

Sweetening the Logistics: Drivers of Logistics Synergy Realization in Horizontal M&As

– The Case of the Cloetta and Leaf Merger

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Sweetening the Supply Chain:
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-The Case of Cloetta and Leaf Merger

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Abstract

Title: Sweetening the Logistics: Drivers of Logistics Synergy Realization in Horizontal M&As.

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Issue of Study: The increasingly competitive climate has caused companies to pursue counteractive strategies such as M&As in the hope for attaining synergy potential. However, M&As are associated with a high failure rate whereas synergy realization is often unsuccessful. One area poorly covered in previous literature and often unattended by merging parties is synergies within logistics, despite its significance for merger success. By increasing knowledge on the subject of synergy benefits within logistics and the realization of these, the actualization of potential synergy benefits can increase, thus enabling an increase in the success rate of M&As.

Purpose: The aim of this thesis is to contribute to increased knowledge of logistics synergies in horizontal M&As and realization of these, in order facilitate horizontal M&A success.

Method: A pragmatic research philosophy is used together with a combined deductive and inductive research approach. The method used is explanatory and conducted in the form of a case study. The gathering of data has been of both of qualitative and quantitative nature in order to ensure a differentiated picture. In addition, both primary and secondary sources of data have been used.

Conclusions: Cloetta and Leaf is considered to have significant synergy realization potential given existing literature regarding logistics synergies in horizontal M&As. The high synergy realization potential is derived from a high combination potential along with a high level of integration. The empirical results supports the fact that combination potential and integration are important factors,

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however, employee resistance is evident in the Cloetta and Leaf merger and is considered to have a negative impact on synergy realization potential. Furthermore, employee resistance seems to increase with a high degree of similarities and when the relative size of the companies is big. A complete framework for potential synergy realization and the subsequence of affecting factors is missing in existing literature, why the empirical findings are compiled in a framework, building on existing literature, with the aim to better describe what factors affect potential logistics synergy realization.

Key Words: Logistics synergies, horizontal M&As, integration, combination potential, employee resistance, potential synergy realization

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Lund, 2012-06-01 Erik Pålsson and Ylva Ridderheim

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1 Introduction

In this chapter, the background of the thesis is presented. The increasingly competitive landscape for companies today is described as well as counteractive measures conducted by companies such as mergers and acquisitions (M&As). The possibilities as well as areas of complications regarding M&As are described further and the issue of study highlights the overlooked area of synergy realization within logistics. This is followed by a description of the specific M&A studied, the purpose of the thesis, objectives, target group and delimitations. A model illustrating the overview of the thesis finalizes the chapter.

1.1 Increased Competition

The business climate of today is characterized by intense competition and the competition has increased significantly the last few decades.¹ The underlying factors causing this increased competitive climate are, among others: globalization, emerging markets demographic swift, price wars, reorganizations, and rapid technological changes.² Companies today use different counteractive strategies to develop competitive advantages and thus cope with the increasingly competitive climate. Competitive advantages encompass adding more customer value and thus attain a position of relative advantage in comparison to rivalry firms.³

A competitive strategy means either taking offensive or defensive actions in order to establish a defendable position in the industry and to cope with competitors. A competitive strategy can be focused upon leveraging upon position, hence, strategically choosing a position were the company's capabilities provide the best defense or choosing a sector with less competition. Blue Ocean Strategy is an example of a strategy aimed at targeting uncontested market space by giving rise to completely new industries or altering the boundaries of existing ones.⁴ Competitive strategies focused upon positioning describe how companies seek to achieve and sustain competitive advantage, and can be divided into the key drivers: *cost leadership*, *differentiation* or *segmentation*. The aim with cost leadership is to achieve superior profits through lower costs and therefore focus upon achieving economies of scale and scope as well as eliminate unnecessary costs. Differentiation involves adding more customer value to areas of significance, through product features and quality for instance, for which customers are willing to pay a price premium. A focused strategy implies targeting a limited part of the market on which

¹ Porter 1999

² Ilinitch et al. 1996

³ Porter 1999

⁴ Kim and Mauborgne 2005

either a cost of a differentiation strategy is applied.⁵

1.2 Merger and Acquisitions to Meet the Increased Competition

A common competitive strategy is the focus upon influencing the balance of competitive forces by redefining the industry, and thereby improving the specific company's relative position. The structures, boundaries, conduct, and performance of the industry is altered in a favorable direction by, for instance, industry consolidating M&As, which have the potential of significantly changing the competitive landscape.⁶ Another cause of redefinition of industries is the convergence of the industry value chain by the redefinition of core and non-core business. Industry convergence causes third parties to enter the market and outsourcing initiative to increase, as well as collaboration and partnering cross-border, with competitors, customers, and suppliers.⁷ Extensive research has demonstrated natural consolidation patterns in industries today and how ambitious M&A rationales can redesign the industry structure to a company's advantage.⁸ Consequently, M&As have become an important strategy for companies today, which is evident from the global M&A trend^{9,10} where activities has been increasing the last decade despite cyclical variations. M&A activities hit an all time high in 1999 and again in 2007, whereas a correlation with the global economic climate can be distinguished.^{11, 12, 13}

1.3 M&A Definition and Implications

An M&A is an externally oriented corporate development effort and describes the situation in which two companies joints in a new legal entity through the exchange of shares or with additional funding by one of the two parties.¹⁴ M&As are common strategies pursued by companies and has become an important part in order for companies grow, enter new markets, increase know how, diversification, increased efficiency through new combinations of material and immaterial assets.^{15,16}

⁵ Porter 1999

⁶ Ibid

⁷ AT Kerney 2001

⁸ Dean et. al 2002

⁹ Häkkinen et. al 2004

¹⁰ Porter 1999

¹¹ <www.oecd.org> 2012-04-17

¹² <www.mergermarket.com> 2012-03-01

¹³ Gaughan 2007

¹⁴ Wall and Rees 2001

¹⁵ Häkkinen et. al 2004

A common driver for M&As is to achieve synergy benefits.¹⁷ Synergies can be described as *“the bonus that is achieved when things work together harmoniously”*.¹⁸ Thus, synergies are the value creation which stem from the combination of units and can consist of: for instance, increased efficiency through new combinations of assets, reduction of threats, increased market power, cost savings, increased financial strength, and leveraging capabilities.^{19, 20} The potential of achieving synergy benefits contributes to why acquiring companies is prepared to pay a price premium for the target companies.²¹

M&As are, however, associated with a high risk since studies concludes that as much as 60-80 % of all mergers turns out as financial failures, meaning that they fail to deliver shareholder value.²² The high failure rate is described as caused by two principle reasons. The first is that companies may pay too high premium in regards to the potential synergy benefits available.²³ The second is the insufficient post merger integration and the lack of focus upon post-merger synergy realization. Several authors conclude that integration between the merging firms is a key factor to ensure synergy realization and thus M&A success.^{24, 25, 26, 27} However, instead of focusing upon post-merger realization of synergies, over-attention is often given to pre-merger phase and to financial issues,^{28, 29, 30} despite the fact that all value creation takes place after the acquisition.³¹ In fact, only 30 % of the potential synergies of merging companies are actually realized³² and, according to Taqi, synergy realization among merging companies is often characterized by *“more talking than doing”*.³³

¹⁶ <www.ec.europa.eu> 2012-03-01

¹⁷ Berkovisch and Narayanan 1993

¹⁸ Mark Twain (1835-1910)

¹⁹ <www.ec.europa.eu> 2012-03-01

²⁰ Carpenter and Sanders 2007

²¹ Sirower 2007

²² Tetenbaum 1999

²³ Sirower 2007

²⁴ Larsson and Finkelstein 1999

²⁵ Shirvastava 1986

²⁶ Schweiger and Walsh 1990

²⁷ Haspeslagh and Jemison 1991

²⁸ Calipha, et al. 2010

²⁹ Tetenbaum 1999

³⁰ Mirvis and Marks 1992

³¹ Haspeslagh and Jemison 1991

³² Tetenbaum 1999

³³ Taqi 1991

1.4 Issue of Study: Logistic Synergies in Mergers and Acquisitions

Despite extensive literature upon M&As and potential synergy benefits, one aspect that has been given little attention is synergy realization associated with logistics processes and resources. In addition, Langabeer and Seifert state that the integration of logistics processes and resources is an area often disregarding in M&A proceedings. Instead, focus has been on strategic, financial and organizational issues in terms of synergy benefits.³⁴ Best and Seger describes synergies within logistics as characterized by *"easy to see hard to get"*.³⁵

Nevertheless, logistics is an area that might have a major impact on how a merger performs, especially when it comes to costs but also in terms of revenues, operating expenses, capital expenditure and working capital.^{36, 37} Consequently, this area is often the largest potential source of cost savings³⁸ and changes to the supply chain provide great opportunities for deriving significant business advantages³⁹. In fact, research conducted by Langabeer and Seifert points out a direct correlation between how effectively supply chains of merged firms are integrated and how successful a merger is.⁴⁰ In addition, they conclude that improved logistic integration is essential in improving the probability of post-merger success. In addition, according to several authors, the potential of logistics synergy benefits is especially high in horizontal M&As.^{41, 42, 43}

Hence, understanding logistics synergies is both important pre-merger, providing useful information in decision making for general management, as well as post-merger, for logistic management in the implementation and realization.⁴⁴ Contributing to increased knowledge on the subject by investigating potential synergy benefits within logistics and the realization of these, the actualization of potential synergy benefits can increase, thus enabling an increase in the success rate of horizontally merging companies.

³⁴ Häkkinen et al. 2004

³⁵ Best and Seger 1989

³⁶ Herd et al. 2005

³⁷ Häkkinen et al. 2004

³⁸ Herd et. al 2005

³⁹ Benitez and Gordon 2000

⁴⁰ Langabeer and Seifert 2003

⁴¹ Taqi 1991

⁴² Porter 1985

⁴³ Häkkinen et. al 2004

⁴⁴ Ibid

Consequently, the lack of actualization of synergies is an area, which many merging companies are struggling with, thus, an increased focus upon post-merger integration and synergy realization would potentially lead to an increase in number of successful M&As.^{45, 46}

1.5 The Case: The Merger of New Cloetta

The fifteenth of February 2012 it was made official that Cloetta and Leaf, both large players on the Swedish confectionary market, were to merge and to take the name of Cloetta, hereafter referred to as new Cloetta.⁴⁷

The rationale of the merge is to become the market leading confectionary company in Sweden with a strong base in the Nordic region, by taking advantage of the combination potential and few overlaps of the companies' product portfolio's. In addition, the merger is expected to yield other cost and efficiency synergetic results in terms of stronger route to market within the Scandinavian market and increase efficiency within the supply chain.⁴⁸ The current contracts regarding warehousing of both companies expire 2014 why a decision regarding extension or restructuring of contracts will have to be taken.⁴⁹

1.6 Purpose

The aim of this thesis is to contribute to increased knowledge of logistics synergies in horizontal M&As and realization of these, in order facilitate horizontal M&A success.

1.7 Goal

The goal of this thesis is to establish a framework for logistics synergy realization, consisting of key factors and their sequence and interrelation in a pre-merger phase.

1.8 Research Questions

- How has previous literature considered logistical synergies in horizontal M&As?

⁴⁵ Häkkinen et al. 2004

⁴⁶ Herd et al. 2005

⁴⁷ Cloetta Press Release 2011-12-16

⁴⁸ Ibid

⁴⁹ Ibid

- What has been published on the subject logistics synergies the last ten years?
- How are the pre-merger logistics structure and operations for Cloetta and Leaf in Scandinavia?
- What is the optimal post-merger warehouse set-up for the Scandinavian market for new Cloetta?
- How applicable is previous literature on the Cloetta and Leaf case?

1.9 Delimitations

Due to time restrictions and restrictions provided by the assigner, the focus of this thesis has been outbound logistics from warehouse to customer. However, inbound logistics of finished goods has been considered in terms of order handling. In addition, the study has been limited to the Scandinavian market since the primary affect of the merger will be here. However, Finland has been disregarding to enable comparison between the companies, since Finland is an export market for Cloetta and self-providing for Leaf, with an own production site and the high local character of produced goods.

In addition, horizontal mergers is the focus of his thesis since most synergies, and thus logistic synergies, can be found here due to the similarity of the two companies in terms of products, markets, customers and suppliers.^{50, 51, 52} Following the same reasoning, horizontal M&As probably has more impact on logistics structure and processes for the merging companies.⁵³ However, different motives for horizontal M&As will have different impact on logistics and in this thesis the potential realization of cost-based synergies is the main focus.

1.10 Target Group

The target group for this thesis is the academic world as well as the case company,

⁵⁰ Taqi 1991

⁵¹ Porter 1985

⁵² Chatterjee 1986

⁵³ Häkkinen 2004

new Cloetta. The main findings will, however, be of interest for companies with horizontal M&A ambitions and with intention to realize logistics synergies.

1.11 Overview of the Study

The overall structure of the thesis is presented below.

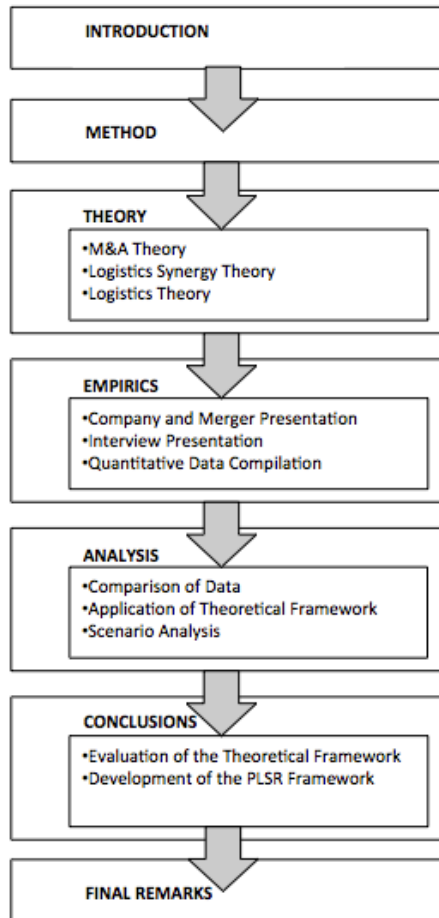


Figure 1: The outlook of the structure and main parts of the thesis

2 Method

In this chapter, the research philosophies that establish the fundamentals of the methodology used are described, followed by the research and methodology approach. Next the research method chosen is motivated as well as the research strategy. This is followed by the time horizon and the data gathering method. The chapter is ended with a methodological breakdown into the main phases of the work process along with how credibility was ensured.

2.1 Research Philosophy

A research philosophy is a way in which to regard the surrounding world. Thus, depending on chosen philosophical approach, the outcome may vary. There are three major ways to think about research philosophies: *epistemology, ontology and axiology*. All these research philosophies contain important differences and describe different things. Within epistemology there are three main philosophies that can be approached: *positivism, realism and interpretivism*. Positivism is concerned with hard facts and data, realism stresses the existence of material things regardless of the human mind and interpretivism focuses on connections and relationships instead of focusing on hard data. Ontology has two approaches, *objectivism and subjectivism*. Objectivism proposes that reality is independent of how it is perceived, while subjectivism claims that reality is a consequence of how social actors perceive it. Axiology is a philosophy that studies judgment about values of the researcher.⁵⁴

A combination of these philosophical approaches is *pragmatism*, which claims that the most important determinant of the research philosophy is the research question.⁵⁵ Pragmatism is considered the most appropriate philosophical approach to use in this thesis, since the usage of only one of the mentioned research philosophies is considered to narrow when approaching this research, due to the area examined being very differentiated and complex.

2.2 Research Approach

There are two main research approaches: *deductive* and *inductive*. The deductive approach suggests that a theoretical framework is drawn up for the research question to be examined within. After the research is performed, the researcher can draw conclusions and create new theory. This approach might be appropriate when to prove a scientific question and having a hypothesis about the outcome. The inductive approach on the other hand creates theory whereas the research is

⁵⁴ Saunders et al. 2007

⁵⁵ Ibid

performed. This approach might be useful when the social context of the problem is of importance and the sample of subjects is relatively small. As with research philosophies, it is possible to combine research approaches and is often advantageous to do so.⁵⁶

The approach of this thesis is to establish the purpose and goals based on existing literature on the topic, which is comparable to the deductive approach. However, since the field of study is relatively unique, theory will evolve along the way, which promotes for an inductive approach. Furthermore, the analysis of the data collected makes out a great part of the thesis and is considered inductive. Therefore the chosen approach is to combine both a deductive and an inductive approach during different steps of the work.

2.3 Methodological Approach

There are three main research methods: *exploratory*, *descriptive* and *explanatory*. The *exploratory* method is applicable when to explore a subject in a new way. The *descriptive* method, aims to describe something as objectively and accurate as possible. The *explanatory* method is used when explaining a certain problem.⁵⁷ In this thesis the research method is mostly explanatory, since the aim is to explain implications of an M&A between two companies by presenting, comparing and analyzing empirical data by applying a theoretical framework. However, both an exploratory and a descriptive method is used at times, although explanatory is the main method.

2.4 Research Strategy

There are numerous research strategies to choose from. For all the strategies presented below all of the above-presented methods can be used. Furthermore, as with research philosophies and research approaches, research strategies can be combined with each other to attain a more comprehensive understanding. The potential strategies are: *experiment*, *survey*, *case study*, *action research*, *grounded theory*, *ethnography* and *archival research*.⁵⁸

Experiment is grounded upon the establishment of an artificial reality in which tests are performed to validate or falsify a hypothesis. *Survey* is a research form that

⁵⁶ Saunders et al. 2007

⁵⁷ Ibid

⁵⁸ Ibid

answers questions like whom, what, and why, and typically deals with large amounts of data, often gathered by the use of questionnaires. A *case study* is an empirical investigation of a specific object in a certain context. *Action research* is when the researcher gets involved in the investigated field by, for instance, participating. *Grounded theory* is when theory is created along the way as data is gathered and analyzed. *Ethnography* is a strategy where the aim is to get the research subjects' point of view and requires the researcher to immerse in the social context to large extent. *Archival research* is when the main data studied is administrative documents.⁵⁹

In this thesis, a case study strategy is applied since an M&A between two companies are investigated. The reason for choosing a case study approach was the fact that the opportunity to investigate the ongoing merger between Cloetta and Leaf was presented to us as well as the perception that a case study approach was considered appropriate when investigating the chosen subject.

2.5 Time Approach

When conducting a research, it could be either *cross-sectional* or *longitudinal*. *Cross-sectional* is when the study is performed at a particular time, meaning the phenomenon is studied at that specific moment. *Longitudinal* means that the research stretches over time in order to investigate how certain parameters change over time.⁶⁰ In this thesis, a cross-sectional study is performed mainly due to restrictions in time. It could, however, be interesting to investigate the merger between Cloetta and Leaf with a longitudinal approach, since a deeper understanding of the post-merger phase could be acquired that way. However, this is not possible given the limitation in time and would broaden the scope significantly, therefore a cross-sectional study is considered sufficient to answer the purpose of this thesis.

2.6 Data Gathering

Data can be divided into two categories, *primary* and *secondary data*. *Primary data* consist of data collected by the researcher with the purpose of usage in the research that is being conducted, while *secondary data* consists of data that has been previously collected for a purpose other than the conducted research. Furthermore data can be classified as either *qualitative* or *quantitative*. Quantitative data

⁵⁹ Saunders et al. 2007

⁶⁰ Ibid

concerns data that can be measured and evaluated numerically. Such data are for instance statistics and questionnaires. However, not everything can be measured which limits the knowledge generated from a quantitative study. Qualitative data are input from people concerned in the research. Qualitative studies are usually used when aiming to gain a deeper understanding of a specific subject, event or situation. Both qualitative and quantitative data can be both primary and secondary.⁶¹

Usage of only quantitative or qualitative data is not necessary and a mix is perfectly acceptable. When only one of the two data gathering procedures is used and in only one way, this is called a *mono method*. For example by only collecting data through questionnaires, a *single quantitative* method is used, which is a type of mono method. If for instance both a questionnaire and statistics is used, a *multiple quantitative* method is used, which is a *multiple method*. If both a single quantitative and single qualitative, or multi quantitative and multi qualitative, or any combination between quantitative and qualitative is used. It is called a *mixed method*.⁶²

2.6.1 Sources of Primary Data

Interviews are an example of qualitative data and enable direct access to relevant and valid information. Additionally, interviews also allow greater knowledge since questions can be individually adapted and changed according to the answers received. There are several different types of interviews, used for different purposes and settings, and they range from highly formalized and structured in which a prepared list of standardized questions are used to informal unstructured interviews which more resemble a conversation.⁶³ The formalized interviews in this thesis have been conducted over the phone due to the fact that accessibility to the interviewees was limited. Open-ended questions prepared before the interview was used to avoid leading questions and limit bias. The average length of the interviews has been one hour and the same question where used on all interviewees to get comparable results, see appendix 1. The total number of interviewees was three, two from Cloetta and one from Leaf. The Cloetta representatives have been the logistics manager and the warehouse manager, and the Leaf representative has been the logistics manager. The reason for the selected interviewees was their field specific knowledge on logistics along with the perception that the insights from the chosen

⁶¹ Björklund and Paulsson 2003

⁶² Saunders et al. 2007

⁶³ Björklund and Paulsson 2003

interviewees reflect the interest of each company well.

