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Food industry structure in Norway and Denmark since the 1990s

Path dependency and institutional trajectories in Nordic food markets

Thesis for the degree of Philosophiae Doctor

Oslo, 2017

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*Series of dissertations submitted to the
Faculty of Social Sciences, University of Oslo
No. 631*

ISSN 1564-3991

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Cover: Hanne Baadsgaard Utigard.
Print production: Reprosentralen, University of Oslo.

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1. Preface

This dissertation has been submitted to the Faculty of Social Science, Department of Sociology and Human Geography at the University of Oslo (UiO), as partial fulfillment of the requirements for the degree Philosophiae Doctor (Ph.D.). The work has been carried out at Norwegian Institute of Bioeconomy Research (NIBIO) as a part of the larger project ‘Governing food in a globalising environment’ (GOFOOD) managed by Stig Strandli Gezelius. The main supervisor was Lars Mjøset, UiO. The work was financially supported by the Norwegian Research Council.

My thesis provided several challenges both personally and professionally. Personally because how could I, as a Non-Norwegian, handle the task to develop a qualitative research project on Norwegian agriculture and food production with a historical and cultural dimension. This challenge was not only linguistically, but also in the basic understanding of Norwegian history and culture. I accomplished all these challenges with the support and contributions of my supervisor Lars Mjøset. He provided me with help and guidance throughout the work on this dissertation, and his broad knowledge and expertise added significant value to the presented work. Thank you for giving me your guidance and support whenever I needed it. Lars was not only guiding me through the research process, he also integrated me into the Norwegian research system.

Special thanks also to Hilde Bjørkhaug who was my second supervisor. Hilde followed my work and contributed to research paper #1 and #2. She became co-author of the second research paper and continuously approved the thesis. Many thanks for introducing me to the research activity at the Center for Rural Research in Trondheim.

I would like to thank all the people from NIBIO (former NILF) for all the help and support they provided me during my work. Especially, I would like to thank Mogens Lund. He became the Director of our research department and introduced me to the Danish research community at University of Copenhagen. Mogens is co-author of research paper #4, together with Niels Götke, and was continuously helping me with accessing the Danish research field. I was introduced to Henning O. Hansen at University of Copenhagen. Henning became co-author of research paper #3 and was organising the field work in the Danish food industry. Without the help of my three Danish colleagues, I had never been able to access the Danish field of research in this dissertation. Thank you all for helping me through this process. At

NIBIO I also would like to thank Sjur S. Prestegard for supporting me throughout the whole PhD period. Further I would like to thank Stig Strandli Gezelius as responsible project manager. Thanks also to Ivar Pettersen for introducing me to the Norwegian food industry community and to Agnar Hegrenes and Klaus Mittenzwei for giving various inputs concerning Norwegian agriculture and agricultural history. Thanks to Svein Ole Borgen who was helping me in the early stage of the project.

2. Introduction

The PhD thesis contributes to the analysis of structural developments in the Norwegian agri-food chain since the 1990s in comparison to developments in the Danish agri-food chain. Several aspects of structural development are specified at the sectorial level. By studying structural developments in two small countries, we relate to larger processes within global food production. The structure of global agri-food chains is continuously under development, including the whole supply chain from agricultural farming via industrial processing and retailing to food consumption. Aspects like concentration, internationalisation or technological specialisation, all of which are covered by the concept of structural development, are thus specifications of industrial macro-tendencies and global food issues. The concept also refers to concentration and internationalisation of retail chains and technological enhancements at the farm level. Each of these factors potentially contributes to structural developments of the agri-food chains. A comprehensive definition is given in part 5.2 of this introduction.

The research questions posed in this dissertation are only concerned with selected parts of these interdependent developments. Structural development is above all analysed in the academic disciplines of corporate strategy and industrial organisation, mostly taught in business schools. In this dissertation I also rely on institutionalist political economy, in particular the approaches known as varieties of capitalism and historical institutionalism, developed within political science and sociology. The central research question is therefore not that of structural developments as such, but how such developments can be analysed with reference to institutionalist perspectives on path dependence and institutional complementarities. The overall methodological approach of this dissertation is to *specify structural development of agri-food industries with reference to national trajectories, which are analysed as cases of historical institutional path dependency*. The more specific research questions are specified in part 3.1 of this introduction.

This introduction summarizes the research conducted in this PhD project. It presents the four research papers and explains how they connect to each other. The PhD thesis contains elements of corporate strategy theories on food industry structure, as well as institutionalist perspectives on the Norwegian and Danish varieties of capitalism, specified for the agri-food sectors of the respective countries. This introduction will connect and extend these two perspectives and discuss how they relate to each other. The introduction has these parts: a

discussion of research questions and methodology (part 3), a presentation of approaches to institutional political economy (part 4), a presentation of food economics (part 5), and a final part on the state of research (part 6). In the conclusions (part 7) I will answer the research questions that I pose below.

I start by discussing research methodology in part 3. The research questions are specified in part 3.1. Both the research questions of the single papers and the overall research questions of this PhD thesis are presented and connected to each other. Research methodologies are discussed in part 3.2 and data are presented and classified in part 3.3. Part four on institutional political economy consists of three subsections. The first discusses path dependence and institutional complementarities (part 4.1). The second discusses Polanyi's concept of the double movement and market-organising institutions (4.2). The third expands Carlota Perez' four stage model of great surges in capitalist development (4.3) which is part of research paper #2. Part five discusses elements of food economics that I rely on in this PhD thesis. I start with food economics and the distinctiveness of food markets in part 5.1 and I give a detailed definition of food industry structure in part 5.2. The final part (5.3) discusses food industry mergers and acquisitions (M&A). Part six presents the state of research in this field in Norway (part 6.1) and in Denmark (6.2). Part seven develops and summarizes the overall conclusions of this PhD thesis. The original research papers are attached thereafter.

3. Methodology and research strategy

3.1. Research questions

This PhD thesis mainly focuses on the industrial parts of the agri-food chain: industrial food processing and retailing. Retailer driven vertical integration is included, since it involves considerable industrial elements (Burch and Lawrence, 2005; Burch and Lawrence, 2007). Farming and consumption patterns, the two outer elements of agri-food chains, only play a minor role in the thesis. An illustration of the research included in the thesis is given in figure 2 of research paper #3. While my empirical research on Norway and Denmark started with a quite open focus on structural developments, specifications were made as the study developed. This is in line with grounded theory methodology. Forms of market concentration and degrees of international integration became very central specifications in the study (especially in research paper #3). The comparative findings developed in the thesis are specifications, emerging from substantive grounded research on the Norwegian and Danish cases of structural developments. In grounded theory terms, concentration and internationalisation are properties of a core category, which is industry structure and structural development (see part 5.2.). But national contextualisation with the institutionalist trajectory of the two economies allowed me to specify these formal concepts of corporate strategy and industrial organisation.

The PhD thesis aims to understand structural developments in the agri-food chains of Norway and Denmark since the 1990s. The study of structural development is a main theme in studies of corporate strategy, informed by mainstream economics. In this PhD thesis, the study of corporate strategy is combined with the study of varieties of capitalism, particularly as developed by historical institutionalism. The latter tradition provides concepts that allow national contextualisation (Hall and Soskice, 2001; Thelen, 2014; Mjøset, 2015). The analysis starts with the institutional transformations in the 1990s, considered a turning point (the neo-liberal turn, cf research paper #3) from which national trajectories is traced. An EU member since 1973, developments in Denmark were directly connected to the structures and institutions of the EU internal market, while Norway's development became a purely national trajectory, given that agriculture was not included in the 'European Economic Area' (EEA) agreement. This PhD is most centrally interested in identifying the complex interplay between institutional responses, firm behaviour, and sectorial structural developments. While the period since the 1990s is the main focus of the dissertation, attention is paid to longer-term

historical path dependency, too. While Denmark entered the 1990s as an exporter of agri-food products, Norway had developed a protected national system. Thus, the overall research question of the PhD thesis is:

- (a) (*National institutions and adjustment strategies/policies*) What was the historical path of Norwegian and Danish agri-food at the turn of the 1990s and what was the national response to that turn in the respective countries?
- (b) (*Structural changes – changes in the structure and strategic relationships between firms*) How did structure actually change since the 1990s, and what was the relationship between structural developments and institutional trajectories?
- (c) (*The adjustment strategies of firms*) What have been the main strategic drivers and underlying motives behind structural development since the 1990s?

This interdisciplinary approach to comparison of the two case countries implies that features not often covered in the study of corporate strategy are included, particularly the topic of financialization. Structural development in the Norwegian agri-food chain since the 1990s implies the impact of financial capital, due to deregulation since the late 1980s. Here is an important comparative contrast to Denmark. Research paper #2 is a contribution to the international social science debate on the financialization of agri-food.

The thesis consists of four research papers. Each focuses on different key aspects. While all of them contribute to the analysis of structural developments (particularly paper #1 and paper #3), the second paper highlights finance capital involvement (research paper #2) and the fourth biotechnological adaptations (research paper #4). Table 3 gives an overview of the relationship between the four papers and their contribution to the overall research question.

	Main research questions	Contribution to the thesis
Research paper #1 “Fusjoner og oppkjøp i norsk matindustri under økt internasjonal integrasjon siden 1990-tallet” (Klimek, 2015)	What was the national trajectory of agri-food development in the early 1990s, and what were the corresponding strategic motives for M&A activity?	Basic foundation of concepts and categories; the first contextualising case study of structural development in Norway
Research paper #2 “Norwegian agro-food attracting Private Equity capital; Varieties of capitalism – varieties of financialization?” (Sociologica Ruralis) (Klimek and Bjørkhaug, 2015)	Did the institutional pattern of Norwegian agri-food attract finance capital since the late 1990s? How does Private Equity capital contribute to structural development? Why finance capital involvement in Norway, but not in Denmark?	Comparative specification of finance driven structural developments
Research paper #3 “Food industry structure in Norway and Denmark since the 1990s” (Under review)	What was the historical path at the turn of the 1990s? How has institutional design impacted on agri-food structure in both countries?	Comparison and process tracing of structural developments in Norway and Denmark since the 1990s; Comparative specification of developed concepts and categories
Research paper #4 “Bioøkonomi og matsikkerhet i Norden – fra enkeltsektorer til ny, norsk biopolitikk» (Det norske samfunn, 2016)	What are the bioeconomy strategies in the Nordic countries and Norway What are the political responses to bioeconomy as a specific kind of structural development?	Biotechnological specification of structural developments

Table 1: The four research papers of the PhD thesis (included in part 7)

Research paper #1 contains the first development of the basic concepts and categories, employing these in an analysis of Norwegian structural developments. Such studies have earlier been conducted for the Danish agri-food industry, mainly based on theories of corporate strategy (Hansen, 2005; 2013). The paper combines concepts drawn from the study of corporate strategy with a historical institutionalist account of the Norwegian context. Research paper #2 is a first comparative specification, based on the empirical fact that finance capital involvement in Norway is extensive. It thus also makes a contribution to the social science debate on financialization. Research paper #3 has a central position within the PhD thesis, as it contains the most extensive account of the basic elements of the historical processes that are traced. It provides a comparative extension of the research findings presented in paper #1. This allows for comparative specifications and contextualised generalisations. Forms of market concentration, as well as degrees of internationalisation, are central features in both countries, but they differ in the specific institutional contexts. Research paper #4 compares Nordic bioeconomy strategies. Technological specialisation is one element of structural development and the ongoing process towards the new bioeconomies is thus another specific content of structural adaptations. While each research paper deals with specific key aspects of structural developments, they all contribute to answering the overall research questions by means of a ‘contextualist approach to the social

science methodology' (Mjøset, 2009). In the next section I will discuss this research methodology in detail.

3.2. The contextualist approach to the social science

This PhD thesis employs case study methodologies, treating Norway and Denmark as two national cases of structural development. Explanation of these developments is based on reconstructions of case-specific macro-political and macro-economic processes since the 1990s. Such case study oriented research yield middle-range theory (Merton, 1968; Pawson, 2000), a concept that can be specified with reference to the twin concepts of substantive and formal grounded theory (Glaser and Strauss, 1967). Mjøset writes:

“When delimiting a case, we start from a problem, then select a process towards an outcome and define the context in which it takes place. We finally explain by tracing the process within the context. These are the three basic operations of a contextualist methodology.” (Mjøset, 2009:39)

On the basis of different philosophical references, Mjøset identifies three clusters of social science research methodology. He argues that the contextualist position – which can be traced back both to Weber’s methodological reflections and to the interwar Chicago school of sociology – has not been treated as a distinct methodological and philosophical cluster. The two other clusters are the standard one and the social-philosophical (Mjøset 2009:41). Mjøset reconstructs the three clusters with reference to three different practical philosophies, based on distinct styles of reasoning (Hacking, 1999), and six notions of theory (Mjøset, 2006:381). The cluster of standard methodologies relates to the natural sciences (an experimental ideal), the social-philosophical cluster to the humanities (transcendental and existential philosophical reflection), and the third to participation-based case-explanations of singular outcomes (as in court-cases, therapy and social work). While the first and second positions rely on practical philosophies developed in disciplines belonging to other academic faculties than social science (namely natural science and humanities), the third position is one which has autonomously emerged within social science. Thus, Mjøset suggests that “the message to social scientists who employ qualitative methods is that they should think twice before they buy into either a standard or a social-philosophical methodological style.” (Mjøset, 2009:65) Table 2 shows the three clusters of social science methodology.

	Standard position	Social-philosophical position	Contextualist position
Philosophical reference	Natural science, logical positivism	Humanities, phenomenology, structuralism	US pragmatism, European critical theory
Notion of theory	Law-oriented, idealizing	Transcendental, deconstructionist	Explanation-based, critical theory
Methods	Mathematical modelling, thought experiments, statistical analysis	Interpretive analysis, discourse analysis, grand narratives	Qualitative case studies, participatory fieldwork

Table 2: Three cluster of social science research methodology (Source Mjøset, 2009)

Qualitative case study methodologies are the methodological basis of this third position. Such an explanation-based sociology relies on the explanation of social interaction within given cases situated in time and space. The accumulation of knowledge proceeds by comparative specification and generalisation, as in grounded theory. The contextualist approach thus relates to US pragmatist ‘participatory’ philosophy and the grounded theory understanding of knowledge accumulation. Such a participatory case oriented sociology aims at learning from an understanding of social interaction as situated in time and space. US pragmatists rejected high level notions of theories, that is, theories with a claim to universal range. Grounded theory’s notion of theory instead is an attempt to accumulate knowledge by developing an understanding of how context (time and space) impact social interactions. This PhD thesis is a contribution to the accumulation of grounded, substantive knowledge within the local research frontier on agri-food structural developments. A study of social interaction is grounded when developed through the accumulation of substantive empirical knowledge, preferably through comparative case studies. Such an approach is sceptical of universal range theories, since substantive knowledge only can be developed through participatory intervention at the case study- or middle-range level. (In studies of the meso- and macro-levels, this participatory feature must be modified, as specified below.) Specification and generalisation go hand in hand in the development of comparative substantive knowledge and theory. The two concepts of formal and substantive grounded theory are important here. The concept of substantive grounded theory refers to contextual generalisations within substantive research frontiers. The concept of formal grounded theory refers to formal patterns across research frontiers (Glaser & Strauss 1967, 33; Mjøset 2009, 54f). In my project, the elements of corporate strategy, namely Hansen’s 35 single drivers for agri-food M&As (see research paper #1 and #3), are formal theoretical perspectives on firm behaviour. In contrast, the comparative process tracing of Danish and Norwegian developments represents the basis of substantive theory.

