

# **The Standardization-Adaptation Dilemma: Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?**

A Case Study at Tetra Pak Korea

Jesper Hallberg  
Malin Helldin

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

Copyright © Hallberg, Jesper; Helldin, Malin

Department of Business Administration  
School of Economics and Management, Lund University  
Box 7080  
SE-220 07 Lund  
Sweden

Department of Design Sciences  
Faculty of Engineering, Lund Institute of Technology  
Box 118  
SE-221 00 Lund  
Sweden

Master Thesis in Technology Management - Nr 240/2012  
ISSN 1651-0100  
ISRN LUTVDG/TVTM--12/5240--/SE  
Printed in Sweden  
Tryckeriet i E-huset, at Lund University  
Lund 2012

## Abstract

**Title:** The Standardization-Adaptation Dilemma: Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?  
A Case Study at Tetra Pak Korea

**Authors:** Jesper Hallberg and Malin Helldin

**Supervisors:** Stein Kleppestø – Associate Professor, Department of Business Administration, Lund University

Björn Kronkvist – PhD Candidate, Division of Innovation Engineering, Lund Institute of Technology

Jesper Bringström – Supply Chain Integration Director, Tetra Pak Korea

**Problem definition:** In times of increased globalization, the question of to what degree global companies should standardize their business is a topic often addressed in academic research. Connected to a decision between standardization and adaptation are tradeoffs, as both directions bring about advantages that would otherwise not be fulfilled. Tetra Pak Korea is an example of a case where such tradeoffs need to be considered. In line with Tetra Pak's standardized, global delivery strategy, the regional management has communicated an ambition of 100 percent direct deliveries for the local market company in Korea. However, challenges regarding an implementation have been identified, which has led to a need for further investigation. How could Tetra Pak handle the tradeoffs that arise because of these challenges? Are the greatest advantages achieved through an implementation of the standardized process, or would Tetra Pak benefit more from a solution adapted to the Korean conditions?

**Purpose:** The purpose of this thesis is to investigate how Tetra Pak Korea could handle challenges and associated tradeoffs that arise from the desired implementation of a global, standardized delivery strategy. Furthermore, through this investigation, the purpose is to contribute to the case company's development and to the general, academic

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

discussion regarding the balance between standardization and adaptation in global supply chain strategies.

**Method:** The methodological approach of this thesis has been of an iterative nature. The research strategy has been a combination of both qualitative and quantitative nature, where a quantitative analysis has been needed to understand the current situation and to calculate the financial impacts of an implementation of 100 percent direct deliveries in Korea. In addition, a qualitative strategy has been considered essential to gather the more complex and profound information needed to fulfill the purpose. The design of the research has been a single case study, where empirical information needed has been gathered through interviews, observations and secondary sources. The empirics have been analyzed with the support of a theoretical framework developed based on existing research within the area of study.

**Conclusions:** Through a literature study, process efficiency (including both an internal and an external dimension), customer management and financial performance have been identified as areas to consider in decisions on standardization and adaptation. As illustrated by the case study, all of these areas influence and are influenced by the decisions, and all areas influence each other. Because of this, it is of importance to use an overall approach, where all the areas are regarded equally, when analyzing a potential implementation of standardization or adaptation in supply chain strategy. Furthermore, it is important to analyze each case individually and to avoid labeling a certain factor as profiting from either standardization or adaptation in all situations.

**Key words:** Global Strategies, Standardization, Adaptation, Supply Chain Strategy, Process Efficiency, Financial Performance, Customer Management

## **Acknowledgements**

This master thesis was conducted during the spring of 2012. Malin has a background in business administration and Jesper in mechanical engineering, and this thesis represents the final part of our master program Technology Management. The thesis was initiated by Tetra Pak in order to get a fresh set of eyes to review the company's delivery strategy in Korea.

It has truly been an intense, great and challenging experience for us and we would like to take this opportunity to express our gratitude to the people that have provided us with their fullest support and made this thrilling journey possible.

First and foremost we would like to thank all of the employees at Tetra Pak's market company in Korea where the thesis has been conducted. We are forever thankful for the resources and support you have provided us with in our work. It has been a fantastic opportunity for us to come to Korea to perform our thesis and we are very grateful for the warm welcome and generosity you have shown during our stay.

We would like to say a special thank you to Jesper Bringström, our supervisor in Korea, for your support and guidance through the completion of the thesis. You have kept on pushing us to our limits and although your demands have been high, they have encouraged us to always come up with a better solution, which has taken this thesis and us as professionals to a higher level.

