

The phase of setting up is followed by a time of relative stability in which change is said to be marginal and approaching rather on the action level whereas the basic structure is set, which makes procedural planning to be the approach most likely to be found here.

There might occur phases of adaptation in which the more conceptual levels of an organization might be affected, since changes in the environment or changes in size and scope of the organization require reconsiderations regarding organizational structure or the strategic positioning. The approach of procedural planning is increasingly complemented by inductive learning especially in relation to the new situation the organization is facing.

In the stage of struggle neither an organizations’ state nor its strategy match the setting of the competitive or the general environment anymore. Examples for changes in the environment are political challenges or an increased volatility in general. More than during the adaptation phase the conceptual level of an organization is challenged, which can mean that a new mindset has to be learned inductively. But the struggle can go to the utmost of the conceptual level, if derived activities do not fulfill its purpose anymore because of a biased perception.

Often as a consequence of changes in mindset in a period of struggle the whole set of state and direction will be scrutinized in all of its dimensions (see Figure 1). This process is a kind of an overall alignment process, where all concepts are in a state of flux, which makes them changing. This stage is called “revolution” and it can take the shape of radical changes that make a re-conception necessary or it appears as an overall change as consequence of a shift in vision that can take several years. Thus the revolution starts with a change in the vision and successive new behavior has to be learned inductively. This changeover from one circle to the other in figure (Figure 2) represents that from a revolution the development shown above starts anew with a new phase of building up.

However the pattern how the succession of different period occurs differs according to Mintzberg and Wetsley (1992). They found cycles interrupted by “periodic bumps”, converging cycles followed by diverging cycles and cycles not interrupted but determined by “regular progress”. The latter one they observed with McGill University where they found inductive learning as the predominant kind of change approach which makes change in this pattern appear as directed bottom-up, saying that findings get incorporated into the mindset of the organization and exerts influence on as well conceptual as concrete content of change inductively.
“Oscillating Shifts” are found as one pattern likely to occur in a business environment when leadership is missing. Vision then is built up rather based on consensus than on any kind of active leadership. Thus the organization revitalizes periodically, mainly affected by experimentation in diverging phases and by consensus in converging phases.

Most likely to appear in a commercial settlement and thus related to conventional organizations of mass production and service is change patterned in “periodic bumps”. (see Figure 3)

Thereby organizations remain in relatively long periods of stability, which means that changes occur on the concrete level, whereas the conceptual framework has been set. Revolutionary kinds of change in order to synchronize with a changed environment are “delayed until absolutely necessary”. Whenever necessary these changes appear rather suddenly and leave an organization behind that has to scrutinize all dimensions of its being which enables a new period to start determined by the characteristics of the period of building up.

During times of stability Mintzberg and Westley (1992) describe organizations as rather hesitating towards the revitalizing incremental kind of change regarding a continual adoption towards its external environment. These successive phases within one cycle can also be described as a life cycle, whereas logically a new cycle has to start in order to escape from the demise. This is said to happen usually with revolutionary change.
4.1.2 Radical Change as Punctuated Equilibrium

The view on organizational change occurring in periodic bumps corresponds to Romanelli’s and Tushman’s (1985; 1994) model of a punctuated equilibrium. Clear focus is given on the two fundamental periods where organizations can be found. Convergent Periods are determined by stability. Middle and Executive Management focus on holding “consistencies both among activity domains and that support a strategic orientation and between the strategic orientation and external environmental conditions”. Changes in this phase are considered to be incremental corresponding to the “revitalizing” kind of change as introduced by Mintzberg and Westley (1992), which are mainly managed by middle management. As long as environmental influences are constant, long lasting convergent periods are considered to be positively related to performance, whereas social complexity and interdependence within an organization are becoming more complex. Managing these increasing complexities aiming for consistency creates resistance against (radical) change. During these convergent periods organizations get more and more into the modus of inertia.

The convergent periods are interrupted by radical changes; Romanelli & Tushman distinguish between reorientations as the most frequented way of radical change and recreations as the most extreme kind of change. Both concepts correspond to Mintzberg’s and Westley’s (1992) turnaround change, whereas recreation is defined to affect the basic assumptions of an organization referred to as core values and beliefs. Symptomatically “pattern of consistency are fundamentally reordered towards a new basis of alignment”, which in fact gets expressed by changes in the strategic orientation, which is defined in a similar way as by Mintzberg and Westley (1992) (q.v. Figure 1).

Reorientations and recreations are triggered by internal as well as external factors. By internal factors Romanelli and Tushman refer to product class evolution, comprising the items demand, technology, users and institutional conditions. Product class evolution follows the pattern of the classical product-life cycle, consequently assuming an evolution of product class conditions through periods of incremental change interrupted by both predictable and unpredictable discontinuous changes. Internal factors do mainly result from inertial forces within an organization, which leads to inflexibility regards competitive forces and therefore to low performance and in turn to organizational turbulences regarding the negotiated order in a social context.

Convergent periods and reorientations are clearly distinguishable. In their further work Romanelli & Tushman (1994) hypothesize that “small changes in individual domains of organizational activity will not accumulate incrementally to yield a fundamental transformation”. Thus, radical changes occur in the strategic orientation of an organization as “short, discontinuous bursts of change involving most or all key domains of organizational activity”.

Special attention is paid to changes in executive leadership. Bounded rationality causes inertia with its positive as well as negative impacts on stability and performance of an

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1 As well Mintzberg and Westley (1992) as Romanelli and Tushman, 1985, 1994) assume the existence of radical as well as incremental changes. Their terminology though is different. As depicted in their articles Romanelli’s and Tushman’s “convergent periods” correspond to Mintzberg’s and Westley’s “phase of stability”. However “convergent periods” are related to the behavioral construct “inertia”, which is said to converge, whereas Mintzberg’s and Westley’s phrases are related to organizational learning. “Revolutions” which are also termed “phases of struggle” (Mintzberg and Westley, 1992) express the same as “punctuated equilibriums”. A fundamental difference between both perspectives is the duration of radical changes, since Mintzberg and Westley (1992) consider both short and long during radical change.
organization. Hence Romanelli & Tushman (1994) find out that the “installation of a new CEO will significantly increase the likelihood of revolutionary transformation”.

If organizations master revolutionary change successfully, increasing performance is likely to be observable, whereas the risk of failure within these periods of transformation should not be neglected.

4.1.3 Organizational Change and transition

An organization’s strategic orientation is built up hierarchically from the concrete up to the conceptual (c.f. Figure 1). Internal forces such as the announcement of a new Chief Executive Officer or the organizational inertia, which as a consequence of turbulence aims to resist organizational change and is in the long term said to support declining performance (Romanelli and Tushman, 1985), and external forces such as developments within the product-class evolution (Romanelli and Tushman, 1985) or an increased business volatility (Mintzberg and Westley, 1992) have the ability to induce changes.

When internal or external forces release change within an organization the magnitude of in-company effects depends on where these changes approach. The more the conceptual level of the organizational or strategic contents (c.f. Figure 1) is affected the higher is the likelihood of changes to be of radical kind. In turn the more the action level is concerned by changes the higher the probability of facing incremental kind of change.

In relation to organizational change companies can be found in two fundamentally different phases. “Convergent phases” (Romanelli and Tushman, 1985) are interrupted by radical changes, which take shape either of “short, discontinuous bursts” (Romanelli and Tushman, 1985) or of a long terms overall alignment process (Mintzberg and Westley, 1992). After having faced radical change again a “phase of stability” begins.

Taking both perspectives together one can say that organizational learning and strategy formulation “converges” during the stable phase from being inductive to being procedural planned and tends to become inductive again when synchronization with the environment gets lost. Thus, the concept of inertia seems to be related to procedural planning. This more and more converging resistance towards adaptation (Romanelli and Tushman, 1985) alters then when pure inductive learning on concrete levels has become insufficient to synchronize strategy with the environment. A change in vision might be necessary, which can be triggered by changes in leadership, from a learning and strategy formulation perspective by visionary leadership.

With respect to organizational learning and subsequent strategy development one can distinguish between procedural planning and inductive learning. The organizational phase in which one kind of learning can be attributed the clearest is the “phase of relative stability”, determined by procedural planning, organizational inertia and incremental change. Thus, if companies strategy development is not “deliberate and deductive” (Mintzberg and Westley, 1992) we can conclude that a company is to change radical in the near future, if it has not changed radical in the very recent past. Overcoming organizational inertia can be realized by making use of the “powerful interpretative force”, which is “threat perception”. This implicates broadening of the window through which threat is perceived, which could be done by external advice from an external network (Gilbert, 2005).

\[2\] c.f. Mintzberg and Waters (1985) for “planned strategy”
Table 1  Organizational Change and transition

<table>
<thead>
<tr>
<th>Transition affects</th>
<th>Organizational learning and strategy formulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause(s) of transition</td>
<td>organizational inertia (associated with procedural planning)</td>
</tr>
<tr>
<td>Consequence(s) of transition</td>
<td>organizational learning and strategy development is not deliberate and deductive; conversely organizational learning and strategy is emergent and inductive</td>
</tr>
<tr>
<td>Managerial implication(s)</td>
<td>Overcome organizational inertia Broaden threat perception</td>
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4.2 Theoretical Aspects of the Resource Based View

Based on the work carried out by industrial economists, such as Penrose (1959) one in relevant literature often quoted example, the Resource Based View (RBV) builds up a theory of competitive advantage based on in-firm determinants, which can be seen as an “inside-out perspective” (Scholten, 2006) towards strategy formulation.

The Resource Based View (RBV) assumes heterogeneity within an industry with respect to strategic resources that are owned and controlled by companies. Not being perfectly mobile (Barney, 1991) the possession and employment of resources can lead to a sustainable competitive advantage (SCA), expressed by earning economic rents or reaching above-average performance. Depending on certain characteristics, such as value, rareness, inimitability and non-substitutability (Barney, 1991) or complementarity, scarcity, low tradability, inimitability, limited substitutability, appropriability, durability and overlap with strategic industry (Amit and Schoemaker, 1993) some resources are figured out as key resources. By employing these key resources a SCA is assumed to be reached. Wernerfeldt (1984) argues that “by specifying a resource profile for a firm, it is possible to find the optimal product-market activities”. Resources can be tangible assets, intangible assets and capabilities (Fahy and Smithee, 1999). Grant (1991) in contrast states that “a capability is the capacity for a team of resources to perform some task or activity”. Hence resources are the precondition for capabilities, which build up the basis for a competitive advantage. Wernerfelt (1998) certifies them particularly in the long run an unlimited capacity.

The sustainability as an indicator for the rent seeking potential of these assets, here principally tangible ones and capabilities, is determined by their characteristics. Below the criteria of Grant (1991) should be discussed. Durability of capabilities is managed by maintaining and renewing capabilities, based on resources, through generations, especially “through the socialization of new employees”. Transparency refers to the ease of imitation: the more complex the pattern of an underlying capability appears the more difficult is the imitation for competitors and new market entrants and the higher will be the level of profit. Companies that manage to maintain their resources and capabilities in terms of transferability are likely to be less vulnerable for imitation by competitors. Appropriate attributes for this are the geographical immobility, imperfect information, relatedness to a specific company and the immobility of capabilities. Because of the latter one more focus should be given to capabilities as such. Replicability is the fourth of Grant’s criteria and is related to the ease for outsiders to adopt a capability by internal investment. Hence capabilities based upon highly complex routines are less easy to imitate.
Once a key resource has been identified and subsequently capabilities are deduced the most important implications are protection, development and deployment (Amit and Schoemaker, 1993) to guarantee and utilize the rent-earning potential. But the question occurs how to identify resources and how to derive capabilities. Whereas tangible assets can be extracted from the balance sheet, the situation for intangible assets seems to be more difficult. Hence Grant (1991) formulates two questions: First he asks “What opportunities exist for economizing on the use of resources” and secondly “What are the possibilities for using existing assets more intensely and in more profitable employment”. After answering these questions by analyzing, capabilities can be deduced.

“For most firms, however, the most important capabilities are likely to be those which arise from an integration of individual functional capabilities” (Grant, 1991). Central capabilities are also called “core competencies” and refer to “collective learning within an organization, especially how to co-ordinate diverse production skills and integrate multiple streams of technology” (Hamel and Prahalad, 1990).

4.2.1 Changing Incrementally as Capability

Brown and Eisenhardt (1997) criticise the way of looking on change by focusing on the radical kind it as it is done in the theory of the punctuated equilibrium (Chapter 4.1.2). Their findings implicate that regarding changes as either incremental or radical makes managers feeling to be at the mercy of radical change, which would subsequently lead to a fostering of organizational inertia or stimulate managers to a even more extreme delaying attitude towards “revitalizing” change, which in turn increases the impact of necessary “turnaround” changes as Mintzberg and Westley (1992) phrase it.

Focusing “on change as rare, disruptive and often ill-advised reorientation” lead managers and their organizations to emphasize their victimhood, which is according to Brown and Eisenhardt (1997) a barrier to gaining a competitive advantage. Their findings analogously suggest that having the ability to manage change rather proactively in a continual manner could produce a core capability for a company, which will be difficult to imitate because it can only be developed over time depending on individual histories. Subsequently the capability to manage change in this way enables a company to reach a competitive advantage. Far more do the findings by Brown and Eisenhardt (1997) implicate that with this capability the chance for the need to change radical in “periodic bumps” or punctuated equilibriums respectively will decrease, since only for fundamental breakthroughs (e.g. DNA cloning, automobile, jet aircraft) there remains some disruptive potential.

The authors relate underlying capability to the development of new products as a physical expression of change. However they do not regard New Product Development (NPD) solely from a procedural perspective but point to the fact that such a capability has to be deeper rooted, namely in the culture of an organization. In their extensive multiple case study research Brown and Eisenhardt (1997) find that companies that have the capability to organize their change in order to reach or sustain a competitive advantage are characterized by specific traits, which are

- Managing to create freedom to improvise current projects, however in a given structure
- Exploring the future by executing multiple low cost experiments in various directions
- Linking products together over time (path dependency)
4.2.2 The Resource Based View and transition

That RBV has been meeting with criticism that appears relevant for the purpose of this research. Jarzabkowski (2004) discusses RBV’s ignorance of “dynamism inherent in strategic action”. Hence the sustainability of competitive advantage is questioned, since resources, originally seen as rigid and routinizing, may not suit a changed environment anymore.

Therefore dynamic capabilities derived from the RBV “are perceived to generate change inside the firm and also lead to market change, suggesting interaction between micro- and macro contexts” (Jarzabkowski, 2004). The adaptive practice as new configurations of existing resources make them appear to be more appropriate to sustain competitive advantage (Jarzabkowski, 2004).

However, Kraatz and Zajac (2001) question the usefulness of unlimited adaptability as intended by the concept of dynamic capabilities. Their empirical findings, having investigated the relation between resources and organizational change, suggest that resources are commitments exploiting its distinctive potential when based on “irreversible choices and deliberate persistence”. Companies that are rich of valuable and distinctive resources are then less likely to change their strategies due to turbulences in their environment. Distinctive resources might be strong reputation and relationships, specialized knowledge and expertise, loyalty of customers and suppliers. Building them up requires according to Kraatz and Zajac (2001) “deliberate, committing strategic choices”, conversely to the actions due to unbounded adaptability. Fundamentally the findings of Kraatz and Zajac (2001) scrutinize the “common presumption that pursuing adaptation and co-alignment is uniformly desirable or rational course for organizations confronted with changing competitive, technological or social environments”.

Brown's and Eisenhardt’s (1997) basic assumption though differs from the concluding argumentation by Kraatz and Zajac (2001) as cited above. Companies that own the capability of changing incrementally in a proactive manner are less prone to face radical strategic change. Thus, in effect the development of such a capability, implicitly path-dependent and over time, can be seen as overcoming the disruptive potential of radical changes.

If, in spite of differing perspectives on the need of alignment\(^3\), we can conclude by combining Brown and Eisenhardt (1997) and Kraatz and Zajac (2001) that often recurring radical strategic change is avoidable by changing incrementally. However, based on the findings discussed, we have to put the findings in relation to industry attributes. Whereas Brown’s and Eisenhardt’s (1997) findings are based on companies in the “high-velocity computer industry”, Kraatz and Zajac (2001) conclude from a longitudinal analysis of American liberal arts colleges. As found by Mintzberg and Westley (1992) education organizations tend to change regularly progressing, whereas in “velocity” industries “adaptive practice is assumed to be value creating” (Jarzabkowski, 2004).

Another stream of research puts the sustainability of resources into perspective of substitution. Peteraf and Bergen (2003) argue that scarcity and rareness of resources\(^4\) is relative to its context and not resistant to change. The potential threat thereby is prospective resource substitution, since managers’ focus in terms of rivalry is often limited to direct and close competition. Hence, resource substitutions, analogous to product substitution, may be

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\(^4\) Rareness and Scracity of resources as basic requirement to generate competitive advantage by Barney (1991).
overlooked, although these resources might satisfy customer needs and quality demands in the same way. If resources can be substituted, their rareness and scarcity prepositions are made redundant and these substitutable resources do not contribute to a competitive advantage, at least not to a sustained one. In its effect product and resource substitution are similar concepts, since both put a potential threat on competition, which is difficult to recognize; their impact thus is comparable to the threat of new market entrants on incumbents (Peteraf and Bergen, 2003). Derived managerial implication is to scan the environment broadly, taking resource and “capability equivalence” and “market needs correspondence” into consideration alike when analyzing current and potential competitors.

Resources, like mentioned earlier could be reputation and relationships, specialized knowledge and loyalty with customers and suppliers are allocated heterogeneously within an industry. If the industry is changing the mix of resources required for a competitive advantage is changing too.

A resource rich organization, pursuing strategies that allow flexibility in clear cut boundaries, is less prone to be at the mercy of environmental change, whereas the required degree of adaptability depends on the competitive environment.

Additionally, we can assume that the actual case of resource substitution can lead to an, at least perceived, industry in transition, which indicates in turn that companies in an industry in transition may face the sustainability assumption of resources offended.

### Table 2 The Resource Based View and transition

<table>
<thead>
<tr>
<th>Transition affects</th>
<th>Suitability of Resources</th>
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</thead>
<tbody>
<tr>
<td>Cause(s) of transition</td>
<td>resource substitution</td>
</tr>
<tr>
<td></td>
<td>new resources in the resource-mix of an industry</td>
</tr>
<tr>
<td>Consequence(s) of transition</td>
<td>sustainability of current resources may be challenged</td>
</tr>
<tr>
<td>Managerial implication(s)</td>
<td>Develop the capability to change incrementally</td>
</tr>
<tr>
<td></td>
<td>Develop more appropriate resources</td>
</tr>
<tr>
<td></td>
<td>Increase focus on customers and competitors</td>
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</table>

### 4.3 Theoretical Aspects of Innovation

This chapter introduces categories of innovations, the impact they can have on an industry and the phases of execution within a company.

Scholars distinguish between two major kinds of innovations\(^5\) which are process and product innovations. Whilst it is generally known and accepted that new products can have the ability to contribute to a company’s competitive advantage, process innovations are often understated. “Being able to make something no one else can, or to do so in ways which are better than anyone else is a powerful source of advantage” (Tidd et al., 2001) and leads to a context in which innovativeness can be seen as a capability of companies.

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\(^5\) Innovation in this research is understood to be in accordance with the definition of Christensen and Bower (1996): “Innovation refers to a change in technology, whereby technology “means the processes by which an organization transforms labour, capital, materials and information into products or services”.

27
Research by Christensen and Bower (1996) revealed the impact on an industry that innovations can have. Thereby they distinguish between “sustaining” and “disruptive” innovations. Sustaining innovations are thereby understood to be a continual alignment process of the current offer with the changing demand of current customers. In contrast, disruptive innovations are understood to be changes in technology, which make an old technology redundant. These disruptive innovations are mostly led by new entrants into an industry, whereas the sustaining kind of innovation is pushed and controlled by incumbent, often leading, firms in an industry. The bemusing appearing statement of Christensen and Bower (1996) that leading firms might lose their positions because they “listen too carefully to their customers” becomes clear, while taking their findings into account, which link disruptive innovations to the needs of potential customers. Companies often fail in realizing these “latent needs” (Slater and Olson, 2002) because their attention is paid to current customers, which explains their leadership in sustaining innovations.

According to Tidd et al. (2001) the innovation process can be subdivided into four phases in a chronological order. The **scanning phase** means an active identification process in the environment for potential or actual changes. Continuous recognition of signals outside the company is crucial to know the “what”, whereby is recommended to companies to develop routines in order to automate the process. During the **strategy phase** a company has to align their possibilities, resulting from the scanning phase, with their resources and their overall strategy. Questions to be answered in this phase are: “What can we do?” and “What do we want to do?” The **resourcing phase** is characterized by moving the ideas into a first physical reality. Which knowledge (e.g. in-house vs. external) should be employed in which way is thereby a crucial question to answer. The last part of the innovation process is the **implementation phase**. In there the innovation, being product or process, is going to be developed to maturity. At the same time the market, external or internal, has to be scanned, developed and get prepared for the final launch. During the whole development of innovations a learning loop is referring back to the single stages. The whole process is described as a funnel leading from various ideas to a final product or a new process. The degree of novelty thereby differs among innovations from incremental over radical to transformational. In reality the development does often not take place in such a straight way as it has been described above. Communication problems and disorganization between the different departments involved are the major cause for that.

### 4.3.1 Innovation and Transition

Innovations can be seen as a measure to act successfully towards a competitive advantage and in relation to change in an industry it can be either the trigger or a reaction of companies to cope with change; up to develop the capability to change incrementally, which prevents the need for (frequent) radical changes (Brown and Eisenhardt, 1997). Innovations are closely related to learning and to the employment of resources, taking their characteristics abovementioned into account, since the ability to innovate successfully is a resource as such and appears to be only possible if a company has managed to develop strong learning skills. The innovative capabilities of companies seem to be influenced by the vision of managers and their filtered characteristic, since scanning the environment is the initial step towards a structured approach to innovation. Thus it appears to be logical that innovativeness can be related to the dominant logic (Bettis and Prahalad, 1986; 1995) of a company, subsequently in a broader context to the mindset of an industry as aggregated level of individual firms.
### Table 3: Innovation and Transition

<table>
<thead>
<tr>
<th>Transition affects</th>
<th>Innovations (particularly type of)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause(s) of transition</td>
<td>Missing alignment with current and potential customers</td>
</tr>
<tr>
<td>Consequence(s) of transition</td>
<td>Disruptive innovations pushed by new entrants</td>
</tr>
<tr>
<td>Managerial implication(s)</td>
<td>(Continual) innovation can be a firm’s way to cope with change and to prevent its disruptive impact</td>
</tr>
<tr>
<td></td>
<td>Increase customer and competitor focus</td>
</tr>
</tbody>
</table>

#### 4.4 Theoretical Aspects of Competitive Forces

In the fight for market share, competition is not manifested only by the other players in the industry. Customers, suppliers, potential entrants and substitute products are all forces that shape the competitive environment of an industry (see Figure 4. The goal of the approach by Porter (1980) is to find a position in the industry where the company can best defend itself against these five forces or can influence them in its favor.

The knowledge of the underlying sources of competitive pressure provides the groundwork for a strategic agenda of action. They highlight the critical strengths and weaknesses of the company, animate the positioning of the company in its industry, clarify the areas where strategic changes may yield the greatest payoff, and highlight the places where industry trends promise to hold the greatest significance as either opportunities or threats. Companies may either take the forces as given and match own strengths and weaknesses with the environmental situation or take a more pro-active attitude and alter the shape of the forces. Shifts in underlying determinants, as shown in the boxes of Figure 4, might be anticipated by strategy makers in order to respond to them early.

Every industry has an underlying structure, or a set of fundamental economic and technical characteristics, that gives rise to these competitive forces. The strategist, wanting to position his or her company to cope best with its industry environment or to influence that environment in the company’s favor, needs to learn what shapes the environment tick.

Since this research deals with companies doing business in changing industries the model developed by Porter (1980) will contribute significantly to a deeper understanding of changes in the competitive environment in particular. The framework will assist in understanding the subjects of changing environments, since it is as a tool for that assumes certain forces shaping the industry. Especially the determinants of the forces are considered to change over time among others influenced by companies’ strategies.

Slater and Olson (2002) adjust the five-forces-model by Porter (1980) towards dynamics in industries that have occurred since the initial work of Porter, such as globalization of marketplaces, technology progression, deregulation and the business shaping appearance of the Internet. Basic assumptions in the original model are still kept, such as first and foremost the impact of industry factors on a company’s performance and accordingly the choice of appropriate strategies assuming business specific risks. However, augmentations are made where market dynamics and unpredictability come into play. Assuming the model by Porter as given, Slater and Olson (2002) define the industry by groups of actors approaching one market, who produce close substitutes. In this way their argumentation towards positioning of a company in the market is derived from the market and not solely from the company itself. Figure 5 presents their model; underlying components will be presented below.
In the force called Composite Competition Porter’s concepts of “substitutes” and the threat of new “entrance” has been put together because of close interrelations between those factors. Slater and Olson highlight the importance of innovations for competition, in particular their potential to foster “cutthroat” kind of competition, especially those that bear “disruptive” characteristics.

Complementors are related to network effects, whenever the demand for a product is dependent on number and availability of other products. Slight distinction is made between products that have interrelated demand because they require each other in terms of components and complementary products as independent but interrelated products. Making use of Complementors is said to increase returns.