The informalized interviews have been conducted with relevant representatives from both companies, both over the phone and on site. The Cloetta representatives have constituted of: the logistics manager and warehouse manager, which was also interviewees in the formalized interviews, along with the logistics coordinator, and the Leaf representatives have constituted of: the logistics manager, who was also interviewed in the formalized interviews, along with a logistics trainee. Consequently, the same representatives that were interviewed in the formalized interviews were interviewed again, along with two new representatives. The reason for this was that only using formalized interviews was considered insufficient, since a continuous communication has been necessary. The representatives have been chosen to provide access to data as well as data specific knowledge. In addition, the representatives have provided us with greater insight to both companies' logistical structure and operations.

Observations are studies of subject behaviors for analysis and interpretation. Observations are an example of qualitative data and can be conducted with different degree of observer participation, whereas *direct observations* are conducted as a field visit to the case study while *participant-observation* lets the researcher participate in the events studied.⁶⁴ In this thesis, direct observations were performed in terms of field visits at both companies' current facilities in order to enable greater understanding of the logistics operations conducted. Direct observations was considered most suitable in the Cloetta and Leaf case since the aim of the observations was to increase knowledge regarding their logistics operations, why participation was not considered necessary. Cloetta was visited 2012-03-28 and Leaf was visited 2012-02-01.

Archival documents are considered primary data, even though the data is not collected by the researcher.⁶⁵ The archival documents in this report have been numeric data concerning the logistics structure of each company, and consequently considered quantitative. The reason for focusing on quantitative data was the fact that it was considered most suitable to reflect the logistics operations since numbers do not lie. The data have been a mix of raw data retrieved from the ERP-system⁶⁶ along with compiled statistics. The reason why both raw data and statistics have

⁶⁴ Björklund and Paulsson 2003

⁶⁵ <www.emeraldinsight.com> 2012-05-08

⁶⁶ *Enterprise Resource Planning – is a system that compiles internal and external data within the organization, in order to facilitate decision making* (Hosseini 2004)

been used was to increase comparability between Cloetta and Leaf. In some cases it was not straight forward how to calculate a certain measurement, why raw data was suitable in these cases, since the measurements can be broken down in its components and the same in-parameters can be used in the analysis. However, sometimes figures were more easily interpreted, why statistics was suitable in these cases.

2.6.2 Sources of Secondary Data

Literature studies covers all written sources of material: books, written reports, studies and articles, for instance and can be both qualitative and quantitative. Literature studies enable gathering of a large amount of information in a relative short period of time and do not require any monetary resources. This is preferable when to acquire knowledge of a specific subject and to establish a theoretical framework. Since literature studies consist of secondary data, one negative aspect is therefore that the purpose and method may not be clear.⁶⁷ When collecting literature it is important that proper literature for the specific research is collected. By clearly defining the subject, relevant key words can be distinguished, which sets the foundation for theory collection. It is also important to get an understanding towards what has been published in the particular field of study, since the risk of publishing something that already exists is reduced.⁶⁸ In this thesis, literature was collected throughout the writing process, starting with literature concerning M&As and synergy realization, which was complemented with more specific theories regarding logistics synergies. The area of logistics was elaborated further on by investigating implications of logistics network design.

Logistics synergies were identified as an area poorly covered in literature, which motivated a more extensive literature review in order to determine what has been written. The literature review was initiated after reading an article by Häkkinen et al.⁶⁹, where all articles concerning either M&As or horizontal integration published in the largest logistics and supply chain journals between 1989-2002 was presented. In total 242 issues were reviewed by Häkkinen et al.⁷⁰ and only three articles that in some way discussed M&A or horizontal integration was found. An additional 315 issues, in the same journals, ranging from 2002-2012 was reviewed in this thesis and no additional articles concerning M&A or horizontal integration could be found.

⁶⁷ Björklund and Paulsson 2003

⁶⁸ Saunders et al. 2007

⁶⁹ Häkkinen et al. 2004

⁷⁰ Ibid

This implies that both primary and secondary data was used along with both qualitative and quantitative data, why a mixed method was applied. This because it was considered to narrow to choose only one method, since both a deeper understanding of the situation, along with hard data was required.

2.6.3 Analysis of data

First, the gathered literature was analyzed in order to distinguish key parameters of logistics synergies. Based upon these parameters, an initial theoretical framework describing potential synergy realization was developed and applied on Cloetta and Leaf. In order to provide input to the framework, in terms of combination potential, the gathered empirical data from Cloetta and Leaf was analyzed numerically in Excel to distinguish similarities and complementarities. The other parameters, integration and employee resistance, was analyzed more qualitatively based upon degree of combination potential along with input from interviews and observations.

To test the model, the empirical data was analyzed in different scenarios representing different levels of integration. That way, the affect on synergies from integration could be visualized and compared to the outcome of the model application. The aim of the analysis was to investigate how well the theoretical framework corresponded to the case studied and if there were any changes that could be made to the framework to make it more applicable. Any deviations from the theoretical framework found in the scenario analysis was noted and served as potential input to a revised framework.

All interviews conducted was transcribed and analyzed qualitatively in order to distinguish the companies': expectations, areas of concern, perception of main logistics synergy potential along with logistical similarities and differences, take on a third party solution (3PL) and future outlook. This is done in order to evaluate similarities and differences in the companies' pre-merger perception.

2.7 Thesis Process

Figure 2 illustrate the process of the thesis and each phase is described in detail below.

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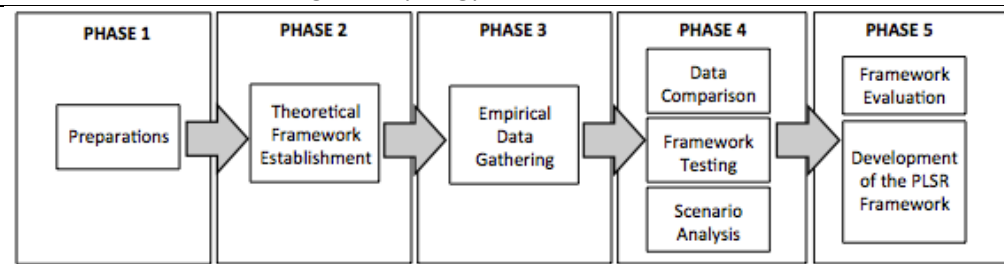


Figure 2: Description of the four-phased work process of the thesis divided

2.7.1 Phase 1

The thesis was initiated with the establishment of certain deliverables together with Leaf representatives, which set the fundament of the work to be conducted. The deliverables consisted of what data to be collected and the expected outcome. Furthermore, important time lines were discussed, such as when data can be assessed and expected delivery date.

2.7.2 Phase 2

After the setting of deliverables, the thesis was commenced by an extensive theory gathering process, which was initiated with a broad theory gathering on the field of M&A and synergies. This was complemented with theory regarding logistics synergies as well as logistics network design. The field of logistics synergies was identified as poorly covered, which motivated a more extensive literature review on the subject. A few interesting authors where distinguished in the field of logistical synergies in horizontal M&As, who's research where further studied. After analyzing the gathered literature, key parameters for potential synergy realization within logistics where identified. Based upon these parameters, an initial theoretical framework describing potential synergy realization was developed.

2.7.3 Phase 3

When the theoretical framework was established and data could be assessed from Cloetta, the data gathering processes, in terms of company specific data, was commenced. The company specific data covered both numerical data as well as interviews, where the numerical data was divided into sub-areas given the theoretical framework and interview questions was designed to highlight important theoretical aspects. The gathering of data was conducted with close collaboration with representatives from companies to ensure the comparability of the data collected.

2.7.4. Phase 4

After the gathering of relevant and comparable data, the similarities, complementarities and differences of the companies was investigated. The comparison was made in order provide input to the theoretical framework in terms of combination potential. After evaluating the combination potential, the framework developed was applied on the case in order to distinguish theoretical synergy realization potential. Besides from combination potential, integration and employee resistance was evaluated as well. Integration and employee resistance was evaluated qualitatively, with input from the degree of combination potential as well as input from interviews and observations. To test the outcome of the framework empirically, four different scenarios implying different levels of integration were developed. The results from the scenarios were evaluated both in terms of cost and other implications of logistics network design. Phase 4 was concluded with the result of the scenario analysis and its implication on logistics network design.

2.7.5 Phase 5

Based upon the outcome of the scenario analysis along with the key findings of the interviews, the theoretical framework applied was evaluated. Both areas corresponding with the empirical findings along with areas of improvement was identified. The results from this evaluation were incorporated in a revised framework: *The Potential Logistics Synergy Realization Framework*.

2.8 Credibility

The credibility of a research refers to its believability or trustworthiness and can be divided into three different areas: *reliability*, *validity*, and *generalizability*.⁷¹ Reliability concerns the accuracy of the result, regardless of the chosen research strategy, and refers to the degree of which the results from the research, despite chosen research strategy, can be trusted. Hence, reliability assess whether identical results will be attained at repetition of the research procedure or if the result is dependent of certain assumptions or factors.⁷²

Four types of threats exist to the reliability of a research, *subject or participant error*, *subject or participant bias*, *observer error*, and *observer bias*. Subject or participant error refers to errors that stem from inconsistencies in the studied situations in

⁷¹ Saunders et al. 2007

⁷² Ibid

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regards to normal or average situations which impacts subject behaviors. Subject or participant bias refers to external factors that impact the accuracy of the responses given by the subject or participant. Observer error concerns the individual impact that each interviewee has on the interview situation and the answers derived. Finally, observer bias refers to differences in interpretation between different observers.⁷³ Reliability was achieved by choosing logical and relevant research population, attaining criticism of literature sources and information provided by the company and constantly question whether the theoretical framework was sufficient.

Validity refers to the degree of which the research method is measuring what it was intended to measure according to the purpose of the research.⁷⁴ A high validity was achieved by using several different sources of data and clear, unbiased interview questions. Validity was also ensured through a distinct definition of the parameters of the gathered data, furthermore comparability between data from each company was ensured through thorough evaluation and sourcing of each data parameter.

Generalizability, or external validity, refers to the extent to which the research result is applicable to other settings. The degree of which the results are generalizable is restricted in researches conducted in limited number of settings and if the researched settings have unique components.⁷⁵ Criticism has been raised towards the generalizability of case studies, due to its inability to make statistical inferences. However, like experiments, case studies provide analytical generalization whereas findings instead are generalized to theory.⁷⁶ Generalizability was achieved through strict limitations and the fact that the aim was to highlight findings, both theoretical and empirical, which can contribute to the understanding of logistical synergies in horizontal M&As, rather than to develop new theory.

⁷³ Robson 2002

⁷⁴ Ibid

⁷⁵ Saunders et al. 2007

⁷⁶ Yin 1994

3. Theory

In this chapter general theoretical background concerning M&As is presented first followed by how to enable synergy realization and thus ensure M&A success. Next follows theory regarding logistic synergies in horizontal M&As, where a more extensive literature review is performed. The final part in the chapter concerns more fundamental logistics theory regarding logistics network design.

3.1 Mergers and Acquisitions

An M&A is an externally oriented corporate development effort and describes the situation in which two companies joints in a new legal entity through the exchange of shares and additional funding by one of the two parties.⁷⁷

A merger can be categorized into three main groups depending on the industry that the concerned companies operate within: *horizontal mergers*, *vertical mergers* and *conglomerates*. A horizontal mergers concerns companies that operates in the same industry and on the same company level in the same markets and, as a result, are potential competitors.⁷⁸ A vertical merger is characterized by a forward or backward integration in the value chain and thus concerns companies that operate in the same industry but on different levels. The two concerned parties can either be involved in a customer - company relationship or a supplier - customer relationship. Conversely, conglomerates refer companies that do not operate within the same industry.⁷⁹

3.1.1 Motive for Mergers

Five categories of M&A motives have been distinguished by Bower: *the overcapacity M&A*, *the geographical roll-up M&A*, *the product or market extension M&A*, *the M&A as R&D*, and *the industry convergence M&A*. M&As with the purpose of eliminating over-capacity is common in older capital-intensive industries with competing companies, where the M&A enables the elimination of less competitive units and consequently increases efficiency by rationalizing operations. M&A have also been used as a mean to extend into new product lines or markets to increase international presence. The strategic intent of product or market extension is found in situations with companies that either sells similar products in different markets or different products in the same market, where the extension enables a brand strengthening. The geographical roll-up motive is the strategic intent of an M&A to

⁷⁷ Wall and Rees, 2001

⁷⁸ Waldman and Jensen, 2001

⁷⁹ Häkkinen et al. 2004

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seek growth and achieve economies of scale and scope by strengthening and expanding presence within current geographical markets. The M&A as R&D is described as the rationale to access R&D knowledge and capacity and thus use the acquisition as a substitute for developing in-house R&D and know-how. For instance, a larger company acquires smaller firms to obtain specific technologies. The last category, industry convergence, describes a M&A situation motivated by a company's anticipation that a new industry is emerging in which it desire to have a position and therefore culls resources from existing industries with eroding boundaries.⁸⁰

All of the described rationales for M&As consist of the motive to achieve potential synergy benefits by integrating and combining business units, resulting in an increased competitive advantage.^{81, 82, 83}

3.1.2.1 Synergies

The concept of synergy is associated with value creation, which in a business setting can be described as units or companies generating greater value combined than separated. The word is derived from the Greek word *synergos*, which in essence means *working together*.⁸⁴ A majority, 75 %, of all M&As, is initiated by the ambition to explore and attain potential synergy benefits.⁸⁵

Chatterjee divides the concept of synergies into three groups: *operational synergies*, *collusive synergies* and *financial synergies*. Operational synergies are derived from elimination of excess capacity and other related costs or from economies of scale or scope resulting in increased efficiency in production, administration, distribution or marketing. Collusive synergies arise from increased market and purchasing power. Financial synergies are derived from a reduction in cost of capital, risk diversification and coinsurance.⁸⁶ In addition to above-mentioned synergies, Katz et al. adds *managerial synergies*, which are derived from leveraging upon capabilities and eliminating redundant management activities.⁸⁷

⁸⁰ Bower 2001

⁸¹ Porter 1985

⁸² Campbell and Goold 1998

⁸³ Carpenter and Sanders 2007

⁸⁴ Campbell and Goold 1998

⁸⁵ Berkovisch and Narayanan 1993

⁸⁶ Chatterjee 1986

⁸⁷ Katz et. al 1997

Several authors argue that horizontal mergers have the best conditions in terms of synergy realization. For instance, according to Taqi and Porter, the potential of synergy benefits in horizontal acquisitions is believed to be the highest in comparison to the other M&A situations, verticals and conglomerates.^{88, 89} In addition, Chatterjee argues only horizontal M&As can ripe the benefits of both operational and collusive as well as financial synergies.⁹⁰

3.1.2.1.1 Revenue and Cost Synergy Strategies

Capron makes a distinction between revenue-based and cost-based synergies in horizontal acquisitions. Revenue-based synergies are derived from resource deployment and combination leading to higher sales growth. Revenue-based synergies are described as more difficult to predict and monitor due to the fact that these synergies involve external factors, such as customer perception and reaction.⁹¹

Cost-based synergies are derived from economies of scale and scope. Economies of scale arise if the merged firm achieves unit cost savings as it increases the scale of a given activity. Production-linked economies of scale are commonly considered as the main driver of cost cutting, but economies of scale may also be achieved in other functional areas of a business (e.g. R&D, distribution, sales or administrative activities) through the spreading of fixed costs over a higher total volume.⁹² In addition, sharing activities can also enable merging firms to obtain cost reduction based on learning curve economies, since each merging business, when acting independently, might not have a sufficiently high level of cumulative volume of production to exploit learning curve economies. Evidently, scale economies are often described as a by-product of labor learning, however, recent studies indicates that scale economies are also something derived from shared problem solving between functions and divisions within the company.⁹³ Eccles et al. describes the advantage of combining the extensive distribution channels of one party with a superior product of the other.⁹⁴ The other source of cost synergies, economies of scope, arise when the merged firm achieves cost savings as it increases the variety of the activities it performs. This is the case when the shared factor of production is imperfectly divisible, so that the manufacture of a subset of goods leaves excess

⁸⁸ Taqi 1991

⁸⁹ Porter 1985

⁹⁰ Chatterjee (1986)

⁹¹ Capron (1999)

⁹² Shepherd (1979)

⁹³ Häkkinen et. al (2004)

⁹⁴ Eccles et. al (1999)

capacity in some stages of production.^{95,96}

Cost-based synergies are considered to be especially relevant to outcome predictions of horizontal acquisitions due the high likelihood of overlapping or duplicate activities.⁹⁷ Following the same argument, the degree of cost-based synergies is regarded as higher in horizontal mergers with companies that operate within the same geographical markets.⁹⁸ Horizontal acquisitions provide opportunities for sharing assets characterized by some indivisibility and underutilized before the acquisition, while rationalizing two sets of product lines and divesting the less efficient assets.⁹⁹ In addition, horizontal acquisitions commonly increase the scope of the firm and allow spreading the firm's resources over a broader range of products.¹⁰⁰

3.1.2 Achieving Merger Success

*"While deals often fail in practice, they never fail in projections."*¹⁰¹

M&A activities between organizations have steadily been increasing the last decades and from the late 1980 to 1998, the annual value of M&As increased from \$50 billion to \$592 billion in Europe and more than doubled from 1998 to 1999 reaching \$1,22 trillion. The global M&A value reached \$3,4 trillion 1999.¹⁰² Although this was a extraordinary growth rate, it shows a pattern, and according to more recent trends, M&As hit a high in 2007 of just over \$3,5 trillion but then dropped to just over \$1,5 trillion in 2009. The current trend is that M&As keep increasing in value and in 2011 the total value was just over \$2 trillion.¹⁰³

Evidently, mergers seem to be highly correlated with the overall economic situation, why M&A activities vary cyclical.¹⁰⁴ Below the trend for 2004-2011 is presented and a decline in M&A activity can be seen after 2007, which is unsurprising giving the financial crisis had its beginning in 2008.