We would also like to acknowledge and thank our supervisors at the university, Stein Kleppestø and Björn Kronkvist, for the inspiration, feedback and support you have given us during the conduction of this thesis.

Last but not least we would like to thank each other for great cooperation during the conduction of this thesis. We would also like to send our thoughts and gratitude to our friends and families who have supported us all the way to the finish line.

Lund, 2012-06-02

*Jesper Hallberg*  
*Malin Helldin*

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

## Glossary

<b>ERP system</b>	Enterprise resource planning (ERP) is a system that integrates internal and external management information across the entire organization, including for example finance/accounting, sales, service and customer relationship management. The purpose of the ERP system is to simplify the information flow between all business functions and units within the company. The information flow is usually managed through an integrated software application.
<b>Cluster</b>	A cluster is a region of markets within Tetra Pak. The division into clusters is used as a way to subordinate the global market into smaller parts.
<b>Converting factory</b>	The factories where Tetra Pak's packaging material is produced are called converting factories.
<b>Make-to-order</b>	Make to order is a production approach where products are produced once an order is received, i.e. no products are produced before the customer places an order.
<b>Direct deliveries</b>	Direct deliveries refer to a delivery strategy where products are delivered directly from the converting factory to the customer without any storing between the factory and the customer.
<b>NEA&amp;O</b>	Northeast Asia & Oceania (NEA&O) is the Tetra Pak cluster in which markets of Korea, Japan and Oceania are included.
<b>CSR</b>	The Customer Service Representative (CSR) is responsible for order management, including sales order handling, delivery order handling and invoicing. The CSR handles the daily contact with the customers.
<b>KAM/SAM</b>	The Key Account Manager (KAM) and Senior Account Manager (SAM) are responsible for the long term relationships with Tetra Pak's customers.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---



## Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	BACKGROUND .....	1
1.1.1	<i>The Standardization-Adaptation Dilemma .....</i>	<i>1</i>
1.1.2	<i>Supply Chain Management .....</i>	<i>1</i>
1.1.3	<i>The Case Study at Tetra Pak Korea .....</i>	<i>2</i>
1.2	PROBLEM DISCUSSION .....	3
1.3	PURPOSE .....	5
1.4	RESEARCH QUESTIONS .....	5
1.5	DELIMITATIONS .....	5
1.6	DISPOSITION .....	7
<b>2</b>	<b>METHODOLOGY .....</b>	<b>9</b>
2.1	METHODOLOGICAL APPROACH .....	9
2.2	RESEARCH STRATEGY .....	10
2.3	RESEARCH DESIGN .....	11
2.4	RESEARCH METHOD .....	11
2.4.1	<i>Interviews .....</i>	<i>12</i>
2.4.2	<i>Observations and Embedded Research .....</i>	<i>13</i>
2.4.3	<i>Secondary Sources .....</i>	<i>13</i>
2.5	THEORETICAL FRAMEWORK .....	14
2.6	CRITICISM OF THEORETICAL SOURCES .....	15
2.7	METHOD OF ANALYSIS AND THE STUDY'S RESULT .....	15
2.8	TRUSTWORTHINESS .....	16
2.8.1	<i>Credibility .....</i>	<i>16</i>
2.8.2	<i>Transferability .....</i>	<i>17</i>
2.8.3	<i>Dependability .....</i>	<i>17</i>
2.8.4	<i>Confirmability .....</i>	<i>17</i>
<b>3</b>	<b>THEORY .....</b>	<b>19</b>
3.1	STANDARDIZATION AND ADAPTATION IN GLOBAL STRATEGY .....	19
3.2	SUPPLY CHAIN STRATEGY .....	20
3.2.1	<i>Introduction of Supply Chain Management .....</i>	<i>20</i>
3.2.2	<i>Lean in Supply Chain Management .....</i>	<i>20</i>
3.2.3	<i>Customer Management .....</i>	<i>21</i>
3.2.4	<i>Supply Chain Strategy in a Global Environment .....</i>	<i>21</i>
3.3	STANDARDIZATION .....	22
3.3.1	<i>Standardization and Its Benefits .....</i>	<i>22</i>
3.3.2	<i>Standardization in Supply Chain Strategy .....</i>	<i>22</i>
3.4	ADAPTATION .....	23
3.4.1	<i>Adaptation and Its Benefits .....</i>	<i>23</i>
3.4.2	<i>Adaptation in Supply Chain Strategy .....</i>	<i>23</i>
3.4.3	<i>National Culture and Business in Korea .....</i>	<i>24</i>