In line with traditional economics and Porter the authors determine the bargaining power of customers by size, number and their ease of switching suppliers. Thus, few large suppliers that can easily switch supply are seen as powerful. Slater and Olson offer two strategic options for companies to cope with customers’ power. Accepting the status quo and work on profitability level that at least the costs of capital are earned back is the first solution, not favored by the authors. The second solution aims for profit maximization. Since number and size of customers in a defined market cannot be influenced easily the suggestion is to raise switching costs of customers by providing more value to them than competitors do. Strategically this is proposed to be done by increasing quality or service benefits, by “reduce non-price costs” or presented as non favorable in the long term by lowering costs.

Corresponding to customer bargaining power supplier power is defined. Also here a group of suppliers that is small in number and composed in large units, having the ability to change

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**Figure 4** Forces governing competition in an industry and their determinants

<table>
<thead>
<tr>
<th>Suppliers are powerful if</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Industry concentration is high</td>
</tr>
<tr>
<td>- Product is unique/differentiated</td>
</tr>
<tr>
<td>- Buyers switching costs are high</td>
</tr>
<tr>
<td>- Product difficult to substitute</td>
</tr>
<tr>
<td>- A customer is not important</td>
</tr>
<tr>
<td>- Forward integration is easy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rivalry among Industry Competitors is intense if</th>
</tr>
</thead>
<tbody>
<tr>
<td>- High number or equal strength</td>
</tr>
<tr>
<td>- Slow industry growth</td>
</tr>
<tr>
<td>- Low differentiation / low switching costs</td>
</tr>
<tr>
<td>- Fix costs are high</td>
</tr>
<tr>
<td>- Product is perishable</td>
</tr>
<tr>
<td>- Supply is higher than demand</td>
</tr>
<tr>
<td>- Exit barriers are high</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Threat of New Entrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access of Potential Entrants depends on</td>
</tr>
<tr>
<td>- Economies of scale</td>
</tr>
<tr>
<td>- Product differentiation</td>
</tr>
<tr>
<td>- Capital requirements</td>
</tr>
<tr>
<td>- Size independent advantages</td>
</tr>
<tr>
<td>- Access to distribution channels</td>
</tr>
<tr>
<td>- Government policy</td>
</tr>
<tr>
<td>- Industry growth</td>
</tr>
<tr>
<td>- Experience curve of incumbents</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Threat of substitute products or services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substitutes put a threat if they</td>
</tr>
<tr>
<td>- Reduce price</td>
</tr>
<tr>
<td>- Improve performance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Threat of Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suppliers</td>
</tr>
</tbody>
</table>

**Source:** own compilation based on Porter (1980)
their counterparts on their demand side easily is said to be powerful. Slater and Olson (2002) emphasize the popularity of measures to increase the efficiency and hence decrease purchasing costs in order to gain profitability in recent years. Their strategic recommendations are in case of powerful suppliers to strive for long term relationships (peaking in long term contractual relationships) and extra non price benefits. In case of weaker suppliers Slater and Olson stress the dependence of buyers on their suppliers in terms of quality and innovation. In order to conserve and even improve the qualitative level of supplies negotiations on the lowest price possible should be avoided since quality of deliverables and their innovativeness depends on a “strong and stable” cash flow in order to guarantee “adequate returns” demanding regarding the buyer-supplier relationship the payment of fair prices.

Figure 5 Market influences on profitability, risk and strategy

Source: Slater and Olson (2002)

As a dynamic element in the model on market analysis Slater and Olson involve a force called market turbulence. Since said to be easier to predict changes in the scope of the market or differences in amounts thereby are seen as not as disruptive as the “development of solutions for to latent needs”. Being difficult to predict these developments can be either taken as opportunity or seen as threat. Shedding light on market turbulences with perspective of the product life cycle highlights the importance of the transition from “early adopters” to the “early majority” which is limited by firms’ sight to current customers in perspective of the diffusion of innovations (Christensen and Bower, 1996). Slater and Olson distinguish between “market” and “competitive” turbulences. The first one is related to the changes in customers’ preferences and the way the served markets are set up. Changes in strategies and derived methods of competitors are summarized as “competitive turbulences”. Growing markets are determined rather by market turbulences while competitive turbulences are more likely in maturing markets. Industries differ in their degree of vulnerability for turbulences depending on barriers to imitation such as patents, brands, access to resources, scale economies and integration in a network of relationships. The higher the turbulences in an industry are the higher varies the profitability.

Strategic Implications
A firms’ strategy shouldn’t be based on the market structure, but on a firms’ position within an industry depending on their resources and capabilities. Crucial prerequisite to either reach or

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6 Exploiting the disadvantageous negotiation position is described as “short sighted” since that might impede the potential to add value to the best supplies for the own buyers.
sustain a competitive advantage is market orientation by acquiring market sensitivity, continuously developing it and convert it into related market behavior. According to Slater and Olson development of these capabilities affords organizational learning to understand market turbulences in a broad and long term focused way. Cognitions in already served as well as new markets might be tested in small scaled experiences in order to expand their results as soon as they are ready for creating value to customers. Embeddedness into a strong network based on trust and common interest of suppliers and customers is presented as a natural consequence of market orientation. The way how these relationships can be fostered might differ from market to market, but goal has to be customer’s satisfaction. Thereby differentiation and a unique service level towards competitors are said to be keys towards long term business relationships and towards fetching higher prices than competitors do.

Continuously analyzing the market structures in terms of strategic groups, buyer networks, complementors and substitute industries might assist to find “value propositions” which are not adopted and needs that are not served yet.

### 4.4.1 Competitive Forces and Transition

According to Porter (1980) basically all forces allow changes, if their determinants (c.f. Figure 4) change. Regarding barriers (e.g. to entry) the argumentation implies that the larger the scope of changed determinants, the more are barriers affected. Since “the collective strengths of forces determines the profit potential of an industry” and subsequent strategies viable for companies we can assume that the larger the changes in the forces are the more impacting it will be towards industry profitability and following consequences for companies’ strategies and risk potential (Slater and Olson, 2002) in that industry. Changes in as well the “collective strengths”, as of the impact of single forces will differ from industry to industry since different industries function in different ways, indicating that also the “profitability-impacting” forces, so to say industry specific “key forces”, differ by industry. If the forces based on underlying determinants change, then also the composition of the collective strengths and hence “key forces” may change. Changes in forces can be induced by industry incumbents themselves, new entrants, external parties, suppliers and/or buyers.

Porter’s strategic options for companies implicate that companies may change the forces themselves and are for defensive reasons encouraged to do so. Examples given are product differentiation, capital investments and vertical integration. Accordingly, depending on scope of decisions, strategies of competing companies and positions suitable to them are changing as well. As indicated by Mintzberg and Westley (1992) and depicted in Figure 1 changing positions are related to the conceptual level of an organizations’ strategy. If companies differentiate their formerly uniform products even visions of competitors might be affected, since the product category might demand a complete different business unit strategy (Romanelli and Tushman, 1985). Thus we can assume that shifts in forces may trigger radical change.

If buyers or suppliers alter the determinants that make them powerful, then they may change profitability of an industry, which can be the case, most obviously derivable from Porter (1980), by raising the industry concentration rate. Externally induced changes of forces can be altered governmental policy, which Porter relates in particular to the threat of potential entrants that may raise due to deregulation of industries, changes in environmental and safety policy. Thus, if forces outside the own rivalry change then it is most likely that this will impact the industry and positions within it and strategic options open to companies.
Special attention deserves the threat of potential entrants and substitution, because of the same (destructive) impact (Slater and Olson, 2002) and their characteristic of being “the most formidable but least recognizable competitive threat” (Peteraf and Bergen, 2003). Barriers to entry are often set by incumbent companies to answer the threat of potential entrants into their industry by preserving their advantage, in terms of deterring physical entrance and disable innovations by newcomers (Han et al, 2001). According to Han et al. (2001) the view on barriers to entry as value creating needs some reconsideration. They argue, that companies “look to barriers as a safeguard against entry, a prolonged overreliance on these structures may cultivate unwillingness or inability to engage in innovations”. Consequently this non-innovative behavior invites new entrants, either because of their advantage in innovativeness or due to the possession of other strengths7, which in turn lower incumbents’ performance. In their empirical study among Korean consumer product firms they found the barriers switching costs, capital requirements and distribution access to be ineffectual, whereas cost advantages and proprietary assets have been found to be effective barriers. Continual innovations in order to “sustain an installed customer base”, and in the mid term as well continuous as discontinuous innovations, are managerial implications to secure an advantageous place in competition. This innovative behavior should be backed up by a “market-oriented culture [...] driven by customer and competitor focus” in order to adjust a companies strategy continuously towards changes in their competitive environment and by emphasis on effective barriers, such as patents, brand names (Han al, 2001). It seems obvious that there appears to be a strong link between barriers that companies set, organizational inertia as cause for radical changes and the limiting impact of the dominant logic (Bettis and Prahalad, 1986; 1995).

Competitive forces are to a large part responsible for profitability of an industry, its risk potential, positions open to companies and strategies viable for them; this is undisputed in modern management research. If these forces change, profitability, risk, positions and strategies are challenged, dependent on the magnitude of change. We can assume that changing forces are both cause and consequence for/of a changing environment. The composition of the “collective strengths” of forces depends on the context and might also be subject to change; hence industry specific “key-forces” may change as well. Special attention in turbulent times deserve “the threat of new entrants” and “substitution” since they bear risk, which is difficult to predict. Both forces have a strong relation to innovation as substitute products and new market entrants might be innovators.

Table 4   Competitive Forces and Transition

<table>
<thead>
<tr>
<th>Transition affects</th>
<th>Profitability, Risk, Position and Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause(s) of transition</td>
<td>Changes in competitive forces</td>
</tr>
<tr>
<td>Consequence(s) of transition</td>
<td>Changes in competitive forces</td>
</tr>
<tr>
<td>Barriers set by companies hamper their adaptation</td>
<td>The importance of a single force may switch</td>
</tr>
<tr>
<td>Focus on all competitive forces</td>
<td>Pay special attention “substitution” and “new entrance”</td>
</tr>
<tr>
<td>Innovate continuously</td>
<td></td>
</tr>
</tbody>
</table>

7 “Other strengths” relate to what Porter (1980) calls “size independent advantages” (c.f. Figure 5).
4.5 Theoretical Aspects of Supply Chain Management

Recognized by scholars (e.g. Boehlje, 1999) as a major change in the agri-food industry is the evolvement of the perspective of supply chains and subsequently supply chain management. A supply chain is defined as “a series of (physical and decision making) activities connected by material and information flows and associated flows of money and property rights that cross organizational boundaries” (Van der Vorst et al, 2005). Subsequently Supply Chain Management is the alignment of these activities. Expectations regarding the supply chain approach are gains in efficiency, quality management and control, risk reduction and quick responses to changes in consumers’ demand for food attributes (Boehlje, 1999). As a consequence of that integrative alignment of initial suppliers towards final consumers, not economic entities as such but different supply chains are competing with each other (Lambert and Cooper, 2000) for their share of the consumer’s food expenditures” (Boehlje, 1999). Several domains thus such as investment decisions, location, technology, processing and distribution systems are affected due to their interdependence within a supply chain (Boehlje, 1999). This “management of multiple relationships across the supply chain” (Lambert and Cooper, 2000) does not necessarily require vertical integration or common ownership (Ziggers, 1998). Instead it is a question of coordinating product and information flows smoothly.

Supply Chain Management aims to add value for consumers and other stakeholders (Lambert and Cooper, 2000) and is so committed to generate higher returns and to reach a competitive advantage for the supply chain and its members. Furthermore well executed management of the supply chain is said to improve the market orientation of a company due to improved customer responsiveness (Martin and Grbac, 2003). Members of a supply chain are embedded in a network of relations with suppliers and customers to different degrees. Non integration of a supply chain leads according to Lambert and Cooper (2000) to “much friction and thus waste of valuable resources”. Dependent on the product, availability of raw materials, suppliers and customers the design for every supply chain looks different. However Lambert and Cooper (2000) identified three elements that are part of every supply chain which has been augmented by van der Vorst et al (2005) and is shown in Figure 7. Related elements are briefly introduced below starting with the three elements originally identified by Lambert and Cooper (2000).

The Supply Chain Network Structure defines the members of a particular supply chain into primary and supporting members and presents a structural framework of the dimensions horizontal structure, vertical structure and horizontal positions, which contribute as describing and analyzing tool to design and analysis of supply chains. From perspective of an individual company (as well from an outside perspective) members of a supply chain may be identified, dependent on the network structure, with which “continuous information flow” should improve the product flow. Thereby Supply Chain Business Processes have been identified as subjects of integration. These processes are customer relationship management, Customer service management, Demand management, Order fulfillment, Manufacturing flow management, Procurement, Product development and commercialization and returns. Goal of all these processes is to manage the fulfillment of customer needs best without losses due to inefficiency. Which process has to be managed in which way and with which intensity depends thereby on the context and is among others a matter of allocating scarce resources.

For food supply chains Supply Chain Management has additionally gained importance for the sake of enhancing food safety due to a number of especially animal disease crises in the recent past (Van der Vorst et al, 2005).
Lambert and Cooper distinguish between four types of process links describing the level of integration, which are managed process links, monitored process links, not-managed process links and non-member process links.

Figure 6 Framework for chain/network development

The Management Components of Supply Chain Management describe the managerial methods and structures of a chain and network, which are used to organize the processes. Roughly it can be distinguished between physical and technical management components on the one hand side and managerial and behavioral components on the other hand side. According to Lambert and Cooper are in particular those components that relate to management and behavior, such as governance, risk and reward structure and culture and attitude, often underestimated. However, since each link has another purpose and determinants also the management components of interest and application should have. Van der Vorst et al. (2005) have added another element to the SCM framework which are Chain Resources “that are used to produce the product and deliver it to the customer”. Human, physical and virtual tools can be underlying resources that coordinate information and subsequently products. For example the usage of Information and Communication Technology (ICT) is thereby a crucial tool to coordinate information flows and provide as a whole an information infrastructure.

4.5.1 Supply Chain Management and transition

Goal of SCM is to avoid inefficiencies when the right products have to be delivered in the right time to the right place in the right quality. Searching for efficiencies is according to Roberts (2004) what companies do in turbulent phases. In order to become more efficient information sharing plays a decisive role in aligning processes. Additional effect can be an increase in responsiveness towards customers and competitors (Martin and Grbac, 2003).

9 “FSCN” as mentioned in Figure 6 means Food Supply Chain Network
As discussed in previous chapters, customers and suppliers are both parties that can cause changes and can be affected by changes of another layer in the chain alike. All the theoretical aspects that search for competitive advantages, discussed in the sections above, implicate that change could be mastered by scanning the external environment better and put special emphasis on current and potential customers to learn from them. Supply Chain management offers tools to align information flows.

### Table 5 Supply Chain Management and transition

<table>
<thead>
<tr>
<th>Transition affects</th>
<th>Linkages in a supply chain and their management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause(s) of transition</td>
<td>Inefficiencies in organizing supply chain activities</td>
</tr>
<tr>
<td>Consequence(s) of transition</td>
<td>Information sharing is more important</td>
</tr>
<tr>
<td>Managerial implication(s)</td>
<td>Share information with customers and suppliers</td>
</tr>
</tbody>
</table>

### 4.6 Theoretical Aspects of Vertical Coordination

Vertical coordination is not directly related to Supply Chain Management with its holistic chain and network view, but to the organization and governance of business activities and relations between business entities in a chain from producer to processor. An important decision companies’ facing thereby is the “make or buy” decision, which should be carried out effectively (Harrigan, 1985). Vertical Coordination can have many faces and should seek for effective organization of vertical relations. (Harrigan, 1985; Roberts, 2004). Vertical disintegration can be a result of the search for efficiencies and is thereby understood to be the turn from a former “make decision” towards a “buy decision”. Roberts (2004) gives a number of reasons for this, which basically have in common that a company comes to realize that it is more efficient to focus on the core business, which will be the business where it is good at.

A large body of research on vertical coordination has been carried out in the last 15 years with respect to the US agri-food industry (e.g. Royers and Rogers, 1998) eventually concluding that the US food system has gone through a period of vertical alignment. In the recent past questions of vertical coordination have become more and more subject to European agri-food systems as well. Following different degrees vertical integration will be introduced briefly.

In a rough categorization, the possibilities of vertical coordination range from arm-length transactions, via contractual agreements, to vertical integration, which has joint ownership as the most far reaching form. Paying attention to the pork processing industry Schulze et al. (2006) present a framework that shows the common options in Europe to coordinate business relations vertically in relation to the pork chain.

Figure 7 shows on its left pole the least integrated form of coordination referred to as spot market. Spot market agreements can be short term contracts underlying common contract law and do not bind suppliers and buyers for multiple transactions. Long term relations though have a binding nature, being rather informal they limit the scope of transaction partners. Marketing contracts regulate buying and selling transactions between buyers and sellers towards obligations. This might go along with a shift in price risk from seller to buyer (Schulze et al., 2006). In production contracting the control of the buyers may rise since beyond agreements subject to a marketing contract, conditions of the production process
may be determined. In contract farming the economic entities still keep their autonomy, but beyond production contracting the contracts might be longer and more regulating. Centralized decision structures become usual and might organize the entire flow of farm inputs. Vertical integration is the most binding coordinative measurement since it is defined as joint ownership, which can mean either the buyer or the seller being the owner of formerly legally independent entities.

![Vertical coordination of meat supply chains](image)

Source: Schulze et al. (2006)

### 4.6.1 Vertical Coordination and Transition

Vertical integration and measures to coordinate vertical relationships in a value chain determine the boundaries of the firm and are subject to changes of competitive circumstances. Vertical Integration and the inherent “make or buy decision” depends on the circumstances and should be regarded in the light of efficiency (Harrigan, 1985; Roberts, 2004). Modification of the industry structure due to industry evolution is thereby an important reason (Vong Srivastana and Finger, 2005) for changes in efficiency. This can implicate for a company in one situation to make an input into the production process themselves, respectively to incorporate an activity downstream the value chain and in another situation it can be more effective to buy the same product or activity. In recent years successful companies exemplified the concept of disintegration, where owned layers of the value chain have be disposed, whereas the business relation continue mostly as long term (contractual) relation (Roberts, 2004). Beyond integration or disintegration there might be situational reasons to re-integrate (Vong Srivastana and Finger, 2005).

<table>
<thead>
<tr>
<th>Transition affects</th>
<th>Vertical Coordination and Transition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause(s) of transition</td>
<td>Boundaries of the firm</td>
</tr>
<tr>
<td>Consequence(s) of transition</td>
<td>Inefficiencies due to existing boundaries</td>
</tr>
<tr>
<td>Managerial implication(s)</td>
<td>Vertical integration or disintegration (or re-integration)</td>
</tr>
<tr>
<td></td>
<td>Consider efficiencies of current organization of your transactions</td>
</tr>
</tbody>
</table>

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4.7 Theoretical Framework “An industry in transition”

Summarizing chapter 4 Figure 8 presents the theoretical framework “An industry in transition”. The theoretical views and aspects, which have been introduced and discussed regarding its impact for change, have been converged in the Figure 8.

The ovals in the figure contain the managerial issues in an industry in transition that have resulted from the discussion of the theories. The arrows from the ovals directed towards the center indicate causes for an industry of transition. The arrows directed from the center towards the bubbles indicate consequences of transition for companies with respect to that particular issue.

If we take the oval of “Organizational Learning and Strategy Formulation” as an example then first of all it needs to be stated that we find this strategic construct related to an industry in transition in two dimensions, i.e. both as cause and as consequence. If an industry is in transition this might be caused by organizational inertia as described in chapters 4.1.2 and 4.1.3. Consequence for “Organizational Learning and Strategy Formulation” in turn is that the execution of this part of managerial action will be emergent and inductive in case of an industry being in transition.

If we want to answer research question 1.1 (What does it mean for an industry to be in transition?) we can now say that strategic orientations as depicted in Figure 1 are affected. Challenges that companies face, when their industry is in transition as asked by research question 1.2, are in particular to cope with increased uncertainty. Their resource endowment, profitability, risk, positions and strategies, the boundaries of the company and the way they
used to learn and develop their strategies will no longer be as before. Realizing the hidden threats, such as substitutes and new entrants possibly approaching the industry with disruptive innovations, is another major challenge companies are facing. To do so managers need to know, that their view on the business might not represent reality anymore. Their dominant logic (Bettis and Prahalad, 1986; 1995) moves away from equilibrium, where it has been maybe for a long time. Thus realizing which particular changes are taking place in their industry and what this means for the individual company, and how consequently their view should be adjusted to the new situation, possibly by unlearning, is a the major challenge for companies in industries in transition.

4.8 Conclusion of chapter 4

From the theoretical perspective shown in this chapter we have learned, that when an industry is in transition:

- the current resources may not be longer appropriate, since their sustainability might be affected
- the process of organizational learning and strategy formulation needs adjustment, moving towards formal planning and deduction, while enlarging the threat perception
- the boundaries of the firm may have to shift, either towards integration or towards disintegration (reintegration might be the case as well)
- the supply chain relationship may need to be changed, particularly in terms of information sharing
- as profitability has gone down the current strategy needs revision, especially since competitive forces may have changed
- other innovation strategies have to be adopted, since transition may have been triggered by disruptive innovations
5 Methodology

Having developed the theoretical framework in chapter 4 we have decided to introduce the industry of interest in depth before two case studies will be executed, described and analyzed in this report. In general terms this procedure appears to be appropriate since the research design as well as the theoretical framework as depicted in figure 8 investigates a relationship between the business environment and the company with special regard to transition.

5.1 Industry Analysis

The industry analysis in chapter 6 introduces the developments in the pork processing industry within the last 15 years and presents the content of the transition in that industry. Frameworks of competitive forces, in particular Slater and Olson (2002), and Supply Chain Management are used to structure and guide the analysis. Down the chapter the analysis zooms into the industry. This perspective and relevant sources to employ have been identified in initial interviews as presented in section 5.6. Sources that have been used for the analysis are:

- Scientific literature on the agri-food industry
- Industry-Reports prepared by the LEI
- Presentations by research institutes
- Statistical databases such as FAOSTAT and Eurostat (presentation of macroeconomic information; i.e. global and European production and trade flows)
- The internet database of “Lebensmittelzeitung” for industry and company information
- Reports by the commercial market research agency Gira
- Data provided by Planet Retail
- Information provided by PVE

5.2 General Research Strategy

As a suitable research strategy the conduction of a case study has been identified. The case study is understood to be a research strategy and often related to qualitative research in a wrong way (Yin, 2003). Both elements, quantitative and qualitative, can be part of a case study. “The case study is preferred in examining contemporary events, but when the relevant behaviours cannot be manipulated” (Yin, 2003).

The goal of that research is to gain strategic insights into the agro-food industry with special regard to the pork processing sub-sector. Empirical evidence should assist in developing a reliable conceptual framework. As a preliminary stage the theoretical framework will be refined in that case study.

A case study seems to be appropriate because the phenomena we are coping with are contemporary events, behaviours cannot be manipulated and we approach to answer various “how”- questions that need to get deep strategic insight into actors in an industry.

The ways the case studies are going to be conducted in this research are referring to the procedure as it is suggested by Yin (2003) since his work is focussed on a proper procedure by appreciating the use of theories as much as possible from the beginning onwards. Differently Eisenhardt (1989) is aiming at the “building of theories from case study research”. Thus the procedure suggested takes existing theories at a later stage of the
research into account. She describes a differentiated and clear way of finding the cases, gather data and compare them constantly with fitting theory until a new theory has been developed. The process however appears to be difficult to presume because the fit between data and theory cannot be planned at this time.

As suggested by Yin (2003) a feedback loop is established at the end, by answering question 4 (“What are the practical opportunities and limitations of applying the theoretical framework?”) in order to evaluate the appropriateness of the selected theory.

### 5.3 Specific Research Strategy

A case study selection procedure does not follow the pattern of a sample determination as it is done within other research strategies. It is formally not the goal to present a sample of a population (Yin, 2003).

To make the research insightful and robust (Yin, 2003) we have decided for a *multiple case study* design since different factors have been identified earlier (i.e. chapter 2), which trigger change in companies of interest. The impact might be different between several cases.

We have decided to implement a *multiple case study* of the holistic kind because we aim to do our analysis on a rather global level. This approach appears to be more appropriate to serve the objective of this research, bearing in mind that we aim for a conceptualization of change and underlying factors in the agro-food industry with special regard to the pork processing industry in North Western Europe. In contrast to the holistic multiple case study there is the embedded multiple case study which searches for deeper insights into the units embedded in the cases. Thus, we want to describe and analyse actions and mindsets of the cases as a whole instead of going deeper into more particular units of the companies, which could be single divisions or business operations.

### 5.4 Case Study Selection

For the sake of meeting our research objective and answering subsequent research questions properly we need to define criteria for selecting the cases. According to Yin (2003) we can add validity to our research while making sure, that we have a few similarities within our sample. Reliability will be added while guaranteeing some dissimilarity within the cases.

**Criteria for Similarities**

- **The cases need to face change as it is understood in this research**

  This research assumes that the pork processing industry is in a situation of transition. Transition thereby is understood to be the impact amended industry factors have on the strategies of companies. As parts of the research unit the selected cases should fulfil this criteria.

- **The cases need to be outstanding in the way they counter transition in their environment**

  In order to learn more about the industry – company relation regarding strategic change we want to select cases that have taken above average courses of corporate development within the last 4 years. This relates in particular to developments in scale (and scope) within that period of time regarding the North-Western European market for pork meat. However
due to increasing linkages of product flow also developments in other parts of Europe will be considered for this selection. In order to make this criterion operational the input from the expert interviews will influence the selection.