3.3. Research design and empirical input

In this study, Norway and Denmark are the macro-contexts for the study of sectoral structural development. The interview data relied on in the thesis provide information on corporate strategies and the behaviour of firms. The research design relates these three levels. The data used came from three main sources, corresponding to different analytical levels. The first empirical input is 19 information gathering expert interviews with top management in both countries (firm level). These interviews, together with the other two secondary empirical sources, form the basis of the case reconstructions. The second input is previous substantive empirical research which has been accumulated into ‘local research frontiers’ (see part 3.3.2.), with reference to clusters of frequently asked research questions in particular areas of social science research (Mjøset, 2009a, 60f). Such local research frontiers are often called “the literature”, representing accumulated qualitative and quantitative research on historical and present features, in this case, features of agri-food sectors in Norway and Denmark, covering a number of analytical levels between the micro- and the macro-level. The third input is mainly official macro-economic statistics such as growth rates, GDP development, or export statistics. Table 3 summarizes the empirical input to the two case studies. They will be discussed in detail below.

Empirical sources	Norway	Denmark
Expert interviews	13	6
Local research frontiers	See part 3.3.2. - table 5	
Official macro-economic statistics from 1990 to 2012	Statistics Norway, Statistics Denmark, Nordic Statistics, OECD (see table 6)	

Table 3: Main empirical sources in the PhD thesis

In the following, I first present the interview material (part 3.3.1). In a second step, I discuss how other secondary sources have been integrated into the study (3.3.2). Finally, I discuss research design, spelling out the extent to which the empirical features of the study rely on grounded theory methods (part 3.3.3.).

3.3.1. Interview material

The interview material is the primary empirical input to the study. All together 19 expert interviews were conducted in Norway and Denmark between April 2012 and May 2015. The interviews were semi-structured, focussing basically on the strategic drivers and underlying motives for M&A activity in the sector. The overall research question in all the interviews was the relationship between M&A strategies and market-organising-institutions since the

1990s. But some key elements in the interview guide had to be tailor-made for the specific investor group that was interviewed. As specifically discussed in research paper #1, investment strategies differ between, for example, a family owned brand house or a Private Equity company. In the former, the interviews focused on brand portfolio strategies and family ownership, while in the latter, the interviews rather investigated the specific Private Equity business model. But in each case, market-organising-institutions and M&A strategies were central.

An empirical input of just 19 interviews is quite limited given that research aims at reconstructing two comparative cases on the meso- and macro-level. However, information was gathered within the top management layer of the leading investment communities in both countries. The companies covered make up about 50 to 80 percent of the total number of such firms. As for the case of Norwegian Private Equity, there are presently five investment companies in the sector and I was able to interview four of those. In addition, I interviewed a Private Equity investor who had been surveying the Norwegian food sector, but had decided not to invest in the sector. Given the limited size of the Norwegian investment community, I was able to generate substantive empirical material with just 13 interviews. In Denmark, we conducted six semi-structured interviews with top management. Given the existence of previous research, these interviews saturated the Danish case. Within the empirical study of structural development – part of corporate strategy research – Danish researchers have addressed the development of Denmark’s agri-food sector (Hansen, 2005). I rely on this research tradition, in combination with my own institutional political economy approach. The six interviews conducted relied on a specification of the Danish corporate strategy research tradition, focusing on change in the institutional framework since the 1990s. Table 4 below details the interviews conducted in both countries with four different classifications.

	Norway	Denmark
Industry manager	5	3**
Private Equity investor	5*	/
Retail manager	2	1
Political sector representative	1	2
Total interviews (transcribed / notes)	13 (11/2)	6 (5/1)

* Including one PE investor who was analysing Norwegian agri-food, but decided not to invest.

** Including one manager who had left the sector earlier

Table 4: Expert interviews in Norway and Denmark

I used expert interview methodologies to access the field. There were different challenges involved when conducting interviews on the strategic behaviour of the investors and company leaders. Expert interviews are one way to directly access a research field.

“(…) talking to experts in the exploratory phase of a project is a more efficient and concentrated method of gathering data than, for instance, participatory observation (…). Conducting expert interviews can serve to shorten time-consuming data gathering processes, particularly if the experts are seen as crystallization points for practical insider knowledge and are interviewed as surrogates for a wider circle of players.” (Boger, Littig and Menz, 2009:2)

The main function of the expert interviews was to provide insights into strategic motives for structural developments at the sectoral level. Corporate strategy decisions are an undisclosed field, but the experts, the company leaders, were forthcoming when asked about their competitive market strategy. Very few turned down my request about recording the interview, and only a few refused to be cited. Thus, the main part of the interviews were taped, transcribed, and a number of statements have been cited in the research papers. However, this interview material is only one empirical source. I also rely on two other empirical sources. The main aim of the interviews was not to get a source for citations. Rather, they helped me accessing the field, identifying the properties that pattern structural development at the sectoral level. Besides the effort to gain such information, there were also other challenges when conducting the interviews: The Norwegian business community is quite small, often headquartered in the Oslo region, and the experts I interviewed often knew each other very well. Anonymity and confidence have therefore been central concerns. Furthermore, it was difficult to interview the Private Equity companies that had invested in direct competition with the national farmer cooperatives, as these companies had been fiercely criticised by the Norwegian farmer lobby.

3.3.2. Secondary sources: local research frontiers and macro-economic statistics

The developments analysed in this PhD thesis are located at the meso-level (the structural development of the agri-food sectors), and the macro-level (the respective national economies as relevant context). For the reconstruction of these meso- and macro-cases I do not rely on interview material only. My research strategy has been to reconstruct meso- and macro-developments from the 1990s to the present. My information gathering interviews introduced me to the field, providing a first understanding of M&A activity. The interviews provided information on the macro-economic context for M&As, but case reconstruction has been further saturated by other empirical inputs, drawn from the relevant local research frontiers (Mjøset, 2009), including macro-economic statistics. For macro-qualitative studies, such empirical input (particularly accounts within history and economic history), whether quantitative or qualitative, can be considered a macro-level equivalent to fieldwork in micro-qualitative research projects.

“The equivalent to fieldwork is to tap into relevant earlier research: this field consists of various printed sources, information-seeking interviews (...) as well as earlier analysis relating to the field, from the relevant local research frontiers down to detailed historical monographs” (Mjøset, 2009:244)

Table 5 summarizes the basic local research frontiers that I rely on in my meso- and macro-level reconstructions.

	Local research frontiers	Exemplified by authors	Reference in the introduction
A	Comparative institutional political economy - Path dependency and VoC - Double movements - Market-organising-institutions - Financialization	e.g. Mjøset (2015) Pierson (2000), Hall and Soskice (2001) Polanyi (1944), Dale (2010) Mjøset (2012) Perez (2002)	(Part 4 in this introduction)
B	Corporate strategy studies of global food industries	Barwise and Roberston (1992), Hansen (2013), Porter (1980)	(Part 5 in this introduction)
D	Corporate strategy studies on food industry M&A's	Hansen (2013), Adams and Love and Capps (1997)	(Part 5 in this introduction)
E	Corporate strategy and other social science studies of Danish agri-food	Hansen (2005; 2013), Iversen and Andersen (2008), Mordhorst (2008)	(Part 6.2. in this introduction)
F	Corporate strategy and other social science studies of Norwegian agri-food	Olsen (2010), Bjørkhaug, Almås and Vik (2015)	(Part 6.1. in this introduction)

Table 5: Local research frontiers included in the PhD thesis

The other secondary empirical input is official macro-economic statistics, provided by OECD, Statistics Norway and Statistics Denmark. These data have been included at different stages of research and with differing purposes. One main advantage here is to trace macro development for the period under investigation. Table 7 below gives an overview of such data included in the PhD thesis. The table shows figures/tables on macro-economic data integrated into the research papers.

Research paper & figure/ table	Title	Main evidence
Paper #1 (table 5.2.)	Export-import ratio of the natural resource complex from 1992-2012	- Agriculture declining - Forestry, fisheries, oil & gas growing
Paper #1 (figure 5.1.)	Foreign direct investments in Norwegian food industry 1989-2011	- Foreign capital involvement growing since the 1990s decade
Paper #1 (figure 5.2.)	Import competition for Norwegian processed foods 1996-2012	- Import growth - Export stagnation
Paper #2 (figure 1)	Norwegian Private Equity fund raising 2003-2010	- PE market growth since the late 1990s
Paper #3 (table 3)	Agri-food, GDP and total exports since the 1990s	- Decline of GDP share in both countries - Decline of export share in both countries - But Danish agri-food departing from a much higher level
Paper #3 (figure 1)	National protection coefficient (NPC) in Norway and Denmark since the 1990s	- NPC Norway 1,54 - NPC Denmark 1,06
Paper #3 (table 6)	Historical process tracing, milestones of agri-food development in Norway and Denmark	- Gives a brief summary of 20 th century developments
Paper #4 (table 3.2)	Population growth in Nordic comparison 1995-2012	
Paper #4 (figure 3.1)	Co2 emissions in Nordic comparison 1995-2012	

Table 6: Macro-economic statistics and process since the 1990s decade, figures included in the PhD thesis

Drawing on these data I develop substantive and grounded explanations of industry structure. The empirical inquiry started with expert interviews. On this basis, I developed core categories and their properties, specifying these for the two cases (part 3.3.3.). These specifications have at later stages of inquiry been further developed with reference to secondary empirical data. The next section will discuss research design more closely, showing in detail how the specified properties have been integrated in the PhD thesis.

3.3.3. Grounded Theory: core category and properties

The interview material was analysed with the help of grounded theory methods such as open and selective coding (Bryant and Charmaz, 2007). Throughout this process of analysis, the coding of the concepts was also related to the relevant local research frontiers. The informants interviewed in the run of this project contributed with reflections on how market institutions impact on M&A activity and structural development. Research paper #1 and #3 most clearly examine the process of coding in combination and confrontation with Hansen's taxonomy of 35 single drivers for M&A activity and structural development. This taxonomy particularly contributed to research question (c) of this PhD thesis, which is the firm-level investigation on

drivers and motives for M&A activity. Hansen’s work here served as an available research frontier that converges to the firm-level investigations in the thesis. In grounded theory terms, the taxonomy serves as formal grounded theory (as defined in section 3.2). It had been developed in a study of global agri-food industries, and the interview material served to test the concepts of this theory. This process of inquiry showed that at the firm-level, when it comes to business strategy, the cases of Norway and Denmark do not show any differences. For instance, companies in both countries follow diversification strategies (cf research paper #1 and #3). But the analysis soon showed that specification was required to answer research question (b), the question of structural changes at the sectoral level. The analysis of research question (b) thus resulted in specified comparative findings (table 7).

**Analysis of interview material with grounded theory methods: open and selective coding /
Comparative findings regarding testing of Hansen’s taxonomy**

Comparative Norwegian findings	Comparative Danish findings
Structural national growth barriers	Full international integration, consisting of:
Connection – disconnection to EU	World market competition (demand extension)
Insulated concentration	Foreign competition on domestic market

Table 7: Analysis of interview material in this PhD thesis

The empirical research in this project was designed as a stepwise process, starting from M&A strategies (firm-level) to specified comparative findings (sectoral level) and path dependence at the 1990s turn (political economy). The specified comparative findings at the level of industry structure are of crucial importance. They mediate between the level of the firm and the “higher” institutional levels (sectorial, national, international). Each of these comparative findings has been identified in the interview material. They are the end result of permanent examination, confrontation and comparison (testing) with existing theories of business strategy within the field, as synthesized in Hansen’s table with four boxes of M&A strategies (research paper #1 and #3). This stepwise process of inquiry from interview material to the testing of Hansen’s taxonomy and finally to specified comparative findings can be seen as an attempt to rely on grounded theory as a means to combine different analytical levels. These comparative findings have then been deepened as I have consulted other empirical sources, such as various other relevant local research frontiers and macro-economic statistics. A more detailed presentation of core category, properties and my own comparative findings is given in table eight. The core category of this PhD thesis is industry structure and structural development. Forms of concentration and degrees of internationalisation are the most central properties identified in the research process.

Core category	Properties of core category (based on Hansen's taxonomy)	Comparative findings	
		Norway	Denmark
Industry structure / structural development	Concentration	Structural growth barriers Insulated concentration	
	Internationalisation	Connection – disconnection to EU	Full int. integration: a. Demand extension b. Foreign competition

Table 8: Core category, properties and comparative findings

The research design pursued in this dissertation can be summarized as follows. The starting point was interviews at the level of the firm. Coding of these interviews along the lines of grounded theory was combined with evaluation of concepts (Hansen's taxonomy) from relevant research frontiers. This provided an analysis at the level of firms and of the drivers of structural changes at the sectorial level. This empirical inquiry soon showed that historical and institutional specification was required to understand the full processes of changes in industry structure and M&A activity. In the following section, I specify my approach to such historical and institutional specification.

4. Institutional political economy

This thesis relies on comparative institutional political economy to specify economic processes in both countries. The contrast to mainstream neoclassical economics is that no rational self-contained actors are presupposed. In the institutionalist framework, economic behaviour is analysed as path dependent, rooted in history and situated in given contexts, specified in time and space. Thus, in this PhD thesis, institutionalist analysis specifies the historical context within which formal theories of corporate strategy, food economics and food industry M&As (see part 5) are specified. In this section I discuss some basic elements of historical institutionalist political economy (an overview of institutionalist approaches is given in Kang, 2014): path dependency and institutional complementarities (4.1) and double movements and market-organising-institutions (4.2). In the final part, I discuss Carlota Perez' historical and institutionalist conception of financialization (4.3).

4.1. Path dependency and institutional complementarities

Path dependency (Mahoney 2000; Pierson 2000) is a conception of social research that focus on processes and historical sequences. Pierson discusses the 'increasing returns' mechanism. Mahoney gives a broader overview of the concept in historical sociology, defining two

different perceptions of path dependency, one of which is Pierson's. Pierson defines path dependency broadly:

“The notion of path dependence is generally used to support a few key claims: Specific patterns of timing and sequence matter; starting from similar conditions, a wide range of social outcomes may be possible; large consequences may result from relatively small or contingent events; particular courses of action, once introduced, can be virtually impossible to reverse; and consequently, political development is often punctuated by critical moments or junctures that shape the basic contours of social life.” (Pierson, 2000:251)

Specifying path dependence, Mahoney starts by criticising those who use the conception to explain present events with earlier events.

“For example, according to Sewell's [BK: Sewell, 1996] influential definition, path dependence means ‘that what has happened at an earlier point in time will affect the possible outcomes of a sequence of events occurring at a later point in time.’ Definitions such as this one have led many scholars to characterize their arguments as path-dependent simply because earlier events affect later events.” (Mahoney, 2000:510)

A missing link in historical sociology, Mahoney argues, is that sociologists have developed sophisticated models for the inclusion of processes, sequences and temporality into research strategies, but those conceptions are not equal to path dependency. Thus, it has remained unclear what really underpins a path dependent explanation (Mahoney, 2000:510). Trying to distinguish path dependency from other approaches to historical explanation he defines three common features: (a) sensitivity to causal processes at an early stage of a path, (b) outcomes are not determined by any singular event in the historical path, but (c) path dependent sequences follow relatively deterministic causal patterns, which is ‘inertia’ that make it difficult to leave a given path. He identifies two dominant research frameworks of path dependency: self-reinforcing and reactive sequences (Mahoney, 2000:508). The former relates to Pierson's concept of increasing returns, which reinforce steps along the path.