⁹⁵ Panzar and Willig 1981

⁹⁶ Teece 1982

⁹⁷ O'Shaughnessy and Flanagan 1998

⁹⁸ Eccles et al. 1999

⁹⁹ Capron 1999

¹⁰⁰ Lubatkin et al. 1998

¹⁰¹ Warren Buffett, cited in *The Economist*, September 2 1995

¹⁰² www.oecd.org 2012-04-17

¹⁰³ <www.mergermarket.com> 2012-04-17

¹⁰⁴ Gaughan 2007

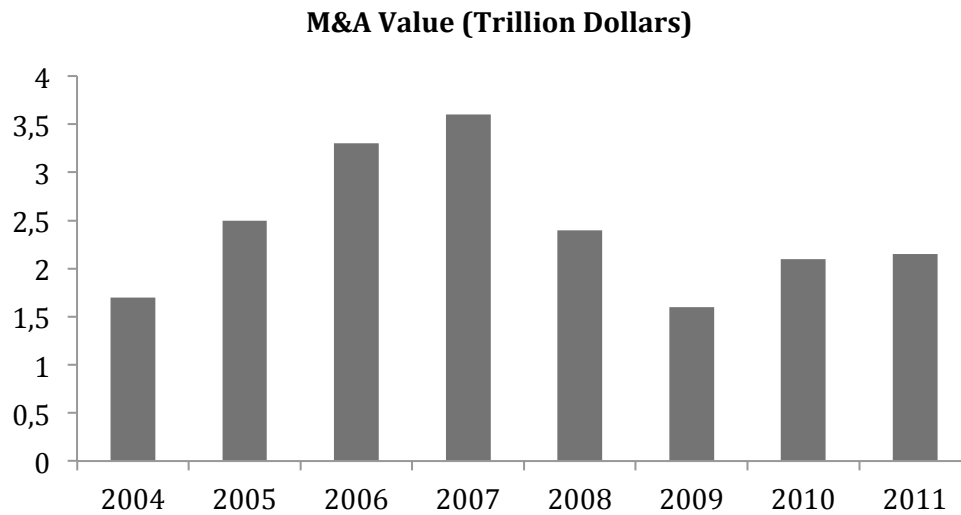


Figure 3: Demonstrating the global M&A trend from 2004 to 2011¹⁰⁵

Despite the rise in number, scope and size, research indicates that M&As are generally unsuccessful. The majority, as much as 60-80 %, of all M&As are financial failures and consequently fails to generate shareholder value.¹⁰⁶ Despite the many evidence on merger failures, companies, regardless of industry, still pursue mergers. The phenomenon can be explained by the tempting rationale to achieve value creation in terms of synergy benefits, such as cost reduction, revenue and efficiency increases and strategic advantages for instance.¹⁰⁷ Mark Sirower describes the relation between M&As and synergies as follows:¹⁰⁸

“Suppose you are running at 3 mph, but are required to run 4 mph next year and 5 mph the year after. Synergy would mean running even harder than this expectation while competitors supply a head wind. Paying a premium for synergy – that is, for the right to run harder – is like putting on a heavy pack. Meanwhile, the more you delay running harder, the higher the incline is set. This is the acquisition game.”

According to Tetenbaum only 30 % of potential synergies of merging companies are actually realized.¹⁰⁹ The reason for this is, according to Taqi, that merging companies

¹⁰⁵ <mergermarket.com> 2012-04-17

¹⁰⁶ Tetenbaum 1999

¹⁰⁷ Ibid

¹⁰⁸ Mark Sirower cited in the synergy trap pp. 77-78 2007

¹⁰⁹ Tetenbaum 1999

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often underestimate the efforts required for synergy realization due to the belief that potential synergies create value on its own.¹¹⁰ Consequently, a majority of companies pursuing M&A strategies struggle to create value by realizing the potential synergy benefits post-merger.

Several authors argue that the cause of the high number of M&A failures is the lack of post-merger integration focus and effort.^{111, 112} In mergers, financial issues are often given over-attention at expense of organizational, cultural, and physiological factors.^{113, 114, 115} Consequently, the discrepancy between the pre-merger deal making phase and the post-merger implementation and integration phase, causes many mergers to fail. This might be prevented with a well-established post-merger integration management plan. According to Tetenbaum, companies with a well-established integration plan has proven to achieve greater merger results in terms of value creation, and studies have demonstrated that the presence of a post-merger integration plans can raise the possibility of success with 50 %. In addition, only 30 % of potential synergies of merging companies are actually explored and actualized, 55 % is deliberately or accidentally disregarded, while 15 % are failed or ill-conceived. Additionally, less than 20 % of the merging parties had established a post-merger plan and given attention to the actual integration of the two parties.¹¹⁶

Haspelagh and Jemison identifies four key challenges in managing an acquisition:¹¹⁷

- Ensuring that there is a consistency between the firms overall strategy and that of the acquisition
- Ensure quality in the decision making process concerning the acquisition
- Ensuring the capability of the both firms to integrate
- Ensure that there is a capability to learn from the acquisitions

3.1.2.1 Synergy Realization

Larsson and Finkelstein have studied M&A performance and conclude that synergy realization is a result of: firstly, *similarities* and *complementarities* of the merging

¹¹⁰ Taqi 1991

¹¹¹ Haspelagh and Jemison 1991

¹¹² Tetenbaum 1999

¹¹³ Calipha et al. 2010

¹¹⁴ Tetenbaum 1999

¹¹⁵ Mirvis and Marks 1992

¹¹⁶ Tetenbaum, 1999

¹¹⁷ Haspelagh and Jemison, 1991

companies; secondly, the amount of integrative efforts, in terms of *coordination and interaction*, efforts during the integration process; and thirdly, the lack of *employee resistance*.¹¹⁸ The authors also investigate the interrelation between the three factors, as well as how these intercede the performance effects of key characteristics of M&As such as *management style similarities*, *cross-border combination*, and *relative size*. Each of these factors is further described below. The authors conclude that both the *combination potential* and the *organizational integration* are positively associated with synergy realization, and that the first contributes positively to the second. The authors found support for the importance of organizational integration as a mean of realizing synergies when the combination potential is high. Conversely, employee resistance has a negative impact upon synergy realization and can either be active or passive. There is, however, neither correlation between the combination potential and employee resistance nor between organizational integration and employee resistance.¹¹⁹

3.1.2.2 Combination Potential

As mentioned above, there are four types of synergies: operational, collusive, managerial and financial synergies.¹²⁰ The combination potential, usually conceptualized in terms of level of relatedness between the two parties, is defined by these various sources of synergy and to what extent these can be achieved, and has the potential to affect the degree of synergy realization in an M&A.^{121, 122, 123} Therefore a high combination potential is likely to create greater synergies.¹²⁴ Companies with related business is often regarded as companies with high combination potential.^{125, 126, 127} Relatedness has traditionally been associated with the similarities of operations of merging companies^{128, 129, 130}, while differences have been considered of less value.¹³¹ As stated by Larsson and Finkelstein, the traditional

¹¹⁸ Larsson and Finkelstein 1999

¹¹⁹ Ibid

¹²⁰ Chatterjee 1986

¹²¹ Datta 1991

¹²² Kusewitt 1985

¹²³ Singh and Montgomery 1987

¹²⁴ Larsson and Finkelstein, 1999

¹²⁵ Shelton, 1988

¹²⁶ Singh and Montgomery, 1987

¹²⁷ Montgomery and Hariharan, 1991

¹²⁸ Shelton 1988

¹²⁹ Singh and Montgomery 1987

¹³⁰ Montgomery and Hariharan 1991

¹³¹ Shanley and Correa 1992

view on relatedness consequently fails to capture complementary synergy sources.¹³² These types of sources are key success factors in M&As and consist of operational differences that fit strategically since they have the potential of enhancing each other.¹³³ Consequently, synergies can both be achieved through economies of sameness, accumulation of similar operations, as well as from economies of fitness, combination of different but complementary operations. As a result, the combination potential of M&As consist of both similarities as well as complementarities of operations of the merging companies. The combination potential has a significant positive impact upon synergy realization, where high potential provide a great synergy realization opportunity.¹³⁴

3.1.2.3 Organizational Integration

Previous research and studies within organization and human resource management have emphasized that combination potential does not automatically lead to synergy realization, and that post-merger management play an important role in the degree of synergy realization.^{135, 136, 137} One important aspect of management pre- as well as post-merger is the degree of organizational integration, which is defined as the extent of integration and coordination between concerned companies.^{138, 139, 140, 141} Organizational integration can be either operational or managerial and are both important in order to achieve synergies.¹⁴² Larsson and Finkelstein describes the correlation between the degree of integration and M&A performance, which in turn is due to the positive impact organizational integration has on synergy realization.¹⁴³ Organizational integration is described as the most important reason of successful synergy realization. Thus, M&As with high combination potential requires high organizational integration to ensure successful synergy realization, and both quantitative and qualitative integration are described as equally important in providing these joint benefits.¹⁴⁴

¹³² Larsson and Finkelstein 1999

¹³³ Hitt and al 1993

¹³⁴ Larsson and Finkelstein 1999

¹³⁵ Datta 1991

¹³⁶ Hunt 1990

¹³⁷ Schweiger et. al 1987

¹³⁸ Buono and Bowditch 1989

¹³⁹ Pablo 1994

¹⁴⁰ Shrivastasa 1986

¹⁴¹ Yunker 1983

¹⁴² Larsson & Finkelstein, 1999

¹⁴³ Ibid

¹⁴⁴ Ibid

3.1.2.4 Employee Resistance

Previous research indicates that employees respond negatively to M&As, which is a contributing factor to the high failure rate associated with M&As.^{145, 146, 147} The negative attitude among employees towards M&As can be explained by a “*we versus they*” attitude or culture clash, causing tension, distrust, hostility and resentment.^{148, 149, 150} In addition, employees might experience stress due to fear of affected career possibilities due to reallocation, layoffs or loss of influence.^{151, 152, 153} M&As focused on realizing similarity benefits tend to cause more employee resistance in comparison to M&As dependent on gains from complementarities.¹⁵⁴ As a result, despite the fact that combination potential does not affect employee resistance, a high level of similarity has been proven to increase employee resistance.¹⁵⁵

3.1.2.5 Management Style Similarity

Management style similarities are likely to enhance the possibility of merger success. The reason for this is that similar management styles enhance the level of cooperation across the firms, and thus help to ease the change and reduce employee resistance.^{156, 157, 158, 159} However, no support for a positive impact of management style similarity on organizational integration can be found.¹⁶⁰

3.1.2.6 Cross-Border Combination

The geographical location of merging parties can affect the synergy realization, and cross-border M&As are positively associated with combination potential. In addition,

¹⁴⁵ Blake and Mouton 1985

¹⁴⁶ Hambrich and Canella 1993

¹⁴⁷ Walter 1985

¹⁴⁸ Astrachan 1990

¹⁴⁹ Blake and Mouton 1985

¹⁵⁰ Levinson 1970

¹⁵¹ Greenwood et al. 1994

¹⁵² Hirsch 1987

¹⁵³ Walsh 1989

¹⁵⁴ Larsson and Finkelstein 1999

¹⁵⁵ Ibid

¹⁵⁶ Diven 1984

¹⁵⁷ Marks 1982

¹⁵⁸ Buono and Bowditch 1989

¹⁵⁹ Walter 1985

¹⁶⁰ Larsson and Finkelstein 1999

in comparison to national M&As, cross-border M&As marginally reduce employee resistance. This is explained by the characteristics of cross-border M&As, which are perceived as more complementary than substitutable and thus, regarded as less threatening to employees.¹⁶¹

3.1.2.7 Relative Size

The relative size of concerned firms has a positive impact upon the combination potential, where the combination potential is higher when the target firm is large in relations to the acquiring firm. This supports the “critical mass” argument stating that the target must be of sufficient size in relation to the bidder for it to generate substantial combination potential, rather than the “managerial attention” logic stating that all synergies can be realized with the proper attention from managers.¹⁶²

3.2 Logistics Synergies in M&As

As discussed previously, a common motive for M&As is the potential to achieve and capitalize upon synergies. However, synergy potential does not automatically create benefits and depending on the type of synergy, different efforts are needed from the two concerned companies.^{163, 164} Despite extensive literature on synergies in M&As, not much attention has been given to logistics specific synergies. In logistics and supply chain management journals, only three articles was published concerning M&As or horizontal integration from 1989-2002.¹⁶⁵

Häkkinen et al. has written an extensive article regarding logistical synergies in horizontal M&As. The article contains a literature review and an exploratory survey of Swedish and Finish companies that has performed horizontal M&As. The literature review summarizes all articles that have been published regarding logistical synergies within M&As in the largest supply chain management journals. The selected journals are: *International Journal of Physical Distribution and Logistics Management*, *Journal of Business Logistics*, *The international Journal of Logistics Management*, *European Journal of Purchasing and Supply Management*, *Supply Chain Management: An International Journal* and *International Journal of Logistics: Research and Applications*.

¹⁶¹ Larsson and Finkelstein 1999

¹⁶² Ibid

¹⁶³ Best and Seger 1989

¹⁶⁴ Taqi 1991

¹⁶⁵ Häkkinen et al. 2004

From 1989 – 2002 only three articles regarding M&As or horizontal integration were published.¹⁶⁶ Furthermore, a complementary literature study, performed in this thesis, of the articles published between 2002 and 2012 in the supply chain management journals reviewed by Häkkinen et al.¹⁶⁷, reveals that no research has been added to the subject, see table 1.

¹⁶⁶ Häkkinen et al. 2004

¹⁶⁷ Ibid

Table 1: Literature review performed by Häkkinen et al.¹⁶⁸ between 1989-2002, complemented with a literature review performed by the authors of this thesis between 2002-2012, regarding articles published concerning logistical synergies in horizontal M&As

Review of How Logistics and SCM Journals Have Published Research on M&A				
Journal	From Volume, Number, Year	To Volume, Number, Year	Number of issues	Articles on M&A or Horizontal integration
<i>International Journal of Physical Distribution and Logistics Management</i>	Vol. 19, No. 2, 1989	Vol. 42, No. 4, 2012	234	2*
<i>Journal of Business Logistics</i>	Vol. 11, No. 1, 1990	Vol. 33, No. 1, 2012	47	0
<i>The international Journal of Logistics Management</i>	Vol. 1, No. 1, 1990	Vol. 23, No. 1, 2012	51	1**
<i>European Journal of Purchasing and Supply Management</i>	Vol. 1, No. 1, 1994	Vol. 18, No. 1, 2012	79	0
<i>Supply Chain Management: An International Journal</i>	Vol. 1, No. 1, 1996	Vol. 17, No. 4, 2012	86	0
<i>International Journal of Logistics: Research and Applications</i>	Vol. 1, No. 1, 1998	Vol. 15, No. 1, 2012	60	0
<p>*Currie, Wendy, <i>The Supply-Side of IT Outsourcing: "The trend towards Mergers, Acquisitions and Joint Ventures"</i>, <i>International Journal of Physical distribution and Logistics Management</i>, Vol 30, No. 3, 2000, pp. 238-254; and Caputo, Mauro and Valeria Mininno, "Internal, Vertical and Horizontal Logistics Integration in Italian Grocery Distribution", <i>International Journal of Physical distribution and Logistics Management</i>, Vol. 26, No. 9, 1996, pp. 64-90.</p> <p>**Ojala, Lauri, "Changing Logistical Patterns and Policies in Northern Europe", <i>The international Journal of Logistics Management</i>, Vol. 2, No. 2, 1993, pp. 42-54.</p>				

¹⁶⁸ Häkkinen et al. 2004

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However, the articles published regarding M&As or horizontal integration do not exclusively concern the area of logistical synergies in horizontal M&As. For instance, Currie's¹⁶⁹ article does not cover the integration of physical supply chains, while Caputo and Mininno's¹⁷⁰ article does not cover M&A situations but merely collaboration between separate companies. Lastly, Ojala's¹⁷¹ article does not cover manufacturing companies.

Häkkinen et al. also investigates what has been written regarding logistics in M&A articles. This is conducted through an exhaustive research search in databases covering over 3000 publications. It is found that the dominating theory field is strategic management, which occurs in 83 % of the articles while none of the articles had an operational perspective. Furthermore, most of the articles concerned the post-merger phase and was conducted as either case studies or surveys. The results are presented in table 2 below.¹⁷²

Table 2: Published research concerning logistics in M&A articles¹⁷³

Total number of articles	Theory Field				Merger Phase in process			Method					Not Addressing Logistics Issues
	Strategic	HRM	Financial	Operational	Pre-Merger	Deal	Post-Merger	Case	Survey	Concept	Modeling	Other	
126	105	26	38	0	56	34	10	38	43	27	11	24	116
	83 %	21 %	30 %	0 %	44 %	27 %	81 %	30 %	34 %	21 %	9 %	19 %	92 %

Evidently, the research performed by Häkkinen et al. concludes that very little has been written within the particular field of research covering logistics synergies in horizontal M&As. To elaborate in this field Häkkinen et al. conducts an exploratory survey of 48 Swedish and Finish companies that has undergone a horizontal M&A.

¹⁶⁹ Currie 2000

¹⁷⁰ Caputo and Mininno 1996

¹⁷¹ Ojala 1993

¹⁷² Häkkinen et al. 2004

¹⁷³ Ibid

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The survey tests six different hypotheses on following functions within each of the observed companies:¹⁷⁴

- Sourcing
- Manufacturing
- Distribution
- Sales
- IT
- R&D
- Administration
- Finance

The six different hypotheses are formulated in an attempt to clarify what yields merger success and synergy realization, and are stated below indicated by H1-H6:¹⁷⁵

- H1: *“The possibility to achieve synergy benefits in logistics is an important motive for horizontal mergers”*
- H2: *“Synergies in logistics are hard to realize as opposed to other synergies”*
- H3: *“There is a relationship between the relative size difference of the merging companies, and the difficulty of synergy realization. The smaller the target is compared to the acquirer, the easier synergy realization will be”*
- H4: *“There is a positive relationship between the rate of expected synergy benefits and the realized level of integration. The higher the rate of expected benefits is, the higher the level of integration will be”*
- H5: *“There is a positive relationship between the level of integration and the rated difficulty of synergy realization. The higher the realized level of integration is, the more problems will be encountered during the integration process”*
- H6: *“There is a positive relationship between the rate of expected benefits and the difficulty of synergy realization. The higher the expectations are, the more difficult it is to achieve this benefits”*

The results from the survey are that only hypothesis one, the possibility to achieve synergy benefits in logistics is an important motive for horizontal mergers, can be entirely verified. As mentioned previously, the different hypotheses are tested on different functions within each of the surveyed companies, however, hypothesis one

¹⁷⁴ Häkkinen et al. 2004

¹⁷⁵ Ibid

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has a slightly different breakdown of functions than the division presented earlier. Instead, the M&A motives are defined in accordance to Bower¹⁷⁶ along with additional motives presented by Häkkinen et al.¹⁷⁷

- Product/market extension M&A
- Geographical roll up M&A
- Logistics synergies based M&A
- Overcapacity M&A
- Research and Development M&A
- Restructuring M&A
- Industry Convergence M&A
- Financial Investment M&A

The breakdown above is not entirely consistent with the different functions presented earlier, although some of the functions are represented as M&A motives. It was concluded that the companies participating in the survey rated logistical synergies as the third most important merger reason after product extension and geographical roll up and 40 % of the companies considered logistical synergies to be an either important or very important motive. This indicates support to hypothesis one.

Hypothesis two, that synergies in logistics are hard to realize as opposed to other synergies, is tested for the different functions and cannot be entirely supported since the difference between the functions is too small to be significant. However, it seems that sales is the most difficult function to realize synergies in since the highest rate, 26 % of the companies, considered it to be either difficult or very difficult to realize synergies in this function. The logistical functions: *manufacturing*, *distribution* and *sourcing* is in the top segment of rated difficulty, but is too close to the other functions to verify hypothesis two.¹⁷⁸

Hypothesis 3-6 describes the areas: *relative size*, *expected synergy benefits* and *level of integration*. These areas are identified, among others, by Larsson and Finkelstein as well and are elaborated further previously in the report. Häkkinen et al. summarizes hypothesis 3-6 and their impact on the areas presented above, along with *expected benefits* and *rated difficulty of synergy realization*. Figure 4 below

¹⁷⁶ Bower 2001

¹⁷⁷ Häkkinen et al. 2004

¹⁷⁸ Ibid

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illustrates an overview of the mentioned hypothesizes and will in addition function as an input to a more extensive model by Häkkinen et al. presented later, see figure 5.¹⁷⁹

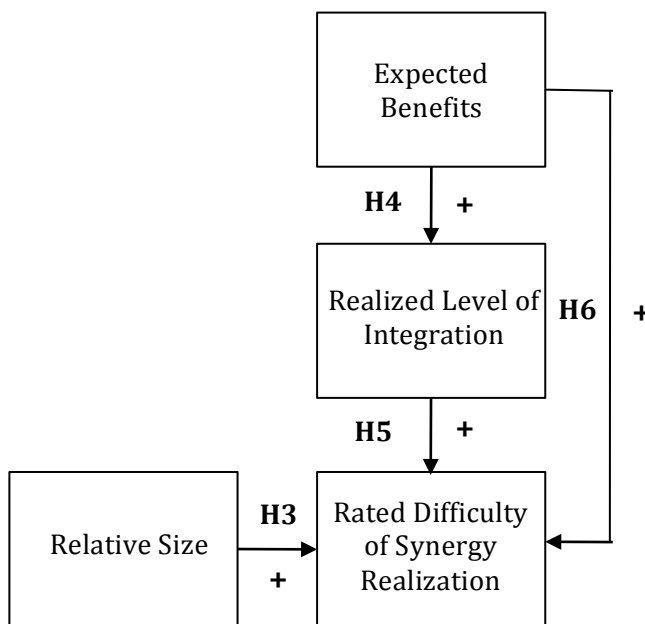


Figure 4: Häkkinen et al.'s hypothesises 3-6¹⁸⁰

As can be seen in figure 4, as well as understood from the hypothesis, relative size is expected to have an impact on the rated difficulty of synergy realization. Expected benefits are believed to affect both, realized level of integration and rated difficulty of synergy realization. Realized level of integration is also expected to affect the rated difficulty of synergy realization.¹⁸¹ The substance of Häkkinen et al.'s hypothesis investigation is that parameters that enhances the synergy possibilities, and thereby the incentives, thus are expected to increase the difficulty of the synergy realization.