- The cases need to have grown cross borders.

Globalization has been identified as a major factor for change in chapter 2. Thus, cases that we will analyse in this research need to be active parts of a globalised economy. As an addition to the previous criterion this means that the growth in scale (and scope) should have been executed cross borderlines. In the meat business there are not yet multinational companies doing business as typical in other industries. So at least investments in other than the home country are required from the cases.

### 5.5 The cases

Two cases have been identified that fulfil the requirement and are assumed to be appropriate to answer the questions. In order to guarantee external validity the selection follows the replication logic as it underlies also experimental designs (Yin, 2003).

Both cases have been selected following literal replication logic. According to Yin (2003) literal replication logic is understood to “predict similar results”. Vion Food Group and Smithfield Foods are distinguished actors in the European Pork Processing sector. Both companies do have in common that they are facing the same competitive environment. However, some differences might remain since their emphasis might be in different countries. But assuming the European market as the market where they are acting the differences should disappear.

#### Introduction of the cases

**Case 1: Vion Food Group**

The Vion Food Group has been established since 2002. By initiative of a Southern Dutch farmers union (ZLTO) large Dutch as well as German pork slaughter and processing companies have been put together and added to the portfolio of a successful processor of animal residues as the earlier investment of ZLTO.

The emergence of Vion Food Group as one of the largest pork processing companies seems to be influenced by radical changes in the environment of that industry. The case of consolidation of several European companies makes us assuming that we could speak (at least partly) of reorientation since several members of that conglomerate have been cooperatives before and core values seem to be affected in the process of becoming limited. Vion Food Group is an outstanding example of recent change in the industry of interest. Therefore we might get a better understanding of change in the agro food industry by studying the company in depth, including interviews with its executive management.

**Case 2: Smithfield Foods**

Coming from the US and looking back to more than 25 years of successful domestic growth towards the world’s largest producer and processor of pork meat Smithfield Foods has entered the European market by the end of the 1990’s. The stock listed American company distinguishes itself from its national and international competitions by its size and its business strategy of vertical integration. None of the large players in the European market pursues this
approach as Smithfield does. After their first acquisition in Europe in 1998, which has been in France, numerous acquisitions have followed applying the same business approach as in the US. This makes us understand Smithfield's most recent investments better. Buying the European meat activities of Sara Lee, incorporating high level brands, and planning to invest 800 million US$ into pork production in Romania makes sense when having an integrated approach.

Since globalization has been identified as a major factor of impact triggering organizational changes, Smithfield's activities in Europe (~5% market share) deserve deeper investigation in order to conclude for further strategic developments among European pork processing companies.
5.6 Data Collection

During the case study qualitative and quantitative methods have been employed. Sources thereby have been:

- Annual reports of the investigated companies (and partly of their predecessors)
- Press releases and additional descriptive information displayed on the corporate as well as on official websites of subsidies
- Interviews with companies representatives at management level
- Interviews with various industry experts
- Information sources if the LEI and Wageningen University
- Supplementary internet resources for company and industry information, specifically the internet database of “Lebensmittelzeitung”, a German food industry magazine, has been frequently used

According to Yin (2003) generally interviews are “one of the most important sources of case study information”. As he puts it the unique strengths of using interviews to generate information for case studies are to be targeted, since only focused on the case study topic, and insightful, because information is procured deductively to conclusions (Yin 2003). Researchers that have used case studies as their research strategy frequently and have furthermore theorized about it, as Eisenhardt (1989), emphasize the usefulness of qualitative data, as they are generated in interviews, because they reveal causes, consequences and the rationale behind.

In our research interviews have been used to capture the background by interviewing various industry experts. Interviewing experts has been executed in a consecutive manner. In order to be efficient as possible initial interviews have been held with experts of the LEI due to their immediate accessibility and their expertise. These initial interviews have led to a quick overview of the industry and its development, its stakeholders and key players. These experts have been mainly:

  a. Robert Hoste (senior researcher for pork production and markets)
  b. Gé Backus (head of animal research group)

After these initial interviews and an intensive desk research, which was definitely simplified by these initial interviews and respective follow-ups, we held further interviews with industry experts often by the medium of the LEI. The advantage of the first interviews was that these interviews could be more structured and questions were more concrete. The interviewees came from universities, related third parties of the industry or have been active in the industry in managerial positions.

The procedure beforehand the interviews has always been the same and was as follows:

  1. A first contact and interview request was made by phone
  2. Following up a standardized introduction into the topic and desired questions have been sent by mail
  3. Together with that formalized introduction an appointment was requested
  4. Having agreed on a date for an interview we have confirmed the appointment
  5. 1 days before the interview we have given a reminding call

The interviews have always been executed with two interviewers, in order to capture verbal and non verbal communication better. All expert interviews have been of high importance for
the industry analysis (i.e. chapter 6) and for the development of a guideline for the case study interviews. Experts that have been interviewed were:

a. Onno-Frank van Bekkum (Nyenrode University, Netherlands)
   • A researcher who is specialized in cooperatives and has been working with European meat cooperatives in the past
b. Albert Vernooij (Food and Agribusiness Research Group, Rabobank)
   • An experienced researcher and market analyst specialized in the pork industry
c. Herman de Boon (Chairman of Nederlandse Verbond van de Groothandel)
   • An expert on agribusiness with huge management and board experience for instance as CEO of the Dutch cooperative Cebeco, of which the pork slaughter and processing activities are nowadays integrated into Vion Food Group
d. Leo den Hartog (R&D director of Nutreco)
   • An expert on agribusiness, in particular animal protein industry, with a technical and commercial perspective; in charge of the Nutreco’s pig breeding R&D centre
e. Frans Stortelder (managing director of the management consultancy EMAplus)
   • An expert on agribusiness with special regard to pork processing industry; as former CEO of Dumeco he has experienced the takeover of this company

It should be mentioned here that in the course of a parallel research project on developments of the dairy industry, we have been co-interviewing, which has provided additional information on the food and agro-business industry. These interviewees were:

a. Goedhart Westers (Food and Agribusiness Research Group, Rabobank; dairy specialist)
b. Andre Olijslager (former CEO of Friesland Foods)
c. Heinrich Schute (industry account manager, Nordmilch)

Having collected a huge set of valuable information, we could process it to the industry analysis in chapter 6. Furthermore did these interviews enable us to set up a guideline for our case study interviews.

For the case study interviews we have intended to interview at least one representative of each company, which should have insight into strategies pursued in Europe. For this sake we were aiming at a representative who is well established in a leading position of the companies’ management. We have approached the interviewees via contacts established by the LEI and Wageningen University. In the case of Vion Food Group this showed up as relatively easy because of reliable relationships. In the case of Smithfield it appeared to be more difficult, since there is not a centralized management team for Europe yet. This was the reason why we decided to interview a management representative from one of Smithfield’s oldest subsidy in Europe, which is Animex in Poland.

In the case of Vion we have interviewed Paul Jansen, who is Director Agribusiness at Vion.

In the case of Smithfield we have interviewed Andre Pawlczak, who serves as Director Public Relations for Animex.
### 5.7 Analysis Plan

Starting from different theoretical perspectives on management and derived implications on transition, we have developed a structure for describing the cases in accordance with the theoretical framework. The items in the theoretical framework thereby represent the categories for our case descriptions. Based on the theories that have lead to the framework we have developed a set of questions / criteria that need to be answered in the case studies. Therefore the structure of our cases will be as follows:

1. **Corporate Background**
   As an introduction into each case the history will be described. Special attention will be paid to recent developments, which are basically the changes as required by the case selection criteria (cf. chapter 5.3).

2. **Profitability, Risk, Positions and Strategies**
   - **Profitability:** To give an overview of the profitability of the cases we decided to present the turnover, the net income, the **Return on Assets (ROA)** as a measure for profitability relative to assets (Ross et al., 2004) and the **net profit margin**, as a profitability measure indicating pricing and cost management (Ross et al., 2004).
   - **Risk:** By answering the question “What do companies perceive as risks affecting their business?” we will learn how broad companies scan their environment and which actions are linked to their perceived risk.
   - **Positions:** Porter (1980) separates market positions for companies into four basic positioning strategies (cf. figure 9). According to that scheme we want to classify the positions of our cases in their competitive environment.

   ![Generic Strategies (Porter, 1980)](image)

   - **Strategies:** This sections answers for each case the question: How do companies employ their resources to take advantage of industry specific forces (as introduced in chapter 5) in offensive and defensive ways?
3. Resources

The third section of the case studies answers the question: “Which resources do companies own?”. Derived from the process of framework building we have identified 5 domains of resources that are central to companies in a transitional environment (cf. Slater and Olson, 2002; Kraatz and Zajac, 2001; Brown and Eisenhardt, 1997). The fields of resources are:

- Reputation
- Relationships
- Specialized knowledge
- New Product Development (NPD) Experience

While doing the expert interviews we found a fifth resource that has the ability to provide a competitive advantage to a company, which is the source of financing.

4. Innovation

Questions to be answered in this section are:

- What type of innovation is observable in the cases (product versus process; sustained versus disruptive)?
- How do companies look at demand and their customer base (stable versus dynamic)?

5. Supply Chain Management

Based on the framework by Van der Vorst et al. (2005) following questions will be answered:

- Which Supply Chain Management Tools are applied in the case? How are they employed?
- Which Supply Chain Business Processes are of importance in the case?
- What management structures are used in each process link?
- What is the character of the network?

6. Boundaries of the firm

Based on the indications by Roberts (2004) questions to be answered in this section are:

- Have there been vertical mergers?
- Have there been outsourcing activities?
- Is the company of interest involved in Joint Ventures?
- Are projects executed in vertical collaboration?

7. Organizational Learning and Strategy Formulation

In this section we will ask questions that help us estimating the magnitude of change based on the work carried out by Mintzberg and Westley (1992). Furthermore it will reveal important strategic factors that have been of importance in the cases. Our questions are:

- Are there long term orientations regarding vision, positions, programs and facilities?
- And how have these orientations developed throughout the last years?
6 Industry Analysis

This chapter aims to give an overview on the pork processing industry in Europe. Since it is goal of this research to conceptualize change in an interactive linkage between industry evolution and firm-level strategy special attention is paid to changes in the industry and subsequently related re-action of companies in that industry. Recent consolidation in North-Western Europe has peaked in the foundation of Dutch based Vion Food Group, which is a conglomerate of Dutch and German slaughter and meat processing companies nowadays accounts for the second largest number of slaughters on a European level (Spiller et al, 2005).

For the composition of developments a time frame of about 6 years (1999 – 2005/2006) is set, whereas we have decided to take a longer term perspective (ca. the last 15 years) on production and trade developments in order to get rid of short term fluctuations. The data collected do mostly not refer to the same timeframes, which has to do with data availability.

This analysis of the industry is structured by taking two theoretical market-based approaches, which are an augmented model of Porter’s initial five force approach by Slater and Olson (2002) and relatively recent emerged Supply Chain Management.

This industry analysis has been carried out in parallel to the development of the conceptual framework as presented in chapter 4 and has as such not been structured accordingly.

Whereas Slater and Olson (2002) based on Porter (1980) regard defending against and usage of five forces within an industry structure as source of competitive advantages; the chain approach focuses on the interrelationships and interdependencies of various actors in an alignment of business processes seen as chain (Lambert and Cooper, 2000). Source for competitive advantage then is the composition and execution of Supply Chain Business Processes, Management Components and Network Structures in an efficient way.

In our analysis we will make use of the perspective of a supply chain, which is in this case the pork supply chain. In single stages of the chain we will zoom into by using parts of Slater and Olson’s model to analyze industries, often referred to as competitive Forces.

The chapter starts with a definition of the market of analysis in subchapter 6.1. Chapter 6.2 until 6.4 present developments in pork production starting from global production and trade (chapter 6.2) and comes via a description of relevant data and environmental factors on the EU level towards a description of current developments of companies. Issues of interest regarding suppliers (chapter 6.5) and customers (chapter 6.6) are presented and discussed afterwards. As mentioned above the supply chain management perspective is taken in subchapter 6.7, describing developments of supply chain alignment in the pork processing industry.

According to the structure of the model by Slater and Olson (2002) the subchapters 6.8 and 6.9 relate to competition within the industry with special regard to innovations and complementarities (chapter 6.9) of products and processes.

Subchapter 6.10 has concluding character and indicates strategies that companies employ often in order to react on environmental forces that are described in the whole chapter.

This chapter answers research question 2 (“Which are the environmental forces influencing the ago-food industry with special regard to the pork processing sector?”) and contributes to the development of the conceptual framework by showing trends in our particular industry and companies reactions.
6.1 Defining the market

As recommended by Slater and Olson (2002) an industry analysis should start with a definition of the market, since industry in their view is defined as groups of actors serving the same market. The industry under investigation in this research is a group of companies that satisfy consumers’ demand of pork meat in Europe.

Figure 10 The Supply Chain of Pork Meat

In the analysis of the industry we focus on pig meat on its way from the farm to the final consumer. Special attention will be paid to the product flows which are presented as bold arrows in Figure 10.

This definition of the market is rather rough, but considered to be necessary to keep a strategic perspective. Particularities of distribution channels and consumers within and between European countries will be discussed throughout this chapter.
6.2 Market Turbulence and Growth on a global level

6.2.1 Global pork production

A look to the worldwide production volume of pork reveals a significant increase during the last 15 years. From 1990, when global production accounted for about 70 million t of pig meat, production has increased to more than 102 million t in 2005 (table 7). This increase accounts for more than 30% and is heavily influenced by the large increase in production by China that produced in 2005 more than twice as much pig meat as they did in 1990. As extractable from Table 1 most countries in the Top-10 ranking have lost shares in world production (in terms of percentages of global production) such as USA, Germany, France, Poland, Netherlands and Italy comparing the years of interest or they’ve gained share like Denmark, Canada, Vietnam and Spain did.

Table 7 Production and world market share of the ten largest pig producing countries worldwide

<table>
<thead>
<tr>
<th>Country</th>
<th>1990 Production (in 1000 t)</th>
<th>Percentage of global production</th>
<th>Country</th>
<th>2005 Production (in 1000 t)</th>
<th>Percentage of global production</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>24.015</td>
<td>34.37</td>
<td>China</td>
<td>50.094</td>
<td>48.86</td>
</tr>
<tr>
<td>USA</td>
<td>6.964</td>
<td>9.97</td>
<td>USA</td>
<td>9.401</td>
<td>9.17</td>
</tr>
<tr>
<td>USSR</td>
<td>6.653</td>
<td>9.52</td>
<td>Germany</td>
<td>4.505</td>
<td>4.39</td>
</tr>
<tr>
<td>Germany</td>
<td>4.456</td>
<td>6.38</td>
<td>Spain</td>
<td>3.310</td>
<td>3.23</td>
</tr>
<tr>
<td>Poland</td>
<td>1.854</td>
<td>2.65</td>
<td>Brazil</td>
<td>3.110</td>
<td>3.03</td>
</tr>
<tr>
<td>Spain</td>
<td>1.788</td>
<td>2.56</td>
<td>France</td>
<td>2.257</td>
<td>2.20</td>
</tr>
<tr>
<td>France</td>
<td>1.726</td>
<td>2.47</td>
<td>Viet Nam</td>
<td>2.100</td>
<td>2.05</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.661</td>
<td>2.38</td>
<td>Canada</td>
<td>1.960</td>
<td>1.91</td>
</tr>
<tr>
<td>Japan</td>
<td>1.555</td>
<td>2.23</td>
<td>Poland</td>
<td>1.923</td>
<td>1.88</td>
</tr>
<tr>
<td>Italy</td>
<td>1.333</td>
<td>1.91</td>
<td>Denmark</td>
<td>1.800</td>
<td>1.76</td>
</tr>
<tr>
<td>Total</td>
<td>69.873</td>
<td>74.44</td>
<td>Total</td>
<td>102.523</td>
<td>78.44</td>
</tr>
</tbody>
</table>

Source: own compilation based on FAOSTAT (2006)

A study of USDA expects a further expansion of global production and predicts increases in particular for China, Brazil and Canada. According to the same study global demand is expected to grow up to 110 million t in 2010. From Table 7 we can conclude that global production is shifting. China is gaining shares in world production tremendously, whereas Europe’s share of global production has fallen from 25% in 1992 to 21% (FAOSTAT) in 2005. Remarkable here in terms of increase of total production appear Brazil and Vietnam, which has almost tripled their pork production during the period under consideration and appear newly in this ranking, together with Brazil.

Trading volumes of pork have increased during the last twenty years. In 2005 the major exporters have been the EU (25), US, Canada and Brazil (USDA, 2005). On the opposite are the importing countries lead by Japan and followed by Russia and Mexico. As indicated above China is by far the most important actor in the world market in terms of production. Hence, trade can be assumed to be important as well. Currently China is a net
exporting country but is expected to become a net importer by the end of the current decade (Rabobank, 2006).
Comparing 1990 with 2005 it strikes that in terms of shares of global exports the EU has almost halved its share, nowadays accounting for 29% compared to 53% in 1990. The US and Canada have massively increased their shares in world exports and Brazil has increased in the period of comparison from 1% up to 14%.
Analysts point to the importance of international trade using US as an example. US exports in 2005 valued with more than 2 billion $, accounted for more than 1 million t of meat and represented 12% of domestic production. Importing 450,000 t of pig meat on the other hand side makes analysts concluding that US meat industry is taking advantage of trade to “maximize the value of the carcass” (Rabobank, 2006).

6.3 Market Turbulence and Growth on a European level

6.3.1 Pork production in the EU

In the period under review the total production of pig meat in those countries that are members of the EU-25 has risen by 15 % from 18.3mln tones in 1992 towards 21.6mln tones in 2005.
The distribution of production in Europe during the last twenty years shows a strong position for Germany in terms of total production and share of total European production. Noteworthy is the strong increase of production in Spain, which has risen from 2 to 3.3 million t, increasing its share of European production by more than 4%.

Table 8 Production and world market share of the ten largest pig producing countries in Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>1992</th>
<th>Country</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Percentage of EU-</td>
<td>Production</td>
</tr>
<tr>
<td></td>
<td>(in 1000 t)</td>
<td>production</td>
<td>(in 1000 t)</td>
</tr>
<tr>
<td>Germany</td>
<td>3.584</td>
<td>19.57</td>
<td>4.505</td>
</tr>
<tr>
<td>Poland</td>
<td>2.035</td>
<td>11.11</td>
<td>3.310</td>
</tr>
<tr>
<td>Spain</td>
<td>1.917</td>
<td>10.47</td>
<td>2.257</td>
</tr>
<tr>
<td>France</td>
<td>1.903</td>
<td>10.39</td>
<td>1.923</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.585</td>
<td>8.65</td>
<td>1.800</td>
</tr>
<tr>
<td>Denmark</td>
<td>1.369</td>
<td>7.48</td>
<td>1.550</td>
</tr>
<tr>
<td>Italy</td>
<td>1.341</td>
<td>7.32</td>
<td>1.299</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.002</td>
<td>5.47</td>
<td>1.100</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>834</td>
<td>4.56</td>
<td>704</td>
</tr>
<tr>
<td>Hungary</td>
<td>764</td>
<td>4.17</td>
<td>654</td>
</tr>
<tr>
<td>Total</td>
<td>18.320</td>
<td>100</td>
<td>21.562</td>
</tr>
</tbody>
</table>

Source: own compilation based on FAOSTAT (2006)

Trade activities in countries that are belonging to the EU-25 nowadays have increased alongside with the global trend. Imports as well as exports have almost doubled during the last 20 years. Figures 11 for 1990 and 12 for 2003 compare exports and imports of major
European trading countries, arranged from left to the right according to the net-exports, which ranks inner European major export and import markets.

Figure 11  Europe’s major pig trading countries 1990

It appears obvious that the Dutch export activities have declined over the period observed which goes along with their decreased production volume. In 2003 an enormous increase in Danish, Belgian and Polish export activities is observable. A change from a net importing to a net exporting country has been made by France, which used to have net imports of 193,000 t in 1990 but due to increased production they are a net exporter in 2003 by 90,000 t. The same change has been made by Spain, which has build up export activities almost from scratch between 1990 and 2003 and is the forth largest European exporting country in 2003.

Figure 12  Europe’s major pig trading countries 2003

As net importing countries in this composition of large volume trading countries within the European Union remain Germany, UK and Italy. All three of them show tremendous
increases in their imports, whereas Germany’s exports did also increase alongside with a strong increase in production. Italy’s import activities have more than doubled and the UK shows an increase by 75%, which means that Italy is the largest importer of pig meat today within the EU-25.

Since imports of European countries mean exports of other European countries due to tariffs and EU-wide sanitary trade restrictions, the comparisons of import activities indicate the major European selling markets.

6.3.2 Future trade flow

Basically the global trade is expected to grow (Rabobank, 2006) especially due to the global increase in demand that cannot be served by domestic production. Since the direct proportional relation between increase in GDP and increase in animal protein consumption is known (Speedy, 2003), experts expect a further growing need of pig meat in a majority of Asian countries with special regard to China (Rabobank, 2006). Later in this report demand in Europe will be discussed.

The intra European trade is expected to grow by shifting eastward, since the economic growth and meat demand relation is assumed to be true also there. Especially Romania and Bulgaria continue to be net importers characterized by growing demand, but industry experts suppose particularly Romania to increase production significantly in upcoming years. Trade from EU-25 to Russia is expected to remain stable, further Russian demand though is presumed to be covered by Brazilian production. According to industry experts the Russian situation is of huge impact for Western Europe; among others Russian imports from mainly Denmark account for the current net-exporting position of the EU, which is likely to change in case of opening borders to Brazil again.

Japan has always been a strong export market for European pig meat. Especially the high export activities executed by Denmark are related to Japanese demand. In the future a change to suppliers from the US and Canada is guessed to replace some of EU-25 exports (Cookson, 2006). However, industry experts expect this change to be of slow pace, since Japanese customers are known for their loyalty.

6.3.3 Politics

The factor politics was considered as being of partial influence for strategies of pork processing companies by industry experts. However they noted the importance of policy making for determining the general conditions for competition.

The German reunification in 1990 has created the largest market within Europe and the internal market of the European Union has grown through the steady enlargement. In 1995 Sweden, Finland and Austria joined the EU and in 1994 ten countries, predominantly from central and eastern Europe, joined the EU. Except Cyprus and Malta as new members all of these countries are growing economies, causing growing meat demand. Except in Poland production has rather declined in these countries in the recent past. Nevertheless do industry experts expect a strong growth in production since land and labour is cheaper than in Western Europe and, additionally environmental restrictions are less.

Of crucial importance for the development of future global trade flows is from a European perspective the development of European market policy and trade regulations, which are partly result of negotiations within the WTO.

Currently pork meat from outside the EU is facing huge barriers to enter the market, which makes it not profitable to export to the EU.
Exemptions are made for approximately a little more than 100,000 tonnes in total (Gira, 2005), comprising several tools of European trade policy, such as interim arrangements with Bulgaria and Romania or arrangements with Africa-Caribbean-Pacific (ACP) countries. Regular duty tariffs for imports into Europe vary by different products respectively cuts. Frozen or chilled unprocessed carcasses have a rate of 0.536 €/kg, whereas the further processed products are the higher the import duties become. Putting total European production into perspective of allowed import quantities it appears obvious that these amounts are only marginal, since it accounts for 0.5% (Gira, 2005).

However industry experts emphasise the importance of the market protection for the status quo in the European pork industry. Changes of importance haven’t taken place yet but the threat of those changes impacts companies and their strategies. The reason why potential trade liberalization is seen as a threat is the cost price difference between EU member states and other countries, which is explained in detail below.

### 6.3.4 Cost price of pork production

Recently the LEI (2006) has carried out a comparison of cost prices in some European countries with the cost price for pork meat in the United States and Brazil. In this project pig shoulder without bones and rind as a typical part of the pig used for further processing has been investigated. It has no specific selling market but is distributable in many ways.

Pork tenderloin though is a luxurious part of a pig with relatively high value per unit and suitable for competition in markets, due to narrowly defined distribution channels and the high value (LEI, 2006). Calculations have been made according to costs incurred in order to process 1 kg of the related pig part and to deliver it to the German Ruhr-Region. This place has been chosen because Germany is a large pig importing country and thus a representative selling market for exporters.

![Figure 13 Cost price for selected parts of a pig in global comparison](image)

Source: LEI (2006)
It can be seen easily that the major share of the cost price for pig meat production is made up by primary production costs, which contain mainly breeding and feeding. Among all countries compared here Brazil has significantly the lowest cost price. Elements that the LEI (2006) considered to be part of primary production costs are: feeding, labor, accommodation, capital and miscellaneous. Costs for feeding thereby account for more than half of the cost price in all countries of the study; in Poland feeding expenses account for approximately 70% of the cost price.

In a composition of primary production costs in the same study can be seen that Brazil has the lowest input costs of all countries in this comparison. Feeding costs for the production of 1kg pig meat, ready to slaughter, account for approximately 0.40€ in Brazil, whereas the costs in European countries range from 0.60€ (Netherlands) to almost 1€ per kg (Poland). In the US the input costs for feed are marginal lower than in the Netherlands. Brazil has low labor costs, similar to Poland while in all other countries this factor is considered to be higher. The factor accommodation is another advantage of pork production in Brazil, whilst especially in North-Western Europe land and subsequently accommodation is expensive. In the US accommodation is presented to be higher than in Brazil, but lower than in major European countries. The factors capital and miscellaneous are considered to be equal in the countries studied. Gira (2005) additionally reports on high environmental and other legal standards that are responsible for a relatively high cost price in European countries.