“In an increasing returns process, the probability of further steps along the same path increases with each move down the path. This is because the relative benefits of the current activity compared with other possible options increase over time. To put it a different way, the costs of exit – of switching to some previously plausible alternative – rise. Increasing returns processes can also be described as self-reinforcing (...).” (Pierson, 2000:252)

While reinforcing path dependence gives incentives to move the path down, frameworks of reactive dependencies analyse causal processes wherein an event is a reaction to an event that happened in an earlier sequence. Self-reinforcing path dependence implies reproduction, while reactive path dependence implies transformation and breaking points that lead to

contrasting reaction. Still, analysed as a causal chain, a reactive sequence form a path dependent trajectory.

“These sequences have a familiar logic of A leads to B, which leads to C, which leads to D, and so on, such that the final event of the sequence depends on the occurrence of the first event.” (Mahoney, 2000:526)

Within the study of varieties of capitalism, Hall and Soskice’s (2001) concept of institutional complementarities implies path dependencies. Path dependent explanations contrast sharply to neoclassical models, since they allow non-optimal market equilibria. Thus, markets and market behaviour are not driven by calculating rationality and full market information, but by real social interaction, emerging from decisions made by humans situated in historical time and space. Path dependent explanations of national economies imply non-optimal market equilibria, because they are rooted in the historical trajectory of an economy.

“Thus, path dependence serves explicitly as a counter to those forms of economic theory which posit that interactions between economically rational actors will lead to efficient outcomes, and argues instead that inefficient equilibria may be stable. This broad claim stems from the basic theoretical foundations of path-dependence theory, which seeks to model situations in which there are increasing rather than decreasing returns. In such situations, inefficiencies and suboptimal allocations of resources can persist over time, even when actors are aware of them and are economically rational.” (Crouch and Farrell, 2004:5)

A national political economy might profit from an increasing returns mechanism, even under non-optimal resource allocation, because institutional complementary arrangements had constituted a path of economic development at one earlier sequence in the economic trajectory. This point is of particular importance in this PhD thesis: economic trajectories may be stable over time, they may persist exogenous shocks (e.g. the neo-liberal turn), and such a path may result in increasing returns over time. These theoretical perspectives are highly relevant to the study of Norwegian and Danish agri-food.

Path dependence and institutional complementarity are interrelated concepts in institutional political economy. The complementary arrangement of institutions embedding the market serves to stabilise an economic path over time.

“What is common to all conceptions of complementarity is the core idea that the co-existence of two (or more) institutions together affects the strategic choices of actors and/ or will enhance the ability of actors to achieve their objectives. Indeed, it is the very existence of complementarity that makes the whole notion of distinct systems or models of capitalism plausible, since complementarity presumes that there are a limited number of ways to combine institutional elements successfully.” (Deeg, 2007:612)

Institutional complementarities exist when one institution complements another institution so that market equilibria depend on the complementary arrangements of different institutions. Institutional political economy studies processes of economic development that are embedded in institutionally complementary arrangements. Such arrangements play a crucial role in this PhD thesis, which uses the concept of market-organising-institutions to address such issues. Hall and Soskice (2001) put the concept of institutional complementarities at the core of their varieties of capitalism program.

“The point of institutional complementarities has special relevance for the study of comparative capitalism. It suggests that nations with a particular type of coordination in one sphere of the economy should tend to develop complementary practices in other spheres as well. (...) Where dense networks of business associations support collaborative systems of vocational training, for instance, those same networks may be used to operate collective standard-setting. Similarly, firms may pressure governments to foster the development of institutions complementary to those already present in the economy in order to secure the efficiency gains they provide.” (Hall and Soskice, 2001:18)

Much of the varieties of capitalism literature thus investigates the relationship between the national characteristics of an economy and its institutional system, analysing how they fit together and how they complement each other.

Path dependency and institutional complementarities broadly address historical stabilisation processes, such as institutional inertia, that stabilise ‘non-optimal’ market equilibria. In this way these concepts have a deterministic character of institutional stabilisation rather than change. There is thus a separate debate of how institutional settings change (see e.g. Crouch, Streeck, Boyer, Amable, Hall, Jackson, 2005; Deeg, 2007, Crouch, 2010, Boyer and Hollingworth, 1997). In this PhD thesis, Polanyi’s idea of double movements, as well as Perez’ conceptions of techno-economic-paradigms are main anchors of change in capitalist history. I return to this in the next section.

Summarizing this brief introduction of path dependency and institutional complementarities in the social sciences, we can refer to Norway and Denmark as two cases of nationally specific, path dependent, trajectories of agri-food development. Such theoretical elements are included in at least three of the research papers of this PhD thesis. Research paper #1 contains the historical reconstruction of Norwegian agri-food regulation before and after the 1990s, which can be considered a path dependent development. Research paper #2 on financialization is the most explicit attempt at identifying institutional complementarities in the Norwegian agri-food chain. The conclusion drawn in this paper is based on an argument on complementary transformations. We argue that complementary institutional

transformations in all the three market-organizing institutions lead to the present situation in which the Norwegian agri-food chain attracts finance capital. The Norwegian capital market was liberalised, the natural resource complex has come under pressure from WTO liberalisations, and the target price system (which is connected to the complex of institutions related to labour) is under pressure, too. These are independent, but complementary transformations that together explain finance capital involvement since the 1990s. Finally, in research paper #3 the concept of path dependence plays an important role. Obviously, Denmark has a long history as an exporter of agri-food products and has moved further down this path since the 1990s decade. Given Pierson's definitions above, my hypothesis is that this is a reproductive, self-reinforcing path of economic development. Norway, in contrast, had at the same time in the early 20th century chosen another trajectory: national self-sufficiency and separation from the world market. My argument here is that, in contrast to Denmark, we must understand the 1990s transformations, the neo-liberal turn, as a breaking point within this particular Norwegian path, which is a reactive type of path dependency. Given the two perceptions of path dependency, we can view the Danish path as one of increasing returns, based on the comparative advantages of an export oriented agri-food sector. In sum, I find different path dependencies in Norway and Denmark (see research paper #3).

4.2. Double movements and market-organising-institutions

Polanyi's idea of a double movement, published in his famous book *The great Transformation* (Polanyi, 1944), was rediscovered by social science, and by sociologists in particular, since the neo-liberal turn in the early 1980s (Dale, 2010). In the following, I rely on Mjøset's (2012) reconstruction of Polanyi's idea of a double movement. In this account, the concept of market-organising-institutions is linked to Polanyi's definition of the three fictitious commodities of labour, capital and natural resources. This specification of Polanyi's framework supplies the basic institutional political economy framework of this PhD.

In chapter six of *The Great Transformation*, Polanyi develops the concept of fictitious commodities and the idea of the double movement. His point of departure is the program of managing a complex industrial economy with reference to the principle of the self-regulating market that treats any item as a commodity. This implies that prices and price formation are taken as the basis of a market economy, since those coordinate resource allocation. He argues that a society organized with reference to these principles is a utopian vision, one that if implemented, would amount to an extremely artificial society.

“A market economy is an economic system controlled, regulated, and directed by market prices; order in the production and distribution of goods is entrusted to this self-regulating mechanism. (...) Production will then be controlled by prices, for the profits of those who direct production will depend upon them; the distribution of the goods also will depend upon prices, for prices form incomes, and it is with the help of these incomes that the goods produced are distributed amongst the members of society. Under these assumptions order in the production and distribution of goods is ensured by prices.” (Polanyi, 2001:71)

The principles of the self-regulating market economy require that labour, capital, and land must be treated as commodities with a price. This is the very basic precondition for the functioning of the market economy. In contrast to the earlier feudal and mercantile societies the new market economy required an institutional separation of society into an economic and a political sphere. Labour and land were the central pillars in the organisation of the feudal society, while money did not play any crucial mediating role at all. The market economy separated labour and land from their traditional institutional context (which was regulating distribution in the feudal society) and attempted to subsume them under price formation, that is, treat them as commodities. This is the main shift in societal organisation that Polanyi classifies as great transformation.

“A market economy must comprise all elements of industry, including labor, land, and money. (...) But labor, land, and money are obviously not commodities (...) Labor is only another name for a human activity which goes with life itself, which in its turn is not produced for sale but for entirely different reasons, nor can that activity be detached from the rest of life, be stored or mobilized; land is only another name for nature, which is not produced by man; actual money, finally, is merely a token of purchasing power which, as a rule, is not produced at all, but comes into being through the mechanism of banking or state finance. None of them is produced for sale. The commodity description of labor, land, and money is entirely fictitious.” (Polanyi, 2001:74f.)

Polanyi then argues that the belief that labour (human beings), land (nature) and money can be treated as commodities, is an illusion. Their commodity-character is completely fictitious and no society would be able to survive under such conditions.

“But no society could stand the effects of such a system of crude fictions even for the shortest stretch of time unless its human and natural substance as well as its business organization was protected against the ravages of this satanic mill.” (Polanyi, 2001:76)

This is the point of departure for Polanyi’s idea of a double movement: the attempt to commodify labour, land, and money, would inevitably trigger a countermovement of social protection. This created the great transformation. At the end of the sixth chapter of the book he writes about the ‘one big’ double movement in the history of the 19th century.

“Social history in the nineteenth century was thus the result of a double movement: the extension of the market organization in respect to genuine commodities was accompanied by its restriction in respect to fictitious ones. While on the one hand markets spread all over the face of the globe and the amount of

goods involved grew to unbelievable dimensions, on the other hand a network of measures and policies was integrated into powerful institutions designed to check the action of the market relative to labor, land, and money.” (Polanyi, 2001:79)

Mjøset (2012) is critical of this ‘one big’ double movement in capitalist history, suggesting a more nuanced specification. He notes that Polanyi in fact pointed to the existence of different varieties of capitalism.

“I bokens siste kapittel betoner han at man kan tenke seg mange varianter av organisert kapitalisme innen denne rammen. Bare én linje er utelukket, nemlig at arbeid, penger og ressurser behandles som varer. Disse antydningene må regnes blant de mest treffende forutsigelser samfunnsvitenskapen har sett. (Mjøset, 2012:18)

[“In the last chapters of the book, he implies that one can think of many varieties of organized capitalism within this framework. Only one variety is out of question, namely that labour, money and resources are treated as commodities. These suggestions are some of the most precise forecasts made in social science.”]

Mjøset has applied the concept of market-organising-institutions to a study of the international integration of the Norwegian oil economy (Mjøset and Cappelen, 2011) and has developed a varieties of capitalism framework which goes beyond the Hall & Soskice’s (2001) dualist distinction between liberal and coordinated market economies (LMEs and CMEs) (Mjøset, 2015). Both build on Polanyi’s double movement and the three fictitious commodities. In the preface to Polanyi he further writes:

“På nasjonalt nivå dannet det seg markedsorganiserende komplekser av lovgivning, institusjoner og organisasjoner i forhold til de tre elementene vare, penger og naturressurser. I stedet for at arbeidskraften ble behandlet som vare, videreutviklet man lønnsforhandlingsystemer, sosialpolitikk og trygdeordninger. Regulering av pengene ble sikret av sentralbank, pengepolitisk lovgivning og finanstilsyn. For naturressursenes vedkommende dannet det seg handelspolitiske avtaler, statlige avtaler med produsentorganisasjoner i primærnæringene, samt konsesjons- og eiendomslovgivning. Den nordiske modellen kan defineres som en slik kombinasjon av markedsregulerende institusjoner.» (Mjøset, 2012:19)

[“At the national level, market-organizing complexes were formed as complexes of legislation, institutions and organizations relating to the three elements labour, money, and natural resources. Rather than treating labour as a commodity, institutions such as wage negotiation systems, social policies and social insurance emerged. Regulations of money were secured by central banks, monetary policy legislation and finance supervision authorities. As for natural resources, there were trade policy agreements, state-based agreement with primary producer associations, as well as concession and property laws. The Nordic model can be defined as such a combination of market-organizing institutions.”]

Research papers #1 to #3 employ this understanding of market-organising-institutions, taking into account Mjøset’s revisions of Polanyi’s double movement analysis. Mjøset requires a historical specification of these responses in capitalist history. The neo-liberal turn, identified

also in the research papers, is, following Mjøset, another double movement and the concept thus must be specified towards recurrent double movements in capitalist history.

“I lys av Polanyi’s begrep om dobbeltbevegelse må 1945-71 regnes som en klar andre fase. Perioden fra 1970-tallet og framover må oppfattes som første fase av en ny dobbeltbevegelse. (...) Vi må derfor skille mellom en rekke historisk kontekstualiserte dobbeltbevegelser. (...) Polanyi’s ene ‘store transformasjon’ oppløser seg således i mange mindre. Vi må kort sagt kunne analysere ‘varianter av kapitalisme.» (Mjøset, 2012:21)

[“In the light of Polanyi’s concept of a double [movement], we must consider 1945-71 as a second phase. The period since the early 1970s and onwards must be conceived as the first phase of a new double movement. (...) We therefore must distinguish between a number of contextualized double movements. (...) Polanyi’s one “great transformation” thus dissolves into a number of smaller ones. In short, we need to analyse ‘varieties of capitalism’.”]

In his later 2015 paper Mjøset further pursues his revision of Polanyi’s double movement, which he wants to make accessible to specified analysis of different varieties of capitalism.

“Once we distinguish responses in the three critical areas of institutional design [BK: labour, money, resources], we see that double movements depend on the area studied and on the result of earlier transformations [BK: path dependency]. (...) In sum we must think in terms of a matrix, with resources, money, and labour horizontally, and various periods vertically.” (Mjøset, 2015:27f.)

Here Mjøset connects double movements and the evolution of institutions in capitalist history, developing elements of Polanyi’s analysis into a specified model for comparative studies of varieties of capitalisms. As long as capitalism is dominated by the liberal principles of the self-regulating market, double movements are recurrent phases in capitalist history. They differ in time and space, and the historical evolution of such institutional arrangements must be seen as path dependent. This framework forms the institutionalist political economy framework in this PhD thesis.

The missing link in Mjøset’s specification, this is a point that I would like to add here, is that of the double movement itself. While Mjøset specifies in time and space, he does not explicitly question the two-fold character of the double movement between liberalisation and social counter-mobilisation. Capitalist history cannot be considered a historical pendulum movement between liberal offensives and social countermoves. Mjøset defines double movements as situated in time and space, he adds a perspective on path dependency, and he discusses social movements and organisations engaged in such double movements. But he does not explicitly explain why all capitalist history should be divided in movements of liberalisation and protection. If we now turn Polanyi’s one big double movement, which we can identify empirically, into a theoretical argument for the comparative analysis of varieties

of capitalism, we need a more specified perception of this double movement. We must question whether all capitalist history really can be considered as one of liberal offensives. Mjøset employs Perez' four stage model (next part, 4.3.), which is a model of capitalist progress driven by technological revolutions. This, I guess, is the synthesis and then double movements are connected to technology driven great surges in capitalist development. If we now relate double movements to great technological surges in capitalist history, we must conclude that not any attempt at institutional change (those institutions that contradict with the new technologies) must be a liberal offensive addressing self-regulating market rationality. Instead we must think of many folded double movements that attempt to align institutions with the new organization of production.