The relationship between relative size and rated difficulty of synergy realization, hypothesis three, is completely rejected since it does not apply to any function and thereby questions the idea that a large target company directly indicates a risk due

¹⁷⁹ Häkkinen et al. 2004

¹⁸⁰ Ibid

¹⁸¹ Ibid

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to the acquirer having to incorporate more aspects.¹⁸² An explanation to the outcome that a large target company, relative to the acquirer, does not necessarily increase the difficulty of synergy realization can be found in Larsson and Finkelstein research that suggests that a relatively small acquisition might not receive sufficient managerial attention to realize potential synergies, leading to increased difficulties.¹⁸³

The relationship between expected benefits and realized level of integration, hypothesis four, is not fully supported since it do not apply to all functions and can thereby not be verified. However, the relationship is strong for sales, R&D and distribution and it is demonstrated that a high rate of expected benefits within these functions can actually have a positive impact on other functions and influence the integration of these. This is specifically significant for distribution, since a high rate of expected benefits seem to have an impact on all other functions, except for finance.¹⁸⁴

The relationship between realized level of integration and the rated difficulty of synergy realization, hypothesis five, only prove a clear correlation in finance and here the correlation is negative. This implies not only that the hypothesis is rejected, but also that the relationship is the opposite of what is suggested in the hypothesis.¹⁸⁵

The relationship between expected benefits and rated difficulty of synergy realization, hypothesis six, is partly supported. However, the relationship cannot be verified for all functions in a company. However, the hypothesis is verified for all logistical functions, *manufacturing*, *distribution* and *sourcing*, which is an interesting result given the topic examined.¹⁸⁶

Based on the figure 4 and research from Larsson and Finkelstein¹⁸⁷, Häkkinen et al. has developed a framework adapted to logistic synergy realization in M&As. The framework takes into account sourcing, manufacturing and distribution and investigates synergies within structure/resource and process. These synergies are divided into three steps: *combination fit and potential*, *level of integration* and

¹⁸² Häkkinen et al. 2004

¹⁸³ Larsson and Finkelstein 1999

¹⁸⁴ Häkkinen et al. 2004

¹⁸⁵ Ibid

¹⁸⁶ Ibid

¹⁸⁷ Larsson and Finkelstein 1999

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realized synergies. The last step is complemented with *difficulties of synergy realization* in order to enhance knowledge growth and experience. Based on their research and hypothesizes, six factors are identified that impact these steps: *similarities, complementarities, geographical overlaps, relative size, pre M&A quality* and *M&A experience*. These factors affect the synergies in different steps, see figure 5 below.¹⁸⁸

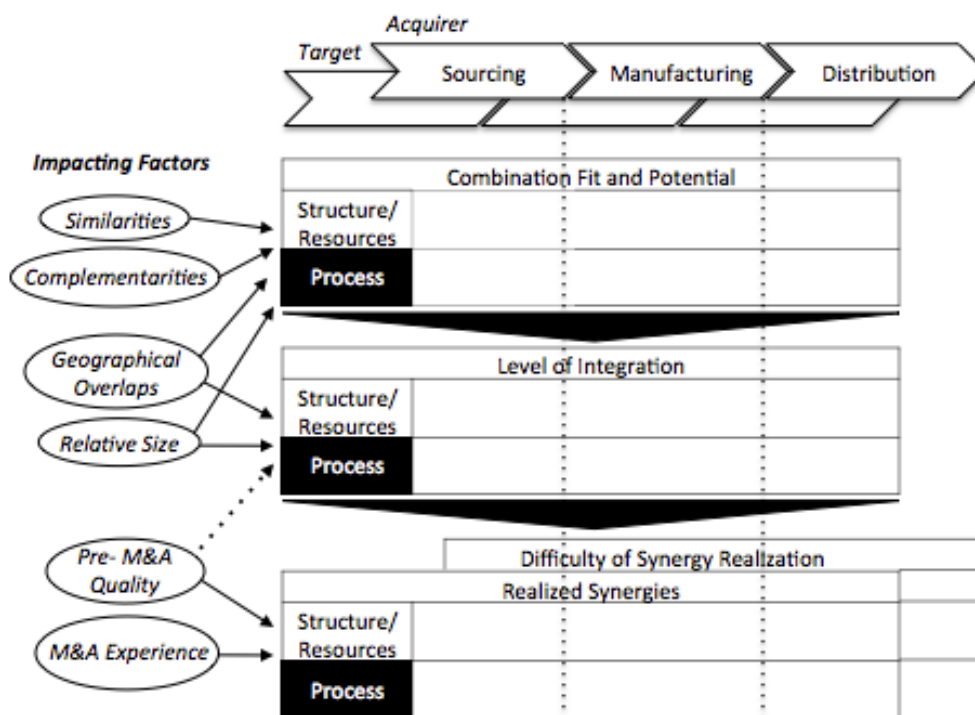


Figure 5: Häkkinen et al.'s framework for logistics impact in M&As¹⁸⁹

As can be distinguished in figure 5, similarities, complementarities, geographical overlaps and relative size all directly affect combination fit and potential. Geographical overlaps, relative size and pre M&A quality directly affects the level of integration and pre M&A quality and M&A experience directly affects the realized synergies. Combination fit and potential affects level of integration and level of integration affects realized synergies. The framework can be used to examine the combination fit and potential, level of integration and realized synergies in different

¹⁸⁸ Häkkinen et al. 2004

¹⁸⁹ Ibid

functions and different phases during the M&A process, which in turn can contribute to a better understanding of the situation.¹⁹⁰

To conclude the work of Häkkinen et al. the topic of logistical synergies M&As has been identified as a poorly attended subject in previous theories. Despite the fact that companies pursuing M&A strategies consider logistics synergies an important motive. It was also demonstrated that the expected synergy benefits for distribution plays an apparent role for the integration of all functions except finance.¹⁹¹ Given the finding that distribution seems to be an important factor when it comes to logistical synergies, this area is elaborated further.

Best and Seger focuses upon synergy benefits in distribution, whereas the distribution structure is defined as the network of warehouses, resources, and logistics service providers. The distribution process consists of the activities and procedures that turn different input into delivery service, used within the warehouse and order processes. The authors stresses the complexity and time required of the actual realization of synergies and the problem with executives regarding integration of distribution as an easily achieved task, which thereby causes insufficient planning.¹⁹² However, according to Best and Seger, the reason for executives' ignorance of the importance and difficulties associated with integration of distribution is caused by the fact that synergies within distribution often appear understandable and clear-cut when merging two firms operating within the same market and with similar products. However, to succeed with distribution integration, following key factors should be carefully evaluated, these are following:¹⁹³

- Channels of distribution
- Order entry coordination
- Pricing
- Organizational integration
- Inventory control
- Credit, invoicing and receivables policies
- Physical distribution operations
- Cost allocation

¹⁹⁰ Häkkinen et al. 2004

¹⁹¹ Ibid

¹⁹² Best and Seger 1989

¹⁹³ Ibid

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The importance of similarities and integration within these areas are emphasized as a mean of ensuring successful co-distribution. The implications of the above-mentioned factors are further elaborated below:

Channels of distribution

There are risks associated with combining distribution channels. Risks especially arise when the distribution channels differ significantly between the companies. Consequently, it is important to notice is that companies serving the same market with similar products still can have considerably different manners of distributing these products. Not paying attention to, or not respecting, these differences might lead to severe problems and end up costing money. Tampering with distribution channels might also jeopardize a unique market positions that a company has acquired.¹⁹⁴

Order entry coordination

Different policies and procedures for order entry as well as differences in terms of customer ordering patterns and pricing policies increases coordination difficulties. For products to be co-distributed, either orders must be received together or joined internally before shipment. The best approach to this is to enable for customers to place orders at the same time to the same place, otherwise co-distribution is hard to succeed with, which advocates integration.¹⁹⁵

Pricing

Coordination of pricing policies is also a difficult issue and changes should be approached with caution, since pricing strategies are often an important part of the company's overall strategy, for instance in terms of marketing. The efforts taken must therefore be guaranteed not to cause a negative effect.¹⁹⁶

Organizational integration

A centralized organization is the most suitable when trying to achieve an effective co-distributing structure. However, centralization might lead to severe employee resistance since it might intrude on the current strong divisions.¹⁹⁷

¹⁹⁴ Best and Seger 1989

¹⁹⁵ Ibid

¹⁹⁶ Ibid

¹⁹⁷ Ibid

Inventory control

Inventory control is important and when it comes to co-distributing there are mainly two key dimensions to consider: specifying level of integration and ownership. Specifying level of integration is crucial in order to ensure that customer needs are met. A risk when conducting co-distributing is that the customer service of the co-distributed products may take on the lowest service level of the two companies. Ownership, in turn, concerns whether it is the divisions or a central group that is responsible for the inventory. The owner of the inventory has different implications on how the inventory is managed. If the inventory is owned centrally, the cost for the single division might be higher in order to reduce overall costs, while when inventory is owned by each division there might not exist an overall plan for service levels. Regardless of ownership, it is important for management to create consistent incentives that enables greater clarity and control.¹⁹⁸

Credit, invoicing and receivables policies

Credit issues are often delicate and raised to the surface when companies pursue efforts to co-distribute products and is important to be aware of. As with orders, coordination of invoicing is dependent on synchronization and avoidance of any delays that might occur. Receivables are a key asset to the company and therefore the ownership must be decided. One issue that needs consideration is allocation of customer credits or deductions on paid invoices, which can be a time consuming and costly task. However information concerning total receivables is important in order to avoid over exposure to single customers.¹⁹⁹

Physical distribution operation

Warehousing and transportation is often regarded as the key factor for co-distribution. In addition, these are considered to be the easiest part to coordinate and as long as the products are similar, both combined warehousing and transport are often manageable.²⁰⁰

Cost allocation

Employees often meet cost allocation with resistance and irritation, regardless whether the decision is centralized or not. Therefore careful planning is important when suggesting a cost allocation to reduce employee resistance.²⁰¹

¹⁹⁸ Best and Seger 1989

¹⁹⁹ Ibid

²⁰⁰ Ibid

²⁰¹ Ibid

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Consequently, similarities and integration are important aspects for companies to regard in terms of logistics synergies. Given the parameters presented above, Best and Seger expressively highlights the necessity of similarities in channels of distribution and physical distribution operations in order to succeed with co-distribution. Furthermore, integration is emphasized as of high importance to coordinate order entry between companies and centralization is considered the most suitable way of integration.²⁰² These findings correlate with the conclusions of Häkkinen et al. and Larsson and Finkelstein whom both underline combination potential and integration as vital for synergy realization.^{203, 204}

Chopra and Meindl also identifies drivers of supply chain performance, where performance is measured as a firm's degree of responsiveness and efficiency. Responsiveness is, for example, how rapidly the company can respond to changes in customer demand while efficiency is how capable the company is at achieving profitability. Beside from determining the supply chain performance, these drivers also determine the strategic fit throughout the supply chain. The distinguished four drivers are described below²⁰⁵:

Facilities

Can be used for different purposes, for instance a production facility or a storage facility. The location, capacity and the flexibility of the facility are important parameters and have a big impact on the performance of the supply chain. Depending on what strategy the company has, location, capacity and flexibility will differ. A strategy for high responsiveness might indicate being at many locations, while a high efficiency strategy might indicate fewer locations with higher capacity at each.

Inventory

Consists of all goods a company currently holds, this could be raw material, work in process and finished goods. Depending on the company strategy, a company can hold either a large or a small inventory. A high responsiveness might indicate keeping large inventories, while a high efficiency strategy might indicate keeping smaller inventories and thereby free up capital.

²⁰² Best and Seger 1989

²⁰³ Häkkinen et al. 2004

²⁰⁴ Larsson and Finkelstein 1999

²⁰⁵ Chopra and Meindl 2004

Transportation

Can take on different forms and is basically moving of inventory from one point to another. Different strategies imply different ways of transportation. Fast but expensive transportation might be a good choice if the strategy is to achieve high responsiveness, while slower but cheaper transportation might be a good choice if the strategy is to achieve high efficiency.

Information

Consists of data and analysis of the above-mentioned performance drivers, including customers, and thus making it the potentially strongest driver since it directly affects all other drivers. Information enables managers to make better decisions concerning the supply chain and has therefore the potential to make it both more responsive and efficient.

The drivers stated by Chopra and Meindl correlates with the parameters presented by Best and Seger²⁰⁶ previously, where *facilities* and *inventory* corresponds to *physical distribution operations*, and *transportation* to *channels of distribution*. *Information* incorporates the other three drivers along with *customers* and is thereby also correlated with *pricing* and *credit, invoicing and receivables policy*.

Best and Seger describes distribution as a differentiated problem with many aspects to consider. Commonality is considered as the key aspect and thus the most important factor to evaluate when integrating. High commonality speaks for a high level of integration, while a low commonality speaks for a more conservative approach.²⁰⁷ Consequently, different levels of commonality correspond to different level of integration, indicating ranges of integration from complete or combinations of integration to zero integration.²⁰⁸

In addition, Chopra and Meindl stress the importance of achieving a good balance between responsiveness and efficiency, which should be the main goal of a supply chain strategy.²⁰⁹ The implications of integration and centralization will be elaborated further in following section.

²⁰⁶ Best and Seger 1989

²⁰⁷ Ibid

²⁰⁸ Ibid

²⁰⁹ Chopra and Meindl 2004

3.3 Logistics Network Design

Logistics network design has a significant impact upon the performance of the supply chain and thus the performance of the company. Network decisions covers the interrelated areas of the role and location of facilities, as well as the capacity allocated to each. Proper stock level must be ensured to not risk high costs and poor utilization associated with over-allocation or poor responsiveness associated with under-allocation. In addition, decisions regarding which market each facility is to serve and which supply sources that provide each facility. The allocation of market and supply sources is vital since it affects the supply chain performance in terms of production, inventory, and transportation costs. These decisions have long-term impact upon the supply chain's, and thus the company's, performance since facility closure or movement is associated with high costs.²¹⁰

Meeting customer needs, together with the costs related to meeting those are two dimensions to evaluate the network design alternatives along. The main customer needs that are affected by the decision are: response time, product variety, product availability, customer experience, order visibility, and returnability. Customer needs and demands will thereby affect the previous drivers of supply network performance differently. Network design decisions are, according to Chopra and Meindl, especially important for merging companies. Due to issues related to excess or differences in the markets served by the merging companies, consolidation or change of location and role of facilities can often contribute to both cost reduction in terms of directly affecting both logistics and facility cost and improved responsiveness. The final decision of location of facilities in network design should be based upon the optimization of profitability while ensuring satisfying level of responsiveness towards customers.²¹¹ Consequently, centralization decisions in terms of consolidation of warehouses must take several implications into consideration.

The benefits of a low level of centralization is the shorter delivery distances to customers which reduces risks associated with goods transportation and delivery time, which consequently reduces the cost of transportation due to the increased geographical coverage.^{212, 213}

²¹⁰ Chopra and Meindl 2004

²¹¹ Ibid

²¹² Jonsson and Matsson 2005

²¹³ Chopra and Meindl 2004

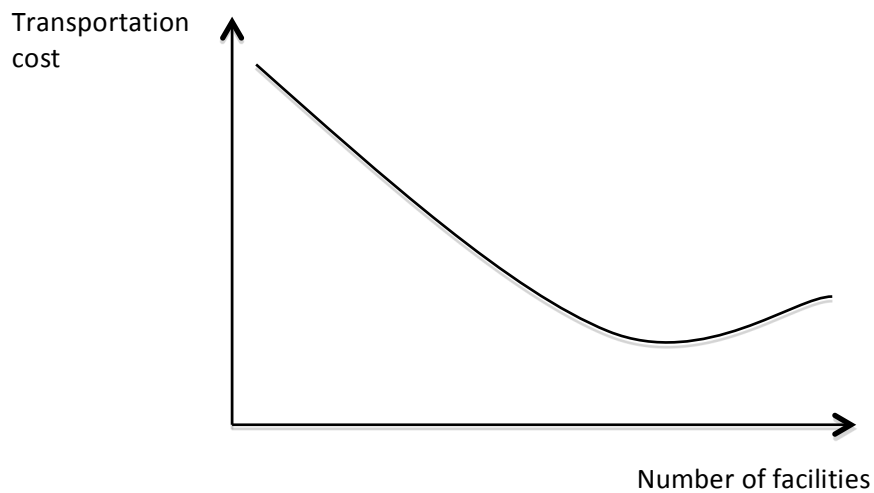


Figure 6: Correlation between transportation cost and number of facilities²¹⁴

However, as seen above, the transportation cost increases after a certain point, which is explained by the fact that a low level of centralization reduces the consolidation of goods and administration, which becomes significant when having many warehouses. The reduced degree of consolidation and increased administration outweighs the benefits of shorter transportation distances when having too many warehouses.²¹⁵

The reduction of risk due to shorter delivery distances might also result in increased customer satisfaction. For instance if the customer demands a very quick delivery of a product, then the company is more likely to satisfy the customer if it is situated at many locations with large stocks. The longer response time the customer is prepared to tolerate, the fewer number of facilities is required.²¹⁶

²¹⁴ Chopra and Meindl 2004

²¹⁵ Ibid

²¹⁶ Ibid

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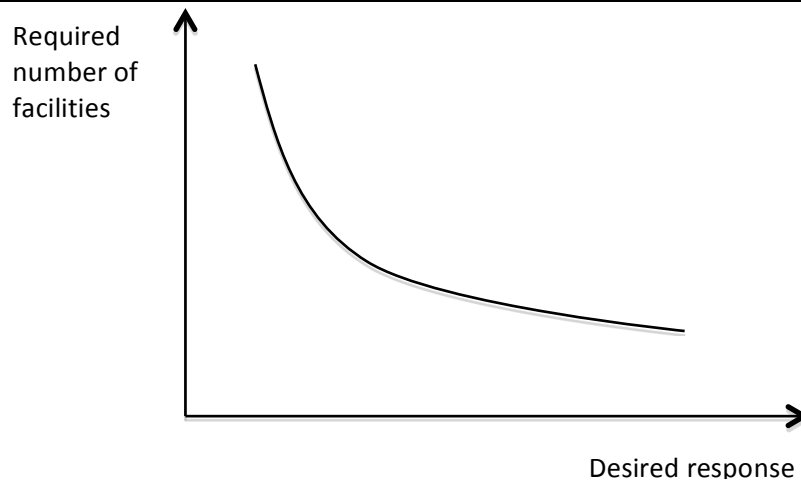


Figure 7: Correlation between required number of facilities and desired response time²¹⁷

However, a redundant number of facilities, where economies of scale are lost, increase transportation cost in terms of decreased fill rate, as seen in figure 6.²¹⁸

An increased number of facilities increases both inventory as well as facility costs. A high level of centralization with greater sized warehouses leads to potential economies of scale within distribution and administration, such as order processing. In addition, the strengths of automation can more easily be exploited. Centralization also enables a reduction in safety stock levels why inventory level in terms of safety stock can be reduced and consequently lead to a decrease in cost of capital. A high degree of centralization also reduces inventory storage costs since less warehouses need to be managed.²¹⁹