Slaughter costs do not differ that much in a global comparison whereas in cutting Brazil again has lower significant lower costs per unit. Differences in slaughter and cutting costs are mainly attributed to labor costs. According to experts is this share of the cost price also the part where economies of scale could approach and reduce the costs per unit. However imports of the US and Brazil are still kept out of Europe due to import tariffs in case of the US whereas Brazil’s exports are prohibited due to sanitary reasons. It can be exerted from Figure 13 that Brazil has a comparative cost advantage towards all other countries investigated, taken tariffs and transportation to Europe into account. Taking advantage of economies of scale is an often used argument when discussing reasons for the scaling up of European pig production and processing. While regarding the cost price differences and the way the cost price is composed it appears difficult to compete with the US, but particular with production from Brazil imagining unrestricted trade.

Thus for the European industry political stability in terms of a closed market appears to be a decisive factor in global competition. Nevertheless the trend of less trade restrictions is irreversibly forecasted by all experts we have spoken with, even though nobody is able to predict how long it will take and in which steps it will be proceed. Logistics play an important role in order to bring the perishable raw product to its customer. Thus the impact of trade liberalization on the fresh meat sector is restricted by physical attributes of the products. Nonetheless impact on further processing, where meat can be used in frozen way, are more likely.
6.4 Market Turbulence and Growth on company level

This paragraph presents recent developments in the pork processing industry in Europe, which are mainly developments of concentration due to mergers and acquisitions made by a few large companies. The recent history of growth will be shown first in general, and more in detail for the Netherlands and Germany.

6.4.1 Mergers

In 2002 Danish Crown is reported (Lebensmittel Zeitung, Web database) to be by far the largest pork company in Europe covering a broad range of activities of slaughtering and further processing and thereby generating a turnover of 5.4 billion €. Around 10 other companies were considered to be the other big ones with turnovers around 1 billion € (Lebensmittel Zeitung, 31/03/05).

Since then a lot has changed and industry experts expect the trend of scaling up to go on.

Figure 14 Recent Mergers and Acquisitions in European meat industry

Source: Thiele (2005)

Three major changes are observable in the process often referred to as consolidation or concentration process, which are the entrance of the largest US pork producer and processor Smithfield into Europe by acquisitions, the formation of the Vion Food Group and European expansion of Danish Crown by acquisitions and joint ventures.
The entrance of the American market leader Smithfield into Poland by acquiring the largest Polish processor of pig meat Animex has unsettled the established competition according to what experts reported.

In 2004 the technical press reports an investment volume of Smithfield into Animex of 240 million $ up to this point of time. Additional investment in Poland has been Morliny in 2004 and an increasingly share (22.4%) of the Spanish based slaughter and processor Campofrio S.A. Additional investments have been made into Romanian industry with the acquisition of the Contim Group in 2004 and into the British (Norwich Food Company and Ridpath Pek form since 2004 the Smithfield Foods Ltd) and the French processing industry (acquisition of the pork processor Jean Caby in 2004) (Lebensmittel Zeitung, 17/12/04).

At the same time the formation of the Vion Food Group has taken place. As of July 2006 the name Vion Food group is the official name of the company which has been started as Bestmeat developed via the integration into the corporate holding Sovion into the current company. The company is considered to be strategic investment by a Dutch farmers union, comprising German as well as Dutch pork processors acquired between 2002 and 2005.

The long ago dominating Danish cooperative Danish Crown is still the largest pig slaughter and processing company in Europe. However in the year 2004 also the market leader has made some investments. With the acquisition of Oldenburger Fleischwaren Danish Crown has invested in further processing in Germany, the acquisition of the British Flagship Foods Ltd. adds approximately 1.5 billion € turnover to the overall activities. Furthermore Danish Crown has invested into a Joint Venture in Poland together with Finnish HK Ruokatalo. Both of them have bought the Polish meat company Sokolow, which has an above average quality of production in comparison to their domestic competitors.

Another change in Danish Crown’s operations was the agreement with Swedish Meats made in 2004 as well to take over their export activities (Lebensmittel Zeitung, 17/12/04).

With the inner German acquisition of Barfuss by Westfleisch in 2004 and the acquisition of the Danish Slaughterhouse Slateriet Brorup AS by Toennies in 2005 two German based meat processors could manage to get into the upper ranks of the position table of the 10 largest pig slaughters in Europe as shown in Figure 15.

**Figure 15** Market Shares of Europe’s ten largest pig slaughter companies in 2005

<table>
<thead>
<tr>
<th>Slaughterer</th>
<th>% Market Share</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danish Crown</td>
<td>10</td>
<td>Denmark</td>
</tr>
<tr>
<td>Vion Foods</td>
<td>8</td>
<td>Netherlands/Germany</td>
</tr>
<tr>
<td>Westfleisch</td>
<td>2.4</td>
<td>Germany</td>
</tr>
<tr>
<td>Tönnies</td>
<td>2.3</td>
<td>Germany</td>
</tr>
<tr>
<td>Cooperl</td>
<td>1.6</td>
<td>France</td>
</tr>
<tr>
<td>Socopa</td>
<td>1.6</td>
<td>France</td>
</tr>
<tr>
<td>Glon Sanders</td>
<td>1.0</td>
<td>France</td>
</tr>
<tr>
<td>Grempian</td>
<td>1.0</td>
<td>UK</td>
</tr>
<tr>
<td>Swedish Meats</td>
<td>1.0</td>
<td>Sweden</td>
</tr>
<tr>
<td>Gausepohl</td>
<td>0.8</td>
<td>Germany</td>
</tr>
</tbody>
</table>

While regarding Figure 15 it appears an industry concentration of 24.3% as the European market share the five largest slaughters occupy in 2005. Industry experts hesitate to call it a consolidated market yet. However they state that the obvious developments in terms of concentration that have taken place in recent years are up to continue.

6.4.2 National Concentration

As seen before an industry concentration process on a European level is recognizable whereas it seems to be difficult to consider the entire European market as highly concentrated. Obvious though appears the relative high shares on European level that are attributed to certain countries, namely Denmark, the Netherlands and Germany. While regarding recent developments especially the Dutch and the German market deserve special investigation how the scaling up of companies takes place in these national or regional contexts.

6.4.2.1 The Netherlands

In the Netherlands there have been several mergers in the pork processing industry, basically leading to one dominant company acting in the market in 2006, which is nowadays called Vion Food Group.

Figure 16 Market shares of Dutch slaughterhouses between 1995 and 2005

![Market shares of Dutch slaughterhouses between 1995 and 2005](image)

In 1994 there have been 19.5 million pigs been slaughtered in the Netherlands. There have been 30 slaughterhouses with a capacity bigger than 100,000 slaughters.
The largest slaughter companies were the cooperatives Coveco and Encebe with 15% and 14% share of total slaughters respectively. Aside the companies Sturko, Hendrix Group and Jansen Group accounted for relatively large market shares between 6% and 9% each. 50% of all slaughters in this year are either attributed to smaller slaughterhouses or are not directly assignable. Then in 1995 Dumeco has been formed through a merger by the companies Coveco, Encebe and GUPA and accounted for 31% of all slaughters which is extractable from Figure 16.

In 1998 the formation of two other increasingly significant companies in terms of market share has taken place. Sturko had taken over Jansen group and increased its’ market share from 10% to 18% and Hendrix Meat Group came into existence through a merger of the companies Hendrix group, Murris and Smits, which has lead to a market share of the three largest companies of 65%.

In 2001 Sturko was taken over by the market leader Dumeco as their largest competitor and in 2004 the new formation has again taken over the number two in the market, which was Hendrix Meat Group. At this time the formation was called Bestmeat, today’s name is Vion Food Group including the German companies Moksle, Nordfleisch and Suedfleisch.

In 2005 the company accounted for 59% of all pig slaughters in the Netherlands, having as largest competitors the companies Hilckman (7%), Compaxo (8%) and the Slaughterhouse Groenlo (7%). 19% of slaughters are executed by smaller companies.

Mentioned as competitor in 2005 the Slaughterhouse Groenlo (hatched area in Figure 16) has been taken over by Vion in 2006 which has increased their market share again.

Pig production in the Netherlands has decreased during the period under consideration here, as already mentioned earlier. The total amount of pigs slaughtered was 14.4 million in 2005. Alongside with the concentration there is a trend to close down capacity. From 30 slaughterhouses with a capacity bigger than 100.000 slaughters in 1994 the number has decreased to 16 in 2005. Major reason for this is grouping of slaughter activities after cooperate mergers have been taken place.

6.4.2.2 Germany

The pig slaughter and processing industry in Germany is much less concentrated than it is in the Netherlands. Whereas in the Netherlands the first strong developments into a concentrated industry have taken place in the mid 1990’s, industry experts report on an emerging concentration process that has only happened in recent years.

Figure 17 shows the shares the 10 largest pig slaughter and processor companies in Germany have had in 2004 and 2005. Obviously there are 4 companies that account for a market share larger than 5%. Significant production increase has taken place within Vion and Tönnies from 2004 to 2005. However Vion’s increase can be mainly attributed to the acquisition of Suedfleisch in 2005.

The four largest companies in Germany account for a market share of 53.6% in 2005. Compared to the situation in the Netherlands where 4 companies amounted 81% of the entire industry in 2005 or to the US where the CR4 has been 64% in 2003 (Hendrickson and Heffernan, 2005) the German pig slaughter and processing industry cannot be described as highly concentrated, but with a tendency to develop in that direction. Noteworthy appears here that the market share of the 10 largest companies in 2005 has been 65.7%, whereas the share of slaughters of the 6 largest companies in the US in 2003 has been 77%.
Nevertheless there are plenty of small or medium sized companies that scaled their production up from 2004 to 2005 and referring to experts intend to continue this growth leading to an industry structure with 3 or 4 large companies, leaving still room for plenty of small and medium sized pig slaughter and processing companies.

6.5 Suppliers

While regarding the supply side of pork processing companies we will focus on the most important suppliers of raw materials, which are farmers.

For 2003 the farm structure survey of the European Union (Eurostat, 2006) reports on 2.197.000 pig farmers in the EU-25 and of 672.000 pig farmers in the EU-15. In the EU-25 agricultural holdings rearing any kind of pigs account for a share of 42% of all farmers, whereas in the EU-15 the comparable number has been 25%.

Even though to be expected as growing in future production the New Member States (NMS) of the EU-25 are still determined by a high degree of fragmentation, among others attributed to socialistic policy systems (Rabobank, 2006). Since countries in Central and Eastern Europe are in a transitional process only limited conclusions can be drawn on their primary processing structure, beyond that there is fragmentation but a huge growing potential, which explains also recent investments by foreign companies as shown above.

General trends for the farming sector in Western Europe are developments towards a decrease of labor, a decrease in number of agricultural holdings while their size and output is increasing. These developments are mainly attributed to changes in patterns of food consumption and technology progression (Blandford and Hill, 2005).
While looking to the way how these developments express on pig farms in major producing countries in Western Europe, we can see that there is a restructuring going on in Europe’s largest pig producers, noteworthy with slower pace and partly contrary in Belgium and France. Figure 18 shows that referring to large size classes of pig herds in Denmark, Spain and UK, but also in Germany and Netherlands the herd size per farm is increasing which can be seen by comparing the increase of herds larger than 500 sows in 1997 and 2003. In almost all countries shown, a large majority of the herd is kept in units bigger than 100 sows. An exemption is made by Germany which shows growths in all size classes which might be attributed to large amount of part-time farmers.

Along with these general trends in the farming sector goes a tendency of increasingly specialized farmers, which can be seen as a consequence of the industrialization of agriculture.

However, putting the number of farmers into perspective of the definition of market power in economics it can be stated that the basic situation of farmers in terms of power is very poor towards their customers, since a large number of farmers with a highly fragmented structure negotiates with an increasingly concentrated number of slaughters and processors.

Basically farmers’ output and subsequently herd size depends on prices paid by their buyers. However, farmers profitability requirements are often (family structured farming) determined by the goal to keep on farming for the current generation. Thus powerful customers might be economically harmful in terms of prices paid.

In order to enhance their disadvantageous position in negotiations, farmers tend to cooperate horizontally, which is traditionally intended by the formation of cooperatives (Chaddad et al, 2004). The impact of cooperatives in the pork industry is rather decreasing in North Western Europe. With the formation of Vion Food Group as well in the Netherlands as in Germany the largest former cooperatives have been incorporated into an Investor Owned Firm.

Farmers throughout Europe try to impact prices as important part of the buyer-supplier relationship. They attempt to do so by exerting influence on price building mechanisms. Examples are auctions, such as “Teleporc” in the Netherlands, “De marche du porc Breton”
in France, the “Mercolleida” in Spain or the Austria based “Österreich - Börse”. In these auctions up to 33% of the domestic production is traded, whereas the influence on the general price level is estimated to be much higher (Hoste et al, 2003).

6.6 Customers

In order to describe and analyze the customers of pig slaughter and processing companies we have to distinguish between direct and indirect customers. Direct customers are retailers, wholesalers, food service enterprises and further processors, which include processing for human consumption as well as industrial processing of byproducts for pharmaceutical and industrial applications as soon as food and feed ingredients.

6.6.1 Pig Meat product flows

During interviews with experts a majority of them considered the relation to retailers as the most weight carrying on strategies of processors. However, other experts also mentioned the proportionality of this argument, since only about one third of a carcass is sold in retail outlets as fresh meat. There might be slight differences between countries within the EU-25 but as an example the German situation is shown in figure 19 and is highlighted here. An analysis of the product flows of pig meat (ZMP, 2006) resulted in direct shares of 23,4% for retail (combining butchers and retail outlets), 5,3% for catering, 17% for exports, 53,9% for further processing and 0,5% for direct sales by farmers of the total pig meat production in 2004. The raw material thereby originated to 76,3% from domestic processing, to 23,3% from imports and to 0,5% by farmers directly. Taking solely the domestic production, then about 65% are going into further processing, also the majority of imports is determined for further processing (35%). Only a small share (15%) of imports are purchased directly by retailers, which is also found by Spiller et al. (2005) who state for German retail that purchasing of pig meat is dominantly covered by domestic supply. Wholesale participates in the overall product flow by 21% as an intermediate, selling its major volume to further processors, covering thereby 18% of demand by further processors and 14% of retailers demand.

It can be seen, restricted to Germany that from the perspective of slaughter and processing companies the selling of meat is a highly fragmented issue and retail accounts for only a small share of the total quantity of pig meat. For the trade flow between farmers and slaughterhouses intermediates, such as cattle dealers, still play an important role in Germany, however with decreasing importance (Spiller, 2005), which is according to experts a general trend in Europe. From this we can conclude, that the business relation between farmer and slaughterhouse has gained importance.

Drawing the picture for the most important markets within the EU-25 we can conclude, based on an analysis by Gira (2005b), that the German retail share is part of a European trend. Whereas in 1998 retail share of fresh meat was 40% it has declined to 33% in 2004. There is a large deviation within the countries investigated. In Poland for instance the share has declined from 98% to 78% in the period under consideration. In the UK the share has fallen
from 12% to 9%. Gira predicts an ongoing development in this direction, foreseeing 29% in 2010 and 25% retail share of fresh meat in 2015 in the 18 markets investigated\(^\text{11}\).

For the slaughter and processing industry we can conclude two implications, which are the importance of out of home consumption\(^\text{12}\) and related distribution channels and the increasing importance of convenience products, such as ready-to-eat meals.

### 6.6.2 Retail

Often referred to as impacting developments of food processing industries is the increased market power of retailers due to concentration processes in this segment of recent years. Regarding the US market share held by the nation’s top four food retailers, from the mid-1990s to 2000, the four-firm concentration ratio (CR4) raised from 17 percent to 34 percent (Barkema, et al, 2001). In Europe a concentration process has also taken place on a national level leading to domestic ratios (CR5) between 23% and 88% in 2004 (cf. Figure 20).

\(^{11}\) Underlying analysis includes Finland, Greece, Czech Republic, Italy, Sweden, UK, Denmark, Spain, Poland, Belgium, Portugal, Hungary, Austria, Ireland, France, Slovakia, Germany and The Netherlands

\(^{12}\) In line with Grievink (2006)
Roughly spoken there is a tendency of higher concentrated retail sectors in countries of Northern Europe, whereas in Southern Europe the sector is more fragmented. Especially during last century (1990’s) this concentration has taken place, attributable in particular to a merging wave in the second part of the century (Dobson Consulting, 1999).

Source: www.marketsharematrix.org based on data from PlanetRetail - www.planetretail.net
However internationalization of individual retail companies goes with alternating success. Investments made in European markets, either by European or other companies are not always crowned with success. Wal-Mart recent divestment in Germany, Carrefour’s withdrawal of its Czech activities or Ahold’s dispersal of its Spanish and some Polish activities (selling of hypermarkets) are examples for divestments in European retailing (Lebensmittel Zeitung).

Hence retail concentration in the EU-25 is changeful regarding the last 7 years. The shares single retailers have on total sales, hence their market share, has been decreased between 1999 and 2005. Within a range of 2% CR10, CR5 and CR3 have decreased between 1999 and 2002 and have risen again between 2002 and 2005, though not reaching the level of 1999, as expressed in Figure 22.

![Figure 22](image)

**Developments in retail concentration in the (region of) EU-25**

<table>
<thead>
<tr>
<th>Year</th>
<th>TOP 10</th>
<th>TOP 5</th>
<th>TOP 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>40.54%</td>
<td>25.37%</td>
<td>17.68%</td>
</tr>
<tr>
<td>2002</td>
<td>38.72%</td>
<td>23.77%</td>
<td>16.31%</td>
</tr>
<tr>
<td>2005</td>
<td>39.88%</td>
<td>24.34%</td>
<td>17.06%</td>
</tr>
</tbody>
</table>

Source: own compilation based on data from PlanetRetail - www.planetretail.net (August 2006) for the EU-25

However, taken whole Europe (not only EU-25) as a market, one cannot speak about a consolidated market as Figure 23 shows. The trend for whole European retailing is rather fragmentation than consolidation, observable for the last 7 years.

According to market studies (Deloitte, 2006) the fastest growing retailers are not those with a strong focus on internationalization, but with one of focus on a specific outlet format as well as on only a few (1 or 2) countries. As a consequence of price and easy shopping focussed consumers, retailers aim to overcome resulting “commoditization of the retail experience” by differentiation, often making them focussed on branding (Deloitte, 2006).

Retail differentiation has also been studied by Grievink’s (2006), concludes a segmentation of retail into 4 formats. These 4 formats recognized thereby are product and brand selling stores, discount stores, quality discount stores and branded stores. Especially becoming a brand itself seems to be the highest goal of retailers. Retailers strategies’ towards their
suppliers are determined by the search for “distinguishing tools, control and low prices”. Particularly the two last items affect suppliers.

**Figure 23** Developments in European retail concentration

![Developments in European retail concentration](image)

<table>
<thead>
<tr>
<th>Year</th>
<th>TOP 10 Market Share</th>
<th>TOP 5 Market Share</th>
<th>TOP 3 Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>37,77%</td>
<td>23,67%</td>
<td>16,52%</td>
</tr>
<tr>
<td>2002</td>
<td>35,55%</td>
<td>21,87%</td>
<td>15,06%</td>
</tr>
<tr>
<td>2005</td>
<td>35,15%</td>
<td>21,78%</td>
<td>15,25%</td>
</tr>
</tbody>
</table>

Source: own compilation based on data from PlanetRetail - www.planetretail.net (July 2006) for 42 European countries

One measure to gain control over suppliers and negotiate low prices is to concentrate purchasing activities. Recent work of Grievink (Figure 24) shows the imbalanced negotiation circumstances in the food supply chain.

**Figure 24** The supply chain funnel for six European countries

![The supply chain funnel for six European countries](image)

Based on studies in 6 European countries (France, Germany, Italy, Netherlands, Spain, UK) Grievink (2006) found out that 3.2 million farmers aim to sell their products to 160 million final consumers. The supply chain thereby is represented as a funnel, increasingly narrowed by the retail sector. Cause of that fact is mainly the attempt of retailers to increase their
purchasing power, resulting in 70 retail buying desks in the countries researched. From earlier presentations in 2001 this number has even decreased by 40 buying desks. The major quantity of fresh meat supposed for retail selling has to go through this funnel, which can be seen like an eye of a needle due to the number of entities competing.

6.6.3 Meat in Retail

Large volumes of pig meat are sold by retailers. For processing it has strategically a particular interest since margins they can earn with fresh meat are the highest among all distribution channels.

Spiller (2005) reports for the German market on an average share of 16% of retailers’ turnover accounted for by meat. Thus meat is the largest product group that retailers sell, followed by fruits and vegetables. Hence meat is considered as a traffic generator for retailers, which determines subsequently their strategies for sales and their negotiations with suppliers.

Two major changes are observable in retail sales of fresh meat (again referring to Germany). The first change is related to the composition of retailers fresh meat offer. According to Spiller do meat sales sold at the serve-over counter account for 52% of retail sales, however with a decreasing tendency. These services are replaced by pre-packed meat. Between 2000 and 2005 the share of pre-packed meat has almost doubled from 23% to 43% (VDF, 12/05/06).

The other change is related to the differentiation of retail formats as discussed below. Due to the recent growth and popularity of discount outlets, accounting for approximately 30% of the market in major European countries (Grievink, 2006) these formats have gained massively market shares in fresh meat. Gira (2005b) reports on a growth of 19.8% and predicts further growth, whereas the market shares of traditional hyper- and supermarkets are considered to be rather steady. However the pace of discounters gaining market share differs within European countries, whereas France and Germany are the cutting edge.

6.6.4 Meat Demand in Europe

While comparing the demand all kinds of meat pig meat is the most prominent among European consumers as visible in Figure 25. The demand for Bovine meat has declined since 1990, which can be explained by the occurrence of BSE. After a decline during last decade, demand for pig meat is increasing again, as extractable from Figure (Nr. 25) replacing some of the demand for poultry meat.

Per-capita pig meat consumption has been around 43 kg in 2004 for the entire EU-25 (Gira, 2005a). The highest per-capita-consumption has been in Spain (62.7kg/capita), the lowest in Latvia (19.3kg/capita) though. Thereby a tendency is observable of slightly declining consumption in countries of the EU-25, whereas in the NMS consumption per capita seems to increase.

Given the regional tendencies, the decrease of consumption in some countries is almost equalized by increase in other countries. Thus the overall European demand for pig meat is considered to be stable, deviating by less than 1% a year (Gira, 2005a).
6.6.5 Consumer preferences

In general terms consumers' preferences are constantly changing, since life-style and underlying preferences are peoples attempt to keep their basic values in an ever changing environment. These changes whatsoever are of rather slow pace (Grunert, 2006). Due to demographic trends such as an increasing number of single individual and dual-income households, the consumer nowadays spends less time for the preparation of meals. But there is also a higher heterogeneity in the consumption. In almost all countries there live minorities whose preferences for food differ most of the times slightly from the domestic main stream and allow new niche producers (RABOBANK, 2005). Also consumers demand for food with reduced saturated fat, cholesterol and sodium. Concerns about nutrition are increasing, which has been observed in the US already in the early 90's by industry experts (BARKEMA, 1993). Along with increased consumer consciousness for health goes the increase of consumption of functional foods (AKDENIZ ET. AL., 2003). Due to demographics in major Western countries the share of elderly people has risen. Thus this group with specific habits and needs therefore has become a large segment of markets. Increased importance as a target group is due to the relatively high purchase power they have at least in Western countries.

Reaching these new consumer segments needs new specialized products from the industry. For example the US beef industry lost 25 percent of the meat market share to pork and poultry because the industry has not been able to develop a competitive convenient product for consumers (KATZ AND BOLAND, 2000).

Changes in consumers preferences are also influences by increased concerns for food safety. The consumers' reaction on Classical Swine Fever, Foot and-Mouth-Disease or Avian Influenza have shown this to the industry by strong reduced consumption of those products, even when the disease does not impact human health. (RABOBANK, 2005; FEARNE, 1998).
What does this general shift towards diversified needs and the increasing preference for health and convenience attributes mean to the meat processing industry? In a study on trends of consumers’ preferences for meat Grunert (2006) found out that the whole market is facing increasingly “fragmentation and diversification”. He argues that extrinsic characteristics beyond origin and place of purchase will become more important, fostering diversification on the one hand side and raising the need for supply chain members to provide products and information. Alongside with a diversification of retail outlets, marketing via extrinsic characteristics might become useful by using emerging retail channels. Meat avoidance as an observed trend taken together with the need for more convenience could lead to more processed products in a ready-to-eat manner. Grunert (2006) discusses the public concerns about issues like animal health or environmentally friendly production by distinguishing between consumers and citizens, because societal concerns may influence purchasing decisions only occasional. This raises the need to be aware of the kind of impact of certain concerns, but enables companies also to a differentiated marketing, converting citizens’ concerns into consumer concerns. However for doing so at the Point of Sale as an appropriate place, experience is lacking.

Changes in consumers’ preferences differ between countries as much as the preferences itself differ. When the business consultancy Cap Gemini was trying to identify the global consumer in 2002, conducting market research in the US and in nine European countries, they found as common ground consumers have in industrialized countries the demand to be recognized as individuals by companies, which are expected to conduct business on their terms. These terms are determined by five attributes of commercial transactions, which are price, product, service, access and experience. These factors have been aligned in the so called “Consumer Relevancy Framework” which has been tested in different countries. Consumers within European countries differ in their emphasis on these terms, which implies for producers of consumer goods different consumer oriented strategies in different countries. Hence, when we speak about consumers we cannot speak about a kind of European consumers since their perception and evaluation of products differs too much.