4.3. Financialization

Research paper #2 relates to the topic of financialization in three respects. First, the topic is introduced with reference to Epstein (2005), Krippner (2005) and Ertuk et al. (2008). Second, the paper surveys the financialization of the firm, which refers to shareholder value- or value based management. These are management principles that aim to realign agency problems by making corporate financial indicators the core of strategic behavior. Private Equity is one business model that fits into this frame. Third, Carlota Perez' historical reconstruction of technological revolutions and financial capital is recounted (Perez, 2002). This macro-historical reconstruction of the relationship between productive capital and financial capital in capitalist history can be related to other social science analyses of financialization. Due to space restrictions, I was not able to deepen the discussion on Perez in research paper #2 and I here would like to give a broader overview of Perez' contribution.

Perez' framework is based on the analysis of technological revolutions in capitalist history (2002, part I), with an analysis of productive and financial capital (2002, part II) added. Technological revolutions generate 'techno-economic-paradigms', a term which Perez uses to signal broader institutional shifts in the socio-political environment.

"Each technological revolution, then, is an explosion of new products, industries and infrastructures that gradually gives rise to a new techno-economic-paradigm, which guides entrepreneurs, managers, innovators, investors and consumers, both in their individual decisions and their interactions, for the whole period of propagation of that set of technologies." (Perez, 2002:9)

Perez identifies five such revolutions in capitalist history, providing the scheme that is reproduced here as figure 1 (Perez, 2002:57). The figure shows the five great surges identified

by Perez, each surge divided according to her four stage model. The scheme also identifies core countries, from which the diffusion of the techno-economic paradigms originates.

Figure 5.2 *Approximate dates of the installation and deployment periods of each great surge of development*

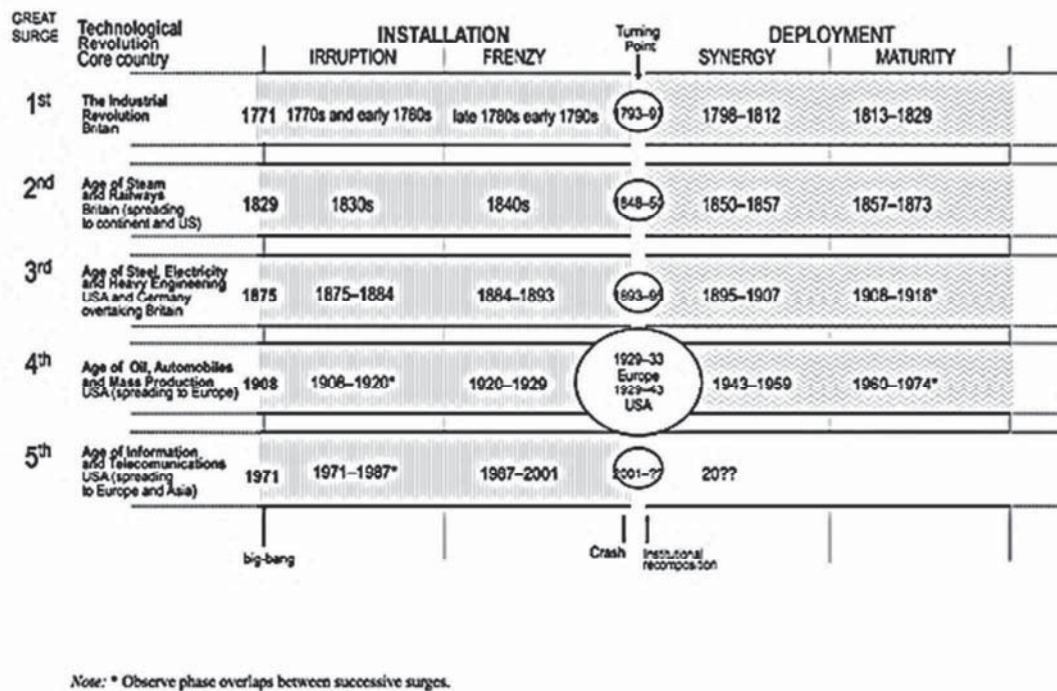


Figure 1: Perez' great surges and the four stage model (source: Perez, 2002)

The five great surges in capitalist history (shown in the figure) consist of an installation period and a deployment period, and each of them is subdivided into two periods.

“Each period in turn goes through two different phases, defining the changing character of the assimilation process, so that the recurring sequence is made up of four phases lasting around a decade each: Irruption, Frenzy – turning point – Synergy and Maturity.” (Perez, 2002:152)

In the second part of the book Perez investigates the relationship between the agents of productive and financial capital. Productive capital is tied to the production of goods and services, while “financial capital is mobile by nature” (Perez, 2002:72). Agents of financial capital can quickly move resources to the new emerging technologies. This rush of financial capital towards the new technologies spurs the diffusion process, but also represents the starting point of the frenzy phase in Perez’ four stage model. Here, I shall label this phase a financialization phase. The frenzy results in financial collapses, signaling the turning point from the installation period to the deployment period of the new paradigm. New regulatory

efforts shape new synergy between productive and financial capitals in the deployment period of the new paradigm.

It is of particular interest to this PhD thesis that Perez also applies institutional perspectives to explain the process of great surges in technology driven capitalist developments. First, when a new techno-economic paradigm irrupts, it grows out of the institutional frame of the former paradigm and, second, at the end of the installation period, singled out as financial frenzy, new regulatory efforts lead into the deployment period of the new techno-economic paradigm.

“The socio-institutional framework adapts to each paradigm and, in turn, shapes the preferred direction in which the technological potential will be deployed (...). But, this deep adaptation eventually becomes an obstacle for the introduction and diffusion of the next technological revolution. A society that had established countless routines, habits, norms and regulations, to fit the conditions of the previous revolution, does not find it easy to assimilate the new one. So, a process of institutional creative destruction will take place, with the simultaneous dismantling of the old framework and the gradual installation of the new. Nevertheless, some of the most significant institutional changes are only induced, after about half a surge, by the mounting social and economic pressures.” (Perez, 2002:153f.)

Technological restructuring, institutional inertia as well as finance capital involvement are basic elements behind the reasoning in this PhD thesis. Diffusion of the new paradigm is sequential and lagged, starting from the core country and spreading to others thereafter.

“What is held in this book is that (...) most diffusion processes are sequential and lagged, taking the form of wider and wider ripples of propagation. As paradigms mature in the core countries, investment opportunities move further and further out, seeking comparative advantages, different conditions and possibilities for outstretching saturated markets.” (Perez, 2002:63)

In this thesis Carlota Perez’ model of technological development and finance capital is a contribution to explain finance capital involvement in Norway. The Norwegian agri-food chain is less consolidated than those of the Nordic neighbouring markets and Private equity capital expects the Norwegian market to undergo further liberalisation in the future. We therefore argue in research paper #2 that the Norwegian agri-food chain attracts Private Equity capital. In terms of Perez’ model we might call this Private Equity driven consolidation a finance driven diffusion.

5. Food economics

In this section I discuss some key economic indicators of global food markets and specifically indicators of Norwegian and Danish food industries. I discuss macro-economic data and economic explanations of the present status of the agri-food chains in the context of the respective national political economies. Food markets are basically conditioned by biological input factors and by the very specific character of food as a basic human need. Food demand grows much less than the consumption of other commodities. Thus, the food sector's share of GDP declines the more a country develops. This implies a challenge for those who work to generate income from this sector. The structure of the food industry, which is the central subject of this thesis, develops in accordance with global macro-trends, such as internationalisation and concentration.

5.1. Food economics and food markets

The economic importance of food markets differs considerably across time and space. Agri-food chains are today globally organised and dominated by large transnational corporations. But the nature of fresh food implies that many products in the markets still have a local character, despite the global dimensions. Even though the agri-food chains are affected by globalization, food is genuinely dependent on agriculture and its ties to the use of land. The biological conditions of agriculture give food markets a unique character, compared to other industrial sectors. One basic biological factor influencing food markets is the seasonality, with unstable agricultural outputs and limited potential for storage. The quality of agricultural output differs seasonally and “annual fluctuations of 5-10 per cent in grain production are significant compared to the fluctuations in the total output of the economy.” (Hansen, 2013:4) Storage and real-time transportation of fresh food is another unique character affecting the organisational structure of the food industries.

In absolute terms, international trade has risen dramatically through market liberalisation and globalisation. But in the case of the food sector its relative share of global trade is decreasing. The economic importance of the agri-food chains within a national economy is declining, the more a country develops. The contribution of food markets to GDP is of declining importance, a process which is evident in all countries which undergo economic development. One very specific economic characteristic of food as a tradable commodity is that *income elasticity of demand* is low. The German statistician Ernst Engel (Engel, 1857) first showed that food consumption does not grow according to household's income. Food is a necessity or

inferior good and consumers do not eat more food the more income is available. I will return to this below. International food business and the rise of transnational corporations indicate that food trade is increasing in absolute terms. But internationalisation is largely based on foreign direct investments and the transnational corporations consist of local subsidiaries spread around the globe. The global organisation of food supply still requires local specificities.

Different key economic indicators attest the declining contribution to GDP “with the relationship between supply and demand playing an important role: relatively large productivity increases remove resources from the sector, while relatively small increases in consumption limit market expansion.” (Hansen, 2013:67) Figure 2 and 3 below show that the GDP share of the agri-food chains within the respective economies of Norway and Denmark is decreasing.

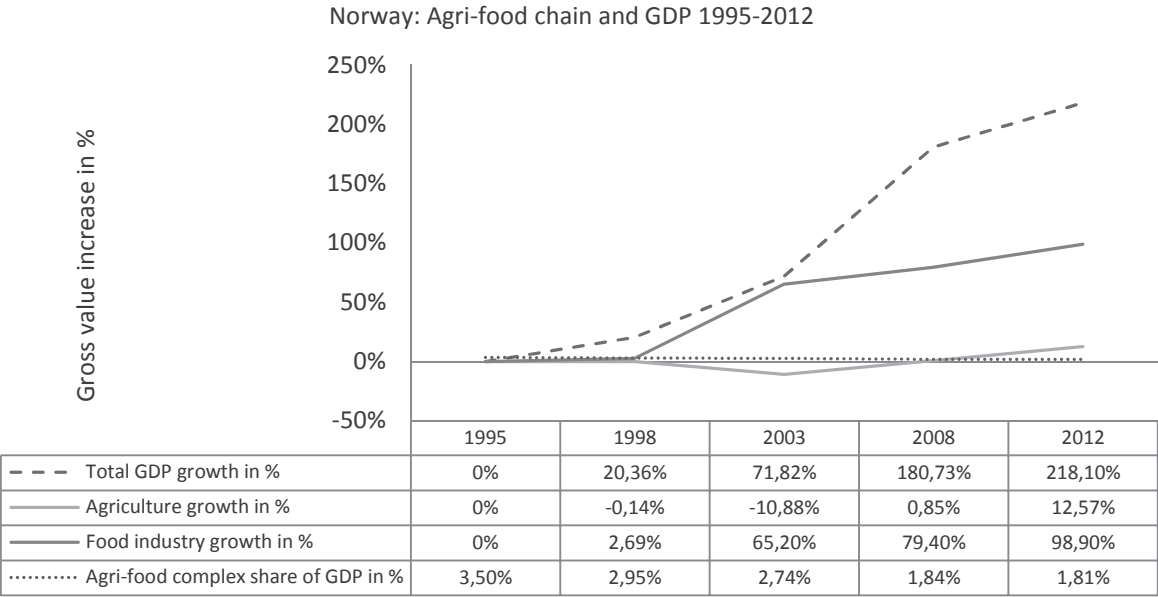


Figure 2: Source Statistics Norway (Tabell: 09170: Produksjon og inntekt, etter næring)

The data presented here and further below are analysed in research paper #3 (summarised in table 3 of research paper #3). Figure 2 above shows that the contribution of the Norwegian agri-food chain (agriculture & industry) decreased to presently 1,81% of total gross value output. From 1995 to 2012 Norwegian agriculture has grown by 12%, while the industry has grown by 98%. The sharp increase in total gross value of about 218%, which of course is

driven by oil and gas resources, explains the declining contribution of the agri-food chain. In total, the contribution to Norwegian GDP (3,50% to 1,81%) was declining by 48% since 1995. As for Denmark the total share of GDP is decreasing, too, but on a higher level than in Norway.

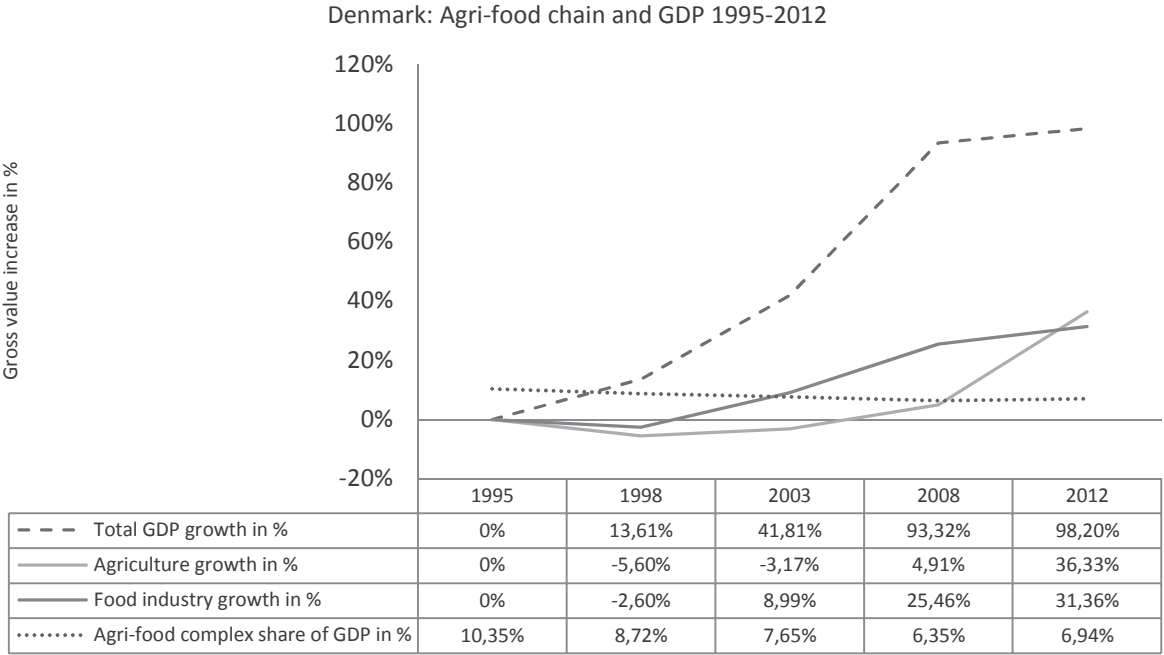


Figure 3: Source Statistics Denmark (Tabell: Produktion, BVT og indkomstdannelse (69-gruppering) efter prisenhed, transaktion, branche og tid – NABP 69)

Total Danish gross value rose by 98% since 1995, while the agricultural (36%) and the industrial (31%) contribution also show a declining tendency. As for Denmark in 2012, the aggregated contribution of the agri-food chain to Danish GDP is nearly about 7%. In total, the contribution to Danish GDP (10,35% to 6,94%) was declining by 32% since 1995. This shows that, in relative terms, Denmark was able to keep the total decline at a lower level than was the case in Norway. Note that these data do not consider foreign economic activity, which may of course compensate for the domestic decline.