²¹⁷ Chopra and Meindl 2004

²¹⁸ Ibid

²¹⁹ Jonsson and Mattsson 2005

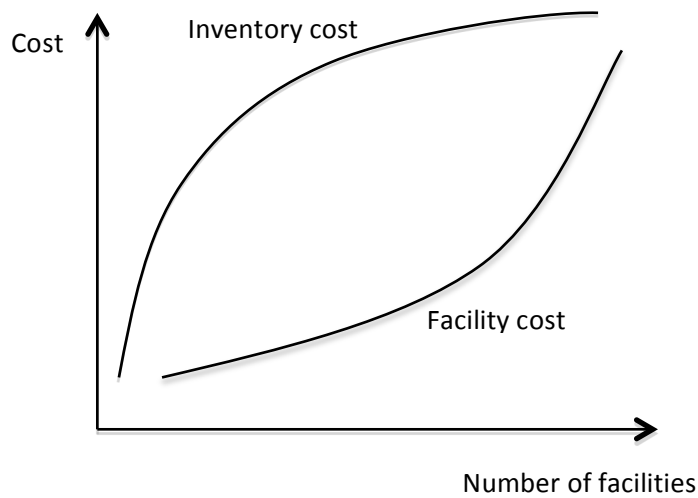


Figure 8: Correlation between cost and number of facilities²²⁰

As seen above, the higher number of facilities, the higher inventory and facility cost. The relationship however differs, where inventory cost has a decelerating growth rate while facility cost has an accelerating growth rate. The implication of this is that when going from a centralized to a decentralized structure, the inventory cost is going to change most initially. However, this cost will stabilize with an increased number of warehouses, whereas facility cost continues to rise.²²¹

While transportation cost increases with an increased degree of centralization, it is also reduced to a certain level due to load consolidation and greater vehicle capacity utilization. Due to greater delivery distances to customers both lead times as well as risks associated with the transportation of goods are likely to increase. Centralization of the number of warehouses also increases the demand on warehouse sophistication in order to handle the demand and specific needs of different areas, countries or markets.²²² However, firms might raise the number of cost-wise optimal number of facilities to improve responsiveness to customers. The increased costs are motivated by increased sales.²²³

The total logistics cost is the sum of inventory cost, transportation cost and facility costs. As seen below, total logistics cost first decreases with increased number of facilities, but then increases. At the same time, response time decreases as the

²²⁰ Chopra and Meindl 2004

²²¹ Ibid

²²² Jonsson and Mattsson 2005

²²³ Chopra and Meindl 2004

number of facilities increases. A company should strive to keep the total logistics cost as low as possible and only increase response time by increasing costs when it is evident that this action will yield a big revenue growth.²²⁴

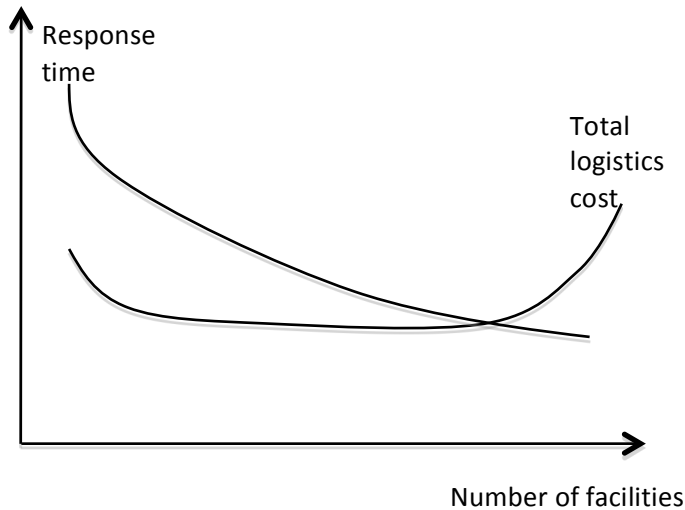


Figure 9: Correlation between response time and total logistics cost and number of facilities respectively²²⁵

3.3.1 Third-Party Provider of Logistics Services

Third party logistics, or 3PL in short, describe the company activity of outsourcing the entire or, selected parts of the logistics function that previously were conducted in-house, to a third party.²²⁶ The trend today is that more and more companies choose this solution, rather than keeping the logistics operation in-house. Initially, 3PL was mainly restricted to outsourcing of the transportation function, but as the interest is increasing, 3PL has become more comprehensive and today it is possible to outsource the entire logistics function.²²⁷

Several benefits and risk aspects can be associated with 3PL. The main benefit with 3PL is the possibility to achieve economies of scale by combining the logistics function of several different companies. In addition, by outsourcing non-strategic activities an organizations can focus upon core competence and instead take

²²⁴ Chopra and Meindl 2004

²²⁵ Ibid

²²⁶ Oskarsson et al. 2006

²²⁷ Ibid

advantage of logistics competence and know-how provided by a third party.²²⁸ 3PL can also contribute to increased customer satisfaction and also enable access to international distribution networks.²²⁹ However, 3PL is not suitable for all companies. Companies with great logistics competence and large volumes might benefit from keeping it in-house and thus achieve the benefits of economies of scale themselves. Furthermore, companies having logistics as an important part of its core business might also benefit from maintaining it in-house.²³⁰

3.4 Summary of Theory

The relatedness between merging parties in horizontal M&As is presumed to be especially high and thus also the perceived synergy potential, which is especially true in terms of cost-based synergies due the high likelihood of overlapping or duplicate activities.^{231, 232} Due to similar reasoning, horizontal M&As probably has more impact on logistics structure and processes for the merging companies.^{233, 234, 235} Not only similarities, but complementarities as well, are vital in ensuring synergy realization, together encompassing the combination potential.²³⁶ Despite the fact that synergy potential is perceived to be higher in horizontal M&As, great efforts are still generally needed, potential is alone no guarantee for synergy realization and value creation.²³⁷ Another key aspect to enable synergy realization is organizational integration, which positively impacts potential synergy realization.²³⁸

In addition, M&As are associated with high failure rate²³⁹ and financial issues are often given over-attention at expense of organizational, cultural, and physiological factors.^{240, 241, 242} Consequently, the discrepancy between the pre-merger deal making phase and the post-merger implementation and integration phase, causes

²²⁸ Sink and Langley 1997

²²⁹ Bask 2001

²³⁰ Oskarsson et al. 2006

²³¹ O'Shaughnessy and Flanagan (1998)

²³² Eccles et. al (1999)

²³³ Taqi 1991

²³⁴ Porter 1985

²³⁵ Häkkinen et al. 2004

²³⁶ Larsson and Finkelstein 1999

²³⁷ Taqi 1991

²³⁸ Larsson and Finkelstein 1999

²³⁹ Teteanbaum 1999

²⁴⁰ Calipha et al. 2010

²⁴¹ Tetenbaum 1999

²⁴² Mirvis and Marks 1992

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many mergers to fail. The removal of excess activities and other efficiency-increasing measurements can trigger employee resistance, which are therefore important to minimize to ensure M&A success.²⁴³

The possibility to achieve synergy benefits in logistics is an important motive for horizontal M&As, but despite this fact, not much attention has been given to the field within previous literature.²⁴⁴ In addition, top management often fails to recognize the difficult aspects associated with logistical integration of the parties, which causes insufficient planning.²⁴⁵ A positive relationship has been proven between the rate of expected synergy benefits within logistics and the realized level of integration, where the higher the rate of expected benefits is, the higher the level of integration. This also has a positive effect upon other areas and influences the integration of these, which benefits the overall organizational integration and consequently the total synergy realization.²⁴⁶ This confirms that logistics synergies are an important motive for M&As.

Commonality is considered a key aspect when integrating logistics functions, where a high commonality speaks for a high level of integration. Parameters such as order handling coordination benefits from integration and a high level of centralization is considered preferable when integrating.²⁴⁷ Level of centralization has implications on facility and inventory cost, response time to customer and transportation cost. These are all parameters that need careful evaluation in order to achieve a satisfying distribution structure.²⁴⁸

To further visualize the key aspects extracted from theory, the theoretical framework presented in figure 10 is developed. The framework will be applied to analyze the empirical data from the case companies in chapter four and five. The framework is further described below.

When evaluating potential synergies within outbound logistics and the effect of integration, two areas are distinguished as important to evaluate in terms of similarities and complementarities. These are warehouse and distribution and are

²⁴³ Larsson and Finkelstein 1999

²⁴⁴ Häkkinen et al. 2004

²⁴⁵ Best and Seger 1989

²⁴⁶ Häkkinen et al. 2004

²⁴⁷ Best and Seger 1989

²⁴⁸ Chopra and Meindl 2004

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derived from the parameters presented by Best and Seger²⁴⁹, along with the drivers of supply chain performance presented by Chopra and Meindl.²⁵⁰ These parameters have some overlaps, which are used to divide warehousing and distribution into sub areas. Warehousing is divided into: *complexity, characteristics of goods, order handling* and *inventory* and distribution is divided into: *customer structure, delivery terms* and *customer demands*.

According to Häkkinen et al. the similarities and complementarities of the parameters presented above are expected to affect integration, which in turn affects potential synergy realization.²⁵¹ Furthermore, Larsson and Finkelstein suggests that employee resistance is expected to have a negative affect on synergy potential, but is not associated with either combination potential or integration.²⁵² In conclusion, *combination potential, integration* and *employee resistance* are the key factors affecting potential synergy realization.^{253, 254} These parameters are affected by *geographical overlaps, relative size, pre M&A quality*²⁵⁵, *management style similarities* and *cross border integration*.²⁵⁶ Geographical overlaps and cross border integration is considered equivalent, why the term geographical overlaps will be used. Potential synergy realization is also directly affected by pre M&A quality and *M&A experience*.²⁵⁷

²⁴⁹ Best and Seger 1989

²⁵⁰ Chopra and Meindl 2004

²⁵¹ Häkkinen et al. 2004

²⁵² Larsson and Finkelstein 1999

²⁵³ Ibid

²⁵⁴ Häkkinen et al. 2004

²⁵⁵ Ibid

²⁵⁶ Larsson and Finkelstein 1999

²⁵⁷ Häkkinen et al. 2004

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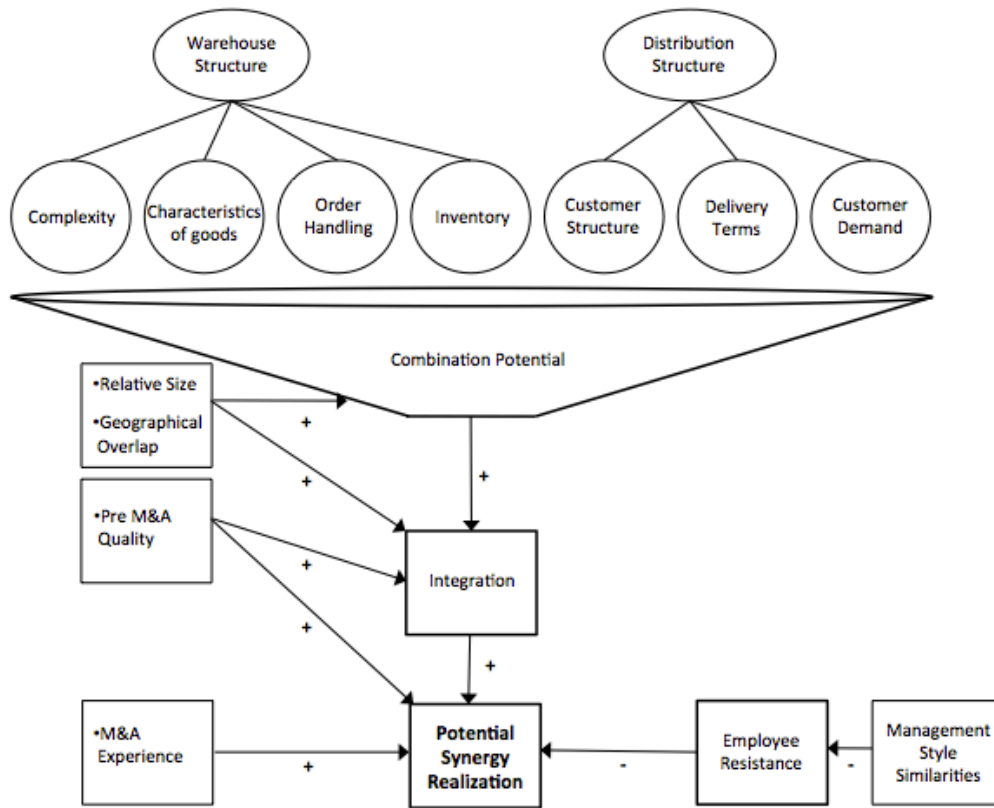


Figure 10: Theoretical framework describing important parameters to evaluate potential synergy realization in logistics operations

4. Empirics

This chapter will present the merging parties more exhaustively and describe each company's current logistics structure. Both quantitative and qualitative data will be presented to enable a distinction of similarities and differences between Cloetta and Leaf, and thus provide an understanding of the logistics structure of the two companies. The data is complemented with interviews with key employees regarding their expectations, areas of concerns and outlook for the future. The data gathered, both numerical data and interviews, correlates to the parameters presented in the theoretical framework presented in figure 10. Numerical data is divided into the sub-areas presented for warehousing and distribution, while the interview questions aims at highlighting combination potential, integration and employee resistance.

4.1 Company Presentation

Cloetta and Leaf, two Swedish companies within the confectionery industry, officially merged on the fifteenth of February 2012. Two private equity firms, Nordic Capital and CVC previously owned Leaf, while Cloetta was listed on the stock exchange, thus owned by their stockholders with AB Malfors Promotor as the largest owner. The combined company takes the well-established name of Cloetta and becomes a leading Swedish confectionery company with a strong base in the Scandinavian markets as well as in Italy and the Netherlands. The new Cloetta will produce and sell products within three main categories: chocolate, sugar confectionery and refreshment (pastilles and chewing gum), and manage a portfolio of brands with a long tradition and have pro forma net sales of SEK 5.7 billion and recurring EBITA of SEK 666 million.²⁵⁸

In total, new Cloetta's products will be sold in more than 50 markets. The four Nordic markets will account for 55 % of net sales. The largest market will be Sweden with 28 % of net sales. The Middle region, with the Netherlands, Belgium and Germany, will account for 19 % of net sales, Italy for 17 % of net sales, and the rest of the world, including UK, will account for 8 % of net sales.²⁵⁹

²⁵⁸ Cloetta press release 2012-12-16

²⁵⁹ Ibid

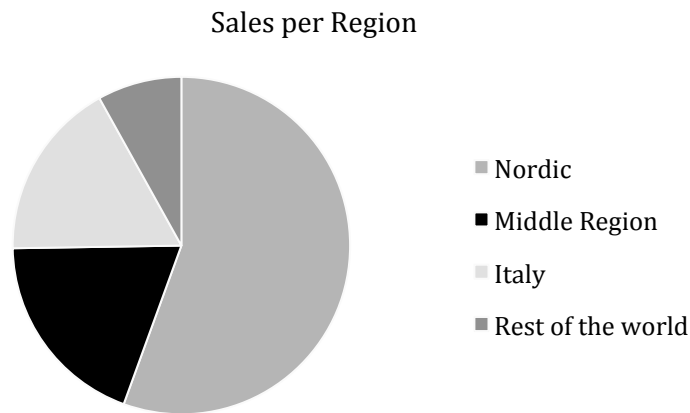


Figure 11: Sales per region for new Cloetta²⁶⁰

New Cloetta will have its own sales- and distribution organization in each of its 7 key markets, covering all major grocery chains as well as the impulse channels, petrol stations and convenience stores for instance. New Cloetta will have a supply chain organization with almost all production technologies needed for the company and will have 12 factories in 6 countries (3 in Sweden, 1 in Finland, 1 in Belgium, 2 in the Netherlands, 4 in Italy and 1 in Slovakia).²⁶¹

Table 3: Number of factories in each country²⁶²

Country	Number of factories
Sweden	3
Finland	1
Belgium	1
Netherlands	2
Italy	4
Slovakia	1
Total	12

²⁶⁰ Cloetta press release 2012-12-16

²⁶¹ Ibid

²⁶² Ibid

4.1.1 Facts about Cloetta

Market

Cloetta is operating within the chocolate and sugar confectionery industry, where chocolate makes out the vast part of the turnover. The geographical market is Sweden, which is Cloetta's main market, along with the rest of Scandinavia: Norway, Finland and Denmark. There is also a market for travel retail and other exports. Cloetta's total turnover was 987 MSEK 2011.²⁶³

Production

Cloetta has its production on two sites, Ljungsbro and Alingsås. The production during 2010/2011 were 16 600 ton for Ljungsbro and 1231 ton for Alingsås. The production in Ljungsbro is mainly focused on chocolates while the site in Alingsås in mainly focused on sugar confectionary.²⁶⁴

Warehouse

Cloetta has its own central warehouse located in Norrköping, where it distributes goods to all its markets.²⁶⁵ A more extensive presentation of warehouse structure is presented under section 4.4.

4.1.2 Facts about Leaf

Market

Leaf is operating within the chocolate, sugar confectionery and refreshment industry, where sugar confectionery and refreshment make out the vast majority of the turnover. The geographical market is Scandinavia with Sweden, Denmark and Norway, Finland, the middle Europe with Germany, Belgium and the Netherlands, and the southern Europe with Italy. Leaf is also present in the UK market, the Slovakian market and has some presence in for instance Switzerland, Canada, Spain, Hong Kong and Singapore. In total Leaf's products are sold in more than 50 markets. The Scandinavian market is the largest with Sweden as the main market. Leaf's turnover for Sweden, Denmark and Norway was 1 400 MSEK 2011.^{266, 267}

²⁶³ <www.cloetta.se> 2012-02-10

²⁶⁴ Ibid

²⁶⁵ Meeting with Cloetta representatives 2012-03-28

²⁶⁶ <www.leafsweden.se> 2012-02-10

²⁶⁷ Meeting with Leaf representatives 2012-02-01

Production

In Scandinavia Leaf has a production site in Gävle, Sweden, but goods are also produced at other sites such as Slovakia, the Netherlands and UK. In total Leaf have 12 own production sites and 12 outsourced production sites.^{268, 269}

Warehouse

Leaf is currently going through a restructuring program where a 3PL solution will be used with a warehouse in Helsingborg, Sweden for goods to the Swedish and Danish market along with a warehouse in Norway with goods for the Norwegian market.²⁷⁰ A more extensive presentation of warehouse structure is presented under section 4.4.

4.2 Presentation of Merger

The main reason for the merge of Cloetta and Leaf is to become the confectionery leader in the Scandinavian market. The merge enables a strengthening of the brand and market position by the ability to offer a full range of complementary products through Cloetta's strength in chocolate and Leaf's strength in sugar confectionery and refreshment (pastilles and chewing gum). The complementary product segments and the increased scale of the merged company, new Cloetta, is assumed to create sales synergies by enhancing its attractiveness among both customers and suppliers, and thus establishing a stronger route to market, mainly in the Scandinavian region. Another reason for the merge is to achieve cost and efficiency synergies by increasing efficiency and streamlining commercial and logistics operations in Scandinavia, as well as reduce overhead and administration expenses. In addition, increased bargaining power and control of the supply chain are important motives along with broadened know-how within the areas of R&D, technology and other proprietary processes.²⁷¹

Leaf is in the process of finalizing a Scandinavian supply chain restructure program expected to yield cost savings. The restructure program will lead to a reduction of number of warehouses in Scandinavia from three warehouses to one with a third party solution, enabling greater economies of scale and efficient handling. The rationale for the restructure program is to achieve cost reductions by reducing cost per managed unit and increase capacity utilization. The program was triggered by the closing of the Danish factory, which reduced the need of a Danish warehouse

²⁶⁸ <www.leafsweden.se> 2012-02-10

²⁶⁹ Meeting with Leaf representatives 2012-02-01

²⁷⁰ Ibid

²⁷¹ Cloetta press release 2011-12-16

and a costly warehouse set up in Norway.²⁷²

4.3 Interviews with Cloetta and Leaf Representatives

Below a summary of the conducted interviews are presented divided into expectations, areas of concern, main logistics synergy potential, logistical similarities and differences, take on 3PL and future outlook. The main findings are highlighted in italic.