6.7 Chain Coordination

The development of strong relationships with buyers and suppliers is according to Slater and Olson (2002) characteristic and consequence of companies being market focussed. Strong relationships may improve organizational learning of the market orientated organization, enable them to better scan the market and guarantee high revenues since “sophisticated, key customers are willing to pay premium prices for the sellers’ products and accompanying services”.

Often meat is categorized as commodity as well by scholars (Connor and Schiek, 1997) as by most of the experts were speaking with. Slater and Olson (2002) acknowledge well the difference between originally premium products and originally commodities in customers’ involvement and customers esteem of the buyer-seller relationship. However this makes only a difference in the degree and difficulty of the challenge to establish and maintain such a relationship.

The question then is how to organize the relationships within a chain and organize underlying activities. The item “chain coordination” is also an outcome of our expert interviews, who pointed out that in the current situation questions of coordination are of high importance. The experts highlighted the operational necessities of chain coordination among European companies. Elements thereby are quality assurance (also in large amounts), efficiency in
terms of logistics and information exchange and (accumulated) scale to be flexible in the choice of distribution channels and in the size of customers. One expert stated that “bringing the right product to the right place in the right time with the right quality will be the major challenge for the pork processing industry in the future”.

According to experts the relation towards customers has changed in a way that partnerships between processors and retailers are becoming more common and companies attempt to be preferred suppliers to retailers and food service as an upcoming distribution channel. Additionally chain coordination is considered as important in order innovate. An example for that out of the agribusiness industry is the Omega-3-milk of the Dutch based agribusiness company Nutreco (primarily feeding), which was developed in collaboration with the retail chain Marks and Spencer.

However, coordinative elements downstream the chain that apply specifically to meat companies could not be identified, even though their importance has been highlighted.

On the supplier side though there is a lot more of coordinative effort visible. Quality assurance, supply assurance and efficiency are reasons that have been named here.

In contrast to the US pork production chain the relationship between suppliers and slaughter and processing companies in Europe is mainly organized as spot market operations (Spiller, 2005). Contractual agreements are considered not to be viable, at least in North-Western Europe, which is sometimes explained by the entrepreneurial business culture of European farmers (Netherlands) and the huge amount of choices for buyers (Germany).

Nevertheless, as figured out by some experts, contractual agreements as way to govern the supplier-buyer relationship between farmers and processors are eligible for the sake of efficiency and supply assurance. Other experts on the other hand doubt of the viability of such a governance structure.

Attempts to coordinate the supply chain by farmers, rather in terms of rebalance the weak negotiation position, has already been discussed in paragraph 6.5. On the side of processors there are also measures of coordination visible. In order to assure quality and enhance the exchange of information, Vion Food Group has launched the internet based information system “Farming Net”. This appears to be of high importance to Vion since they highlight it on their corporate website.

With “farming net” data on output of slaughtering and quality is exchanged. The system additionally enables its user to participate in bench-marks, which can give farmers valuable operational management information.

Coordination of processors with chain members downstream the chain is reported by one expert, but seems to be restricted towards informal information exchange. The informal character of current collaboration makes us assume that it is in its early phase yet.

If we regard the supply chain for pork with its elements Management Components, Business Processes and Network Structure (Lambert and Cooper, 2000) we can conclude, that Supply Chain Management is by far underdeveloped yet according to the importance experts ascribe to it. Formalized measures of coordination seem to be restricted to the relation between farmers and processors, whereas there is different and partly antagonistic action observable.
6.8 Composite Competition

Traditionally competition in an industry has been classified between the two poles cutthroat and civilized. Historically, cutthroat though is determined by price wars whereas innovations, product development and advertisement are mainly characterized to be rather civilized. Slater and Olson (2002) reveal this opinion as fallacy, since developments have shown that innovations are very well able to have cutthroat effects, sometimes causing the disappearance of products and subsequently their producers.

When we were interviewing industry experts all of them emphasized the importance of innovations in the pork processing industry as a measure to gain competitive advantages. However, their recommendations were more prospects than a description of the current situation. Current activities that are belonging to the field of innovation are rather process innovations on the production level. Within the scope of scaling up companies innovate in direction of efficiency and subsequently cost-reduction in production. Automations in slaughtering or the fully automated deep-freeze warehouse of Toennies are examples (Lebensmittel Zeitung). With this new warehouse Toennies aims for process efficiency with special regard to logistics and further processing of frozen convenience products. None of the experts reported on disruptive innovations neither in processes nor in products.

As a potential disruptive innovation meat replacements could be seen. In line with vegetarian and meat avoiding consumer preferences (Grunert, 2006) one expert referred to laboratory research on artificial meat developed from plant proteins. A breakthrough of these products could guarantee a more environmental friendly production of “meat”\textsuperscript{13}. However, demand for these innovations might be restricted especially to European consumers. A tendency of consumers’ acceptance can be derived from the milk protein based meat replacement “Valess” by the Dutch dairy cooperative Campina. Throughout the first year of its introduction into the Dutch market it has been subsidized with 0.66\texteuro per product by Campina, whereas it has been bought by 13\% of Dutch households (Lebensmittel Zeitung, 12/01/06). From this experience it can be concluded that there is a need for “meat alternatives” in the market, but it seems not to have “disruptive” potential, whereas in terms of a product life cycle this can only be guessed at this point of time, because sophisticated products are in the early phase of their development.

Most experts see a lot of potential for sustained product innovations in the meat industry, whereas this perspective remains not specified also caused by the fact that we were mainly speaking to experts with a rather commercial perspective. Another restraint in being concrete regarding potential innovations might be the wide spread opinion of industry experts that mentality of managers of this industry is difficult to match innovations. So descriptions of the average mind-set of managers range from close minded via short term focused to supply and volume focused. Innovations that require long term focused R&D are often rejected in favor of short term measurable efficiency improvements, as for instance the closure of a slaughterhouse.

At this point of time innovation cannot be seen as a factor shaping competition in the meat slaughter and processing industry, although the implicated potential makes it a latent factor regarding future competition.

\textsuperscript{13} Environmental problems related to meat production are serious with respect to world wide growing demand since 70\% of world wide water usage is attributed to meat production. Also the treatment of waste products such as mainly manure cause dramatic environmental problems.
Current competition is rather characterized by, speaking in terms of Porter, cutthroat kind of competition. Making use of scale effects, saving costs and aiming for the lowest purchasing costs of raw material are the compound determinants of competition. This cost and production focus is among others triggered by customers that are basically interested in prices. According to Slater and Olson (2002) a strategic option for processing companies would be innovation, especially of that kind, that addresses latent needs of customers and consumers.

### 6.9 Complementors

In their market oriented approach towards industry analysis Slater and Olson (2002) characterize the existence of Complementors as potentially return increasing. The authors reduce the complementary approach thereby to a marketing perspective and relate it to products. Evidence on the existence of complementary products to pig meat is scarce.

What we could see during the expert interviews was that companies that sell (all kinds of) meat are trying to make use of complementation effects in their marketing strategy. As an example Nutreco’s Spain based chicken division Sana has developed a “chicken burger”, which is sold as a combination of Sana’s poultry meat and other non-Nutreco products. However for the pig meat processing industry we could not find similar examples. Also the development of convenience products, such as ready to eat meals, attempts to benefit of complementors and seems to be more prominent in the processing of pig meat.

Complementary activities and process are also said to be return increasing and assist in reaching a competitive advantage (Roberts, 2004). Complementary relations mean a positive effect of one activity to output, value or place in the set of activities of another activity. Complementary relations thereby are variable and change due to changes in the external environment.

Within the scope of mergers and acquisitions in the pork processing industry taken together with increased scale of production as on major trend companies take advantage of complementarities.

Information systems that companies are using to improve information flows, such as Vion’s “farming net”, can be also seen as non-price advantages for suppliers (Slater and Olson, 2002) and might have effects of decreasing purchasing costs and bind suppliers, thus complementary to the information component.

Roberts (2004) characterizes mergers as successful when they make use of complementarities. Industry experts describe recent merger behavior as searching for complementarities. Vion is said to focus on a high market shares in Europe, whereas the behavior of Smithfield is depicted to focus on strong market positions. Recent acquisition of Sara Lee Food Group matches this description. One expert stated: “Sara Lee Food Group is market leader in the French market of cured legs, of cooked legs, they are market leader in the Portuguese market, they have strong positions in Netherlands and Belgium, and so their position and their energy is on the market side”.

On the other hand side there are also complementary activities disbanded. Prior to the sell of Hendrix Meat Group to Vion, Nutreco has been a company that used to follow a strategy of vertical integration. They have been running a pig breeding division and have been producing feed and were doing research on it, using synergies of both departments. These activities can be described as highly complementary, taking into account that feeding and breeding are the most important factors, composing the cost price of pig production and
processing. Nowadays Nutreco still owns these departments, without processing pigs anymore.

6.10 Competitive strategy

Most of the experts we’ve interviewed were emphasising the need of companies to scale up in order to re-gain power in the potential level-playing field of slaughter and processing companies on the on hand side and retailers on the other hand side.

Half of the group of experts though realized that scaling up is only one side of the coin. They pointed out that the growing market share of some companies opens up opportunities for other companies. One formulation thereby has been, that companies nowadays “have the choice between a scale and a quality focus”.

Almost all experts pointed out that there has to be a lot more done in direction of customer focus. This relates to R&D and marketing activities, which should focus on the consumer, but also in terms of chain coordination. Contrary to what theory suggests as a market driven business approach, experts rather report on shrunken marketing budgets of companies in recent years in line with an overall cost cutting.

The role meat slaughterers and processors occupy in the chain has changed in recent years. Companies are supposed to be a central link in the chain, matching consumers demand and preferences with supply of farms. However, companies are said to not satisfy these requirements properly yet. As mentioned earlier they are production and supply driven in the opinion of most experts. A market oriented approach, which is often discussed as the way to go in industry but nonetheless considered to be difficult, would require investments into R&D, market research and sensitivity (Slater and Olson, 2002) and network participation. As indicated by Slater and Olson (2002) a related strategy would require a risk taking attitude. Long term financing is a weak point of the industry, visible by the fact that the current scaling up is cross financed by other activities than primary processing of meat, such as the valuation of by-products. Due to these financial weaknesses cost savings are central within pork processing companies since there short term effects are to realize by doing so. As a result of the relatively strong negotiation position towards suppliers, strategic focus applies to this side.

Most experts we have been speaking with see the industry in a turbulent phase. The impact of markets turbulences, which is the change of consumer needs as described above, is considered to be low; companies can easily adapt to it. Competitive turbulence though is rather seen as high, due to the ongoing scaling up and mergers in the industry. This turbulence is also seen as causing future troubles, since scaling up might lead to competitive disadvantages on a global scale where companies would have to compete with low cost producing regions, smaller service driven competitors can earn higher margins, because the competitive disadvantages on a global scale might lead to further uniformization and cost cutting not matching customers’ demands in domestic markets well anymore.

In order to reduce the disruptive impacts of turbulences Slater and Olson (2002) highlight the importance of barriers to imitation. One of these barriers would be branding. Branding of fresh meat is not widespread yet at least in European countries. Having said this it has to be distinguished between national and retail/trade branding.

In an analysis of the German market, Spiller et al. (2005) point out that retailers are keen on own branding in order to control their “traffic generator”, which is expected to lead to more trade brands. As mentioned above in the tough competition of retailer differentiation is considered to be the key to reach competitive advantages. Trade Branding of meat seems to
be one of the tools to differentiate, since this product category counts for a crucial share of turnover. Branding of meat has been researched by Schramm et al. (2004). They describe a deferred strategic position of marketing as well as R&D considerations within meat companies for the benefit of Sales activities. Low profitability, tradition of the industry and lack of successful examples are reasons that hinder action in this direction. Nevertheless they see growing possibilities of producer branding within the scope of increased demand for pre-packed meat. Consequence of not trying it would be a stimulation of trade branding by retailers, which would subsequently lead to a weaker position in negotiations again.

Industry experts showed sceptically on branding, although they expect it in the future to be tried out. Major restrictions they see are the power balance with retail as shown above, a lack of financial resources and finally barriers in mentality.

6.11 Summary of the trends in the European pork processing industry

Previous section have examined the pork processing industry in Europe and its environment and have shown developments of European pork production and trade during the last 15 years and the behavior of companies during the recent past, which is traced back up to 10 years depending on the occurrence of events and the availability of data.

The following trends can be identified: During the last 10 years there have been several mergers and acquisitions of pork processing companies, which have taken place firstly on a national level, as examined for the Dutch situation (Figure 16), and are expanded to be cross border mergers since the beginning of this century. Alongside companies are said to increase their scale of production. Noteworthy small countries, but with large pork production, play a leading role in changing the size distribution of the industry, observable for North-Western Europe. Netherlands largest agribusiness company Vion Food Group as the second largest pork processor with about 8% market share in Europe, and Denmark’s largest cooperative Danish Crown, accounting for about 10% of the European pig market.

In expert interviews we have discussed the reasons for these developments. A major threat that companies fear in Europe is the one of new entrance. The largest pork producer and processor worldwide is the US-based company Smithfield. Since 1999 Smithfield has invested into European pork processing in Poland, Romania, the UK, France and Spain; recently Smithfield has started to invest in pork production in Romania. According to what experts stated European companies feel this entrance as a threat. Beyond they are afraid of the prospective diminishing of trade barriers, which are currently keeping imports away from the European Union with measures of import duties or sanitary restrictions.

The costs of production in European countries are higher than in the US or even more in South American Countries (chapter 6.3.4). Experts assume that within a general liberalization of trade also European markets will be opened up in the future. Aside from this menace an actual change in the institutional environment of pork processors is the stepwise enlargement of the European Union, having peaked in the admission of 10 new member states into the EU in 2004. Those from Central Europe are said to have enormous cost prize advantages in production at least in the short term. Thus experts expect a shift in production to the East.

As a reaction to Smithfield’s entrance, to cost price advantages in the Central Europe and the threat of having to compete with low cost production countries, European companies aim for larger scale of production in order to reduce their cost prices.
Another often mentioned reason for the changing size distribution in North-Western Europe is the **increased bargaining power of the retail sector**. Trends that have been identified in chapter 6.6.2 are a grown **national retail concentration** in many especially North European countries (c.f. Figure 20). Concentration processes thereby have in particular taken place during the late 1990’s. On an aggregated European level however this trend cannot be confirmed; from 1999 until 2005 the concentration of the 5 largest retailers has rather decreased (cf. Figures 22 and 23). Another trend within the retail segment is the increased internationalization of retailers as depicted in Figure 21. Undeniable is an increase in bargaining power of retailers in relation to their suppliers due to the **formation of buying groups** and the **demise of the formerly important wholesale** as an intermediate level. Increased concentration in the retail sector was an often used argument during our expert interviews for the increased company size of European pork processing companies. Meat purchasing of retailers is mainly organized on the national level (see Figure 19 for the German situation), however recent cross border mergers of pork processing companies might be influenced also by the fear that this could change in the future.

**Differentiation of retail formats** is another trend we have identified on the customer side of pork processing companies, which would give room to specialize, offer a customized service level and to establish distinguished partnerships. One expert highlighted the importance of these opportunities companies would have, however steps required would be contradictory to the current activities of many companies which foster uniformization of products due to efficiencies attempted by scaling up. **Consumer preferences** and in particular the appreciation of certain attributes are continuously changing, however very slow. With regard to pork meat the most important trends thereby are the demands for health, convenience and food safety. In general terms there is a tendency towards diverging consumer wishes, which would establish similar opportunities than retail differentiation does. Companies could specialize on certain customer segments.

With respect to their **suppliers pork processing companies appear as having a strong bargaining position**. Although concentrating attempts of farmers in order to level bargaining power are not effective. Nevertheless huge effort of pork processors is recognizable to intensify the **relationship with suppliers**. As mentioned in section 6.5 Vion’s “farming net” is an example for this. Another approach of a large pork processor to intensify the relation with its suppliers is the one of vertical integration by Smithfield in Romania.

Quality assurance possibly in large amounts, efficiency in terms of logistics and information exchange and scope effects for innovativeness are reasons that experts mentioned for the **importance of Supply Chain Management**. However it appears as would the establishment of an effective Supply Chain Management be in its very beginnings.

**Referring to innovation managers mind set** has been identified by many experts to be **increasingly away from markets’ requirements**. They describe the managerial attitude as close minded, supply orientated, short term focused and inflexible and thus not open for the new. All together the pork processing industry in North-Western Europe presents itself as very supply oriented industry, which feels bounded by (perceived) superiority of its, in particular, retail customers. Towards their suppliers they put high bargaining power; nonetheless they establish increasingly strong relations with them. All of this leads to a **weak focus on innovation**, except for some efficiency gaining process innovations. Disruptive product innovations have not been seen in recent years, but are required to foster competition, as industry experts have stated.
### 6.12 Relating industry trends to the framework “An industry in transition”

Finally in this chapter we want to relate the trends identified to our theoretical framework as shown in chapter 4.8. Table 9 applies the theoretical framework “An Industry in transition” as depicted in Figure 8 to the pork processing industry.

<table>
<thead>
<tr>
<th>The issue</th>
<th>Outcome of the industry analysis</th>
<th>Relationship with transition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>• New resources have become important (i.e. financing, supply and quality assurance, relationship management)</td>
<td>• “New” resources reinforce transition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reliance on “old” resources (i.e. efficiency, predominant tie to supply) stimulates organizational inertia</td>
</tr>
</tbody>
</table>
| Organizational Learning and Strategy Formulation | • Market orientation and effective SCM are of importance  
• Current strategies though according to old thinking | • Deductive and planned strategy formulation might follow transition |
| Boundaries of the Firm        | • In the past disintegration/divestments  
• Currently integration: vertical M&A, tightening supplier relationship | • Disintegration vs Integration are at the threshold of transition |
| Supply Chain Management       | • Formal alignment upstream as new  
• Downstream alignment considered to be necessary  
• Chain resources are getting professional | • Supply Chain Integration reinforces transition  
• Effective SCM as tool to master transition |
Table 9 refers to the theoretical framework and draws first conclusions of the theoretical framework by fitting information gathered from the macro level industry analysis into it.

Information that we gathered in the industry analysis fits with our theoretical findings, since for most of our issues we have direct relationships to the transition of the pork processing industry. Limitations regarding the applicability of the framework to the industry level have to be made where the issues can be solely found internal of the cases, such as organizational learning and strategy formulation.

Research Question 2 has asked for the environmental forces influencing the agro-food industry with special regard to the pork processing sector. The factors are:

- Threat of new entrance has increased
- Customer bargaining power has increased
- Competition within the industry has intensified
- Substitutes are neglected

An increased threat of new entrance (with special regard to the enlargement of the European Union) accompanied with an increased customer bargaining power due to the concentration process in the retail sector and the tacit process of non-regarding substitutes leads to an intensified competition and a focus on efficiency gains on the supply side. These developments within the competitive forces put profitability under pressure increase risk and make current positions and strategies within the industry questionable. Also vertical linkages and coordination measures and the boundaries of firms are in flux since efficiency seems not to be given as before. Companies’ resources are affected since particularly specialized knowledge does not appear to be sustainable anymore and companies might have to relearn. In addition new resources as financing or relationships are becoming increasingly important to companies strategy and profitability enhancing activities.
7 Case Studies of Pork Processing Companies

Having developed the conceptual framework in chapter 4 and analyzed the European pork processing industry on a macro level in chapter 6, this chapter presents the results of the empirical analysis.

The theoretical framework as depicted in Figure 8 is used to investigate the influence between an industry in transition and consequences on the company level. Thus this chapter answers Central Research Question 3: “How do companies (successfully) respond to the challenges of an industry in transition and how are these factors related?”

Two cases are presented below. Case 1 in section 7.1 presents the Vion Food Group as a conglomerate of formerly independent meat (predominantly pork) processing companies in North Western Europe. Case 2 in section 7.2 presents the worldwide largest pork processing company Smithfield Foods, who has entered Europe 9 years ago and keeps on building up its business throughout almost whole Europe.

The setup of the theoretical framework helps to structure this chapter. Each section starts with the presentation of the corporate background in subsection 1 (i.e. 7.1.1 and 7.2.1). “Profitability, Risk, Positions and Strategies” are presented in subsection 2 (i.e. 7.1.2 and 7.2.2). The next subsection (i.e. subsection 3: 7.1.3 and 7.2.3) contains an analysis of resources, followed by an elaboration of innovations in both cases (i.e. subsection 4: 7.1.4 and 7.2.4). The next two subsections relate to between firm linkages, while subsection 5 (i.e. 7.1.5 and 7.2.5) refers to “Supply Chain Management” and subsection 6 (i.e. 7.1.6 and 7.2.6) to the “Boundaries of the Firm”. The last element of the theoretical framework that is applied to the cases is “Organizational Learning and Strategy formulation” in subsection 7 (i.e. 7.1.7 and 7.2.7). The last subsection of each section, which is 8, summarizes the case and puts it into perspective of an industry in transition.

Subsection 7.3 in the end compares both cases in relation to the theoretical framework and gives answers to research question 3 and its sub-questions.
7.1 Case I: Vion Food Group

7.1.1 Corporate Background

The development the Vion Food Group has taken in 4 recent years can be described best with the terms consolidation and concentration and can be seen in a broader scope as representative or even trend-setting for the industry in North Western Europe as a whole. Starting from scratch in the pork processing industry in 2002 the company managed to establish itself as the second largest player in the European industry, accounting for 8% market share in the EU in 2005 and employing approximately 15.500 people in 2006.

The dynamic developments in recent years trace back to the company Sobel, which has had a more than 60 years period of successful business operations originating in the procurement of animal residues. In its history Sobel can be described as a continuously growing and internationalizing company, especially when markets became global. Aside from their original core business of the processing of high risk animal residues within Rendac and low risk residues in Sonac, Sobel had expanded their business portfolio to healthcare products during the 1990's due to the acquisition of US-based Banner pharmcaps and to gelatin products by the acquisition of nowadays named Rousselot in 2002. In 2002 Sobel presented itself as an internationally orientated company with around 5000 employees globally, pursuing a strategy of leading positions in the markets they were active in and seeking to be innovative in whatever they were doing. Financially they were looking back to two years of records regarding their operating result in 2001 and 2002. From the year 2000 onwards their regional spread in terms of place of turnover generation had diverged continuously. In 2002 58% of turnover has been generated within Europe, 32% in North America and a grown share of 10% in the rest of the world. This was one reason why Sobel was reconsidering their business portfolio, in the light of a single shareholder, which was an investment branch of the southern Dutch farmers union ZLTO. Close attachment to this shareholder was and still is an important issue in Vions and previously Sobels corporate affairs. Due to this increasing distance of business activities and the goal of substantial growth of the company with activities in the interest of the shareholder, meat producing and processing activities have been added as a second pillar to the business portfolio, beginning in 2002. The first step to “gain immediate market leadership in the meat processing sector” was to acquire the shares of the German based Moksel AG; a transaction that was completed in 2003. At the same time the Dutch cooperative Dumeco\(^\text{14}\) has been acquired, which was already partly attached to ZLTO. In the end of 2003 the northern German cooperative Nordfleisch has been bought and by the end of 2004 the number two in the Dutch market Hendrix meat group has been acquired. About one year later the Southern German cooperative Südfelesch was bought partly, an acquisition to be completed in 2006. As already mentioned above, the Dutch slaughterhouse Groenlo has been acquired in 2006, which has raised the market share of Vion Food Group again.

Vion Food Group thereby is the name of the company as of July 2006. The first step in 2003 in integrating the new business activities was the foundation of the holding “Best Agrifund”, containing Sobel in its original form and “Bestmeat” as the intermediate sub-holding for the newly acquired meat companies. Knowing the preliminary nature of this organization, the 2004 and 2005 annual reports were published under the name “Sovion N.V.” as a replacement for Best Agrifund and “Vion bv” was replacing the name Bestmeat. The clear distinction between Sobel and the investments into the meat industry were made consciously

\(^{14}\) Dumeco as such has a merger history itself, which is described earlier in chapter 6.4.2.1.
in order to guarantee an autonomous development of the independent activities. The principle of autonomy however has been given up recently when Vion Food Group has been established and the activities have been divisionalized into Vion Ingredients, Vion Fresh Meat and Vion Convenience. This new divisional structure is intended to simplify the organization and to align strategic issues better, nevertheless giving room to the divisions in carrying out activities of their respective core businesses. Accordingly a six person corporate executive board has been established comprising a CEO, a CFO, and three COOs with responsibilities for the operations of the divisions and a Chief Strategic Officer, responsible for the overall strategic development and innovations.

Concerning the scope of business activities and further investments Vion Ingredients has a clear international scope and focuses on business to business as well as on business to consumer activities, whereas the latter one is mainly related to Vion’s healthcare products. The focus of the other two divisions is on European consumer markets, whereas retail, food service and industry are regarded to be their major clients.

### 7.1.2 Profitability, Risk, Positions and Strategies

**Profitability**

When Best Agrifund was established financial goals have been defined. Three key figures have been identified as decisive to govern the management and to evaluate their measures. Thereby distinctions have been made between the two fields of operations. Indicating profitability by measuring the efficiency of utilizing capital to generate revenue Return on capital employed (ROCE) is targeting on 15% in both operations respectively. Value added as a percentage of turnover strives for 70-75% within the animal residue operations and 20-25% in the meat processing operations. Return on Sales is set as a measure for operational efficiency and aims at 10% in the (former) Sobel operations, whereas meat processing attempts to generate 3%.