As for the agri-food chains’ share of total exports, figure 4 and 5 below show a declining tendency, too, but again starting from a higher level in Denmark. Food exports grew from 1995 to 2012 in absolute terms in both countries, but were decreasing in relative terms to total

exports. Norwegian gross value of total exports (figure 3)¹ increased by 251% while the export share of agri-food decreased down to 5,78% in 2012. Norwegian gross value of agri-food exports rose by 150% in the period in absolute terms. But the share of total exports (8,11% to 5,78%) was, in relative terms, decreasing by 28% from 1995 to 2012.

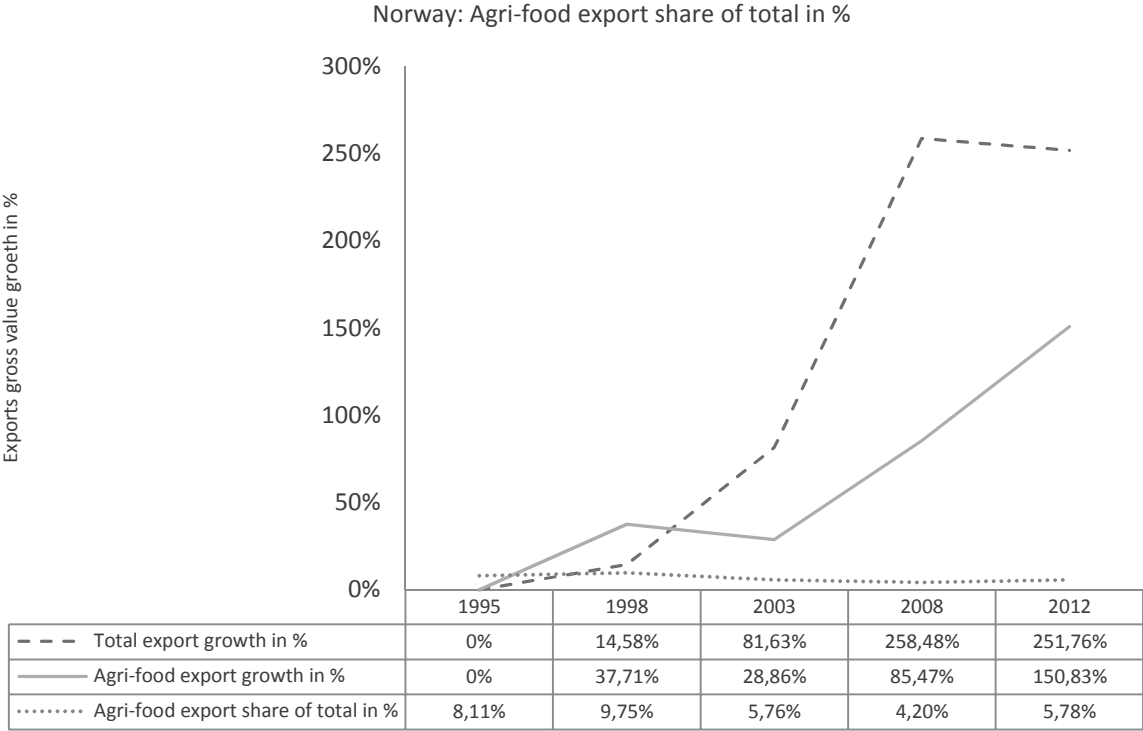


Figure 4: Source Statistics Norway (Tabell 8809-1: Utenrikshandel med varer, etter import/eksport, land, varegruppe, tid og statistikkvariabel)

Denmark has historically always been an exporter of agricultural products. Historically, exports from the sector were crucial in Danish industrialisation (research paper #3). So Denmark was entering the 1990s with a high export share.

¹ Consider figure 5.2. in research paper # 1 (importkonkurranse overfor den bearbeidende matindustrien) on page 129. The export data illustrated in this figure are taken from Rålm (2013). They differ from the data presented in this figure, due to diverging inclusion/exclusion of product groups. The gross value increase in figure 5.2. in research paper # 1 is about 84,5% (from 2903 million NOK in 1996 to 5358 million NOK in 2012). The gross value increase in figure 4 above is about 150% (from 2158 million NOK in 1995 to 5415 million NOK in 2012).

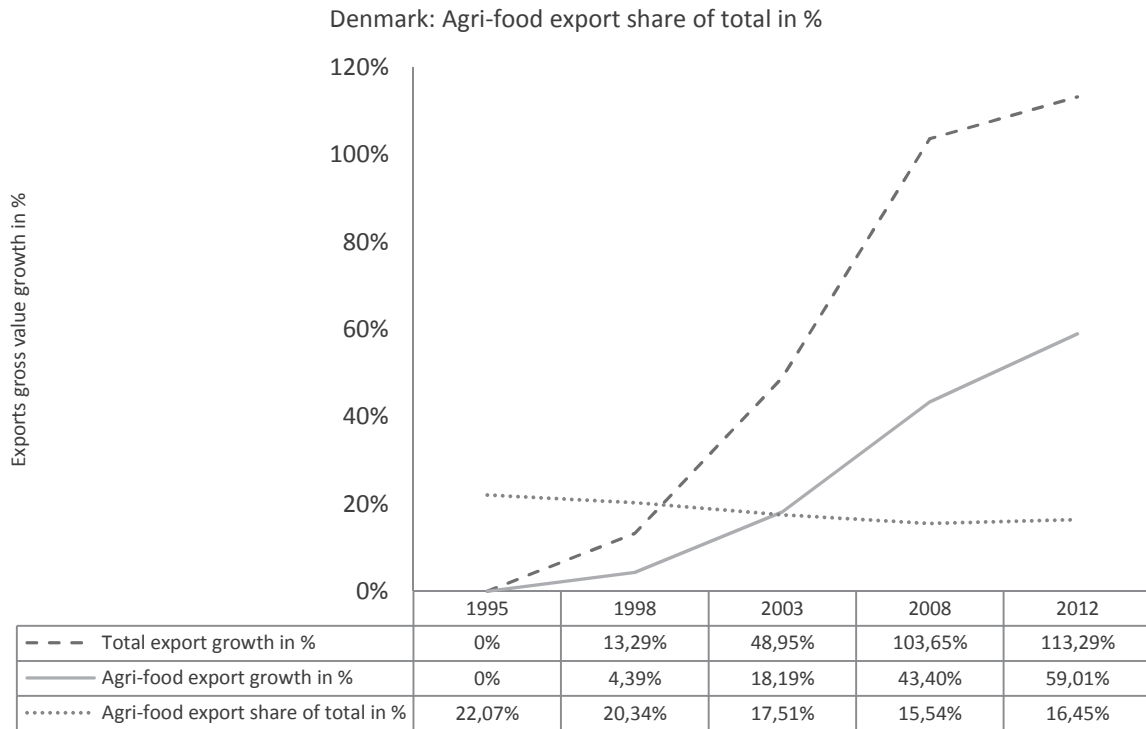


Figure 5: Source Statistics Denmark (Tabell: Den samlede udenrigshandel efter land, im- og eksport, hovedgrupper og tid)

In the period from 1995 Danish agri-food exports rose about 59% in total terms. The share of total exports was declining, too, down to 16,45% in 2012. As for the declining share of agri-food exports to total exports (22,07% to 16,45%), Danish decline was about 25% and, in relative terms, nearly similar to that we have seen in Norway. The tendencies presented in the figures above exemplify the generally declining contribution of agri-food in developed countries. But the data also show that Denmark has been able to keep the pace on a lower level than is the case in Norway. Note again that these data do not tap the enormous differences in the transnationalisation of the Danish sector, as compared to Norway.

Comparison of the macro-economic status of the two sectors has limited explanatory power, given the differences in the historical development of the sector in the two countries. More interesting is the comparison of how the two diverging systems cope with the challenges of the neo-liberal turn. The main point here is thus that of path dependence, not the comparative contrasts. The Norwegian historical path reflects the central aim of income equalisation, while the Danish reflects export orientation. The former is, roughly speaking, income development tied to GDP, the latter one global demand extension. Income equalisation tied to GDP is threatened in the Norwegian case, while export surpluses in Denmark (transnationalisation generally) are reinforced through the 1990s transformations.

In the food sector, low income elasticities of demand indicate a structural problem in the context of growing wealth in an economy. This applies to all developed countries, but is specifically the case in Norway which has no substantial experience with demand extension through exports. Income elasticity of demand is defined as:

$$\text{Income elasticity of demand} = \frac{\% \text{ change demand}}{\% \text{ change income}}$$

If food demand exactly rises in line with income development, income elasticity of demand is 1. If it is bigger than one, rising income would lead to even more strongly rising demand for the sector’s products. But income elasticity of food demand is less than 1 in all developed countries. This is a fact of economic development, the more developed a country is, the smaller the relative amount of households’ income that is spent on food. There is, of course, a tendency towards demand for high quality food stuffs (with higher added-value), but generally, food consumption is physically limited to a constant market size by low income elasticities. Table 1 below shows income elasticities of demand for food in Norway and Denmark. Data show that demand of basic foodstuffs is not developing in line with income.

	Meat	Fish	Milk, eggs, cheese	Soft Drinks	Alcoholic Drinks	Bread, Cereals	Fruit, vegetables	Potatoes	Confectionery
Norway	0,95	0,48	0,52	1,08	1,84	0,40	0,59	0,10	0,47
Denmark	0,87	0,87	0,59	0,69	0,87	0,32	1,10	0,33	0,51

Table 9: Income elasticity of food in Norway and Denmark (Source: Edgerton et al., 1996)

Low income elasticities in the food sector, signals that its contributions to GDP are declining. Schematically speaking, it limits the possibilities to generate profits in line with the rest of the economy. Food producers might strategically counteract these tendencies by a) enhancing productivity to push the returns; or b) expand the total market, by e.g. generating more demand through exports. Option (a) would pressure some food producers out of the market, while option (b) requires economic conditions that make exports competitive. Both tendencies are visible in the Danish agri-food chain, given its high export-orientation. Norway has no experience with export oriented food production and demand extension, and this could therefore not have been a realistic response to the 1990s turn. The above tendencies apply, of course, more to the agricultural producers, depending on the use of land, than to the food processing industry, which is able to move economic activity into foreign markets. In this

thesis, these macro-economic peculiarities are the backdrop particularly for my argument of a breaking point in Norway's specific agri-industrial historical path.

5.2. The structure of the food industry

In microeconomics, *market structure* is analysed through models of supply and demand relations, allocation of limited resources and price formation. Mathematically, these models are constrained optimization models; economically they are interpreted as models of general market equilibrium. In these models, rational actors are seen to maximize utility, possessing full information in a situation of perfect competition. On this basis, the effects of various market structures – monopolistic, oligopolistic, and duopolistic – on resource allocation and price formation are analysed. In the present context I follow a more descriptive definition of *industry structure*, since I study the processes of structural change within the context they take place.

A main reference in the study of industry structures is Michael E. Porter's five competitive forces that shape strategy (Porter, 1980). But as supposed by the title of his book, "Competitive Strategy", Porter is interested in strategy rather than industry structure. In the first chapter he notes what "competitive strategy" is not about:

"Definition of an industry is not the same as definition of where the firm wants to compete (defining its businesses), however." (Porter, 1980:32)

This is an important point, as it illustrates the differences between competitive forces and the definition of industry structure used in this dissertation. Porter is interested in industry structure as far as it concerns the strategy formulation of a firm, which is what defines its businesses in relation to other competitors. Strategy developments reflect elements of industry structure, but only to the extent that the businesses of the company are affected.

"Structural analysis, by focusing broadly on competition well beyond existing rivals, should reduce the need for debates on where to draw industry boundaries. Any definition of an industry is essentially a choice of where to draw the line between established competitors and substitute products, between existing firms and potential entrants, and between existing firms and suppliers and buyers." (Porter, 1980:32)

This quote refers to Porters well known five competitive forces, which are: industry competitors (rivalry among existing firms), bargaining power of suppliers, bargaining power of buyers, threats through new market entrants, and threats through new substitute products.

Porter is interested in the industrial structure around single business cases within the broader all-encompassing structure of whole industries.

In this thesis, Hansen's model of 35 single drivers of food industry M&As and definitions of industry structure are given in research paper #1 and #3. My detailed definition is the following: I define food industry structure descriptively as the number and size of companies, including factors like competition, concentration, specialization, degrees of internationalisation and, particularly important, "with a focus on vertical integration, structural development covers all links in the value chain from research and development, supply and agricultural production to processing, refining, distribution, marketing, retail, and consumption" (Hansen, 2013:234). All the mentioned elements, including the emergence of cluster and network type relationships along food supply chains, together with the new biotechnologies (specialization), represent the national or transnational agri-food chain. This definition does not focus on single businesses or strategy development. Instead it describes the agri-food chain and transformations within it.

5.3. Food industry Mergers and Acquisitions

Drivers and motives of food industry M&As appear in this thesis in form of formal theories on corporate strategy. I rely on a qualitative model explaining the motives for food industry M&As, developed by Hansen in several studies (Hansen, 2005; 2013; TemaNord, 2004). Such research about why, how and when food companies merge or acquire other companies is mostly conducted at business schools, within the academic discipline of (business) economics. Literature focusing particularly on food industry M&As is scarce. Some existing studies analyse macro-economic determinants of food industry M&As (Muehlfeld, Weitzel & Witteloostuijn, 2011; Herger, Kotsogiannis & McCorriston, 2008), the impact of food M&As on employment and wage (Ollinger, Nguyen, Blayney, Chambers & Nelson, 2005), and, above all, there is a number of studies of the US food industry (Connor & Geitmann, 1988; Padberg, Sporleder & Davis, 1989). Some studies apply a value chain perspective arguing that M&As differ between food processors, retailers and the food service sector (e.g. Adams, Love & Capps, 1997). This is also the perspective applied in this thesis. The point that the Norwegian agri-food chain is divided into two institutional stages of food production emerged from a value chain perspective on M&As. (research paper #1 and #3) Though particular literature is scarce, the field is connected to the broad issue on corporate strategy. Strategic motives for M&As converge with corporate market strategy, a research field which has been

extensively explored. As the research field is economics, the contributions are often quantitative and/or mathematized ones. The studies I rely on in this thesis are only a small subset: qualitative ones that cover the whole agri-food sector. I have integrated theories on corporate strategy and industry M&As – considered as local research frontiers – into my reasoning (see the methodology section of this introduction). Relating to my institutionalist framework, I specify these mainstream approaches to corporate strategic interaction. Processes of strategic agri-food M&As are specified and historically traced within the Norwegian and Danish context.