Expectations

The main expectancies from the new Cloetta merger are from both parties the benefits that stem from synergy realization in terms of the *combined product portfolios* and the potential of *increased sales and growth*. In addition, the merger enables Leaf to gain *positive brand effects* from the new association with Cloetta and thus increase presence in customer's mind. Cloetta express anticipation of *increased profitability* and thus insurance of future business, as well as *access to increased number of markets* and distribution coverage. In addition, representatives from both companies mention *cost reductions* in terms of a combined logistic set-up as an expectation.

Areas of Concern

Leaf raises concern regarding *distress among employees* due to rationalization of operations and functions in new Cloetta. It is considered of key importance to counteract and neutralize deceptive rumor spreading within the new organization. Measures can be taken in terms of transparency and communication; however, this will only moderate the effects. An integration plan is under development for new Cloetta's organizational structure, however this is not finalized to date. Another concern raised by Leaf is the *differences in size and history* where Leaf is larger and more international with a different ownership structure, while Cloetta's long history provides different values and perspectives. In addition, due to its size, Cloetta is much *more integrated* were for instance production and commerce is combined. Another concern expressed by Leaf is the fact that until 2014 a dual warehouse structure will dominate for the Scandinavian market, which will bring about increased complexity in terms of administrate customer requirements. Critical aspect of ensuring merger success is described as *realizing identified synergies* as well as *organizational integration* by conveying mutual goals and values to establish a common platform for the future work. Leaf expresses how the fusion is of greater significance and thus worries for Cloetta, due long tradition and local rootedness,

²⁷² Cloetta press release 2011-12-16

and that Cloetta's areas of concerns are probably associated with the owner structure and becoming part of a larger organization.

Cloetta on the other hand raises concerns regarding *great changes in operational structure*, where redundant functions will inevitably be assessed and number of employees decreased. Another concern raised by Cloetta is the fact that the set-up of two Swedish warehouses will not be long lasting. This is described as sad and worrying since Cloetta has established a well-functioning and efficient structure in Norrköping, especially in terms of the cooperation with Samhall, which is described as beneficial. A great concern is that this *Samhall will not be prioritized in the future*. Furthermore, sentiments are described among many Cloetta employees regarding changes taking place after 2014. However, there is still hope among many for the remaining of the warehouse in Norrköping.

Furthermore, Cloetta describes concerns regarding the *merger being conducted on a top management level and not operatively*. Cloetta identifies how the concerns for Leaf should be less than Cloetta's since the *new top management consists of prior Leaf management*. In addition, Leaf's size in comparison to Cloetta implies certain *superiority*. Consequently, this will affect the outcome, whereas the concern is that it will be *Leaf's operations, processes and systems that will be implemented*. Cloetta is not placed in the driver's seat, which is evident especially in terms of Cloetta not being represented in the corporate management of new Cloetta. Another concern is the *loss of Cloetta's long-lived values and culture*.

Both companies express how it is too early to tell whether there are reason for the mentioned expectations and areas of concerns.

The Main Logistic Synergy Potential

Both companies describe the main logistic synergy as the *changed set-up in Scandinavia* that allow for *cost-based synergies as well as distribution flows*. However, Leaf describes the many question marks concerning the actual potential. The pre-merger comparison focused upon warehouse structure where it became obvious that there was *significant synergy potential in terms of a mutual Swedish warehouse* located in Norrköping. However, the new changes to be conducted at Leaf have changed that ambition. Today, the cost reductions associated with a mutual warehouse in Norrköping are perceived as small, according to Leaf. However, great synergies are still present when it comes to distribution.

Cloetta describes the *potential of a consolidation of warehouses*, where a combined

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warehouse in Norrköping would be space-efficient without having to increase the staff to a large extent. The additional costs for an expansion of the current warehouse would not be especially high, according to Cloetta, given the increased efficiency. The expansion would also generate benefits for the lessor in terms of increased contract period.

Representatives from both companies describe the *realization of identified synergies* as a critical aspect for the outcome of the merger.

Logistical Similarities and Differences

Cloetta has *less complex logistics flows* in comparison to Leaf and Cloetta has much *more seasonal variations*. However, from warehouse to customer both companies describe the processes as *highly similar with the same customers and same warehouse operations* in terms of handling of goods. Leaf expresses that there are *evident synergies potential* when it comes to administration.

A difference raised by Cloetta is *the beneficial cooperation with Samhall* for the display²⁷³ handling along with the *absence of hierarchy* within the warehouse, enabling *quick decision-making and high flexibility*.

Take on 3PL

Leaf is essentially *positive* to a 3PL solution, and it is considered optimal for Leaf due to *its complex structure* of several production sites where economies of scale are difficult to attain. However, Leaf expresses the implementation of 3PL as highly *situation-based*. Furthermore, 3PL puts completely different demand on warehouse control and causes *less dedicated employees*, with less flexibility in comparison to an in-house solution. Leaf expresses how 3PL should be regarded as a *pure business decision* in terms of where the largest *cost reductions* can be made.

Cloetta is *less positive* and describes the concerns with 3PL as *decreasing quality* and that no attendance or adaptations are made to meet the needs of *strategically important customers*.

Future Outlook

Leaf describes how the *money decides*, together with the *customers' point of view*, how the new Cloetta will be modeled. Important to notice is that *what enables cost*

²⁷³ A display is a marketing tool where the products are *displayed* in an, for the company, attractive way. Displays are often seen near the counters in grocery stores and are an important marketing channel for both Cloetta and Leaf.

reduction for new Cloetta might not be the best option for a customer perspective according to Leaf. Cloetta describes the most preferable future outlook as a *consolidated modern warehouse in Norrköping*, managed together with an *increased cooperation with Samhall*. The consolidated warehouse would also function as a marketing aspect symbolizing new Cloetta. Furthermore, Cloetta emphasizes the importance of *common goals and strategies* on every level in the organization. In addition, that *identified synergies are realized* and that organizational flows are improved.

4.4 Pre-Merger Warehouse Setup

4.4.1 Cloetta

Cloetta's warehouse is located in Norrköping, Sweden, and distributes goods to all Cloetta's markets. A difference between Cloetta and Leaf, in terms of warehousing, is that in Cloetta's case all goods are distributed from the warehouse. On the contrary, Leaf's export goods are distributed directly from the factory. There are in total 13 employees working at Cloetta's warehouse, of which nine are warehouse workers, three are coordinators and one is the warehouse manager. Except for these workers, there are also Samhall workers, who handle the display assembly and packing. Samhall is a state-owned Swedish company, assigned to provide work for people with disabilities.²⁷⁴ The Samhall staff varies between 50 – 100 workers depending on the seasonal requirement, and Samhall charges Cloetta per delivered display.

The warehouse has a total area of 13 031 m², of which Samhall uses 1 500 m². The total number of pallet places is 14 000 and the average usage is around 10 700. The current set-up has further capacity of a few thousand pallet places within the same building, but this space is not rented today. Furthermore the warehouse has an initial expansion possibility of 5500 m², which would increase the capacity with a total of 12 000 pallet places, including the space not rented today. There are also future possibilities to increase an additional 14 000 pallet places by expanding the space with another 5000 m². This would mean that the future capacity could be increased to a total of 40 000 pallet places.

Due to the fact that Cloetta is seasonally dependent, there are periods of large fill-rate increases in the warehouse, where the summer months can be distinguished as the most demanding period in terms of space requirements. The reasons for this

²⁷⁴ <www.samhall.com> 2012-05-03

increased demand is partly due to the factory being shut down during one month every summer for maintenance, and partly to the production and storage of Christmas products starting mid-summer.

4.4.2 Leaf

Leaf is about to realize structural logistics changes of their current warehouse set-up, from one warehouse in Slagelse, Denmark, one warehouse in Malmö, Sweden and a third-party managed warehouse solution provided by DSV that covers the Norwegian market, to using a third party solution provided by Green Cargo with one outsourced warehouse located in Helsingborg, Sweden, while maintaining the 3PL solution in Norway. The closure of the Danish factory in Slagelse and the movement of production to Levice, Slovakia initiated these logistics changes.

4.5 Pre-merger Data Comparison on Logistic Structure

Below the data of the current warehouse structure for Leaf and Cloetta is compiled and compared. The data is divided into the categories warehousing and distribution. Warehousing consists of warehouse complexity, characteristics of goods, order handling and inventory. Distribution is divided into customer structure, customer demand and delivery terms.

4.5.1. Warehousing

Warehousing is considered to involve complexity, characteristics of goods, order handling and inventory. These parameters will be compared between Leaf and Cloetta in order to investigate the similarities and complementarities between the two merging firms. The data concerning Leaf covers the Scandinavian market while it for Cloetta covers the entire market, including exported goods. The reason for this difference is that Leaf is planning to distribute goods from the presented warehouse structure in Scandinavia for the Scandinavian market, while Cloetta uses one warehouse for their entire market. However, Cloetta's market outside Sweden is considerably smaller than Leaf's.

4.5.1.1 Complexity

The complexity of a warehouse is considered to be of importance in order to compare handling costs. Complexity is represented below by activities such as number of trucks per day, number of SKUs²⁷⁵, service level, lead times and the

²⁷⁵ Stock keeping units, in other words, the total number of unique articles kept in stock

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frequency of safety stock updates. These parameters are compiled and presented in table 4 below for Leaf and Cloetta.

Table 4: Comparison of warehouse complexity for Cloetta and Leaf

Parameter	Cloetta	Leaf
Trucks per day	4	16
SKUs	291	580
SKUs display	60	385
Service level (target)	98,5 %	98,5 %
Service level (actual)	99,2 %	98,2 %
Lead time to customer (DAP)*	2 days	2 day
Lead time to customer (EXW)*	1 days	1 day
Updating of safety stock	Three times per year	Once a year

*DAP=Delivered at Place, EXW=Ex works, the buyer picks up the goods their selves.

4.5.1.2 Characteristics of Goods

The characteristics of goods are considered important in order to distinguish the feasibility of integration. Significant differences might indicate difficulties in regards to common handling. The characteristics of goods are represented below by average weight, temperature requirements, handling requirements and occurrence of bulky goods. See table 5 below.

Table 5: Comparison of characteristics of goods for Cloetta and Leaf

Parameter	Cloetta	Leaf
Average weight	232 kg	250 kg
Temperature requirements	16-18 °C	16-18 °C
Handling requirements	Regular warehouse handling	Regular warehouse handling
Bulky goods	No	No

4.5.1.3 Order Handling

Best and Seger emphasizes the importance of a common order handling in order to succeed with co-distribution and thus integration.²⁷⁶ As a consequence, it is important to evaluate order handling to distinguish similarities and complementarities between the two companies. In table 6, the order handling is presented in terms of number of inbound and outbound orders and order lines for Cloetta and Leaf.

Table 6: Number of inbound and outbound orders and order lines for Cloetta and Leaf, annual figures

	Cloetta	Leaf
Number of inbound orders	554	5 012
Number of inbound order lines	3 446	20 529
Number of outbound orders	8 708	23 870
Number of outbound order lines	74 009	222 837

4.5.1.4 Inventory

Chopra and Meindl mentions inventory level as an important driver of supply chain performance. Depending on whether the company holds a large or a small inventory, it has different strategic implications in terms of responsiveness and tied up capital.²⁷⁷ Furthermore it is considered important to distinguish whether there are any complementarities in terms of capacity. In table 7, capacity and capacity requirements are presented for Cloetta and Leaf.

²⁷⁶ Best and Seger 1999

²⁷⁷ Chopra and Meindl 2004

Table 7: Inventory data for Cloetta and Leaf

Parameter	Cloetta	Leaf
Capacity (pallet places)	14 000	-*
Extension possibilities	Yes, an initial expansion would create additionally 12 000 pallet places and a second expansion has the possibility to create another 14 000 making a total of 40 000 pallet places.	-*
Average number of pallets in stock	10 700	19 731

*Since the Leaf Data is based upon a 3PL solution, the maximum capacity is infinite.

4.5.2 Distribution

Best and Seger stresses the importance of similarities in the physical distribution process, stating that as long as there are certain similarities, co-distribution can often be achieved.²⁷⁸ Chopra and Meindl also stresses transportation as a driver of supply chain performance.²⁷⁹ Therefore it is considered important to evaluate the distribution process and the feasibility of co-distribution. This is done by evaluating customer structure, customer demands and delivery terms. These parameters are compiled for Cloetta and Leaf and compared below.

4.5.2.1 Customer Structure

Customer structure is considered to be an important parameter to evaluate, since great similarities might indicate that the geographical location of the warehouse is of less importance thereby enhancing integration feasibility. Furthermore, great similarities in customer structure might enhance synergies such as higher fill rate through co-distribution of goods. The customer structure for Cloetta and Leaf are compared in terms of the five biggest customer for Sweden and which customer that picks up their own goods. The investigation of biggest customers is presented in terms of weight per customer. The restriction to Swedish customers has been made since the distribution outside the Swedish market differ, where Leaf distributes

²⁷⁸ Best and Seger 1999

²⁷⁹ Chopra and Meindl 2004

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directly to the customers and Cloetta uses one large wholesalers on each respective market. See table 8 and 9 below.

Table 8: Presentation of the five biggest customers in terms of weight for Cloetta and Leaf, annual figures

Company	Customer	Weight (kg)	Company	Customer	Weight (kg)
Leaf	Axfood*	3 390 883	Cloetta	Ica	3 508 645
Leaf	Ica	2 833 093	Cloetta	Axfood*	3 422 323
Leaf	Candy King	2 114 492	Cloetta	Coop	1 734 955
Leaf	Privab	1 346 669	Cloetta	Candy King	1 074 619
Leaf	Coop	1 076 960	Cloetta	Privab	436 364

*Includes Närlivs and Dagab

Table 9: Presentation of the customers that picks up their own goods from Cloetta and Leaf respective

Cloetta	Leaf
Ica	Ica
Menigo	Menigo
Coop	Coop
Bergendahl	Bergendahl
Ikea Ceska republica	Ikea international
Candy King	Candy King
Privab AB	ÖB
	Axfood

4.5.2.2 Customer Demands

Customer demands is another important parameter to compare in order to evaluate integration feasibility. A comparison of the share of picked pallets and full pallets delivered between the two companies is performed in order to see whether there are any similarities or complementarities. See table 10 below.

Table 10: Share of full pallet versus picked pallet and number of unit picks for Cloetta and Leaf, annual figures

	Cloetta			Leaf		
	Full pallets	Picked pallets	Unit pick	Full pallets	Picked pallets	Unit pick
Sweden	90 %	10 %	793 879	70 %	30 %	1 534 111
Denmark	-*	-*	-*	30 %	70 %	670 254
Norway	-*	-*	-*	60 %	40 %	1 114 609

*Cloetta distributes all products to Denmark and Norway from their warehouse in Norrköping and there is no specific data regarding these markets. However, since Cloetta uses wholesalers to distribute to Denmark and Norway orders constitute mostly of full pallets.

4.5.2.3 Delivery Terms

Finally, delivery terms are compared to see if there are any similarities or complementarities between the two firms. The delivery terms for Cloetta and Leaf are presented in table 11 below.

Table 11: Delivery terms for Cloetta and Leaf

Parameter	Cloetta	Leaf		
Delivery terms*	86 % EXW 14 % DAP	SE 70 % EXW 30 % DAP	DK 15 % EXW (hub) 85 % DAP	NO 100 % EXW (hub)
Delivery of exported goods	From warehouse	From factory		

*The delivery terms specified for Cloetta are for their entire market. However, for Denmark and Norway Cloetta uses wholesalers and thus having 100 % EXW

5. Analysis

The analysis is divided into three different steps: data analysis, application of framework and scenario analysis. The first step, data analysis, consists of an analysis of the data presented in the empirics, and aims at highlighting key similarities and complementarities and their respective implications. The result provides input, in terms of combination potential, applicable to the theoretical framework developed, see figure 10. By applying the theoretical framework, the companies' synergy realization potential is evaluated theoretically. The theoretical synergy potential is then evaluated in four different scenarios, which consist of different warehouse set-ups, in terms of both integration level and outsourcing versus insourcing. The scenarios are evaluated in terms of cost and feasibility.

5.1 Data Analysis

After the gathering and compilation of data, certain similarities and complementarities was identified for Leaf and Cloetta. These similarities and complementarities are summarized in table 12 below:

Table 12: Similarities and complementarities for the different areas presented in the empirics

	Similarities	Complementarities	Differences
Warehousing			
Complexity		X	
Characteristics of goods	X		
Order handling			X
Inventory	X		
Distribution			
Customer structure	X		
Customer demands		X	
Delivery terms		X	

As can be seen similarities or complementarities can be found in six of the seven areas examined. A more thorough analysis of the different areas is presented below.

5.1.1 Warehousing

5.1.1.1 Complexity

The warehouse complexity of the two companies was evaluated in terms of trucks per day, SKUs, service level (both target and actual levels), lead times and update frequency of the safety stock. The empirical results revealed that Leaf has a lot more SKUs than Cloetta and more trucks per day, thus indicating that Leaf has more

warehouse complexity than Cloetta. However, Cloetta has a higher service level than Leaf, although identical target level, and updates the safety stock three times more often than Leaf. However given the differences between the two companies in terms of complexity there are distinguished complementarities in terms of best practice between the two warehouses. Important to note and stressed by Best and Seger is the risk of merging companies taking on the worst service level of the two companies.²⁸⁰ Consequently this is an important issue to handle in order to preserve customer satisfaction post-merger for new Cloetta.

5.1.1.2 Characteristics of Goods

The similarity of goods is, unsurprisingly, high between the two. The companies manage goods with similar weight and bulkiness and similar temperature- and handling requirements. The high similarity indicates facilitated mutual handling since similar warehouse personnel know-how, machinery and equipment such as trucks and wrapping can be applied to both companies' goods. As a result, the integration feasibility increases.

5.1.1.3 Order Handling

There are great differences in the number of handled orders and order lines between the two companies. The difference is especially high when comparing inbound orders and order lines, but significant in outbound order handling as well. Even though, number of order lines per order do not differ significantly, Cloetta has an average of six order lines per inbound order and nine order lines per outbound order, while Leaf has an average of four order lines per inbound order and nine order lines per outbound order, Leaf handles almost ten times as many inbound orders and three times as many outbound orders than Cloetta. The identified differences imply a different structure in handling of orders between the two companies, which is an important aspect to take into consideration. Cloetta seems to order larger quantities per order than Leaf does. Best and Seger emphasizes the importance of a common order handling in order to achieve successful co-distribution.²⁸¹ However, if these differences are managed correctly there might be complementary benefits between the companies in terms of complementary best practice.

²⁸⁰ Best and Seger 1999

²⁸¹ Ibid

5.1.1.4 Inventory

The empirical findings on inventory demonstrate great similarities in terms of goods stored, which indicate a similar structure. Furthermore, both companies have the possibility to increase current capacity. Since Leaf has outsourced its warehouse to a 3PL provider, the capacity is infinite. Cloetta on the other hand has a maximum limit, but given the extension possibilities, Cloetta can increase the maximum capacity to a total of 40 000 pallet places, which is enough to incorporate Leaf's Scandinavian goods. The empirical result on inventory thus indicates high integration feasibility, since both companies can incorporate the other within its current structure.

5.1.2 Distribution

5.1.2.1 Customer Structure

Key customers, defined in terms of largest contributors to total weight, are similar for the two parties, which is unsurprisingly since the merger is of horizontal nature. In addition, the customers that pick up their own goods are also similar for the Leaf and Cloetta. The empirical result regarding the customer structure increases the integration feasibility between the two since the geographical location of the warehouse should be of less importance. Furthermore, a similar customers structure enhances synergies such as higher fill rate through co-distribution.

5.1.2.2 Customer Demands

Customer demand is investigated in terms of proportion of picked opposed to full pallets. Differences between the two companies can be identified, where Cloetta distributes a higher proportion of full pallets than Leaf in Sweden, which indicates lower handling cost per pallet. The comparison is more difficult to conduct in terms of Denmark and Norway; however, a similar pattern is likely to be present since Cloetta uses wholesalers in Denmark and Norway, while Leaf does not. In conclusion, the analysis reveals that there are best practice complementarities in the handling of pallets where Leaf could benefit from a higher proportion of full pallets.