<table>
<thead>
<tr>
<th>Table 10</th>
<th>Key Figures I of Vion Food Group and its predecessors between 2003 and 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2003</td>
</tr>
<tr>
<td>Key Figure</td>
<td>Sobel</td>
</tr>
<tr>
<td>Turnover</td>
<td>674</td>
</tr>
<tr>
<td>EBITA</td>
<td>60</td>
</tr>
<tr>
<td>Capital employed</td>
<td>497</td>
</tr>
<tr>
<td>Return on capital employed (ROCE)</td>
<td>12.7%</td>
</tr>
<tr>
<td>Value added as % of turnover</td>
<td>73.5%</td>
</tr>
<tr>
<td>Return on Sales (ROS)</td>
<td>8.9%</td>
</tr>
<tr>
<td>Sources:</td>
<td>own compilation based on annual reports of the Vion Food Group and predecessors (2003 - 2006)</td>
</tr>
</tbody>
</table>

While regarding Table 10, representing the financial achievements of Vion Food Group with its targets it becomes obvious that financial goals have not been met in both sub-holdings of the former Best Agrifund and Sovion, with special regard to the profitability and efficiency measures. Value adding goals however are fulfilled. Aside from not matching the goals as explained above the profitability and efficiency ratio of the meat processing operations has declined constantly. Vion’s ROCE and ROS have decreased from 13.1% in 2003 to 9.5% in 2005 (ROCE) and the ROS has declined in the same period from 1.6% to 1.1% whereas the
same figures have slightly increased over the same period in Sobel’s operations, however not matching the goals initially set. Hence, referring to the profitability we can conclude at this point of time that Vion Food Group has not fulfilled its own goals regarding profitability, instead a decrease in related ratios can be observed.

From table 11 we can clearly extract that efficiency represented by the Return on assets the profitability presented by the net profit margin have massively decreased since Vionfoodgroup and its predecessors came into existence. Putting table 10 and table 11 into relation one can see that the meat operations are massively backed up by the ingredient activities since the distinguished presentation show higher profitability and much better efficiency figures on the ingredient business.

Table 11 Key Figures II of Vionfoodgroup and its predecessors between 1999 and 2005

<table>
<thead>
<tr>
<th>Year</th>
<th>Key Figure</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sobel</td>
<td>467</td>
<td>546</td>
<td>670</td>
<td>762</td>
<td>2,864</td>
<td>5,930</td>
<td>6,285</td>
</tr>
<tr>
<td>Turnover</td>
<td>Agrifund</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sovion</td>
<td>24</td>
<td>35</td>
<td>27</td>
<td>33</td>
<td>46</td>
<td>63</td>
<td>70</td>
</tr>
<tr>
<td>Net income</td>
<td></td>
<td>5,14%</td>
<td>6,41%</td>
<td>4,03%</td>
<td>4,33%</td>
<td>1,61%</td>
<td>1,06%</td>
<td>1,11%</td>
</tr>
<tr>
<td>(in million €)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on assets</td>
<td></td>
<td>8,1%</td>
<td>7,32%</td>
<td>2,69%</td>
<td>2,85%</td>
<td>3,19%</td>
<td></td>
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<td>Net profit margin</td>
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</table>
| Sources: own compilation based on annual reports of the Vion Food Group and predecessors (1999 - 2006)

Risk

Regarding the factor risk Vion Food Group distinguishes between controllable and not controllable kinds of risk. A constant risk they perceive is the availability of raw material, whereas the fear not to meet market demands with new products is a relatively new perceived risk according to their annual reports of recent years. As not directly controllable, but heavily impacting, Vion Food Group considers the risk of food safety crises.

Strategy

The strategy of Vion Food Group has constantly sharpened in recent years, starting from the abovementioned initial goal to have a leading position in the market. Superordinate strategy as described in annual reports and emphasized from a company representative in an interview is based on the two pillars “operational excellence” and “innovation”. Operational Excellence implicates for Vion Food Group to enlarge the scale of their activities, which is in particular related to their fresh meat activities, in order to reduce costs and thus increase the cost efficiency. Within this scope costs have been reduced by 120 million € during the last 3 years (Lebensmittel Zeitung). Innovation though as part of Vion’s strategy is related to the operations in the fields convenience and ingredients. Around 75% of turnover is generated with fresh meat production and primary processing, thus the issue of cost efficiency has been in the center of Vion’s strategy during the last three years, which is argued with the efficient integration of the acquired companies. Furthermore make changes in the competitive environment (i.e. increase in customer bargaining power and an increased threat of new entry) Vion conclude that cost reductions are necessary. Recently and to be understood as
future oriented the issue of superior quality has entered Vion’s strategic thinking. Prospectively price is thereby not seen as the distinctive criteria anymore with regard to the marketing of fresh meat to retailers.

Regarding their strategy Vion Food Group seems to be at the threshold between two different concepts. As mentioned above recent statements have moved away from purely being a cost efficient fresh meat company. This is shown by the separation into new divisions, increasing statements about innovation and quality and by an earlier shift from conceptualizing themselves as a food company instead of a meat company.

Thus we can describe the strategy of Vion Food Group best as currently aiming for cost leadership however preparing a partial (i.e. in convenience and ingredients) differentiation.

Positions
The strategy the Vion Food Group is following and derived positioning in the market can be described as a twofold approach distinguishing between their different business operations. They attempt a scale based leadership position in the market for all their activities, whereas for fresh meat production and primary processing their focus is on cost leadership, while in further processing, which is internally called convenience, and in ingredients their focus is on innovations, thus aiming for a position of differentiation in the market. Nonetheless also for the latter two fields of operations cost efficiencies are not neglected. Recent statements by the management let us assume that in the future there might be a shift towards differentiation also within the fresh meat division. An example for the approach to be differentiated in the convenience segment is the brand “Vion Gourmet”, which should be introduced in the German market in 2007. Products promoted under this brand are meat based spreads, associated with the premium segment. This first approach in branding is supposed to explore Vion’s possibilities in branded products in order to introduce “Vion” as a brand in the mid term.

7.1.3 Resources
The resources owned by Vion Food Group depend, as resources do by definition, on Vion’s path of development. Thus, the history of Sobel as Vion’s direct predecessor, the histories of the various meat companies acquired and the relation to the shareholder form the resource base of Vion Food Group.

Resources, which can be categorized as reputation and distinctive relationships to buyers come from the acquisition of meat companies and thereby especially from sub divisions of the German companies for example Salomon Hitburger and Lutz. Through the acquisition of Moksel AG in 2002/2003 Salomon Hitburger became part of Vion Food Group and has developed towards a strong part in the new formed convenience division, since marketing and sales of deep frozen and ready-to-eat meals as well as new product development of convenience products are executed by this company to a large extent within Vion Food Group. Thereby this company looks back on a long history in successful Business to Business marketing and the maintaining of strong relationships as through the production of hamburgers, such as the well known “Whopper”, firstly for the German and currently for the European branch of the globally operating fast food chain Burger King. Salomon Hitburger presents itself as a company with an innovative spirit that aims to anticipate needs of current and potential customers, as for example by the development of ethno food, finger food and snacks and the ready to eat burger launched for the soccer world championships. Development and production of ready to eat meals and solutions for food service and retail is additionally executed by Ranchmaster and FVZ-Westfleisch, which came to the Vion Food
Group through the acquisition of Nordfleisch. Also these companies have a long history in supplying retailers, both with a regional focus. Via the acquisition of Südfleisch in 2005/2006 the Southern German cold meat and sausages producer Lutz came into the portfolio of Vion Food Group and contributes with its strong reputation as consumer brand in particularly Southern Germany and its established distribution channels to an improved market position in especially that region. All these sub-companies discussed are now integrated into Vion Food Group’s convenience division.

The companies formerly belonging to Sobel look back on a long history of successfully operations, which gets expression in the continuous growth regarding scope of production, regional spread and financial results. Key strengths emphasized by the management of Vion Food Group have always been to add value to commodities and to establish a leading position in the markets they have been active in. This expertise and specialized knowledge should be transferred to the meat business as well, which seems to become more effective due to the integration of managerial processes as a consequence of the new structure.

Physical resources the Vion Food Group has acquired by merging are electronic assets such as the “Farming Net” and a tracking and tracing system. The “Farming Net”, as an electronic information exchange program for the farmer-slaughterhouse interface, allows an smooth product flow from suppliers and offers information beneficial to farmers, such as quality information on their sold pigs. Dumeco had already developed this program, which is now central part of Vion’s SCM execution. The special role this system plays within Vion can be realize when regarding the fact that Farming Net is planned to be introduced into the German pig supply chain as well.

By the acquisition of Hendrix Meat Group from Nutreco Vion has taken over a tracking and tracing system that should be spread throughout the whole company. In times of food safety scandals such a system can be considered as an effective quality management tool that has in particular potential to create trustful relationships with customers.

The special ownership structure and underlying relationship to the shareholder is a resource as such. The strategic back-up and the possibility of sourcing their tremendous expansion in recent years appear to be exceptional. Setting free financial resources for the acquisitions made has been made possible through the joint decision of Sobel’s management and the shareholder by selling Sidmark in 2002, which was a generic pharmaceutical business of Sobel. Freedom in managerial decisions and nevertheless financial and strategic backup is a distinctive resource the Vion Food Group owns.

7.1.4 Innovations

As mentioned above innovation is one pillar of Vion’s strategy. Due to the internal restructuring after the numerous acquisitions the process of innovation within Vion Food Group cannot be described clearly. However, the latest restructuring towards divisions, whereas the convenience division aims to be the driver for innovations in meat, makes us assume that Vion’s innovations will provide a clearer picture in the future. Due to the divisionalization and the establishment of a responsibility for innovation in the executive board, namely the Chief Strategic Officer, one can assume a greater strategic guidance of innovations in the future, which attempts among others on aligning the R&D and New Product Developement (NPD) activities and the creation of a market driven portfolio, as annual reports and statements of managers point out. In an interview with a company representative Vion’s first steps in that direction became clear, which is the currently conducted uniformization of market research among all divisions and the planned
establishment of an own market research department. However, on the corporate level the focus on customers seems to be restricted to current customers, which can be derived from statements in interviews and company publications highlighting the changes in consumer demand as they are described above (chapter 6.6.5). Obviously these changes relate to current customers. This focus might change in the future if the concept of Salomon Hitburger regarding NPD would be adopted by the whole company. Salomon Hitburger presents itself as constantly searching for trends and developments on a global level and as translating their findings into new products as indicated above.

On the corporate level product innovations have been sustained ones in the past. A new process has entered product innovations in the context of the ready-to-eat burger launched by Salomon for the soccer world championships, which has been developed in cooperation with an industrial producer of bakery products and marketed in collaboration with a snack-food producer. The focus on current customers let the Vion Food Group appear to be vulnerable to disruptive innovations that might come from new entrants. As another weakness in this regard appears the restriction of innovations on convenience products. Innovations in fresh meat are considered to be difficult to imagine as an interview with a manager of Vion indicated. However regarding the future strategy this opinion might change, since the COO responsible for both meat divisions stated in an external interview that Vion Food Group has stepped into fundamental research regarding innovations in fresh meat, which could lead to new products within the next 4 years, which target on setting trends for the industry as a whole. This research aims to develop products that are serving consumers’ needs with regard to fitness and health products. As discussed earlier these are needs that are expressed by current customers. However as a first result of this announced research the development of meat based spreads with cheese and different flavors and the launching of liver pies with different additions under the umbrella of the newly created brand “Vion Gourmet” can be understood.

When interviewing a manager of Vion Food Group it became clear that the focus on innovation, highlighted as central to the strategy, does only apply to the convenience segment in the short term. 75 percent of the groups operations are concentrated on fresh meat operations. Innovations there are considered to be on processes to enhance efficiency. Product innovations as described above account for a relatively small share of operations. However it was pointed out that the management of Vion Food Group hopes to have a lagging effect from innovation activities in convenience to fresh meat operations in the long term. However, how product innovations in fresh meat will look like remains unclear at this point of time.

### 7.1.5 Supply Chain Management

Generally it is of importance for Vion to build up and improve the management of their supply chain which is stated in company publications as well as by external industry experts. When we asked a manager of Vion Food Group which strategic goals they pursue with their management of the supply chain three issues of importance have been identified. Minimizing the risk of animal diseases, avoiding the occurrence of food safety crises and organize demand management seem to be purposes of Vion’s supply chain management. Hence, Supply Chain management corresponds to the perceived business risks and appears to have the role within Vion to minimize these risks.

Until data was gathered for this case study there were no chain resources focusing on the management of demand, such as ICT systems in relation with retailers; at least not on a
corporate level which may be different within subsidiaries. Chain resources though are proactively established by Vion with respect to their suppliers. The electronic information system “Farming Net” has been set up in the Netherlands and is to be expanded to German suppliers throughout 2006. Through “Farming Net” primary production related data is exchanged with farmers, in order to improve their farm management, so their production efficiency and the quality of the produced animals. These developments within Vion are fostered by the initially formulated goal of being professional partners for farmers. Alongside the information exchange with farmers Vion uses a tracking and tracing system, which has been adopted from Hendrix Meat Group and is a prerequisite for quality assurance.

For the future however Vion Food Group considers an ICT based information exchange with customers as inevitable. Conceptual planning though has started to align logistics with customers. For these purposes systems should be developed that will guide product and information flow towards customers. According to what Vion Food Group has expressed this will take some more time, since integration of the supply side is considered to be more timely, whereas downstream integration remains in a conceptual planning phase.

7.1.6 Boundaries of the firm

From perspective of Sobel as it has been in the beginning of 2002 the boundaries of the firm have massively changed since the successional developments have incorporated the supplying base of Sobel as a processor of animal residues into the company. From perspective of the single entities nowadays forming the meat related divisions of Vion Food Group their boundaries have also changed depending on their individual histories. Hendrix Meat Group for example as integral part of Nutreco was directly linked to the production of feed, additionally to R&D of feeding and breeding. Due to their incorporation into Vion this link has been cut off and we can speak about disintegration. Due to the numerous mergers and acquisitions synergies have been used and are further attempted with an efficient alignment of business processes. This means also that all the formerly independent companies face business activities they used to “buy” in the past, which are now made by Vion Food Group itself. This relation is most obvious observable with the further processing of meat and the value adding activities. All of the formerly independent companies had further processing operations, however not the same and not to the same degree. As we found out in an expert interview especially the Dutch companies as Dumeco and Hendrix Meat Group are regarded to benefit from the further processing activities of their former German competitors. With regard to further processing of meat we can describe the whole formation of Vion Food Group as a process of integration.

In an interview with a Vion manager we asked him for the current way of coordinating the relation to raw material suppliers, which are mainly farmers. Currently spot market transactions with farmers prevail and cover about 75% of transactions. 25% of livestock transactions though are arranged on a contractual basis, whereas these contracts are agreement for deliveries valid for less than 1 year. Asked for the future organization of these deals the manager expressed his wish to turn around the current share of spot market vs. contractual transaction in the future. Nonetheless does Vion Food Group continue to emphasize the importance of independent and entrepreneurial minded suppliers in their public communications.

The boundaries of Vion Food Group in its current state have changed in recent years whereas we see processes of vertical integration mainly downstream the chain through the incorporation of further processing activities. With respect to their suppliers there is a slight
trend towards more integration since contractual agreements are becoming more prominent within this relationship and are expected to be extended.

7.1.7 Organizational Learning and Strategy Formulation

Since its first steps the Vion Food Group presents itself as a company with a clear vision regarding the position they want to keep in the markets. Already in Sobel’s annual report of 2002, one of the first company publications describing the foundation of Best Agrifund, it is stated that goal is to “gain immediate market leadership in the meat processing industry”. This vision is still valid today and is already reached for some national markets in Europe, such as first and foremost the Dutch and German one, whereas at the end of 2005 Vion was ranked as number 2 in the market of the EU-25. Initially their strategic focus has been to form a meat company, which has changed throughout the years towards the clear formulated goal of forming a European food company. This change has been especially due to the requirements of clients the entities concerned with further processing were facing. As a consequence Vion Food Group is also purchasing and processing poultry meat and fish.

According to an interview with a manager of Vion and statements from secondary sources market has become an important issue within Vion. Nevertheless it is seen as a goal and thus a current point of discussion within Vion how to get there. In this interview it became clear that the industry as a whole is a supply driven one and becoming market driven will be a long way to go. In a broader context Vion Food Group regards this long term transformation of the meat processing industry as comparable to the dairy industry, but endowed with a history that makes it easier for companies to adopt, since the meat industry has always been a less protected industry than dairy was and still is.

Despite their intention of being a food company and expanding their value added activities with their convenience division, Vion Food Group regards its core business as slaughtering and primary processing of fresh meat. According to an interview fresh meat production, including the steps of primary production such as slaughtering, cutting and deboning, accounts for more than 75% of Vion’s operations and is thereby internally understood to be a commodity business. These sentences are more about the strategy of the company, so I would expect this information in section 7.2.2 Asking for the future position of fresh meat in the market and thus its definition within Vion a manager answered that fresh meat is expected to continue being a commodity, which would make further reductions of the cost price inevitable for the future as well. Regarding the definition of the product and underlying positions available and programs possible in the market there seem to remain some open questions in the management of Vion. In an interview by a food market related magazine the COO who is responsible for both meat divisions argued that the narrow definition of fresh meat as a commodity is not to continue, instead differentiation by superior quality and fundamental innovative products will become crucial strategic items in the future.

The recent restructuring of Vion mirrors the belief that fresh meat production and primary processing and any step of further processing are completely different things. However, for the future the divisionalization seems to include the possibility of differentiated fresh meat as well, which could mean less distinguished operations of the two divisions.

Above we have shown what the Vion Food Group has learned over time. Turning our attention now to the process of how Vion has learned and how strategy has developed, we can recognize clear elements of visionary leadership and deductive strategy formulation in the beginning of Vion Food Group. When the current CEO of Vion Food Group, who has
been heading the business operations of Sobel before, made the decision to build that company, he had been observing the meat industry already for 15 years. During that period he had got to know a highly fragmented industry, being not profitable in large parts. At the end of this time a decision had ripen, which was to build a market leader in the European pork processing industry. One idea behind was be able to run cost effective operations. Two third of the current operations of Vion Food Group are in the fresh meat segment (i.e. slaughtering, cutting and deboning). Having started to integrate the acquired companies Vion Food Group was not and still is not sure about their initial strategy of cost leadership. Recent discussions about the definition of meat (i.e. commodity vs. value-addable) and the newly highlighted strategic element of innovation, that is said to apply to a minor part of business operations, make us conclude that the strategy formulation is in the course of shifting. Coming from a deductively developed foundation recent discussions and actions appear to be emergent and inductive.

7.1.8 Summary and conclusion of the Vion Food Group Case

During the last 4 years the Vion Food Group has taken a development of impressive growth. Dutch as well as German leaders in the meat, predominantly pork, industry in terms of market share have come together to bundle their strengths under the umbrella of the Vion Food Group. Mainly initiated and financed by today’s single shareholder ZLTO, as the Southern Dutch farmers Union, the company has been based upon the framework of the animal residue business of Sobel, an internationally successful company for a long time owned by ZLTO as well. The first acquisition by Sobel has been Dumeco as the largest pork slaughter and processing enterprise in the Netherlands with a cooperative background in 2002. Moksel AG a publicly hold cooperation originating from the South of Germany has been added to the portfolio next. Later Nordfleisch, a meat cooperative from the North of Germany, Südfleisch their counterpart from the South and Hendrix Meat Group formerly belonging to the Dutch based animal nutrition multinational Nutreco have been acquired and put together to what is now called Vion Food Group. In the beginning Sobel’s activities and meat processing have been clearly separated. Thus, the conglomerate was first named “Best Agrifund”, related to the city where the headquarter is located, and then Sovion, consisting of Sobel and Vion, which was an intermediate name for the meat activities. As of July 2006, the company has renamed into Vion Food Group with a divisionalized structure comprising a segment for ingredients as the former Sobel, and separated meat activities as “Fresh Meat” and “Convenience”.

When the Vion Food Group came into existence the vision of the management formerly responsible for Sobel was to create a market leader in all markets they are active, taking advantage of a highly fragmented industry in North-Western Europe. Later this target has been advanced in becoming the European market leader. And indeed solely by acquisitions the Vion Food Group has managed to be the second largest slaughtering and primary processing company in the EU-25. Only the Danish cooperative Danish Crown shows slightly higher totals on slaughters. In their main markets, which are the Dutch and German ones they have been the market leaders in 2005. Having grown big this fast, integration was and still is a major topic within the Vion Food Group.

The latest restructuring shows much of the strategy to pursue and underlying conceptualization of the business by the management team. The ingredients division continues Sobels operations in a used manner. The two meat divisions, namely fresh meat and convenience, have been divided, since the company believes that business can be executed more profitable when the fresh meat division focuses on operational excellence and the convenience branch develops innovative solutions for their customers by adding
value in further processed and ready-to-eat products. Thus a threefold approach aims for the profitable valuation of the carcass whereby each division should focus on its core strengths. The largest division thereby is the fresh meat division comprising slaughter, deboning and cutting activities plus the primary processing of raw meat, accounting for 75% of the cooperate turnover. The two meat divisions are distinguished not only by their strategy, but also regarding the positions in the market they aim for: fresh meat should become a cost leader whereas convenience is supposed to offer a differentiated, value added assortment. The announcement to establish “Vion Gourmet” as a brand first in Germany in 2007 in order to examine opportunities for “Vion” as a brand name makes that direction clear. Up to now cooperate results have not been meeting with their own goals referring to both efficiency and profitability ratios. As experts say and separated figures of Sobel show the utilization of animal residues is currently backing up the meat operations in order to be in the black.

Resources and capabilities of this recently emerged conglomerate root mainly in the history of its predecessors. All of the companies had branches for further processing, beyond the slaughtering and cutting of carcasses. As outstanding appears “Salomon Hitburger” since they show up as having strong innovative power and extraordinary relationships due to delivering the well known fast food chain “Burger King” with hamburgers. Looking to Sobel than it becomes clear that they managed to achieve reasonable margins with the processing of slaughter by-products. The company loves to emphasize their innovative capabilities in products and markets, always having been keen on finding the right niche. In interviews and cooperate publications we have learned that these capabilities should be transferred to the whole company. It remains to be seen how Vion Food Group manages to transform their inherited resources into profits. Doubtlessly a key resource is the back-up and freedom supported by the shareholder in terms of giving priority in financing the whole project as well in being patient with currently low profitability and efficiency. Thus, enabling Vion Food Group to grow and accompany them through financial valleys while waiting for peaks is a strong asset.

Regarding the overall integration it becomes clear that Vion’s core business is slaughtering and primary processing, its most profitable business is adding value to by-products, whereas the desired pathway to go is being innovative on the convenience side of the business. So we can see an internal supply chain coming up, which has changed the previous boundaries of the formerly independent companies. Additionally the question appears how Vion manages the supply chain. There we see a tendency to bind farmers stronger in order to make the supply with raw material safe, which is perceived as the major threatening business risk. Logically in this regard looks the investments made into “Farming Net” as an information exchange and service tool for Vion’s suppliers. On the other hand these investments raise the question how a flourishing convenience business can go without ICT investment with regard to retailers.

Overall we can see a company having a clear vision, but oppositional statements of members of the management team let us assume that definitions are not totally clear yet. The major conflict in this case study is on how to define raw meat: Is it a commodity or can you add value and differentiate it in order to increase your margins? Nonetheless Vion Food Group is entirely sure that they want and need to focus more on their customers. Communicating with them by checking possibilities for branding seems a viable way to go. However, to be really market orientated they see a long way to get there.
7.2 Case II: Smithfield

7.2.1 Corporate Background

Smithfield Foods Inc. is the largest livestock and meat processing company of the world originating and historically based in the United States. In 2005 their volume was 14 millions raised pigs and 27 millions processed pigs, neglecting their cattle raising and processing activities. Succeeding their domestic growth starting in the early 1980’s, Smithfield has invested in international expansion since the late 1990’s. Investments in Europe account for the majority numbers of international branches and will be highlighted further, whereas the relation to corporate resources and strategies, based on their US history cannot be disregarded due to their implications for the European activities. Their major distinctive characteristic is full vertical integration, an approach that they brought to Europe on a large scale as well. Worldwide, Smithfield has about 51.000 employees.

Smithfield’s Foods looks back on a 70 year long history in the pork processing industry. The company was founded in 1936 as a meat packaging plant in Smithfield / Virginia. Up to 1969 the company was in possession of the founding family Luter when it was acquired by an investment company. Due to imminent bankruptcy in 1975 one descendent of the founding family, Joseph Luter III, was asked to continue the family tradition and to be the CEO. Since then Smithfield Foods looks retrospectively at a successful development of sales peaking in record earnings in 2005 and in a continuously increased share price.

Smithfield Foods themselves present their growth subdivided into three major stages: domestic growth, international growth and vertical integration. When Joseph Luter III came to the fore in 1974 he refocused the company to its original core business, which is pork processing and managed to regain financial health. In 1981 Smithfield felt ready to acquire its local competitor Gwaltney, which doubled its size and made the company stepping out of the local scope. Two more acquisitions during the 1980’s broadened the scope of business operations; whereas both acquisitions had in common that the acquired companies were financially weak, but owning special market positions, well established brands and a loyal customer base. Until today Smithfield continued to acquire this special kind of company. Remarkably was the acquisition of John Morell & Co. in 1995, which again doubled Smithfield’s size. Further acquisitions in the US up to now focused very much on companies that had valuable market positions in processed products, such as hot dogs, bacon, branded ready-to-eat meals or Italian specialties and convenience products, but who did not manage to be profitable.