Two research paper, one from 1988 and another from 1997, analyse the motives for food industry M&As. Connor and Geithman (1988) provide a qualitative discussion of the motives and effects of M&As in the industry. They study impacts on market structure:

„(...) there are some obvious effects of mergers. One, of course, is the massive restructuring of markets (...).“ (Connor and Gheitmann, 1988:15)

The relationship between mergers and industry structure is also central in this thesis. Connor & Gheitmann sum up the following motives and effects of M&As: diversification, eliminating competitors, concentration, bargaining power, and company size. The first paper studied the US food industry from the 1960s to the 1980s. The second paper is interesting because it specifies M&A motives in manufacturing industries and the characteristics of food markets. They argue that “the food industry has many characteristics that differentiate it from other industries and may have unique factors motivating its merger activity”. (Adams, Love and Capps, 1997:1) Through a literature review they identify the following motives for M&A activity in manufacturing industries: efficiency gains (scale economies, specialization, cost reduction, synergy), managerial motives (growth or revenue growth, foreign growth, reduce risk, managerial self-interests), monopolistic motives (dominance, less competition, increased market share gives increased profits, barrier to market entrants, vertical integration), speculative motives (periods of uncertainty, new arising technologies, speculations on prospective asset prices), and additional motives (antitrust laws) (Adams, Love and Capps, 1997:4f). For their study of the US food industry until the 1990s they conclude that growth ambitions, managerial ambitions and antitrust laws have been central motives for food industry M&A activity (Adams, Love and Capps, 1997:12).

The brief discussion above shows that research in this field, qualitatively or quantitatively, largely converge with Hansen's model, which is used in this thesis. The main difference is that Hansen conducted qualitative research on the Danish agri-food industry for the post WWII period. His table containing 35 single motives and drivers for M&A activity in food industries (in research paper #1 and #3) has been developed, changed, and saturated over several years and several studies. The table was first developed in a comparative study on 20 cases of mergers, alliances and partnerships across the Nordic food markets (TemaNord, 2004). Among the 20 cases studied through interviews, we find some that also have been integrated into this thesis, such as the merger between Arla and MD foods, Danisco and Danpo (research paper #3). One year later, Hansen published a book on structural development of the Danish agri-food sector (Hansen, 2005). It develops his approach more systematically, and in addition analyses a survey among Danish company leaders in the sector, inquiring into motives for recent M&A activity (see part 6.2).

Even though Hansen does not mention qualitative methodological issues separately, his approach to theory development is close to that which is applied in this thesis (see chapter on methodology in this introduction). He developed his model through several qualitative studies on the Danish agri-food industry, relating local research frontiers of relevance to the study of corporate strategy, saturating the model through additional qualitative data (2005, 2013). His 2013 book is an English translation of the 2005 book, updated with additional sections on industry structure and corporate internationalisation.

6. State of research

In this thesis I rely on studies developed in the Danish context, in particular corporate strategy studies of Danish industry structure. In this part, I discuss the present state of research, and there are some overlaps with the literature on the Danish case that I surveyed in the research papers. In Denmark, the Department for Food and Resource Economics (IFRO) at Copenhagen University is centrally engaged in the study of Danish food production. In Norway, the Centre for Rural Research (Trondheim), the Norwegian Institute for Bioeconomy Research (NIBIO, former NILF), as well as the BECCLE center in Bergen have been particularly engaged in the study of Norwegian food. In this part I give a brief overview of recent studies in both countries.

6.1. Food industry changes in Norway

Norwegian research on structural changes of the agri-food chain is quite limited. While several studies have explored agricultural restructuring at farm and policy level (Blekesaune 1996; Bjørkhaug 2007) food chain studies mostly deals with questions concerning the national model of agriculture. There are not many studies of the food industry. As for Norwegian agricultural history, the main reference is Almås (2004) on the period from 1920 to 2000 (“From peasant society to bio-industry”). As for food industry concerns, Borch and Stræte (1999) particularly deals with the subject of structural development. One report analysed the competitive situation for the Norwegian RÅK industry (Borgen, Svennerud & Venges, 2001) and another report dealt with the situation for the two Norwegian farmer cooperatives (Borgen, Røkholt & Sørensen, 2006). In 2011, an analysis of power relations in the Norwegian agri-food chain, the so-called “Matkjedeutvalget” (see NOU 2011:4), contributed to the study of structural development. The study triggered a debate on power relations in the Norwegian agri-food chain, one that still lingers on. It has yielded further contributions, such as e.g. Pettersen and Staal Gabrielsen (2011) and Pettersen (2013). A 2015 book also studies power relations in the food sector (Bjørkhaug, Almås & Vik, 2015), contributing further to the debate that started in 2011. Research paper #1 of this thesis is published in this book, which also contains research on Norwegian poultry, clustering, consumer power, changes in the milk sector, as well as contract production. Furthermore, the book by Per Ingvar Olsen, “Norsk mat etter supermarkedtsrevolusjonen” [Norwegian food after the supermarket-revolution] (Olsen, 2010) is important to this thesis. Olsen here develops the thesis that since the 1990s, the Norwegian agri-food chain has changed to be a

regime of passive adaptations, as witnessed by his formula: “from the ‘country that was different’ to the defensive-adaptive regime” (see Olsen, 2010:95). In the following, I first discuss this contribution in more detail, explaining how I relate to it in my thesis. I then survey some recent publications within the field.

Olsen’s analysis of the Norwegian supermarket revolution is most centrally interested in technological transformations that enabled Norwegian retailers to reorganise the Norwegian agri-food chain in its favour since the 1990s. He applies an Actor-Network perspective arguing that the Norwegian agri-food chain consists of two competing ‘macro-actor-networks’.

“Analysen tar utgangspunkt i den historiske rivaliseringen mellom to konkurrerende regimer med hver sine aktørnettverk, sine modeller for økonomisk rasjonalitet og sine teknologiske og politiske drivkrefter: Det statlig-korporative og det supermarkedsbaserte. (...) De to rivaliserende regimene kan forstås som to ulike “makro-aktører” som begge forsøker å tilpasse de områdene av samfunnets aktiviteter de er rettet mot til sine egne former. (...) Og ikke minst: De representerer hver sin historiske teknologiske revolusjon. Samvirkeorganiseringen er formet av den andre industrielle revolusjonens masseproduksjonsteknologi. Supermarkedsrevolusjonen er et ektefødt barn av den tredje industrielle revolusjon, der informasjons- og kontrollteknologi har gitt helt nye muligheter for teknologisk og organisatorisk integrasjon i massiv skala på tvers av landegrensene og på tvers av organisatoriske grenser.” (Olsen, 2010:11f.)

[“The analysis starts from the historical rivalry between two competing regimes, each of them with their own actor networks, their own models of economic rationality and their own technological and political drivers: state-corporatist and supermarket-based. (...) The two rivaling regimes can be understood as two different “macro-actors”, both attempting to adjust the social areas that they target in line with their own forms. (...) And not the least: Each represent one historical technological revolution. The cooperative organizations are formed by the mass production technologies of the second industrial revolution. The supermarket-revolution is a true child of the third industrial revolution, through which information- and control-technologies have provided entirely new possibilities of technological and organizational integration on a massive scale across national borders and across organizational borders.”]

Analysing technological developments through the ANT perspective, Olsen relates to institutional frameworks. In terms that I use in the dissertation, market-organising-institutions have historically been maintained to achieve ‘farmer-controlled’ developmental industrialisation and later income equalization (The income equalisation act; *Opptrappingsvedtaket* of 1976). Olsen’s argument is two-fold; one part addresses technological possibilities, growing out of the national framework, the other concerns trade regulations, which limit the opportunities to grant subsidies. Both elements are also central arguments in this thesis. The categories for Norwegian agri-food developed in this dissertation, such as ‘structural national growth barriers’ or ‘connection-disconnection to EU’ or ‘insulated concentration’, are largely degree in line Olsen’s reasoning. He notes that state-of-the-art technologies have grown out of the Norwegian context for both agricultural farming

and industrial processing, and that Norway's agri-food regime has changed from being an offensive exceptional country ('annerledeslandet'), becoming a regime of passive step by step adaptations ("defensive-adaptive regime"). According to Olsen, the exceptional period lasted from the period after the first mobilisation against EU membership (1972) through to 1990:

"Det politiske roret ble lagt om i retning av å styrke distriktslandbruket og bevare aktiv gårdsdrift i mange driftsenheter over hele landet, samt bevare en desentralisert industriell struktur innenfor matindustrien. Et viktig verktøy for å bremse avgangen fra landbruket var det såkalte opptrappingsvedtaket i 1976, der staten vedtok retningslinjene for å sikre en framtidig inntektsutvikling for bøndene på samme nivå som gjennomsnittet for industriarbeider. (...) Resultat ble en relativ styrking av landbrukspolitikken mål om å sikre bøndenes inntekter uten tilsvarende krav til deres produktivitetutvikling (...)" (Olsen, 2010:99f.)

[Political guidelines were revised with more emphasis on strengthening of agriculture in peripheral regions, and on maintaining active farming in many units across the country, as well as conserving a decentralized industrial structure in the agri-food sector. An important tool in terms of slowing down the outflow of labour from agriculture was the so-called reinforcement resolution (*Opptrappingsvedtaket*) of 1976, in which the state defined guidelines on how to secure that future incomes in farming would reach the average level for an industrial worker. (...) The result was a relative strengthening of the agricultural policy goal of sustaining farming incomes without corresponding claims to productivity gains in that sector.]

Olsen then shows that until the 1990s, the comparative disadvantages vis-à-vis the Nordic neighbouring countries grew to such a size that, together with the WTO restrictions on further subsidies, Norway was forced into what he calls a defensive-adaptive regime ('defensivt tilpasningsregime').

"Deretter [etter 1997] inntreer hva jeg vil kalle tilpasningsregimet, som representerer en defensiv, reaktiv politikk for å tilpasse politikken til de nye internasjonale rammevilkårene og samtidig søke å opprettholde status quo så langt råd er." (Olsen, 2010:102)

[After 1997, we encounter what I prefer to call the adaptive regime, representing a defensive, reactive political strategy of adapting policies to new international conditions, while at the same time aiming to maintain status quo as far as possible.]

As for farming, Olsen shows that the phase-out within the farming sector was constantly on 20% average aggregated through both the 1970s and 1980s decade. This trend sharply increased since the 1990s reaching an average of 37% for the 2000s. In the end of that decade Olsen locates the shift into the new regime (2010:145). For Sweden and Denmark, it was the other way around. Both had rationalised its farming sectors in the period of Norway's exceptionalism. Both countries had higher degrees of phase-out in the 1970s and 1980s than Norway. However, this picture changes since the late 1990s, and the reduction in number of farming units was just 23% (Denmark) and 19% (Sweden) in 2000-2010. Olsen argues that Norway presently is going through the same process that Denmark and Sweden went through two decades before.

Olsen also shows similar trends in the food industry since the 1990s. Using investment activity in the sector as an indicator, he argues that industry structure and company size prevents invest in the most advanced technologies. This applies specifically to the two farmer cooperatives that depend exclusively on the domestic market. Olsen refers to the case of the meat sector in Trøndelag, where neither Nortura, nor its smaller competitors had enough resources to invest in renewal of production facilities. In the end, this led to collaboration between the cooperative and its competitors. Olsen argues that this was due to limited market size:

“Eksemplene viser at vi er kommet i en situasjon der teknologisk effektive løsninger for en fornyelse av slaktekapasiteten vanskelig lar seg gjennomføre fordi volumene i hver region blir for små, dersom kapasiteten skal deles mellom to eller flere uavhengige aktører. (...) Forestillingen om at vi kan ha både spredt landbruksproduksjon, uavhengige markedsbaserte industriselskaper og teknologisk effektivitet i et lite beskyttet norsk marked bryter altså gradvis sammen. Annerledeslandet møter begrensninger som gjør det stadig vanskeligere å følge med i den teknologiske utviklingen.” (Olsen, 2010:180)

[The examples show that we are now in a situation where technologically efficient solutions aiming to enhance the slaughterhouse capacity are hard to accomplish because the volume in each region has become too small – as long as capacity is to be shared between two or more independent actors. (...) The idea that we can both have decentralized agricultural production, independent market-based industrial companies, and technological efficiency in a not very protected Norwegian market, thus gradually breaks down. The exceptional country faces limitations that make it increasingly more difficult to participate in technological developments.]

Olsen’s arguments are incorporated into this thesis. Some of my concluding remarks overlap with his. I link up with the argument of a ‘defensive adaptive regime’ and identify a relationship between Olsen’s reasoning and Hansen’s model of 35 single drivers for food industry M&As (research paper #1 and #3). The fourth box in Hansen’s table covers ‘passive-external’ motives for M&A activity. These are passive and external constraints that can motivate a company to M&A activity. Research paper #1 identified ‘low growth/ structural growth barriers’ or ‘guarantee of product supply’ as recent motives for M&A activity in the Norwegian agri-food chain. The first paper therefore concludes that M&As are driven by passive external constraints. My conclusions in research paper #1 were thus connected to Olsen’s analysis of the defensive adaptive regime. I argue there that M&As are one way of pursuing passive step by step adaptations.

For other recent contributions to the field of industry structure, there is a report from the Nordic competition authorities from 2005 (Nordic Competition Authorities, 2005). It evaluates competition and concentration in Nordic retailing and food processing markets. Its empirical basis is data from the period 1996-2002 and the marine industry is included. Thus it

is less relevant for this thesis. Furthermore, the study of mergers, alliances and partnerships in the Nordic food markets was already mentioned in part 5.3 of this introduction (TemaNord, 2004). The most recent contribution to the field is the book “Norsk matmakt i endring” [Norwegian food power relations in change] (Bjørkhaug, Almås & Vik, 2015). Some of the contributions here deal with the issue of industry structure: Almås (2015) studies three attempts at national clustering (a poultry cluster in Støren, a marine cluster on Hitra and Frøya, and an agricultural cluster in Jæren). Other articles analyse changes in the Norwegian poultry sector, the Norwegian milk sector, and vertical integration and contract production. Given that poultry also has a central position in this thesis, we can conclude that recent research has particularly been interested in this specific sector.

Recent discussions on the Norwegian food industry have been influenced by the 2011 evaluation of power relations, the so-called “Matkjedeutvalget” (the food chain report), produced by a committee assigned by the Norwegian government (NOU 2011:4). The report points to the growing dominance of the Norwegian retail sector and its bargaining power. The commission proposes to regulate negotiations between suppliers and retailers by law (“lov om god handelskikk”; see NOU 2013:6). The 2015 book mentioned above continues this debate. In this thesis there is no direct link to this debate, but research paper #1 develops the category of insulated concentration in direct connection to retailer driven M&A activity.

Three further references should also be mentioned. Borch and Stræte (1999) analyses structural development and consequences for the local rural population. Their edited volume also contains an article on challenges for the Norwegian farmer cooperatives (Røkholt and Borgen, 1999, see also Borgen, Røkholt and Sørensen, 2006). Entitled “Landbrukssamvirke – fra forvaltning til marked” [Agricultural cooperatives – from administration to the market], the article discusses tensions between the three different arenas wherein the cooperatives operate, that is the membership arena (medlemsarena), the market (markedsarena), and the administrative arena (forvaltningsarena).

“To av rollene (medlemsrollen og markedsrollen) ligger innebygd i selve organisasjonsformen, den tredje (forvaltningsrollen) er en konsekvens av en historisk, økonomisk og politisk situasjon i Norge. De tre arenaene representerer forskjellige sett av krav, normer og forventninger, som til dels er i konflikt eller konkurranse. Landbrukssamvirkes strategiske tilpasning er karakterisert ved deres avbalansering mellom de tre rollene.” (Røkholt and Borgen, 1999:141)

[Two of these roles (the membership role and the market role) is built into the very form of organization, the third (the administrative role) is a result of a historical, economic and political situation in Norway. The three areas represent different sets of claims, norms and expectations, and

these are partly in conflict or in competition. The strategic adjustment of the agricultural cooperatives is marked by their attempts to balance between these three roles.]