5.1.2.3 Delivery Terms

When comparing delivery terms for Cloetta and delivery terms for Leaf, it is distinguished that Cloetta has a slightly higher proportion of EXW. However, Cloetta's proportion is deceiving since Denmark, Norway and export is incorporated, while separated at Leaf. In terms of exported goods, the distribution structure differs since Leaf distributes export goods directly from the factory while Cloetta distributes exported goods from the warehouse, as with all other goods. Regardless

of method chosen, customer impact should be insignificant which indicates customer indifference to either structure.

In addition, the distribution structure differs between the companies in the Danish and Norwegian market, whereas Cloetta uses a wholesaler to handle each market and Leaf does not. Leaf's present structure can be seen as cumbersome due to the direct handling of specific customer demand. However, Leaf's chosen structure can be explained by the fact that they, in comparison to Cloetta, has more ability, resources and knowledge to handle the markets internally as well as greater market presence. The differences in aspect to distribution structure outside Sweden indicate complementarities.

5.2 Application of Theoretical Framework

Given the theoretical framework, see figure 10, the main factors that affect potential logistics synergy realization are *combination potential*, *integration* and *employee resistance*. These factors are in turn affected by *relative size*, *geographical overlaps*, *pre M&A quality* and *management style similarities*.^{282, 283} The purpose of the framework is to explore potential synergy realization within logistics, with a general synergy focus while simultaneously providing a differentiated picture of important logistics parameters. The framework builds on the research of Larsson and Finkelstein, who concludes that the most important factors affecting merger success is *combination potential*, *organizational integration*, *employee resistance*, *management style similarity*, *cross border integration* and *relative size* of the merging companies.²⁸⁴ Along with the framework developed by Häkkinen et al. who concludes that the factors affecting logistics synergy realization are *similarities*, *complementarities*, *geographical overlaps*, *relative size*, *pre-M&A quality* and *M&A experience*.²⁸⁵

5.2.1 Combination Potential

Combination potential is affected by similarities, complementarities, geographical overlaps and relative size.²⁸⁶ Given the analysis conducted above, great similarities and complementarities can be distinguished within both warehouse and distribution structure, which increases the combination potential. The geographical overlaps are

²⁸² Häkkinen et al. 2004

²⁸³ Larsson and Finkelstein 1999

²⁸⁴ Ibid

²⁸⁵ Häkkinen et al. 2004

²⁸⁶ Ibid

large, since both companies' main market is Sweden, which entail a positive impact on combination potential in terms of cost reducing possibilities.²⁸⁷ The relative size of the acquired company, Cloetta, is big, thus increasing combination potential. Consequently, given the parameters presented, the combination potential for Leaf and Cloetta is regarded as high.

5.2.2 Integration

Integration is affected by combination potential, geographical overlaps, relative size and pre-merger quality.²⁸⁸ Given a high combination potential for Cloetta and Leaf, this has a positive effect on integration. The geographical overlaps are significant which has a positive affect on integration. The relative size of the two companies is significant, thus having a positive effect on integration. Finally, integration is affected by pre M&A quality, which means the quality of the processes before the merge.²⁸⁹ If one company has a superior process, this implies integrating the other company's process into the superior one.²⁹⁰ However, in this case no superior process can be distinguished for either company, thus not affecting integration. Given the parameters presented, the level of integration should be high.

5.2.3 Employee Resistance

An important aspect negatively affecting potential synergy realization is employee resistance.²⁹¹ Based upon the interviews conducted with employees from both companies, highly similar expectations can be distinguished which facilitates integration ambitions. Employee resistance, however, can be distinguished in terms of employee concerns at both companies. The concerns are based upon suspicion of rationalization of operations and functions, consequently causing layoffs or change of role and area of responsibilities. Another important area distinguished in the interviews conducted is the differences regarding future outlook, whereas Leaf is more focused upon a future outsourced solution for the entire Scandinavian market whereas Cloetta express an ambition of consolidation in Norrköping. The diversified picture might contribute to the implications concerning employee resistance and thus negatively impacting organizational integration and potential synergy realization.

²⁸⁷ Häkkinen et al. 2004

²⁸⁸ Ibid

²⁸⁹ Ibid

²⁹⁰ Ibid

²⁹¹ Larsson and Finkelstein 1999

Management style similarities can reduce employee resistance²⁹², but are distinguished as small post-merger, due to the different size and historical traditions of the two. However, the new upper management of the merged company will consist of prior Leaf management, consequently generating the same management style and thus positively affecting potential synergy realization. However, following the same reasoning and based upon the interview results, the high Leaf representation might also contribute to increased employee resistance.

5.2.4 Potential Synergy Realization

Besides from the parameters presented above, potential synergy realization is affected by pre M&A quality and M&A experience.²⁹³ Since no superior process is identified, pre M&A quality should not affect potential synergy realization. Furthermore, no real sign of M&A experience is found and is therefore not considered to affect potential synergy realization. However, given the factors presented above, the application of the framework shows considerable synergy realization potential in the case of new Cloetta.

5.3 Scenario Analysis

To evaluate the synergy potential derived from the framework presented above, four scenarios are investigated. The scenarios chosen are considered to be most logical given the current structure and illustrate different integration levels, which is interesting from a theoretical perspective, where integration is considered of outermost importance in order to ensure synergy realization.²⁹⁴ The scenarios are evaluated both in terms of cost and feasibility. The cost analysis is based on quantitative data provided by both companies, presented in previous chapter. The feasibility aspect, on the other hand, takes into account more qualitative data, such as service level, lead times and results from the analysis; consequences of centralization given customer structure for instance. The scenarios that are evaluated are following:

- Scenario one - Zero integration
- Scenario two - Full integration using an outsourced logistics solution
- Scenario three - Full integration keeping the warehousing in-house
- Scenario four - In-house integration combined with outsourcing

²⁹² Larsson and Finkelstein 2004

²⁹³ Häkkinen et al. 2004

²⁹⁴ Larsson and Finkelstein 1999

Consequently, the first scenario is evaluated in terms of no integration between the two companies but keeping the present set-up structure. Scenario two and three represent full integration of the warehousing of the two firms, either by an outsourced scenario or an in-house scenario. The last scenario represents comprised integration. Figure 12 illustrates the geographical location of each scenario and the size of the red dots indicates how many pallets being stored. Each scenario is elaborated further below.

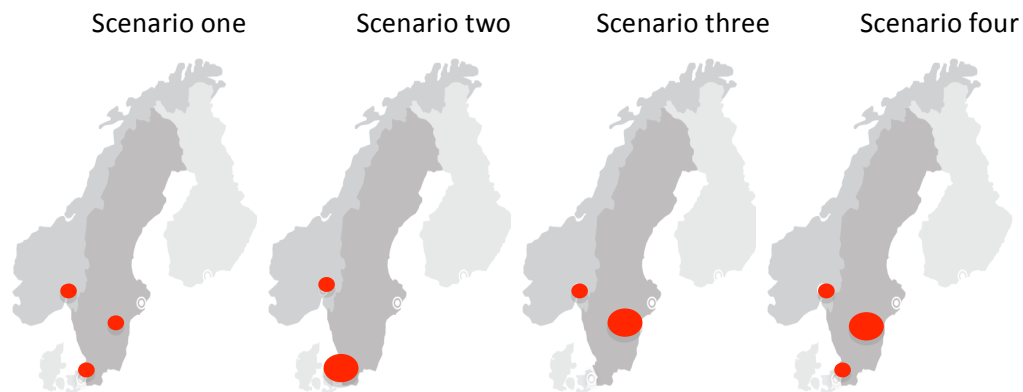


Figure 12: Geographical location of scenario one to four

Since the display handling and display design differs significantly between the two companies, where Cloetta handles a higher amount of small and complex displays than Leaf does. The assumption is made that both companies uses the best possible solution and no cost savings can be derived from this area. In turn, this implies that the cost of displays will not affect the outcome of either scenario and will therefore be disregarded in the scenario analysis.

5.3.1 Zero Integration

The first scenario evaluated is to preserve the current structure of today and consequently not integrating any aspects of the two companies in terms of logistics. Leaf would keep its, in shortly, implemented outsourced solution for Leaf's Scandinavian market and Cloetta its warehouse in Norrköping. The warehousing cost for Leaf in the 3PL solution and the warehousing cost for Cloetta would be the same as today. This setup would mean no synergy realization within warehousing.

Since the exact cost for the two companies are sensitive data, no exact figures will be presented. However, this scenario will work as a normative value and the other

scenarios will be compared to this scenario. To facilitate comparison, this scenario is given the value 1.

5.3.2 Integration

Different levels of integration is evaluated in terms of three different scenarios: outsourced logistics using Leaf's 3PL solution, in-house incorporation of Leaf in Cloetta's facilities in Norrköping, or integrating Leaf's Swedish warehouse at Cloetta's facilities while remaining the warehousing of goods to Denmark and Norway outsourced. Thus, the scenarios either reflect Leaf's or Cloetta's current structure, or a combination of these. It is also considered interesting to evaluate if there are any differences in how the integration is performed, in other words, if there are any advantages with outsourcing the warehousing or keeping it in-house.

5.3.2.1 Scenario Two: Outsourced Logistics

Leaf has previously evaluated different logistics set-ups and has chosen an outsourced solution with Green Cargo. The restructuring program is expected to yield cost savings and it is therefore of interest to evaluate Cloetta in the same template. This enables to distinguish how much a 3PL solution for Cloetta would cost and if it would provide any cost savings for the new Cloetta. When applying the template on Cloetta, the total cost of using a 3PL solution for both Cloetta and Leaf turned out to be 0,74 compared to zero integration. However, given the fact that the volumes are increased, possible economies of scale might be achieved through better prices from the 3PL provider, which might contribute to further reducing the total cost of warehousing.

5.3.2.2 Scenario Three: In-House Integration

In order to evaluate the in-house integration scenario when incorporating Leaf in Cloetta's warehouse, Cloetta's current cost of warehousing is extrapolated using certain assumptions. For instance, the estimation of cost is performed with the help of Cloetta's inventory manager where the main assumptions is that the warehouse has an initial extension possibility of 5500 m² providing an additional 12 000 pallet places and that the employees will have to be increased from 9 to 16 warehouse workers. The warehouse management, consisting of the warehouse manager and three warehouse coordinators, will not need to be increased. Furthermore, there are additional extension possibilities of 5000 m² that would yield another 14 000 pallet places. The same pallet place – employee ratio will be used, meaning that the 14 000 extra pallet places would need an extra 9 warehouse workers, not increasing

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management. This would mean a total of 25 warehouse workers. The initial extension possibility is considered to have a high feasibility and the figures are considered reliable. However, the figures presented for the second extension are less certain since additional costs might appear, such as increased loading space and higher employee cost due to shift work if utilizing all 40 000 pallet places. Furthermore, the feasibility is considered lower than for the initial extension.

These assumptions are used to extrapolate all costs that are likely to increase. This is done by using the relative increase of either space or personnel depending on what the cost is associated with. When estimating the cost of rent, it is assumed that the price per m² will stay the same and potential synergies will be derived from more efficient handling and better use of available space. The prices assume that the cost of handling for a Leaf pallet is the same as for a Cloetta pallet. Given the many similarities, this should be true.

The total cost of incorporating Leaf in Cloetta's warehouse is either 0,72 or 0,95 compared to zero integration, depending on alternative. As stated previously the second alternative is associated with uncertainties regarding figures and also feasibility. A warehouse with that magnitude would be more complex and therefore demand high competence from the employees. However, it should be noted that given the current average usage of Leaf and Cloetta, the second alternative would have overcapacity of around 10 000 pallet places, or 31,5 %. This should easily cover seasonal fluctuations and also has room for Cloetta and Leaf to grow. The overcapacity also implies that the number of employees probably could be reduced to better correspond to current needs.

The first alternative has a considerably lower cost than the scenario with zero integration, while the second alternative has a slightly lower cost. The first alternative is dependent on that 26 000 pallet places is sufficient, which implies a reduction in the current average usage of pallet places for both Cloetta and Leaf, since the combined usage of pallet places is around 30 000. Furthermore seasonal fluctuation would have to be matched in order to eliminate capacity shortage. The second alternative has overcapacity of around 10 000 pallet places, which implies that the employee cost probably could be reduced. Furthermore, all synergy benefits are assumed to be derived through more effective usage of space, for example, more pallet places per m² and better fill rate. In reality it is likely that other synergies could be achieved as well, such as better fill rate in trucks for instance.

Given overcapacity in the second alternative and the probability of more synergies,

integration in-house ought to be a more profitable alternative than not integrating at all.

5.3.2.3 Scenario Four: In-House Integration Combined with Outsourcing

The final scenario, number four, is a combination of outsourcing and integration. The scenario evaluates keeping Leaf’s pre-merger structure of a outsourced logistics solutions, in terms of goods distributed to the Danish and Norwegian markets, while integrating the goods distributed to the Swedish market into Cloetta’s facilities in Norrköping. Hence, the 3PL solution in Helsingborg would provide Denmark with goods, but no longer cover the Swedish market and the 3PL solution in Norway would provide the Norwegian market with goods. In order to consolidate both companies’ goods for the Swedish market, Cloetta’s present warehouse will be required to expand. As presented in scenario three, there are two expansion possibilities. Given that scenario four’s consolidation only covers Leaf’s goods for the Swedish market, the first expansion alternative, increasing the capacity to 26 000 pallet places, is presumed to be sufficient. Furthermore, the same template for the 3PL solution will be used as before, but with a reduced number of units. The assumption is made that the same unit prices will apply.

The cost of consolidating Leaf’s goods for the Swedish market into the warehouse in Norrköping is 0,72 and the cost of outsourcing the warehousing of the goods that Leaf distributes to Denmark and Norway is 0,21. The total cost is therefore 0,93 compared to zero integration.

5.4 Results from the Scenario Analysis

Below the results from the scenario analysis is presented and further elaborated on in regards to the impact of logistics network design. In comparison to scenario one, scenarios two-four, which represent integration of some level, are proven to be more beneficial for new Cloetta in terms of cost, see table 13.

Table 13: Cost comparison of the different scenarios

Scenario 1	Scenario 2	Scenario 3		Scenario 4
1	0,74	0,72*	0,95**	0,93

*Using the initial extension possibility increasing total number of pallet places to 26 000

**Using the second extension possibility increasing the total number of pallet places to 40 000

Scenario one indicates that the current structure would be kept as it is today, which

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implies a decentralized warehouse structure with the potential of reduced transportation distance to customers. Thus, scenario one contributes to potential cost reduction in distribution, hence, a reduced risk of customer dissatisfaction due to shorter distances. However, in order for the warehouse structure to be considered decentralized both Leaf and Cloetta's products would have to be distributed from each warehouse, otherwise the positive effects of decentralization is not achieved and transportation distance would remain the same as is today. Furthermore, the consolidation of goods and, consequently, the fill rate of outgoing trucks, are negatively affected by decentralization and would, in the case of new Cloetta, not change from today in scenario one. Scenario one, therefore, implies lower fill rates than if integrating and therefore higher transportation costs.

The advantages with a decentralized structure are in the case of new Cloetta is the lower warehouse complexity and the reduced risk of employee resistance. However given the significantly higher cost, scenario one is disregarded as the optimal solution for new Cloetta. Consequently, the results of the scenario analysis in terms of costs denotes the importance of integration when trying to achieve synergy realization.

The integration of warehouses, in terms of outsourcing or incorporation in Norrköping, has similar effects on new Cloetta as warehouse centralization. A risk with integrating is thus the possible effect of increased delivery distances to customers and consequently an increased risk for customer dissatisfaction. However, the similarity in customer structure should counteract this effect since the importance of the location decision decreases for the integrated scenarios, therefore, the current transportation distance should not increase.

Given the high similarity in customer structure and the fact that the largest customers pick up their ordered goods at both companies' warehouses, it should only have a positive impact to integrate, since customers only have to pick up goods at either company's current warehouse location. In addition, another positive aspects caused by the high level of mutual customers is that one larger warehouse would enable more present mutual customers to reach the limit of volume discounts and thereby receive a better price for an equal amount of goods, which has the potential to increase customer loyalty.

In addition, by integrating the two companies' warehouses, the benefits of economies of scale in distribution can be achieved. The increase of transportation costs from an integrated scenario will be countered by load consolidation and

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increased vehicle capacity utilization. The fill rate for both customers responsible for picking up the goods as well as for customers for which Leaf and Cloetta provides outbound transportation would increase. In addition, new Cloetta would decrease outbound transportation per unit in the later example for mutual customers.

Integrating warehouses will indefinitely increase the demand on warehouse sophistication, in terms of processes for instance, in order to handle the demand and specific needs of different areas, countries or markets. Additional costs may therefore arise not included in the analysis of scenario three. The increased scale may however motivate automation of the warehouse which might lead to further cost reductions.

6 Conclusion

This chapter concludes the main findings of the application of the theoretical framework, figure 10. In regards to the findings, a revised framework, figure 13, with the ambition to facilitate the evaluation of potential logistical synergies in horizontal M&As, is developed.

The application of the theoretical framework, see figure 10, concludes that the Cloetta and Leaf merger is considered to have significant synergy realization potential given a high combination potential and integration level. The combination potential is important when integrating, since too many differences lacking the characteristics of complementarities might significantly reduce the feasibility and synergy potential of integration. In the Cloetta and Leaf merger there are many similarities, which lead to a high combination potential, which therefore enables integration. Based upon the empirical results and the theoretical framework, figure 10, the most important parameter is similarities, since it directly impacts the combination potential and thus integration without further need of evaluation. Complementarities, in turn, need to be addressed further to distinguish whether they actually contain realization enhancers in terms of best practice or combination potential, or instead if the differences are of such gravity that synergy realization is unfeasible. Geographical overlaps are considered a facilitator of combination potential, since many similarities and complementarities stem from the fact that both companies are present at the same geographical market. Geographical overlaps are also considered to facilitate integration, which is evident in the Cloetta and Leaf merger. Relative size is shown to have a positive affect on combination potential, since the relative size of the companies are significant, which enables more similarities and complementarities to be found and making the impact of these more substantial, which in turn generates a higher combination potential. No sign of the impact of relative size upon integration can be distinguished, however, since it cannot be entirely dismissed, the affect of relative size on integration are kept in the framework. Furthermore, relative size has demonstrated signs of impact on another area: employee resistance, which is not identified in previous literature. The employee resistance is identified in terms of concerns raised from Cloetta in terms of the superiority of Leaf, a consequence of the relative size.

The outcome of the scenario analysis correspond to the high importance of post-merger integration, whereas the three scenarios advocating integration of some extent where revealed to have improved realization opportunity in terms of cost-based synergies potential in comparison to scenario one. The case study underlines

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the importance of integration in terms of warehousing and distribution in order to reach synergies. Integration is thus proven to be of outermost importance, an aspect emphasized in the theoretical framework applied presented in figure 10.

Employee resistance is evident in the case of new Cloetta, whereas employee resistance can be distinguished by raised concerns and different perceptions of the future of new Cloetta. Management style similarities are considered low in the Cloetta and Leaf merger, which is considered to have an enhancing affect on employee resistance. Furthermore, according to literature, employee resistance is often present in the cases of horizontal M&As and especially in terms of having negative impact upon the realization of similarities²⁹⁵, which is distinguished in the empirical result. Therefore, many similarities seem to enhance employee resistance, why the ratio between similarities and complementarities is important to evaluate, since employee resistance can have negative impact on integration and thus potential synergy realization.

In the case study, no significant impact of the following aspects are identified, pre-M&A quality and M&A experience, which is due to the specific case setting. Both pre-M&A quality as well as M&A experience have not been distinguished as significant in the case, why no conclusion regarding these areas are made. However, to ensure generalizability of the conclusions made these areas are not dismissed, but kept in the model.

The identified areas of improvement have been addressed in the revised framework presented in figure 13. The framework resembles the theoretical framework presented in figure 10, with the difference that two additional parameters have been added in accordance to empirical findings. These areas are highlighted in grey. The framework visualizes the critical activities and their sequence in order to achieve logistical synergies in M&As. The framework is based on the framework provided by Häkkinen et al.²⁹⁶ and the research of Larsson and Finkelstein.²⁹⁷ Furthermore important logistics aspects discussed by Best and Seger²⁹⁸ and Chopra and Meindl²⁹⁹ have been incorporated, as well as the key findings from the case study.