Next to their national expansion Smithfield started to invest into pork production in the end of the 1990’s. The acquisition of Carroll’s Foods and of Murphy Family Farms in 1999 and 2000 lead to the foundation of Murphy-Brown LLC as one of Smithfield’s divisions, which made Smithfield the largest pork producer worldwide. Further acquisitions of pork as well as cattle producers have followed up to now.

Smithfield’s international expansion as the third pillar of their growth strategy started in 1998 with the acquisition of SBS in France, a meat and cold cuts producer. This acquisition was followed by another French investment through the acquisition of SFGP in 1999, which is a processor of pork mainly for private label sales to retail. Also in 1999 Smithfield discovered potential in Central European markets and acquired at this point of time (finalization followed in 2005) a large share of the Polish slaughter and processing company Animex, which used
to be a state owned company in this formerly socialistic country. In 2004 Smithfield bought the two British meat companies Norwich Food Company and Ridpath PEK and formed Smithfield Foods LTD, which combines slaughtering and primary processing (Norwich Food Company) as well as further processed and tinned meat products (Ridpath PEK). Additionally in 2004 Smithfield invested further in markets, where they have been already active, whereof the acquisitions of the French meat processor Jean Caby with its well known consumer brand and the Polish meat and speciality producer Morliny are examples. Jean Caby has been integrated into the activities of the existing Smithfield divisions in France and Morliny has been linked to Animex. In the mid of 2006 Smithfiled announced the takeover of Sara Lee Food Group from the consumer goods multinational Sara Lee. Sara Lee Food Group comprises several added value activities in meat processing mainly in France and Benelux countries accounting for an annual turnover of 1,1 billion dollar (in 2005).

In 2004 Smithfield started investing into the Romanian pork producing and meat processing sector by acquiring Agrotorvis and SC Comtim Group SRL, both vertically integrated companies in meat production and processing. In the course of 2006 Smithfield announced further investments into the Romanian pork chain, 850 mln $ are planned to be invested in the next five years into pork raising as well as meat processing. In their latest annual report and in statements of corporate directors it becomes clear that Smithfield’s focus in Europe is to expand the business in Romania aiming to fulfil the goal of transforming Romania into a net exporter of pork. The organization of vertical integrated businesses and the alignment with Smithfield’s overall strategy is executed by the division Murphy Brown LLC, which is also responsible to distribute Smithfield own pig breeds among own and contract pork production.

7.2.2 Profitability, Risk, Positions and Strategies

Profitability
As described above Smithfield Foods Inc. has remarkably grown since Joseph Lutter III was announced to be the CEO. This growth relates to an enlargement of size due to many national succeeded by international acquisitions as well as of scope due to the incorporation of pork producing activities. Smithfield’s enlargement in size and scope has been a stepwise development, increasing its pace especially in the late 1990’s. The average annual sales between 1995 and 1999 (3,039.7 million $) had almost tripled compared to the four years prior to this period (1,095.8 million $). Between 2000 and 2004 another duplication of average annual sales (6,528.4 million $) has taken place in relation to the period before.

As extractable from Table 11 turnover has continuously increased since 1999; comparing 2005 with 1999 it has tripled. Regarding the figures on profitability throughout the years it can be seen that there are relatively large variations. Analyzing the Return on Assets (ROA) we can see an average of 4.22% and a standard deviation of 2.08 percentage points, whereas the net profit margins have an average of 2.44% and a standard deviation of 1.22 percentage points for the period under consideration.

Obvious appears the low profitability in 2003. In the related annual report Smithfield argues the weak profitability would have been due to low fresh pork processing margins, despite low pork prices in that year and therefore oppositional to historic market behavior. Earnings, however, are attributed to contributions from beef and processed meat operations. Thus in that specific year the strategy of vertical integration was not able to avoid low profitability, since market and price behavior was not typical wherefore the vertical integration was build to counter market volatility.
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<td><strong>Turnover</strong></td>
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<td><strong>Net income</strong></td>
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<td><strong>Return on assets</strong></td>
<td>5.36%</td>
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<td>6.88%</td>
<td>4.38%</td>
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<td><strong>Net profit margin</strong></td>
<td>2.67%</td>
<td>1.66%</td>
<td>4.36%</td>
<td>2.98%</td>
<td>0.37%</td>
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**Source:** own compilation based on Smithfield’s annual reports 1999 - 2006

**Risk**

Smithfield Foods present themselves as having a distinguished approach referring to their risk perception and their risk management. Factors in their business environment they perceive as risk have directly linked consequences on an action level. The perceived risk of the cyclical nature of pork prices results in efforts to counter that volatility by own pork production. The risk of substitution of pork meat and subsequent influences on pork prices is answered by measures of financial management such as hedging. General risks in the food industry such as contamination, health concerns, product liability claims and possible recalls are acknowledged as influencing Smithfield’s operations as well. This category of risks mainly relates to health and food safety issues and results in compliance with legal requirements regarding food safety, labelling and traceability including a broad monitoring system. Changes in environmental regulations and pressure from citizen groups are perceived as risks as well. Thus, Smithfield invests into the fulfilment of regulations and aims to behave anticipatory regarding future investments into technology. Beyond, Smithfield lines up voluntary agreements with regional and national authorities. The outbreak of livestock diseases in the US as well as wherever Smithfield conducts livestock production is considered as a non controllable but major impacting threat since especially consumers confidence might be affected, which is thought to be even more of influence if branded products are concerned. The strategy of vertical integration is perceived to be threatened by legislation in the US which might prohibit such a strategy in the future by banning the processing and owning of livestock at the same time. Since vertical integration has developed to be in the heart of Smithfield’s strategy the company is eager to counter such a legislation wherefore lobbying is a decisive measure. Numerous acquisitions have been essential to Smithfield’s growth during the last decades. Within the processes of acquisitions Smithfield recognizes certain risks to be inherent, which are managerial, financial and operational challenges as well as uncertainties about the acquired companies and their environment. Unknown issues might occur most likely whenever acquisitions are made in countries where Smithfield lacks expertise. The spread of Smithfield’s international scope is considered to be risk bearing, due to different economic and legal circumstances and because of currency fluctuations.
Strategy
As described earlier vertical integration is essential to Smithfield’s strategy. Taking their major activities, which are producing and processing of pig meat we can see a large expansion of both levels of operation over the last twenty-five years. Expansions of producing as well as processing cause each other in order to be independent to volatility of market prices and differing raw material qualities. With expansions in both fields of activities Smithfield aims for economies of scale. Expansions and thereby the choice of partners have been following the same pattern. As described above companies that have been acquired were financially distressed but had valuable market positions in their portfolio. The most recent example in Europe is the acquisition of Sara Lee Food Group, which has strong market positions especially in France and with its premium brand “Aoste” it offers reputation and access to new distribution channels for Smithfield. Having invested into further processing the expansion of own production is the next step, which is intended especially in Romania. Regarding Smithfield’s processing activities the tendency to focus on added value activities is recognizable. Investments thus are often directed to increase capacity for added value activities wherefore the 18 months plan to increase a cooked bacon plant in the US by investing 290 US-$ is one example from 2005. Throughout their whole business portfolio Smithfield aims to cover multiple needs of their customers which lead to a partial specialisation. For their Polish activities this means that the eight production plants that belong to Animex are focussing on one specific domain. According to a statement of a company representative this specialization, on a large scale however, improves and broadens distribution possibilities of Animex. Transferring this example to cooperate strategy, Smithfield seems to aim for the realization of cost effective but diversified production at the same time. In 2005 Smithfield has expanded their sales team by establishing a “flexible go-to-market” strategy which implicates the choices to approach customers either as individual companies or as a uniform cooperation depending on the needs of clients. Also on the individual company level sales team expansions have take place in recent years as Animex reports with special regard to reach potential customers in Western Europe. Launching a corporate sales team with one focus on international markets has boosted Smithfield’s pork exports by 30% in 2005.

Positions
Having described Smithfield’s strategy in recent years it becomes already obvious which position in the market they aim for. Having reached large scale operations and thus economies of scale wherever they are already established they are now striving for differentiated and specialized offer at least on the individual company level. Smithfield’s appearance in the market however depends on their customer needs’ as it becomes clear from the transition of the sales team towards a flexible approach. Added value products and increasingly branded meat are in the heart of Smithfield’s focus. Doing so Smithfield has been successful in the recent past as the figures on expansion per product category show: In 2005 sales of case-ready and marinated pre packed fresh meat has grown by 45%, boneless hams by 40% and sales of branded fresh meat to retail have risen by 4%.

7.2.3 Resources
Smithfield itself regards vertical integration as their most valuable resource and major distinction towards their competitors. This can be exerted from corporate publications and from an interview we have had with a representative of Animex as one of Smithfield’s first

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15 From our expert interviews we know that Sara Lee Food Group is the market leader for cured as well as cooked pork legs in the French and Portuguese market and that they are holding good positions in the Dutch and Belgian markets.
subsidiaries in Europe. The major advantage they emphasize because of that approach is independence from the volatility of market prices aside from supply security and influence on quality.⁶ Beyond the pros of that way to coordinate vertical relationships knowledge becomes valuable that they have on vertical integration when it comes to building up an industry including infrastructure almost from scratch. In Poland but even more in Romania Smithfield takes massively advantage from their expertise in vertical integration to establish supportive relations with at least temporary preference by the national government.

Incorporated into vertical integration the acquisition of own genetic material of pigs has to be mentioned here. In 1991 Smithfield acquired the exclusive rights from a British pig breeding company to use their “NPD” genetics in the US and Mexico. “NPD” genetics are in particular lean, according to corporate publications the leanest hog in large scale production. The usage of “NPD” genetics have lead to the foundation of Smithfield’s Lean generation pork, which is registered as a trade mark. All individual pork production companies belonging to Smithfield such as Brown’s of Carolina, Murphy Family Farms and Carroll's Foods are using Smithfield’s own genetics. Since international expansion has started also abroad Smithfield is using their genetics. Beyond approximately 800,000 sows in the US Murphy Brown owns 46,000 sows of own breed in Poland and 14,400 in Romania as of the end of fiscal year 2005. In Poland Smithfield has started to import NPD sows in 2002 and has integrated them in contract farming. Due to their plans to massively expand pork production in Romania a further increase in amount can be expected.

On the market side Smithfield has bought some valuable market positions regarding final consumers lately by acquiring the meat business of Sara Lee Europe. Aoste is a consumer brand, which is well spread throughout Europe and known by many customers. Additionally some brands that represent regional specialties have been add to Smithfield portfolio through acquisitions, such as pre-marinated meat and ham brand “Krakus” from Animex or the French sausage brand “Justin Bridou”, and enhance Smithfield’s reputation on a national but according to an Animex representative beyond on an European level. Krakus branded ham is additionally the most imported branded ham in the US. Furthermore as a relational resource the possession of strong brands to the retail opens Smithfield strong distribution channels that they might use for selling other products.

Smithfield’s recurrent pattern of acquisitions as described above shows that their M&A and subsequent integration skills are a resource as such. This pattern shows a profound knowledge on competitors, which indicates that Smithfield is intensively scanning their competitive environment. Also the profitable development of many of their acquisitions in their US shows that Smithfield owns good integration skills of newly acquired, weakly performing businesses. “Aoste” as an example has been physically integrated into the group Jean Caby, whereby most management positions within former Sara Lee Group have been kept. The key factor however in Smithfield’s acquisition strategy is as aforementioned the turnaround of losing businesses into profitable ones. An impressing example in Europe is the acquisition of Animex, which was making 43 million $ losses a year and has according to cooperate publications been transformed into a profitable business up to now. Also third parties seem apparently convinced by Smithfield’s M&A strategy and capabilities. The acquisition of Sara Lee is a 50/50 joint venture with the investment company Oaktree Capital Management, LLC. Together, both partners form the Groupe Smithfield, S.L. Their skills on integration seem to open access to external sources of financing.

⁶ Smithfield’s concept behind is that pig prices and processed meat prices have been observed to be negatively correlated in the timeframe of a year. Having control over both stages of the value chain is supposed to work as a hedge. However in 2003 this concept has not worked out.
7.2.4 Innovations

Enhancing quality and offering a full assortment to customers is central to Smithfield’s efforts in innovation, whereby it can be distinguished between innovations in production and processing sides of the business.

Much of what Smithfield is doing to innovate in their pig production businesses has been mentioned already above. Having bought in own genetics and continuously improved them aims for the enhancement of quality and efficiency in production. Furthermore Smithfield’s processes are handled in an innovative manner since the vertical integration targets on gains in efficiency. However on the production side innovative activities are recognizable and can be categorized as sustained innovations.

On the processing side of the business Smithfield aims for ongoing improvements in their formulations and recipes with special regard to their ready to eat meals. Consequently in the US Smithfield has installed an innovation group in 2003. Headed by an experienced chief they run a test kitchen. Beyond new product development for their customers this group provides sales and marketing support within Smithfield.

Regarding Smithfield’s European activities it’s noteworthy that their Polish branch Animex is increasing their spending on R&D by 20% on an annual basis. Thereby they focus on the fields breeding, feeding, functional foods for an overall quality enhancement and on collecting knowledge on markets. Within their technical research they collaborate with the Polish Institute of Meat and Food Industry and the National Food and Nutrition Institute. Market knowledge is gathered by the usage of external sources, such as the Polish Statistics Office, the Economist and market research businesses like AC Nielsen. According to the representative of Animex collaboration with final consumers is most important, which gets expression in the installation of focus groups.

7.2.5 Supply Chain Management

When we look at the way how Smithfield executes its supply chain management and the management of linkages to other firms in their chain we see this very much determined by the vertical integration.

According to an Animex representative partners upstream the chain, which are mainly farmers, are equally important as the final customer at the end of the supply chain is. Numerous reasons for the tightest form of collaboration have been given. With special emphasize the improvement of customers trust, the enhancement of quality and the advances in crisis management have been named. Customer relation and service management, Demand management and manufacturing flow management are further aspects that are important to Animex chain approach. Within Animex IT systems are used to provide information to the whole group and to integrate the data from various processes in the company. However there is no ICT based system to exchange information with customers and suppliers.

Referring to Smithfield’s latest annual report a “process verified program” has been developed in order to improve the traceability of final products and to provide a point of differentiation with retailers. This system has been introduced in the US market activities and it can be guessed that not long to go such a system, in case of success, will be tested in Europe as well. However this might take until the internal supply chain is installed, where the activities in Romania seem to be crucial element.
7.2.6 Boundaries of the firm

When considering Smithfield’s boundaries in terms of vertical coordination their strategic approach of vertical integration shows as central again. As described earlier Smithfield has entered into pork production in the late 1990’s within their US activities. Aside from going international Smithfield’s later investments have been made into further, value added processing.

Smithfield’s commitment to their strategic decision in the late 1990’s has not changed. Vertical integration means to them to control the primary production of livestock as well as primary and further processing. Reasons for pursuing this kind of strategy are the independence of volatile market prices of pigs and processed meat and according to an Animex representative the assurance of high quality and food security for their customers.

Recent investments of Smithfield show that after having acquired companies from any part of the supply chain these companies get implemented into a vertical integrated system as soon as possible, depending on the historical circumstances. In the case of Animex Smithfield has bought a formerly state owned enterprise, which was engaged in the primary processing of pigs. The representative of Animex we’ve interviewed emphasized the fragmented structure of the agricultural sector as well as further processing activities. Vertical integration has not been a familiar system to the meat processing industry. However Smithfield represented by Animex has been attempting to move away from spot market transaction in order to come closer to their familiar business model. They invested into building up a network with farmers. Thereby they have followed a twofold approach: firstly going for contractual relationships with farmers and providing genetics to them and secondly by collaborating with Prima Sp. z.o.o a trading company. Nowadays Animex has one-year contractual agreements with farmers covering 80% of their transactions, whereas the remaining 20% are traded on a spot basis. For Animex the current situation is desirable subject to the current circumstances. According to what a company representative told their primary focus is on pushing national consolidation forward and to unlock the potential in Western European consumer markets.

In the case of Romania Smithfield has decided to buy two fully integrated pork processors and to further expand them by heavy investments as described earlier. Their activities within the production chain start with the operation of feed mills goes via pig production on own farms to primary and further processing. Their aim is to run 70 large, modern farms and efficient further processing facilities in order to make Romania a net exporter of pork. Assumingly a net exporting position would also mean a further integration of the Romanian production into Smithfield’s European value chain.

What we can see with Smithfield is an increasing disappearance of boundaries within the scope of managing farm production inputs to the production of ready to eat meat in all of its kinds. Wherever the situation allows and it is cost-effective Smithfield seems to prefer the most tight collaboration in their chain, which is ownership. As ownership is not possible, for what reason ever, chain coordination is executed as tight as possible. Regarding this aspect over time we can say that Smithfield’s boundaries have changed massively when they decided to enter pork production on a large scale. Also the increasingly taken “make – decision” concerning further and added value production in the US and as well as in Europe changes the boundaries deliberately. For Smithfield these changes may seem consequent and intergradient, for some of the companies acquired however a new sight on their business is required, since being involved into that vertically integrated system means a huge change of former boundaries.
7.2.7 Organizational Learning and Strategy Formulation

Suffering a huge setback in the early 1970's Smithfield has recovered since then and continuously developed and expanded up to now. As described earlier this successful development has started in 1974 when Joseph Luter III was announced to be the CEO. Luter has brought Smithfield on a tremendous course of expansion, which has taken place first nationally and later internationally. Growing big in order to make use of economies of scale has always been the motto of Luter and his management team. Throughout his career he has realized a cyclical volatility of margins, complementary in pork production and pork processing. This has lead to Smithfield's commitment to vertical integration. As Luter stated in the annual report of 2000 the decision has been made in order to guarantee consistent high quality for Smithfield's further processing activities. His view on the relation between pork production and pork processing has fostered his decision: "Generally, pork processors make more money when hog prices are low—as witnessed in fiscal 1999—and processing margins decline when hog prices rise. By participating in both ends of the business, we remove many of those peaks and valleys."

In later cooperate publications this conceptualization of the business is still confirmed when Luter refers to a 4-year cycle of high and low margins. As a consequence emphasis of the management has been increasingly given to added value activities and branding. The latest vision statement of Smithfield is to “becoming the most trusted leader in meat processing and hog production”. Regarding the US market they have achieved already the ultimate market leadership. Being trusted as a goal does not yet indicate who should trust them. Partnerships with farmers, as in Poland where they heavily emphasize this aspect, is one side of the coin. At the end Smithfield is a public company and committed to its shareholders. However, regarding the continuously grown share price trust by shareholders to management’s decisions can be assumed. So it’s the final consumer that should trust Smithfield most in the meat business. Throughout corporate publications during the last 7 years it becomes more and more clear how Smithfield’s strategy has developed. It can be summarized as to add value to meat on a large size, making sure that costs are kept low and provide a full assortment of meat to customers. Concluded mainly from US based statements this perspective matches also the European activities of Smithfield.

We can assume that Lary Pope as the successor of Joseph Luter III will continue this pathway, since he has determined this strategy as well working for the company already for 26 years.

7.2.8 Summary and Conclusion of the Smithfield Case

With its more than 70 years long history Smithfield has taken a course of successful development and growth since Joseph Luter III came to the fore. This development has undergone different successive stages with certain overlap and lasts until today. Originating from the US Smithfield has expanded tremendously in the US throughout the 1980’s and 1990’s whereby their size has doubled multiple times. Whenever they have seen a competitor financially lying down, but holding certain complementary assets, they have overtaken these companies. These acquisitions have added products, reputation and special expertise but first and foremost valuable market positions to Smithfield's portfolio. In the late 1990’s Smithfield has decided to expand their portfolio of operations from meat processing to meat, mainly pork, production. After two large acquisitions in the US they have managed to become the worlds’ largest pork producer. The third step of their expansions was their decision to go international. In South America, Asia and Europe they started to establish branches since the late 1990’s. Regarding their European activities they have first bought production facilities and brands in France, then invested heavily into the largest Polish
processor Animex, added acquired brands to them (Krackus and Morliny) later, decided to build up a whole pork supply chain in Romania and started doing so by acquisitions and have lately bought the European meat branch of Sara Lee, which adds premium meat brands to their portfolio.

So far Smithfield presents itself as successful with its strategy of vertical integration. At both ends of the chain they invest to have forerunning positions in order to be effective particularly concerning costs. Their investment policy as well as their risk perception and management shows that they scan their environment, their markets and their competitors broadly. Vertical integration has been introduced as a strategy to assure supply with raw material and to guarantee quality, so far well known reasons for this kind of strategy. Counterbalancing the volatility of pork and meat prices would have lead to increasing margins. However, margins have shown as volatile also after having become a large pork producer. It remains to be seen how the novel model of an integrated chain in Europe, from low cost production in Romania to premium branded marketing all over Europe, will affect profitability.

Advocating vertical integration, knowing competition and being willing to take the risk of investments and having the ultimate expertise in turning around loosing businesses by integrating them into Smithfield’s portfolio are major capabilities Smithfield owns. Key resources behind this capability are a broad view on the business and an active and balanced relationship management on both ends of Smithfield’s value adding chain. This gets expressed by the support of farmers on the one hand side for instance by advice and the provision of own genetics and on the hand side by the recent development of an ICT based point of differentiation for retailers. Due to their size Smithfield owns a large and diversified portfolio of final products, which gives flexibility in offer and marketing to meet the needs of customers.

When we look at the way Smithfield conceptualizes their business then we see a very dynamic and market orientated approach. Meat is seen as something you can add value to and Smithfield feels ready to do so, which requires in their opinion tight control over as much as possible processes in the value chain. The value chain thereby appears as a mean for efficiency, whereas the focus is on the final customer, backed up by the eventual perspective on shareholders as the owners of the company.
### 7.3 Summary and comparison of the Case Studies

Table 13 summarizes the cases and the case analysis of previous sections briefly.

#### Table 13 Summary Vion versus Smithfield

<table>
<thead>
<tr>
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<th>Smithfield</th>
<th>Vion Food Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profitability</strong></td>
<td>ROA (Ø 2003-2005) 2,91%</td>
<td>ROA (Ø 2003-2005) 3,52%</td>
</tr>
<tr>
<td></td>
<td>Net Profit Margin (Ø 2003-2005) 1,26%</td>
<td>Net Profit Margin (Ø 2003-2005) 1,81%</td>
</tr>
<tr>
<td><strong>Risk (perceived)</strong></td>
<td>multi-dimensional approach (broad scan of the environment)</td>
<td>One-dimensional approach (close scan of the environment)</td>
</tr>
<tr>
<td><strong>Positions</strong></td>
<td>Differentiation</td>
<td>Cost leadership</td>
</tr>
<tr>
<td><strong>Strategies</strong></td>
<td>Integrated management approach focussed on the market</td>
<td>Separated approach focussed on production and supply</td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td>• Vertical integration</td>
<td>• Relationships to modern distribution</td>
</tr>
<tr>
<td></td>
<td>• Market knowledge and broad risk perception due to intensive scanning</td>
<td>and innovative power acquired from predecessors</td>
</tr>
<tr>
<td></td>
<td>• Integration capabilities</td>
<td>• Financial backup by shareholder</td>
</tr>
<tr>
<td></td>
<td>• Appreciation by financiers</td>
<td>• Development of branding skills</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td>• Focus on process innovations</td>
<td>• Focus on sustained process innovations</td>
</tr>
<tr>
<td></td>
<td>• Moderate approach to sustained product innovations</td>
<td>• Moderate approach to product innovations</td>
</tr>
<tr>
<td></td>
<td>• Focus on current customers</td>
<td>• Focus on current customers</td>
</tr>
<tr>
<td><strong>Supply Chain Management</strong></td>
<td>• Integration of processes and exchanging information upstream the chain</td>
<td>• Integration of processes and exchanging information upstream the chain</td>
</tr>
<tr>
<td><strong>Boundaries of the Firm</strong></td>
<td>• Make decisions Always tightest form of collaboration as possible</td>
<td>• Tendencies of vertical integration</td>
</tr>
</tbody>
</table>
Organizational Learning and Strategy Formulation  | Deliberate and deductive over time  | Starting deliberate and deductive driven by visionary leadership towards Emergent and inductive  
---|---|---  
World leader in pork production and processing  | Owner of a large pie in the current North Western European industry consolidation  

Having reported and analysed the cases we can give answers to research question 3 and underlying sub-questions.

Research Question 3.1 asks: “How do companies respond to a transitional situation of their industry concerning strategy formulation?” Comparing both companies and their strategy formulation than we can see a clear difference, which is of course subject to our chosen perspective. Smithfield presents itself as deliberate and deductive over time. When Vion Food Group came into existence they had a strong deductive and deliberate approach driven by visionary leadership. After starting up their approach has proven to be difficult to maintain, which becomes physical whilst regarding the discussions about central definitions as described above. In the recent past their strategy formulation has shown as emergent and inductive, with tendencies to find a deliberate and deductive balance again. So the answer to this sub-question can be summarized as: The strategy formulation of companies in transitional situations moves inevitably towards emergency and induction which triggers effort in companies to come back to deliberation and deduction.