A 2001 evaluation analysed the competitive situation of the Norwegian processing industry, the so-called RÅK industry (Borgen, Svennerud and Venges, 2001). The report provides an overview of the regulations affecting the RÅK industry, such as the EEA agreement and active/ passive processing (see also research paper #1).

In sum, this brief review of recent literature on the field of Norwegian food industry structure, indicates that there is common agreement that the Norwegian model of food regulation has come under pressure since the 1990s. Structural developments affect food production in different ways. The tendency converges with what we see in international markets: declining number of farms, larger industrial corporations, more concentrated markets, and power shifts in favour of the retail chains.

6.2. Food industry changes in Denmark

As for recent contributions to the study of structural development within the Danish agri-food chain, I rely on Henning O. Hansen's analysis of post WWII developments in Denmark. Hansen is co-author of research paper #3 of this thesis, and he developed the model of 35 single drivers for food M&As, which has been integrated in research paper #1 and #3. The following account of previous research on Danish development is thus close to that given in the research papers. Before I provide a closer discussion of Hansen's work, I briefly discuss other recent contributions to Danish agri-food development since the 1990s.

The historical development of the Danish agri-food chain is analysed in several works (Senghaas, 1982; Pedersen, 2010; Iversen and Steen Andersen, 2008; Mordhorst, 2008; 2014). An evaluation of the Danish retailer segment was published by the Danish competition authorities in 2014 (Konkurrence- og Forbrugerstyrelsen, 2014). The report questioned power relations and high concentration in the Danish retail sector. It parallels the Norwegian evaluation (Matkjedeutvalget), mentioned above. According to the report, Danish consumer prices are 4-6% higher than in comparable countries, and bargaining power of retail chains is strong since the market is shared between a few powerful ones (see research paper #3). Interestingly, the report also discusses regulative attempts to coordinate bargaining between suppliers and retailers by law (in Norway: 'lov om god handelskikk').

“Konkurrence- og Forbrugerstyrelsen vurderer samlet set, at det vil være uhensigtsmæssigt at indføre retningslinjer eller anden form for yderligere regulering af samhandlen mellem leverandører og dagligvarekæder på dagligvaremarkedet. Retningslinjer eller regulering af samhandelsbetingelserne kan være skadelige for forbrugerne, da det risikerer at svække væsentlige konkurrenceparametre (pris, leveringsbetingelser m.v.) og dermed begrænse konkurrencen med prisstigninger til følge.” (Konkurrence- og Forbrugerstyrelsen, 2014:7)

[According to the overall assessment of the Competition and Consumption Authority, it would be impractical to introduce some sort of further regulation of the collaboration between suppliers and chains in the grocery market. Guidelines or regulation of the conditions of collaboration may be harmful to consumers, as might harm important competition parameters (such as price, terms of deliver, etc) and thus limit competition, with the result that prices rise.]

The Department of Food and Resource Economics (IFRO) at University of Copenhagen regularly supervises the competitive situation of Danish agriculture and the agri-food industries. A series of publications from IFRO studies developments in the Danish agri-food chain. A status report of Danish food production studies recent developments in the processing industries, exemplified by Danish Crown (pork) and Arla (dairy) (IFRO No. 209, 2011; a summary is given in IFRO No. 210, 2012). Danish Crown is the biggest exporter of pork meat in the world (80% of total volume is export production) and plays an important role in the Danish economy. The report identifies the shift from the export of processed meat products to the export of raw products as one present structural tendency.

“Den danske svineködsekspor er over de sidste årtier i betydeligt grad gået fra selv at ferdigforarbejde råvaren til at være underleverandører til forarbejdningsselskaber uden for Danmark. (...) En stor del af videreforarbejdningen af dansk svineköd foregår på fabrikker i især Tyskland og Polen, som er helt eller delvis ejet af Danish Crown. Andelshavere i Danish Crown, dvs. danske svineproducenter, må dermed formodes stadig at trække overskuddet hjem til Danmark, men beskæftigelsen og den indtjening foruden skattebetalinger, der følger deraf, forbliver i udlandet.” (IFRO No. 209, 2011:232)

[Danish exports of pork meat have over the last decades significantly changed from domestic manufacturing of the raw materials towards being a subcontractor delivering to manufacturing firms outside of Denmark. (...) A large share of the further manufacturing of Danish pork meat takes place in factories in above all, Poland and Germany. These are partly or fully owned by Danish Crown. Cooperative owners of Danish Crown, in particular Danish pork producers, presumably then repatriates their earnings back into Denmark, but employment and the incomes, as well as the tax payments, that follows from this, remains abroad.]

As discussed in research paper #1 and #3, price is a central competition parameter in the fresh meat sector and our data show that recent M&A activity in the Danish pork sector was motivated by lower labour costs in Germany, UK and Poland. Employment in the Danish sector has decreased from 13.700 in 2000 to 7.800 in 2010, while the processed volume remained constant. Value-adding for global exports is sourced out to neighbouring countries with lower labour costs (IFRO No. 209, 2011:232). As for the Danish dairy sector, the report mentions that Arla was able to maintain creation of value-added in Denmark, particularly profiting from demand of organic foods. Employment in the Danish dairy sector as a whole

decreased, too, but at a much lower pace from 9.300 in 2000 to 8.800 in 2010. The report concludes that the strong development of Danish dairy also is a result of the European milk quotas, which will be removed in 2015.

“I det hele taget ser mejeribranchen ud til i højere grad end slagterierne at være i stand til succesfuldt at introducere nye produkter med specielle egenskaber, som forbrugerne har taget imod. Økologiske produkter er således vokset til at udgøre en væsentlig del af mejeriproduktionen.” (IFRO No. 209, 2011:237)

[On the whole, the dairy business proves – to a larger extent than the slaughterhouses – to be able to successfully introduce new products with special properties, products that are welcomed by consumers. Ecological products have thus grown to become a main part of dairy production.]

A 2007 report analyses strategies for the Danish agri-food corporations. Cost reduction strategies are identified as the very central aim for Danish food companies under conditions of global competition (IFRO NO. 190, 2007:93). This confirms some of our own research findings, which shows that recent M&A strategies for Danish companies were driven by the quest for lower labour costs, a cost reduction strategy through international sourcing. Also another report analysed productivity development in the Danish agri-food chain showing weak improvements relative to international food industries in the period 1990 to 2009 (IFRO No. 208, 2011). For the internationalised Danish sector, cost strategies, including labour costs, and productivity development directly represents competitive parameters on the global markets.

«Det indikerer umiddelbart, at den danske fødevarerproduktion over en forholdsvis lang årrække ikke har været i stand til at frembringe teknologiske fremskridt, der har øget muligheden for at konkurrere på prisen.» (IFRO No. 208, 2011:83)

[This indicates immediately, that Danish food production over a quite long span of years have not been able to yield the technological progress that has increased its ability to face price-competition.]

Danish agri-food industries have come quite far in structural consolidation and the report concludes that productivity improvements are more difficult to obtain in the Danish context, relative to other international agri-food industries (IFRO No. 208, 2011:85). A 2008 report sums up structural development until 2003, particularly concentration ratios in different branches of the industry. Its conclusion is in accordance with my own:

“The observed generally static food industry sales in the period 1995-2003 are consistent with a mature industry, in which firms pursue value addition and market share rather than sales. From this study it is clear that consolidation is occurring and that this is being accompanied by an increase in industry concentration (as measured in several ways).” (IFRO No. 196, 2008:123)

The authors describe the Danish agri-food industry as mature, due to limitations of demand growth. They see strategies of value addition and market share gains as main drivers in the industry. In sum, according to these IFRO reports, recent discussion on Danish industry structure has focused on Danish labour costs in an internationalised environment, unfavourable productivity developments (relative to other international industries), and the global outsourcing of the two giant cooperatives as the main features. The transnationalisation of Danish agri-food is changing the character of this important national sector and this “leads to the question of what we shall today take as the Danish food industry [*hvad der skal forstås ved dansk fødevarerindustri*]” (IFRO No. 209, 2011:241).

The most explicit discussion of structural development, the background of the present thesis, is found in Hansen (2005:57). Hansen here surveys structural developments in Danish agri-food chains 1945-2003. He disaggregates Danish industry into 33 single branches. As for the general tendencies in post WWII Danish food industry, Hansen points to domestic consolidation starting in the 1960s, followed by a shift towards global expansion. This expansion takes place in the period studied by this PhD thesis. Hansen writes:

“Strukturudviklingen i den danske agro- og fødevarerindustri er kendetegnet ved færre og større virksomheder. Antallet af fusioner toppede i slutningen af 1960’erne og starten af 1970’erne. I de efterfølgende år har der været færre, men betydeligt større fusioner og opkøb. Udviklingen er også gået i retning af stigende andelseje, stigende specialisering og vertikal integration i form af kontraktproduktion. Indsatsfaktorer som især arbejdskraft er reduceret betydeligt.” (Hansen, 2005:57)

[The structural development of Danish agri- and food industry is marked by an ever smaller number of units. The number of fusions peaked in the late 1960s and early 1970s. In the following years, there have been fewer, but significantly larger mergers and acquisitions. The development has also moved in the direction of more cooperative ownership, increasing specialization and vertical integration in the form of contract production. Inputs, and in particular labour, has been significantly reduced.]

As for developments in the 33 separate branches he reconstructs M&As for the most significant companies from the 1960s to the 2000s. Figure 6 provides an example. It shows the consolidation of the Danish dairy sector and the evolution of Arla Foods with the merger between the Danish and the Swedish cooperatives in the early 2000s. Hansen studies the consolidation of Arla Foods with reference to macro-economic and sectoral data. He also practices some sort of process tracing, but without methodological references, to explain structural developments. Political transformations are mentioned in Hansen’s works, but he does not explicitly apply an institutionalist approach.

Figur 6.8. Opkøb, fusioner og strukturelle milepæle i Arla Foods

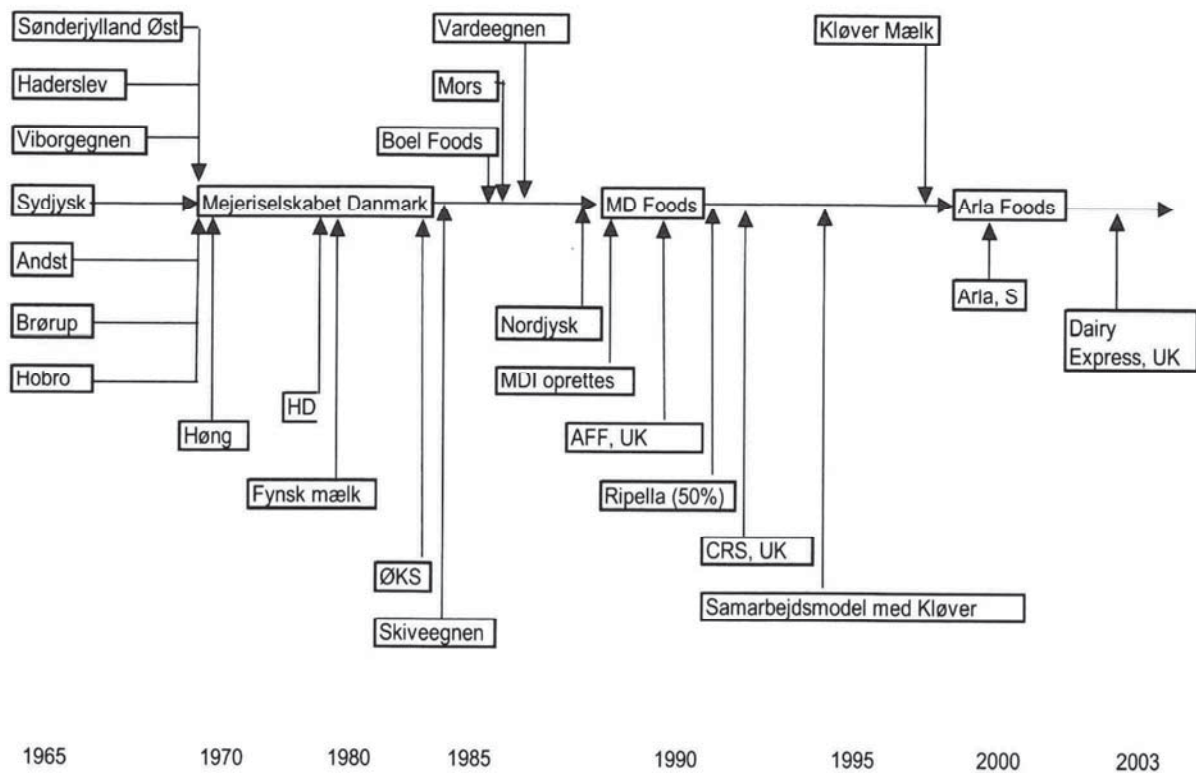


Figure 6: Hansen's reconstruction of Arla Foods in the post WWII period (Source: Hanse, 2005)

Hansen (2005) also provides similar figures for other companies that are studied in research paper #3: Danish Crown, the Danish poultry sector (Danpo and Rose Poultry), and the sugar industry (Danisco).

Other works by Hansen is a book about food economics and industry structure (Hansen, 2013). In another recent work, Hansen provides an overview of political transformations and structural developments (Hansen, 2014), of relevance to this thesis. Figure 7 below is taken from this article. Hansen here argues on the macro level, combining political and economic timelines. This parallels my own research design in this thesis, but Hansen does not pursue an institutionalist approach, and thus he does not really specify the role of institutions, market structure and its impacts on food industry structure.