²⁹⁵ Larsson and Finkelstein 1999

²⁹⁶ Häkkinen et al. 2004

²⁹⁷ Larsson and Finkelstein 1999

²⁹⁸ Best and Seger 1989

²⁹⁹ Chopra and Meindl 2004

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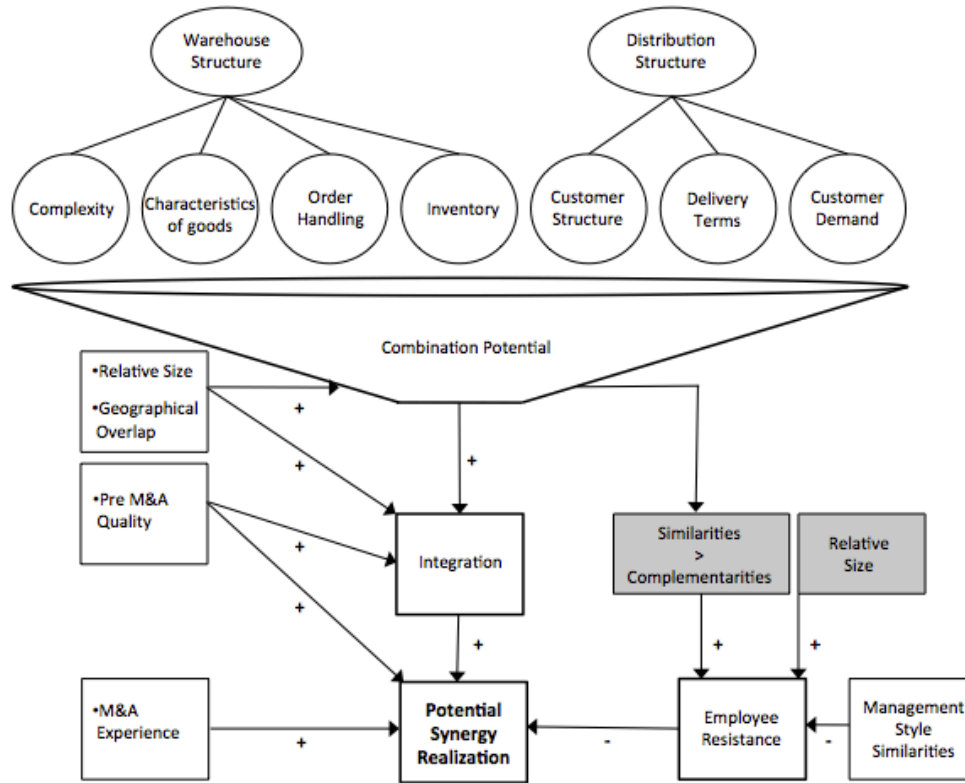


Figure 13: Potential Logistics Synergy Realization Framework (PLSR Framework)

7 Final Remarks

In this chapter, the main conclusions are summarized and compared to the purpose, initial goal and research questions. Furthermore, the empirical as well as theoretical contribution is discussed. The chapter is finalized with a discussion upon the generalizability of the result.

7.1 Achievement of Goal and Answering of Research Questions

The first research question was to investigate how previous literature has considered logistical synergies in horizontal M&As. The exhaustive theoretical framework, see figure 10, developed upon the key theoretical findings illustrated how theory describes factors affecting potential synergy realization. The second research question was to investigate what has been written the last ten years and a literature review revealed that no major research has been added to field. The literature review was conducted on the largest supply chain management journals, investigating articles published regarding logistics synergies within M&As. The results from this literature review highlighted a lack of attendance on the subject, and thus the importance of contributions to the field of research. The third research question was to investigate the current logistics structure of Cloetta and Leaf, which has been performed through a comprehensive data gathering and analysis process. The fourth research question was to determine the optimal warehouse structure for new Cloetta. The performance of the scenario analysis, provide evidence of integration being the most cost efficient set-up, given the data analyzed. The final research question was to evaluate the applicability of previous literature on the Cloetta and Leaf case. According to the outcome of the scenario analysis, current literature seems applicable on the Cloetta and Leaf case, however, no author alone provides a complete framework. Furthermore, the application of the theoretical framework implies that even though insights from several authors are combined, areas of clarification and elaboration is still needed. These insights were incorporated into the Potential Logistics Synergy Realization Framework (PLSR Framework), see figure 13, thus achieving the goal of the thesis, which was to establishing a framework for logistics synergy realization, consisting of key factors and their sequence and interrelation in a pre-merger phase.

7.2 Contribution

The PLSR Framework developed in this master thesis, see figure 13, is based upon a compilation of existing literature into a framework and the key findings from the case study, which in turn are derived from the application of the theoretical framework, see figure 10. The PLSR Framework thus contributes to the filling of the theoretical gap in previous literature. In addition, the theoretical contribution

consists of increased understanding of logistical synergies in terms of pre-merger drivers of synergy and their interrelatedness and sequence for potential synergy realization in horizontal mergers. The PLSR Framework can contribute empirically through application in other horizontal M&A settings. Thus provide increased understanding and proper attendance of logistical synergies and key parameters to regard. By applying the framework as a pre-merger evaluation tool, the potential realization of logistical synergies can be increased and thereby raise the number of successful M&As. Consequently, corresponding to the purpose of the thesis to increase knowledge of logistical synergies in horizontal M&As and the realization of these.

7.3 Generalizability

As stated in the method chapter, generalizability is somewhat restricted in a case study. However, it is stated that the main purpose is not to develop new theory, but to contribute to the understanding of logistical synergies in horizontal M&As. This is performed by compiling existing literature in a theoretical framework, figure 10, along with the evaluation of four scenarios given the case of Cloetta and Leaf. Consequently, the fact that the PLSR Framework, figure 13, is rooted in theory, the generalizability is considered to increase. Furthermore the results presented are considered applicable in other firms, since no industry specific information is included in the framework and all factors are evaluated on a general level, thus increasing generalizability. The only restriction is that the M&A assessed must be of horizontal character and that the potential synergies evaluated are in terms of logistics aspects associated with warehouse and distribution.

References

Written Sources

Articles

Berkovich, E., Narayanan, M.P., 'Motives for takeovers: an empirical investigation', *J. Financ. Quant. Anal.*, vol. 28, no. 3, 1993, pp. 342–67.

Benitez, J., and Gordon, B., 'The Race is On for Supply Chain Success'. *Anderson Consulting White Paper*, 2000.

Best, W. J., and Seger, R.E., 'Synergy Benefits In Distribution: Easy to See, Harder to Get', *The Journal of European Mergers and Acquisitions*, vol. 2, no. 2, 1989, pp. 44-49.

Blake, R. R., Mouton, J. S., 'How to Achieve Integration on the Human Side of the Merger', *Organization Dynamics*, vol. 13, 1985, pp. 41-56, 769–782.

Bower, Joseph L., 'Not All M&As Are Alike – and that matters', *Harvard Business Review*, vol. 79, no. 3, 2001, pp. 93-101.

Calipha, R., Tarba, S.Y, and Brock, D.M, 'Mergers and Acquisitions: a Review of Phases, Motives, and Success Factors', *Advances in Mergers and Acquisitions*, vol. 9, 2010, pp. 1-24.

Campbell, A., and Goold, M., 'Desperately seeking synergy', *Harvard Business Review*, vol. 76, 1998, pp. 131–145.

Capron, L., 'The Long-Term Performance of Horizontal Acquisitions', *Strategic Management Journal*, vol. 20, no. 11, 1999, pp. 987-1018.

Caputo, M., and Mininno, V., 'Internal, Vertical and Horizontal Logistics Integration in Italian Grocery Distribution', *International Journal of Physical distribution and Logistics Management*, vol. 26, no. 9, 1996, pp. 64-90.

Chatterjee, S., 'Types of Synergy and Economic Value: The Impact of Acquisitions on Merging and Rival Firms', *Strategic Management Journal*, vol. 7, no. 2, 1986, pp. 119-139.

Currie, W., 'The Supply-Side of IT Outsourcing: The Trend Towards Mergers, Acquisitions and Joint Ventures', *International Journal of Physical distribution and Logistics Management*, vol. 30, no. 3, 2000, pp. 238-254.

Datta, D.K, Organizational fit and acquisition performance: Effects of post-acquisition integration. *Strategic Management Journal*, vol. 12, 1991, pp. 281-297.

Diven, D. L., 'Organization planning: The neglected factor in merger and acquisitions strategy', *Managerial Planning*, vol. 33, 1984, pp. 1, 4-12, 18.

Eccles, R.G., Lanes, K.L., and Wilson, T.C., 'Are You Paying Too Much for That Acquisition?', *Harvard Business Review*, vol. 77, no. 4, 1999, pp. 136-146.

Greenwood, R., Hinings, C. R., Brown, J., 'Merging professional service firms', *Organization Science*, vol. 5, 1994, pp. 239-257.

Herd, T., Saksena, A., and Steger, T., 'How Supply Chains Drive M&A Success', *Harvard Business Review Newsletter*, vol.1, no.8, 2005, pp. 9-11.

Hunt, J. W. 'Changing pattern of acquisition behaviour in takeovers and the consequence for acquisition process. *Strategic Management Journal*. vol. 11, 1990, pp. 69-77.

Häkkinen L, Norrman A, Himola O.P., and Ojala L., 'Logistics integration in horizontal mergers and acquisitions', *The International Journal of Logistics Management*, vol. 15 no. 1, 2004, pp. 27-42.

Ilinitch, A.Y., D'Aveni, R.A., and Lewin, A.Y., 'New Organizational Forms and Strategies for Managing in Hypercompetitive Environments', *Organization Science*, vol. 7, no. 3, 1996, pp. 211-220.

Mirvis, P. H. and Marks, M. L., 'The Human Side of Merger Planning: Assessing and Analyzing "Fit"', *Human Resource Planning*, vol. 15, no. 3, 1992, pp. 69- 92.

Montgomery, C. A., Hariharan, S., 'Diversified Expansion by Large Established Firms', *Journal of Economic Behavior and Organization*, no. 15, 1991, pp. 71-89.

Katz, J. P., Sinamek, A., and Townsend, J. B., 'Corporate mergers and acquisitions: One more wave to consider', *Business Horizons*, January-February, 1997, pp. 32-40.

Kusewitt, J.B., 'An exploratory study of acquisition factors relating to performance', *Strategic Management Journal*. vol. 6, 1985, pp. 151-169.

Langabeer, J., and Seifert, D., 'Supply chain integration: the key to merger success', *McKinsey Quarterly*, March/April, 2003, pp. 58-64.

Larsson, R., and Finkelstein, S., 'Integrating Strategic, Organizational, and Human Resource Perspectives on Mergers and Acquisitions: A Case Survey of Synergy Realization', *Organization Science*, vol. 10, no 1, 1999.

Drivers of Logistics Synergy Realization in Horizontal M&As

- Ojala, L., 'Changing Logistical Patterns and Policies in Northern Europe', *The international Journal of Logistics Management*, vol. 2, no. 2, 1993, pp. 42-54.
- O'Shaughnessy, K.C., and Flanagan, D.J., 'Determinants of Layoff Announcements Following M&As.' *Strategic Management Journal*, vol. 19, 1998, pp. 989-999.
- Panzar, J. C. and Willig, R. D., 'Economies of scope', *American Economic Review*, vol. 71, no. 2, 1981, pp. 268 – 272.
- Searby, F.W., 'Control postmerger change', *Harvard Business Review*, vol.47, no.5, pp. 4-13, 1969, pp. 4-13, pp. 154-155.
- Schweiger, D., and Walsh, J., 'Mergers and Acquisitions: an interdisciplinary view', in Rowland, K.M. and Ferris, G.R. (Eds), *Research in Personnel and Human Resource Management*, 1990, pp. 41-107, Greenwich, CT:JAI Press.
- Shelton, L. M., 'Strategic Business fits and corporate acquisition: Empirical evidence', *Strategic Management Journal*, no 9, 1988, pp. 279-287.
- Shrivastava, P., 'Post-merger integration', *Journal of Business Strategy*, vol. 7, no.1, 1986, pp. 65-76.
- Singh, H., Montgomery, C. A., 'Corporate Acquisition Strategies and Economic Performance', *Strategic Management Journal*, no. 8, 1987, pp. 377-386.
- Taqi, S. J., 'Catching Shadows: Success and Failure in the Search for Synergies', *The Journal of European Mergers and Acquisitions*, vol. 3, no. 5, 1991, pp. 24-37.
- Teece, D. J., 'Towards an economic theory of the multi-product firm', *Journal of Economic Behavior and Organization*, vol. 3, 1982, pp. 39–63.
- Tetenbaum, Toby J., 'Beating the odds of Merger & Acquisition failure: Seven key practices that improve the chance for expected integration and synergies', *Organizational Dynamics*, 1999, pp. 22-35.
- Hambrick, D. C., Canella, A. A., 'Relative standing: A framework for understanding departure of acquired executives', *Academy of Management Journal*, vol. 36, 1993, pp. 733-762.
- Levinson, H., 'A psychologist diagnoses merger failure', *Harvard Business Review*, vol. 48, no. 2, 1970, pp. 139-147.
- Marks, M. L., 'Merging human resources: A review of current research', *Mergers and Acquisitons*, vol. 17, 1982, pp. 38-44.

Montgomery, C. A., Hariharan, S., 'Diversified expansion by large established firms', *Journal of Economic Behaviour and Organization*, vol. 15, 1991, pp. 71-89.

Pablo, A. L., 'Determinants of acquisition integration level: A decision-making perspective', *Academy of Management Journal*, vol. 37, 1994, pp. 803-836.

Porter, M., Michael Porter on Competition, *The Antitrust Bulletin*, 1999, pp. 841-880.

Schweiger, D. M., Ivancevich, J. M., Power, F. R., 'Executive actions for managing human resource before and after acquisition'. *Academy of Management Executive*, vol. 1, 1987, pp. 127-138.

Shanley, M. T., Correa, M. E., 'Agreement between top management teams and expectations for post acquisition performance', *Strategic Management Journal*, vol. 13, 1992, pp. 245-266.

Shelton, L.M., 'Strategic business fits and corporate acquisition: Empirical evidence', *Strategic Management Journal*, vol. 9, 1988, pp. 279-287.

Shrivastasa, P., 'Postemerger Integration', *Journal of Business Strategy*, vol.7, 1986, pp. 65-76.

Singh, H., and Montgomery. C. A., 'Corporate acquisition strategies and economic performance', *Strategic Management Journal*, vol. 8, 1987, 377-386.

Walsh, J. P., 'Doing a deal: Merger and acquisition negotiations and their impact upon target company top management turnover', *Strategic Management Journal*, vol. 10, 1989, pp. 307-322.

Books

Hossein. B., *The Internet Encyclopedia*, Volume 1, p. 707, John Wiley & Sons Inc., 2004

Oskarsson, B., Aronsson, H., Ekdahl, B., *Modern Logistik*, Liber, 2006

Haspeslagh, P. and Jemison, D. B., *Managing acquisitions: creating value through corporate renewal*, New York: Free Press, 1991.

Walter, Gordon A., *Culture collisions in mergers and acquisitions*, Beverly Hills, CA: Sage Publications, 1985.

Kim, W. C., and Mauborgne, R., *Blue ocean strategy: How to create*

Drivers of Logistics Synergy Realization in Horizontal M&As

uncontested market space and make competition irrelevant. Boston, Mass: Harvard Business School Press, 2005.

Chopra, S., and Meindl, P., *Supply chain management - Strategy planning and operations*, 2nd edition, Upper Saddle River, NJ: Pearson Prentice Hall, Inc., 2004.

Sirower, M. L., *The Synergy Trap*, New York: Free Press, 1997.

Jonsson, P. and Mattsson, S.A., *Logistik: läran om effektiva materialflöden*, 1st edition, Studentlitteratur AB, 2005.

Lumsden, K., *Logistikens Grunder, 2nd edition*, Studentlitteratur AB, 2006.

Saunders M, P., and Thornhill, L.A., *Research method for business students*, 5th edition, Harlow: Prentice Hall., 2009.

Björklund, M., and Paulsson, U., *Seminarieboken - att skriva, presentera och opponera*, Studentlitteratur, 2003.

Robson, C., *Real World Research: a Resource for Social Scientists and Practitioner-Researchers*, 2nd edition, Oxford: Blackwell, 2002.

Yin R. K, *Case Study Research*, 2nd edition, Beverly Hills, CA: Sage Publications, 1994.

Gaughan, P. A., *Mergers, Acquisitions, and Corporate Restructurings*, 4th Edition, New Jersey: John Wiley & Sons, Inc., 2007.

Buono, A. F., and Bowditch, J. L., *The Human Side of Mergers and Acquisitions*, San Fransisco, CA: Jossey-Bass, 1989.

Hirsch, P., *Pack Your Own Parachute: How to Survive Mergers, Takeovers, and Other Corporate Disasters*, Reading, MA: Addison-Wesley, 1987.

Astrachan, J. H., *Mergers, Acquisitions, and Employee Anxiety: A study of Separation Anxiety in a Corporate Context*. New York: Praeger, 1990.

Deans, G.K., Kroger, F., and Zeisel., S., *Winning the merger endgame: a playbook for profiting from industry consolidation*. New York: McGraw-Hill, 2002.

Carpenter, M.A., Sanders, W.G., Rice, J., and Martin, N., *Strategic Management: A Dynamic Perspective*, Sydney, Australia: Pearson Australia, 2010.

Wall, S., and Brownen, R., *Introduction to International Business*, Malaysia: Pearson Education, 200.

Waldman, D. E., and Jensen, E.J., *Industrial Organization: Theory and Practice*, Boston: Addison Wesley Longman, 2001.

Porter, M. E., *Competitive Advantage: Creating and Sustaining Superior Performance*, Free Press, New York, 1985.

Yunker, J. A., *Integrating Acquisitions: Making Corporate Marriages Work*. New York: Praeger, 1983.

Conference Material

Hitt, M. A., Harrison, J. S., Ireland, R. D., Best, A., 'Lifting the veil of success in mergers and acquisitions', Paper presented at Annual Meeting of the Strategic Management Society, Chicago, IL. 1993.

Lubatkin, M., Avisnash, M., Schulze, W., and Cotterill, R., 'Three empirical cases of multifaceted product reorientations: How much does strategic adaptation matter?', Paper presented at the Academy of Management Conference, San Diego, CA, 1998.

Megginson, W.L., Boutchkova, M.K. 'The Impact of Privatization on Capital Market Development and Individual Share Ownership', For presentation at: The Third FIBV Global Emerging Markets Conference & Exhibition Federation of International Stock Exchanges. Istanbul, Turkey, 2000.

Web Pages

mergermarket, mergermarket League Tables of Legal Advisers to M&A for Year End 2011, 2011, <http://www.mergermarket.com/pdf/Press_Release_for_Legal_Advisers_Year_End_2011.pdf> (Retrieved: 2012-04-17)

European Commission, European and Financial Affairs – Mergers and Acquisitions, 2011, <http://ec.europa.eu/economy_finance/structural_reforms/product/mergers_acquisitions/index_en.htm> (Retrieved: 2012-03-01)

A.T Kerney, Inc., A broader perspective on strategy development and formulation, 2011, <<http://www.atkearney.com/index.php/Publications/the-at-kearney-strategy-chessboard.html>> (Retrieved: 2012-03-12)

Cloetta. Press Release: Cloetta och Leaf går samman, 2011-12-16,

Drivers of Logistics Synergy Realization in Horizontal M&As

<<http://www.cloetta.se/001c3158-5ae7-4415-8c96-176dace6cf48.fodoc>>
(Retrieved: 2012-03-12)

Emerald Insight. What is secondary data and archival material?

<<http://www.emeraldinsight.com/research/guides/archival.htm>> (retrieved 2012-05-08)

Appendix 1

Interview Questions

- 1. What are your expectations of the merger?*
- 2. What are your areas of concern?*
- 3. What expectations and areas of concern do you believe that the other party has?*
- 4. In your opinion, which are the critical areas for ensuring a successful merger?*
- 5. In your opinion, which are the primary synergy potential areas in terms of logistics?*
- 6. In your opinion, which are important similarities and differences between Cloetta and Leaf in terms of logistics?*
- 7. What are your future predictions of new Cloetta in terms of set-up in Scandinavia?*