Research question 3.2 asks “How do companies respond to a transitional situation of their industry concerning their resources and capabilities?” If we compare Smithfield and Vion Food Group we see both companies exploiting their existing resources: Smithfield is focusing more on vertical integration whereas Vion focuses more on horizontal integration. We can see a strong resource base within Smithfield that has been build up versus acquired in during the last 20 years. Especially their capability to integrate businesses and turn them around shows up to be a core capability that makes Smithfield less vulnerable to transition. Scanning their environment broadly is another key resource that helps Smithfield to manage change better. Regarding their successful growth during the last 20 years we can assume that they have prevented and shaped both resources well. Vion Food Group is still in a phase of getting to know their resources due to the recently emerged conglomerate of formerly independent resource owners. However it seems that they focus on SCM tools to enhance quality and information sharing and on the market oriented resources that are inherent in their predecessors, which are relationships to modern distribution and innovative power. Especially the recently announced establishment of a gourmet brand show in this direction. So the answer to this sub-question can be summarized as: In transitional periods companies (re-)identify their key resources and capabilities and recollect them. Subsequently key resources are further exploited.

Research question 3.3 asks “How do companies respond to a transitional situation of their industry concerning their organisation with special regard to their ownership structure?” If companies act in an industry in transition they seem to need changes in their ownership structure to adjust to the new situation. This would be one explanation why Vion Food group has changed their ownership structure from a cooperative background to a stock listed
company. Thus they seem to consider a cooperative ownership structure as not suitable for the new situation. During this research we found several statements by representatives of Vion, saying that they perceive cooperative structures as too restrictive to necessary changes. By comparing the corporate background of both cases we can identify the importance of supporting financiers in transitional situations. Additionally we have learned from the development of boundaries that companies in transitions tend to make “Make-decisions” and show tendencies of vertical integration, which is in particular an issue of control upstream the value chain in our exemplary industry. So the answer to this sub-question can be summarized as: In transitional periods financing and control issues are of special importance to companies. Wherever an alternative ownership structure provides advantages for this a company is likely to change ownership as far as this is possible.

Research question 3.4 asks “How do companies respond to a transitional situation of their industry concerning innovations?” Comparing both cases we can see a moderate approach towards product innovations in both cases. Both companies focus on current customers and show chary attempts to find ways to innovate. However, during our case interview with Vion Food Group we have learned that they plan to come up with trendsetting innovations within the next four years. Attributing their hesitations to industry history and current state of R&D we can summarize to give an answer to this research question: Product innovation becomes an issue and companies in transitional industries try to find their position on the innovative playground with regard to this. More obvious in transitional phases seem innovations in processes with regard to efficiency enhancing measures. We found the highest innovative activity during the recent transition of the pork processing industry in North Western Europe with regard to the implementation of Supply Chain Management tools, such as electronic tracking and tracing systems and information exchange tools with partners alongside the value chain.
8 Conclusions and Implications for the conceptual framework

This chapter puts the case findings in perspective of the theoretical framework by commenting on every single factor. Information from the theoretical framework, the industry analysis and the case studies will be converged in this chapter.

Section 8.1 concludes on every item of the theoretical framework. These conclusions have been converged into the conceptual framework, which will be introduced in section 8.2 by discussing the functionality of each item. Section 8.2 discusses the strong and weak points of this thesis by answering research question 4 on the practical opportunities and limitations of applying the theoretical framework.

8.1 Conclusions

Organizational Learning and Strategy Formulation

From the body of research dealing with organizational change we have learned that companies can be found in two fundamentally different stages, which is a period of stability that gets interrupted by transitional periods determined by radical changes. In both periods certain types of organizational learning are dominant. In periods of stability organizational learning is rather deliberate and deductive, mainly expressed by procedural planning, whereas around periods of transition it is emergent and inductive. The types of organizational learning that can be identified are therefore a suitable indication of the current state a company or an industry as aggregated company level is in. Furthermore a realization of an actual state can implicate action for managers. For example theory suggests that the negative impact of transitions can be overcome by broadening the threat perception in rather stable times when changes occur incrementally.

The two cases that we have investigated show different patterns of organizational learning and strategy formulation for the time we have been analysing them. Whereas Smithfield’s learning can be regarded as deliberate and deductive over time does Vion present a more transitional pattern. Having been initiated by visionary leaders who had developed their plan deliberately and deductively they are now rather emergent and inductive. During interviews with Vion’s management though we got the impression that they are in the course of moving towards formalized planning at the moment, shown by their restructuring of the management board alongside with a refined strategy. Smithfield’s continuous and successful growth during the last 30 years is an example for a company that has managed to build successful barriers to radical changes; as theory suggests this can be done best by scanning the environment broad and advancing threat perception. In the case study Smithfield indeed shows a broader risk scanning than Vion does.

Turning our attention to the contents of learning, Smithfield has learned primarily two things over time: 1. pork processors need to align their activities throughout the whole supply chain and 2. market leaders in pork processing need to be international. Those two things are supported by the state of the industry and potential action of pork processing companies that could be derived from our industry analysis.

Resources
The Resource Based View and related scientific discussions suggest that in an industry in transition the suitability of resources might change. The body of resources is assumed to be heterogeneously distributed within an industry. If an industry changes a resource that has accounted for a competitive advantage of a company might no longer be appropriate in doing so and new resources might come up as important.

The pork processing industry in North Western Europe dragged on for a long time of decreasing profitability. This had finally lead to the consolidation process that we have been observing. Consolidation in a not profitable industry (in order to make it profitable) needs financing. This has shown in the case studies, since both Vion and Smithfield’s survival and periodic success relies on better financing versus their competition; in case of Vion via a single shareholder. Due to food safety issues and derived legislation quality assurance has become important in the resource mix of the industry. Via takeovers Vion Food Group has acquired some devices that enhance quality control and ultimately assurance upstream the value chain. In order to be superior versus their competitors however quality management downstream the chain would be needed. The same holds for information exchange and process flow alignment with customers. We can hypothesise at this point of time that meat producers who establish superior relationships with retailers and put that into reality via a professional Supply Chain Management will own distinctive resources in the future.

**Boundaries of the firm**

Regarding the theoretical background of vertical coordination we have learned that boundaries of the firm are in question when efficiencies are changing. This is likely to happen in an industry in transition. In the pork processing industry we can primarily see a changing industry structure towards more concentration. Prior changes on the demand side (i.e. enhanced bargaining power of retailers and differentiation of final consumers needs) are often mentioned as a reason for this. Those movements towards retail concentration have started during the 1980’s in the US and have increased their pace in Europe during the 1990’s. Regarding both case studies we have seen that Smithfield has entered vertical integration during the 1990’s, hence when they were already facing a consolidated retail sector. In the case of Vion Food Group we have concluded a tendency towards more make decisions (i.e. vertical integration), expressed by the attempts to coordinate their supply more and to collaborate closer with farmers.

On the demand side we have seen more make decisions towards further processing up to branded products being sold to retailers. Again these developments have started earlier with Smithfield whereas the Vion Food Group seems to be in its beginnings. Vions appearance as such is a central result of the industry consolidation of the pork processing industry in North Western Europe in recent years since the group incorporates many formerly independent companies. Followed by the conglomeration parts of their newly combined business are under assessment, leading to both integration and disintegration. This however is in its very beginning due to the novelty of the company. But it seems logical that the acquisition of several similar companies makes efficiency becoming a central issue. Thus the pork processing industry having gotten into a transitional phase is subject to changes concerning the boundaries of firms.

How might the future of this look like? On the demand side we can see consumers with differentiated needs and a segmented retail sector providing an outlet to serve those needs. Thus we speak about different supply chains emerging where companies can make choices. The retail sector inherits large negotiation power due to being nationally highly concentrated and being organized in (international) buying groups. Given these circumstances serving customers needs best and level bargaining power best could be when companies make clear decisions about what to offer to retailers. Clear choices downstream the value chain could lead to a one- or more dimensional differentiation into certain operations where a company considers itself good at. Underlying products could be offered on a large scale to customers.
Regarding a company’s business portfolio make decisions could be made where a company considers a (future) core business, whereas residual businesses could be disintegrated. We can hypothesise that companies who will make clear decisions towards positioning (i.e. 1. Which supply chain(s) to serve and 2. Which position to take in this particular chain(s)/market(s)), determining their individual boundaries, will be superior in future competition.

Supply Chain Management
Supply chain management (SCM) focuses on the management of firms activities that cross organizational boundaries. SCM thereby strives for the enhancement of efficiencies and develops concepts and tools for improved information exchange. If an industry is in transition and the structure of the industry changes, the way processes are aligned in a supply chain might not be efficient anymore. In turbulent times companies are said to increase their search for efficiencies in general. Since SCM has been recognized by scholars as one of the most important novelties in agribusiness we assumed and finally found much issues from that direction.

When we were interviewing industry experts SCM came out as one of the major fields where experts see room to improve. So far alignment of business processes has been converged into upward alignment with farmers, which is said having improved quality and process control. Nevertheless alignment downstream the chain with further processors and retailers has been neglected. Experts see this as a major area for improvements.

Given the developments in the retail sector where an increase and internationalization of bargaining power is observable improving information exchange with customers might lead to a better market orientation. As discussed above efficiently executed SCM could be a resource of pork processing companies in the future.

Profitability, Risk, Positions, Strategies
Having analysed the European pork processing industry in depth in chapter 6 we have found remarkable changes in 3 of 5 competitive forces. Competition within the industry has changed due to concentration process. Regarding individual national markets in North Western Europe we can speak about highly concentrated markets (i.e. Netherlands, Denmark and Germany), whereas from a broader European perspective concentration has increased, however it remains relatively low at levels of around 30% of the Top 3. Experts and players in this industry expect further consolidation.

As major reasons for consolidation we found decreasing profitability and the threat of new entrance, which relates in particular to the multinational companies entering Europe such as Smithfield.

On the demand side there have been also changes in the size distribution and international scope of retail. Increased bargaining power is the consequence. Alongside with differentiation of consumer preferences also retails formats are differentiating.

To complete the forces from the competitive environment substitution did not occur substantially in recent years and changes on the supply side are rather negligible since rather a reaction on changes in downstream industries and/or politically induced.

In particular the changes on the demand side enable companies to pursue new strategic directions, which is specialization and differentiation by making deliberate decisions on which supply chain to serve. This does not necessarily mean to limit to one supply chain and one distribution channel, but inherits the necessity to choose. Regarding the bunch of consumer preferences (low fat products, ethnical food, ready to eat meals, traditional kitchen,….) and differentiation of retail formats requires different supply. The roughest categorization thereby is into premium products versus low cost production. This means for companies in the pork processing industry that they have to position themselves. For an industry that used to be
supply driven these developments can be understood to be a real transition, which requires different management, which is in particular a market oriented one.

Having conducted two case studies (i.e. Smithfield and Vion Food Group) we could observe two companies with a different approach. Whereas both companies attempting economies of scale, does Smithfield pay attention to their whole supply chain due to being vertically integrated. This means they have overcome the traditional supply orientation. Instead they have bought in market positions with a broad range of outlets, being able to serve exactly these different supply chains. In Europe consolidation has started later than in the US. Vion is still in the course of a transformation from being fully supply driven to getting market oriented. Theory suggests innovating continually to realize changes in the competitive environment on to be prepared for those changes. In this regard Vion has started to be on a good way, since their reorganization aims at the ability to serve different supply chains.

**Innovations**

Innovations are one of the factors with the ability to lead an industry into transition. This has not been the case in the pork processing industry. Innovations have been rather been process oriented and rather of sustained kind. However there is room for product innovations due to the new requirements on the demand side. A good example for those kinds of innovations is the branded gourmet line of Vion. Those innovations are likely to become more important.

As mentioned above the coordination of the supply chain might be a crucial factor for the future in the competition of companies. This requires tools to coordinate. Innovations in this field are likely to increase. Successful execution of the development would only be possible in coordination with stakeholders primarily customers, which are retailers. Proactive development of those tools might enable companies to set successful barriers to new entry. While product innovation become more important, process innovations (for instance in SCM) continue to be important in the future.
8.2 Implications for the conceptual framework

Having concluded on every factor of the theoretical framework (Figure 8) in previous chapter in a content oriented way we will now turn our attention to the functionality of the theoretical framework. Thereby every item of the theoretical framework will be discussed and is linked together to the final framework.

Figure 26 summarizes our findings in this conclusion chapter towards the final theoretical framework, which is the ultimate goal of this research project.

The conceptual framework contains all the items from our theoretical framework (Figure 8), which have been filled with content from

- a theoretical perspective in chapter 4
- a macro level analysis of the industry in chapter 6
- and a micro level analysis, which are the case studies in chapter 7.

In addition the final framework puts the items in relation to each other, both in a content based and in a functional way. Thus we suggest the conceptual framework for studying and analysing food businesses in markets in transition as follows.

Figure 26 Final Theoretical Framework "An industry in transition"

In our research we have found: If an industry is in transition Resources, Firms’ Boundaries, Innovations and Supply Chain Management are affected. In Figure 26 this is shown by the
arrows that connect an “Industry in Transition” with the four items mentioned. Underneath the items some bullet points highlight the findings of this research for the pork processing industry in North Western Europe as summarized in section 8.1. The bullet points relate to what companies have been doing as a consequence of the transition regarding every item. This can be summarized as new resources, efficiencies and innovations. As found in this research those changes aim for an increase of profitability, minimization of risk and better definitions of positions and strategies. This is presented by the arrows showing from the four items to “Profitability, Risk, Positions, Strategies”.

On the right side of Figure 26 the item “Organizational Learning and Strategy Formulation” shows schematically which phases of Learning can be attributed to a transition and reflects what we found during our case study.

The items of the framework are presented in detail below.

**Organizational Learning and Strategy Formulation**

Organizational Learning is definitely affected by an industry in transition and it reinforces the transition itself. Deliberate and deductive learning and strategy formulation in stable periods lead to organizational inertia, which enables transition to occur unperceived. Within the transition an organization realizes the loss of synchronization with its environment and starts to sort out the situation by learning inductively. Since this happens suddenly after realization of a transition, strategy appears to be emergent. As soon as the situation becomes more comprehensible procedural planning starts and leads to deductive and deliberate learning and strategy formulation after a while. That is the pattern, which is suggested by theories of organizational change. While analysing Vion Food Group, as representative of the transition of the pork processing industry in North Western Europe, we have found this pattern confirmed.

Which role does the item organizational learning and strategy formulation play within our framework? The theories from the field of organizational change that we have applied present patterns on how organizations learn and develop strategy depending on developments in the external environment. These patterns have been derived from observations in reality. Hence we can use this item in two ways. Firstly it can be used to determine a state of a company. Based on historical development and current state of learning and strategy formulation the future regarding transition can be predicted. Secondly an analysis of learning and strategy formulation within a firm can be used to identify effective measures to counter the inevitable nature of the pattern. In which way this item should be used depends of the context where the framework is applied.

In this research it has been used to identify the state of the industry. For the conceptual framework we suggest to use it for this purpose. In a more company (i.e. micro level) analysis the second application could be emphasized.

**Resources**

Resources are in the centre of transition since the mix of important resources within an industry changes. In chapter 7.3 we have concluded on resources: “In transitional periods companies (re-)identify their key resources and capabilities and recollect them. Subsequently key resources are further exploited.”

Unlike with the item “Profitability, Risk, Positions, Strategies”, which is more of descriptive nature in the context of an industry analysis, resources can be and need to be used proactively. New resources have been identified in the industry of our research (i.e. financing, quality assurance and supply chain management) and those companies that possess them will have a competitive advantage and are therefore able to master transition better.

Thus we suggest putting the item resources in the centre of our framework since re-identification and recollection of resources has been identified as a direct consequence of
transition. This place in the framework seems to be supported by inductive learning, highlighting an inside-out perspective.

**Boundaries of the Firm**

As mentioned before efficiencies have been lost in times of transition. Likewise the item resources dealing with the usage of (new) resources also efficiencies need to be searched and applied in an active way. Lost efficiencies are likely to be directly related to decreasing profitability. Make or buy decisions need to be taken in order to re-focus businesses on their strengths and their effective operational execution. In our research we have seen that the companies investigated strive for integration alongside their resource base (i.e. Vion’s horizontal integration and Smithfield’s vertical integration). Hence they realise economies of scale by re-setting their boundaries. Both companies have additionally acquired resources and innovations (e.g. brand names) by takeovers of companies as shown in the case study.

The Boundaries of the Firm are directly affected by an industry in transition. We suggest putting them in the centre of our framework. Furthermore this item directly relates to resources and to innovations, since integration or disintegration of businesses determines directly the access to them.

**Innovations**

As suggested by theory and mentioned above innovations have the ability to trigger transition in an industry. In our research however we have found innovations as necessity to overcome transition and gain back profitability. In our specific industry we have identified innovations, which are recommended in the short term (i.e. SCM coordination tools and small product experiments) and innovation for the longer term (i.e. customer product innovations). The short term ones rather aim for overcoming transition and do partly support processes related to the other “activity items” (i.e. Resources and Boundaries of the firm and Supply Chain Management), whereas the recommended long term innovations strive for improvements of a firms profitability derived from theory and practice.

**Supply Chain Management (SCM)**

An industry in transitions affects Supply Chain Management because activities in a value chain that cross the boundaries of single companies (in particular information exchange) are not executed in an efficient way. The application of suitable SCM tools can lead to master transition successfully. For our particular industry we have concluded above that (re-) gaining efficiencies by applying SCM tools in particular downstream the chain will be a decisive factor for future Profitability, Risk, Positions and Strategies.

Hence we suggest putting the item Supply Chain Management (SCM) in the centre of our framework as tools to analyse efficiencies in a firm and its aggregate.

**Profitability, Risk, Positions, Strategies**

The item Profitability, Risk, Positions and Strategies as adapted from the work of Slater and Olson (2002) is within the heart of a firm’s interest. All of the four factors are driven by the external and business environment as based on Porter (1980). It is an all-embracing concept of a firm’s position in its environment.

In our research we have found that if profitability decreases, risk increases or becomes less controllable, positions in the market are unclear and strategies on how to behave in competition in order to maximize profits are not suitable anymore a company runs into a crisis. If this happens to the majority of companies in an industry we can speak about an industry in transition. Thus the concept of profitability, risk, positions and strategies is where transition starts and where it ends, as soon as a company and the aggregation have regained control over it.
For our conceptual framework on industries in transition we suggest to start with an industry analysis based on Porter (1990) in order to determine the actual state, the economical being of an industry and its companies. We have realized that in our research influencing forces (i.e. increased bargaining power of retail, threat of new entrance, and decreasing profitability) of that item have lead to a transitional state of the industry. Emergent and inductive learning followed by procedural planning lead to a reorientation aiming for increasing profitability, decreasing risk, clear positions and strategies. That is where transition ends. Hence the item Profitability, Risk, Positions and Strategies is suggested to be at the end of the conceptual framework as an outcome of the transition.

8.3 Discussion on the final Theoretical Framework

Strong Points
In section 3.1 the research objective was formulated as: “Objective of this research is to provide strategic insight in the food industry by developing a theoretical framework for studying and analyzing food businesses in industries in transition. After getting an understanding of the related environmental and company elements and their relationships, a theoretical framework will be firstly developed and secondly tested in the meat industry. The final outcome will be a revised conceptual framework”. When we review our research we come to the conclusion that we have fulfilled the objective of this research. In the introductory chapters 1 and 2 we have highlighted changes in the environment of and within the food industries. The industry analysis in chapter 6 provides additional and in-depth insight into the pork processing industry whereas many developments, such as in consumer behaviour and retail concentration can be generalized to other segments of the food industry. Chapter 4 deals with the development of the theoretical framework. In chapter 7 this framework has been applied to the pork processing industry by conducting a case study research. Finally in the previous sections of this chapter the framework has been adjusted and changed based on our findings in reality, leading to the final theoretical framework as shown in Figure 26.

The framework as such is rooted in multiple theories, mainly taken from high level journals on management and organisations science. By combining research on the change of organisations, on resources, on innovation, on competitive forces, on supply chain management and vertical coordination we have taken a broad rage of theories that deal (among others) with the relation of companies and their environment. Derived from multiple state-of-the-art theories the theoretical framework as firstly presented in Figure 8 and adjusted in Figure 26 provides a profound basis for further application.

The theoretical framework as developed in this research has been developed in order to solve the problem as defined in chapter 3: “The LEI (Landbouw Economisch Instituut) as a scientific research institute, being part of Wageningen Universiteit and Researchcentre, needs strategic insight into ongoing developments in the food industry in order to provide advises to governmental and business clients regarding strategic issues in agribusiness with special regard to future decision making”. As mentioned before the thesis provides deep strategic insights into the pork processing industry being part of the food industry. Thus we can conclude that the problem (as defined) has been solved. Furthermore does our research provide information and conclusions (in particular in chapter 8) on the content of advice that could be given to business clients by the LEI.
As discussed with representatives from the LEI during conduction of this research it is important to them that this thesis provides first steps into a model that can be used for further research and analysis of industries in transition. We provide this model, accompanied with guidance on how to use it as described in chapter 5. The framework as shown in Figure 26 gives clear indications on how transitional and stable times of an industry can be identified based on several pieces of research on how industries develop (i.e. section 4.1). An analysis of resources, boundaries of firms, innovations and supply chain management in an industry and within individual companies leads to outcomes that can be used to advise in particular businesses on how to master a specific transition successfully. Methods and questions developed in chapter 5 however should be taken as starting point and can be refined for instance in further research.

**Weak points**

The initial framework that we have developed and shown in Figure 8 is based on theories that claim for generalizability, i.e. the theories are supposed to be applicable to any industry. We have used this framework to analyse the pork processing industry, an industry that we found in a transition in North Western Europe in the recent past. Adjustments to the framework have been made accordingly and refer in particular to the relation between the factors identified. These relations are purely based on what we have found in the pork processing industry. Other transitions might look completely different and would lead to a different relation of the strategic factors in our framework. Hence we can say that the recent transition in the North Western European pork processing industry leads to the relation of factors as shown in Figure 26, the applicability to other transitions and/or industries is limited at this point of time. In order to add generalizability to our final framework further research would be required. Thus we suggest applying the framework to another transition in a separate research project.

If we regard the factors of our framework and how they have been operationalized and tested during the case studies we have to ask ourselves whether all elements have the same quality in terms of their analytical depth and their applicability in the final framework. In the development of the theoretical framework in chapter 3 theories have been introduced and discussed in relation to transition. Thereby research question 1 ("What does it mean to a company to compete in an industry in transition?") and related sub-questions have been the guideline to present theories. Given these guidelines we have derived a relation to transition for each theory. If we turn our attention to the testing of the framework during the case study research it appears obvious that the factor “Organizational Learning and Strategy Formulation” stays rather theoretical and superficial until the end of the thesis. Among the set of factors it has also a different role compared to the other factors in the final theoretical framework. Whereas the other factors are suitable to describe and analyse a transition actively, “Organizational Learning and Strategy Formulation” is suitable to identifying transitions, which is a rather passive role in the entire framework. This raises the question if this factor is suitable for descriptive research. It might either need the development of more profound indicators to use it in a descriptive research or might require more in-company research in further research.

We have found a transitional phase in the pork processing industry in North Western Europe (NWE) in the recent past. Turning our attention to the case studies then it needs to be stated that we have analysed only one company that has been vital part of this transition, which is Vion. Smithfield nevertheless plays an important role in the transition since their entrance into Europe, however not in particular NWE, is perceived as major threat by the incumbents of the industry. In terms of scope of how a company has changed in times of a transition Vion
is definitely outstanding, however investigating further cases (i.e. other companies in the pork processing industry in NEW) would add reliability to our case study findings.

If we compare the quality of two case studies we have carried out then it becomes obvious to the reader that the depth differs due to access to comparable sources. Although we have followed the same methodology the data collected differs. In the case of Vion we have interviewed in depth one corporate senior manager face to face and have carried out many interviews with stakeholders before this interview. In the case of Smithfield we have interviewed the public relation manager of the Polish branch by phone. For both cases we have used many freely accessible sources, such as annual reports. Future investigation of other companies being part of the pork processing industry in NEW would add validity to the findings of the case studies and reliability to the conclusions for the theoretical framework.

Our theoretical frameworks suggest a relation between an industry in transition and consequences on profitability. From a theoretical perspective profitability will be decreasing prior to and in the course of a transition and will be increasing as soon as an industry and their companies have taken corrective action with regard to resources, strategies, innovations and their boundaries. However in our research we do not find significant differences in profitability. In average Smithfield seems to be slightly more profitable (compare Tables 11 -13) than Vion during the last 3 years, but in particular Vion’s net profit margin has rather decreased than increased. As shown in the case studies changes within Vion, which can be seen as a reaction to the transition, have just started and continue to shape their form. In this case profitability cannot be expected to show changes yet. However the relation between transition and profitability remains hypothetical at the end of this thesis and would need further research.

**Answer to Research Question 4**

Research Question 4 has asked for the practical opportunities and limitations to apply the theoretical framework. Having discussed strength and weaknesses of our research above we can now answer this question. The major opportunity to apply the framework as shown in Figure 26 is to gain profound strategic insight into an industry since we regard several important elements from management research that shed light on companies’ strategies from different angles. We have gained understanding of how these elements are related in the recent transition of the pork processing industry in North Western Europe. With our framework we are able to give indications of the state of an industry with regard to transition. The framework as shown in Figure 26 is limited in its reliability since it has been tested in a particular situation in only one industry taking limited amount of examples into consideration. Thus we can conclude that our initial framework (Figure 8) leads to profound strategic insights and indications on the transitional state of an industry. Figure 26 establishes relationships between the factors of the initial framework based on empirical findings of this research. Further research might add reliability and further generaliseability to the relation of the elements in Figure 26.
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