Figur 10. Faser i den danske agro- og fødevarerindustri strukturudvikling, 1945-2014

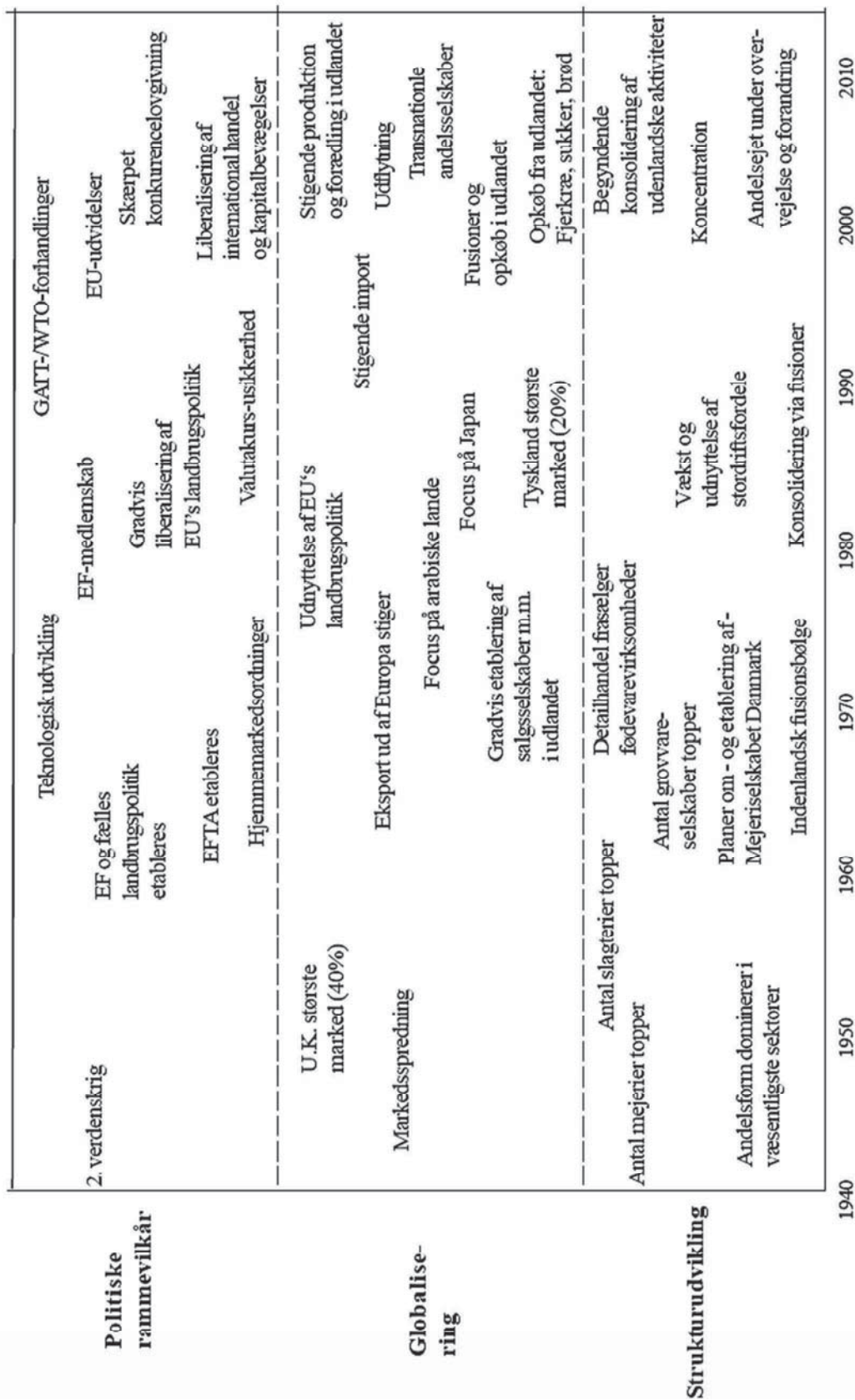


Figure 7: Post WWII structural development of the Danish agri-food chain (Source: Hansen, 2014a:16)

Within this local research frontier on Danish structural developments there are several references to political transformations, but there is no explicit specification of the historical role of institutions and path dependency. Research mostly takes formal theories of corporate strategy for granted. This was a central motivation for the research strategy applied in this thesis, because theories of structural development, particularly the models developed by Hansen, do not fit to the Norwegian case, with its very unique market structure and historical path dependency. The combination of institutional political economy and these formal theories of corporate strategy is one of the research innovations developed in this thesis.

7. Overall conclusions

Each of the four research papers contributes to the accumulation of knowledge within local research frontiers analysing Norwegian and Danish agri-food industries. Each of them develops specific research findings. In this introduction, I have attempted to elaborate the theoretical framework, to connect the various research papers, and to develop answers to the research questions posed in point 3.1. The research questions mentioned in the beginning of this introduction are:

- (a) (*National institutions and adjustment strategies/policies*) What was the historical path of Norwegian and Danish agri-food at the turn of the 1990s and what was the national response to that turn in the respective countries?
- (d) (*Structural changes – changes in the structure and strategic relationships between firms*) How did structure actually change since the 1990s, and what was the relationship between structural developments and institutional trajectories?
- (e) (*The adjustment strategies of firms*) What have been the main strategic drivers and underlying motives behind structural development since the 1990s?

Below I will respond to these questions, relying on the research papers and on the further discussions contained in this introduction. Table 9 summarises the research findings in the separate papers and shows how they relate to the development of the overall conclusions.

Research paper	Research findings	Contribution to overall conclusions
Research paper #1 “Fusjoner og oppkjøp i norsk matindustri under økt internasjonal integrasjon siden 1990tallet” (Fagbokforlaget) (Klimek, 2015)	Structural development in the Norwegian agri-food chain is characterised by passive-external constrains: a. Structural growth barriers b. Insulated concentration c. Connection-disconnection to EU	a. An analogy is identified between Olsen’s thesis of the ‘defensive adaptive regime’ and Hansen’s fourth box, which is M&As driven by passive external constrains
Research paper #2 “Norwegian agro-food attracting Private Equity capital; Varieties of capitalism – varieties of financialization?” (Sociologica Ruralis) (Klimek and Bjørkhaug, 2015)	The Norwegian agri-food chain since the 1990s attracts Private Equity capital, due to: a. Institutional complementary transformations b. The Norwegian food market is less consolidated than the Nordic neighbour markets c. Further liberalisations are expected in the future	a. Private Equity capital identifies a technological and organisational lag in the Norwegian agri-food chain and attempts to consolidate the market b. Given the small dimension of the Norwegian market, Private Equity capital involvement in the Norwegian agri-food chain is obviously higher than in the Nordic neighbour markets
Research paper #3 “Food industry structure in Norway and Denmark since the 1990s transformations” (accepted at Food Policy)	Norway and Denmark entered the 1990s on two different paths and response to the neo-liberal turn differed in both countries: a. Forms of concentration and degrees of corporate internationalisation identified as central comparative categories of structural development b. Norwegian M&A strategies have defensive adaptive character (see paper #1) c. Danish M&A strategies have been coping with full international integration, global demand extension, and foreign ownership on the domestic market	a. Concepts and categories have been specified, particularly the concepts of concentration and internationalisation mentioned on the left side here b. Denmark is moving down a path of agri-food exports which has characterised the sector since the early 20 th century Danish industrialisation. (a path of increasing returns) d. Norway implemented a path of agri-food development based on protection of the national market in the early 20 th century. Norway is since the 1990s going through a transformative turning point enforced by the neo-liberal turn e. In Norway and Denmark we see two different trajectories of path dependency, according to the definitions given in this introduction
Research paper #4 “Bioøkonomi og matsikkerhet i Norden» (Det norske samfunn, 2016)	Biotechnological adaptations are another form of structural development affecting the structure of the agri-food chains in the time to come: a. The implementation of the bioeconomies will follow a path dependent trajectory, too b. Food security will be affected by the new technologies in different ways	a. Technological reorganisation, such as biotechnologies or global sourcing opportunities, goes beyond the small Norwegian market and develops comparative disadvantages rather than the neo-liberalisation of the world markets.

Table 10: Research findings in the PhD thesis

Starting with research question (a - *National institutions and adjustment strategies/policies*) above, this question is two-fold. As of the 1990s both countries had traversed paths of agri-food development that show both similarities and differences. The cooperative movement had been, and still is, the key to understanding of structural developments in both industries. Until the 1990s both industries went through a process of domestic consolidation, due to market

driven expansionism in Denmark and a more politically regulated development in Norway. By the time of the neo-liberal turn we find that domestic restructuring has resulted in two dominating cooperatives in each country. Norway entered the 1990s with an agri-food industry that since the country's early industrialisation was focused on national self-sufficiency, and coordinated by political collective arrangements. Denmark on its part entered the 1990s with a fully export-oriented industry and with a cooperative movement that since the early Danish industrialisation had supported liberal trade arrangements. But Danish industry structure is nonetheless a result of strong coordinated attempts to build these export possibilities. Both industries, thus, are the result of developmental strategies that build on cooperative organisation and economic interventionism, even though with quite differing purposes. Since the 1990s, we see two path dependent agri-food industries that have emerged within coordinated political-economic models that both belong to the Nordic family and marked by differences as concerns the political and ideological position of the sectors within their respective national economies.

The other part of research question (a) is that of the response to the neo-liberal turn. Here we find differences. Focusing on M&A driven food industry structure, I conclude that the neo-liberal turn allowed Denmark to take advantage of trade liberalisations to extend its historically evolved export strategy. I further conclude that the neo-liberal turn becomes a turning point in Norway's historical path of agri-industrial development. Much space in this PhD thesis has been devoted to the comparative specification of categories that explain industry structure in the Norwegian context (see conclusions to question (b) further below). I locate this turning point in Norway's historical path at the industrial level, using indicators clustered around M&A activity. I further link up with the conception of a defensive adaptive regime, here specified for the agri-food industries. Norway's response to the 1990s challenges was that of EU rejection, EEA connection and the maintenance of national self-sufficiency. This impacts on industry structure. This conclusion is a comparative one. The only benchmark for the Norwegian agri-food industry is the international food industries. Domestic concerns such as rural settlement, food security, or the attempts to equalize farmers' incomes play no role in this respect. Such domestic concerns are particularly important for policy development, but they do not address the topic of industry structure. Thus, focusing on industry structure only, Norway experiences a turning point in the path which was established in the early 20th century. Denmark took advantage of global trade liberalisations. Its response

to the 1990s challenges was to extend its export strategy, a process of transnationalisation which was followed by a loosening of the agri-food industries from their Danish roots.

Research question (b - *Structural changes – changes in the structure and strategic relationships between firms*) is again two-fold. The structure of both industries has changed since the 1990s. On a sectoral level, I have identified structural changes in with reference to two properties: (1) forms of concentration and (2) degrees of internationalisation. This conclusion was first developed in research paper #1, but the comparative study in research paper #3 enabled me to specify these categories in detail. For instance, in research paper #1 I did not consider my tentative conclusion about ‘connection-disconnection to EU’ as a specific degree of internationalisation. Research paper #3 came to serve as a comparative extension of the first one. Food industry structure has changed in both countries and at the sectoral level. I conclude that these changes relate to the two above mentioned properties of structural development. Specified for both countries I find the following as main tendencies of structural development (see research paper #3, table 6):

	Norway	Denmark
Forms of concentration (market dynamics since 1990s)	- High - Structural growth barriers - Insulated concentration	- High
Degree of internationalisation (market dynamics since 1990s)	- Low - Connection- disconnection to EU	- High - Full international integration in both ways <ul style="list-style-type: none"> o demand extension o foreign competition on home market

Table 11: Conclusions regarding structural changes

I accessed the field of M&A driven structural development through expert interviews and arrived at a contextualised specification of industry structure since the 1990s in both countries. Concentration and internationalisation are properties of my two cases, and they have been developed in formal corporate strategy theories of industry structure. Table 11 summarizes my comparison of the two cases with reference to these two properties. At the sectoral level, I conclude that industry structure in Norway since the 1990s has underlying dynamics that I classify as: structural growth barriers, insulated concentration, and connection-disconnection to EU. On the Danish side the market dynamic identified is that of full international integration in both ways. The second part of research question (b) refers to institutions affecting food industry structure. Specification of the presented categories was made in relation to institutions that organise the national markets. Corporate strategy theories of industry structure explain strategic decision making at the firm level, but they do not allow

for national specification. One methodological innovation of the thesis was thus the combination of both elements formal corporate strategy theories and substantive comparative specification basing on institutionalist perspectives. The categories of industry structure presented here are the result of such a research strategy. These comparative findings are at the core of my concluding explanations for industry structure and structural development in the PhD thesis. I understand these specifications as mechanisms that facilitate some alternative choices while restricting others. Below I will therefor give a more comprehensive and analytical account of them.

As for the Norwegian case I (a) refer to ‘structural national growth barriers’ as my synthetic explanation combining a bundle of factors that limits growth possibilities in the domestic market. Above all this property is the result of a highly concentrated and saturated consumer market that is limited to about 5m. Norwegian consumers. Export possibilities from domestic production plants are quite limited since WTO restricts subsidised exports. The institutional framework developed in pre- and post WWII agri-food industrialisation, neither matches the new techno-economic paradigm (the ICT-paradigm in Perez’ periodization) nor the pattern of trade and financial integration that goes beyond the small Norwegian market. I argue that structural development in the Norwegian agri-food industry is influenced by this set of underlying mechanisms. They make some alternative choices more likely than others, while excluding others. I (b) further refer to ‘insulated concentration’ as my synthetic explanation of how competition and industrial development to a large degree is insulated within the confines of the national arena. Entry barriers to the Norwegian market on the one side and a few large corporations in key positions along the national agri-food supply chain are important mechanisms in this understanding. Both concentration and entry barriers can be understood with reference to the properties listed in table 8 and Hansen’s taxonomy. I finally (c) refer to ‘connection-disconnection to the EU’ as a set of mechanisms related to the specific historical pattern of internationalisation. Mechanisms involved are brand portfolio management, marketing or production strategy. The state of present technology cannot be properly utilized given the small scale of the Norwegian market. The discussion of business strategies such as managing brand portfolios or utilizing scale and technology in the bigger EU internal market relates to this conclusion (research paper #1, #2 and #3). Furthermore, the Norwegian domestic market is saturated and highly concentrated by large corporations. For these reasons, Norwegian companies are forced to extend demand and to face competition in foreign markets. Once Norwegian companies decide to compete in the large EU market, they will be

forced to rely on business models that converge with those of global corporations that have the EU single market as home base. Operating across markets gives rise to a connected-disconnected character with difficulties to develop scale and efficiency across the markets since the free flow of goods is restricted.

My main summary formula for the Danish case is full international integration both ways. This explanation relates to the following mechanisms: First, Danish possibilities to extend demand by sizeable export strategies and foreign direct investments. Second, the ability of Danish firms to compete at world market prices in the domestic market. Full international integration and competition is an underlying force that frames choices and that makes some strategic decisions more likely than others. Market dynamics that ground in these forces differ considerably to those that were identified in the Norwegian case. These results support my conclusions about two differing and path dependent trajectories of structural development.

As for research question (c – *The adjustment strategies of firms*) we finally arrive at the single strategic drivers and motives underlying M&A activity. The main input to the study of these motives was the expert interviews conducted in both countries. Research paper #1 to #3 analyse industry structure at the firm level, focusing on motives for M&As. Hansen’s table of 35 single drivers for food industry M&As and the institutional contextualisation was found to be a theoretical frame that explains M&A activity in both countries. Table 12 below is taken from research paper #3 and gives a comparative overview of the drivers underlying M&A activity in both countries.

	Norway	Denmark
Strategic drivers for structural development (summarized)	<ul style="list-style-type: none"> - Diversification - ‘attempts to’ foreign growth - Entry barriers - Market share and dominance - Vertical integration (through ownership) - Guarantee of produce supply (aiming at critical supply chain assets) 	<ul style="list-style-type: none"> - Scale economies (critical mass) - Market share and dominance - Diversification - Positioning on emerging markets (foreign growth) - Access to cheap produce and resources - De-mergers - Vertical integration (through partnerships, contract production)

Table 12: Micro-level conclusions

Note that some of the strategic drivers overlap in both industries. Diversification strategies imply regular management decision making and national specification was required to explain differences. Companies in both food industries try to diversify their product portfolio, but what differs are the circumstances under which they try to do so. In Norway, diversification strategies take place e.g. under conditions of national structural growth barriers and in

Denmark they are pursued under conditions of full international integration. The formal corporate strategy concept of diversification applies to companies in both countries, but such an approach does not cover the differences that underlie these processes. In this PhD thesis I have thus attempted to go beyond standard perceptions – contained in corporate strategy theories – through a substantive, comparative and thus grounded specification in both countries.

8. References

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