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

3.5	THEORETICAL FRAMEWORK .....	25
<b>4</b>	<b>THE CASE .....</b>	<b>27</b>
4.1	INTRODUCTION OF TETRA PAK.....	27
4.1.1	<i>Organization</i> .....	27
4.1.2	<i>Core Values</i> .....	28
4.1.3	<i>Global Processes</i> .....	28
4.2	THE MARKET COMPANY IN KOREA.....	29
4.2.1	<i>Organization</i> .....	29
4.2.2	<i>History of Delivery Strategies</i> .....	30
4.2.3	<i>Supply Chain Process</i> .....	31
4.2.4	<i>The Korean Market</i> .....	33
4.3	DIRECT DELIVERY STRATEGY IN KOREA.....	34
4.3.1	<i>Identification of Benefits</i> .....	34
4.3.2	<i>Identification of Challenges</i> .....	35
4.3.3	<i>Markets in Similar Situations</i> .....	36
<b>5</b>	<b>FINANCIAL IMPACTS .....</b>	<b>39</b>
5.1	DESCRIPTION OF SCENARIOS .....	39
5.2	FINANCIAL IMPACTS OF SCENARIOS .....	42
5.3	ANALYSIS OF FINANCIAL IMPACTS .....	43
<b>6</b>	<b>QUALITATIVE ANALYSIS .....</b>	<b>47</b>
6.1	PROCESS EFFICIENCY .....	47
6.1.1	<i>Internal Dimension</i> .....	47
6.1.2	<i>External Dimension</i> .....	48
6.2	CUSTOMER MANAGEMENT.....	49
6.3	FINANCIAL PERFORMANCE.....	51
6.4	OVERALL FINDINGS .....	52
<b>7</b>	<b>CONCLUSION .....</b>	<b>57</b>
7.1	CONCLUSIONS OF THE STUDY .....	57
7.2	FUTURE RESEARCH.....	58
<b>8</b>	<b>REFERENCES .....</b>	<b>61</b>
	<b>APPENDIX 1 – FINANCIAL CALCULATIONS .....</b>	<b>67</b>
	<b>APPENDIX 2 – INTERVIEW GUIDE .....</b>	<b>71</b>

# 1 Introduction

---

*The following chapter starts out with a background on the subject of the thesis, where the main theoretical contents are introduced in order to provide an initial understanding of the area of research. In addition, a brief presentation of the case that is studied in the thesis is given. The background is followed by a problem discussion, leading to the purpose and research questions of the thesis. Finally, delimitations are discussed and the disposition of the thesis is presented.*

---

## 1.1 Background

### 1.1.1 The Standardization-Adaptation Dilemma

In times of increased globalization, the question of to what degree global companies should standardize their business is a topic often addressed in academic research (e.g. Ang and Massingham, 2007; Powers and Loyka, 2007; O'Donnell and Jeong, 2000). Companies can align their business to standard guidelines and processes in many areas, from strategic to operational levels, including global product standardization, marketing offers and human resources (Ang and Massingham, 2007). On the other hand, companies can chose to adapt their business to local conditions within the same areas. The two sides of the standardization-adaptation dilemma are usually driven by cost reduction on one hand and market responsiveness on the other. It is often concluded that a company can profit from an increased extent of standardization and standardized processes (e.g. Manrodt and Vitasek, 2004), but supporters of adaptation points out that there are many differences to consider among national markets, such as physical environment, cultures and product usage conditions (O'Donnell and Jeong, 2000). Proponents of standardization state that customers' needs are becoming increasingly homogenous around the world, calling for opportunities of standardization (Segal-Horn, 1993). This statement is sometimes seen as controversial as others argue that potential similarities are outnumbered by the differences among groups, both between and across countries (Segal-Horn, 1993). According to Lemak and Arunthanes (1997) the extent to which a company should standardize its business is depending on the company's individual circumstances; its generic strategy, environment and management orientation.

### 1.1.2 Supply Chain Management

Supply chain management (SCM) is defined by Mentzer et al. (2001, p. 18) as:

*“the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole”.*

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

In comparison, The Council of Supply Chain Management Professionals' (CSCMP, 2011) definition of supply chain management is:

*“Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies.”*

In both definitions, a systems approach is used and the supply chain is seen as a single entity rather than a set of separate parts (Mentzer et al., 2001). Of importance is the performance of the supply chain as a whole, as opposed to optimization of single parts of the chain. A holistic view of the supply chain is also emphasized in theory on Lean (Hines et al., 2004). Starting out in the automotive industry, Lean production had a “shop-floor-focus” on waste and cost reduction in manufacturing environments. However, since Womack and Jones (2003) appointed value the first principle of Lean thinking, the concept of Lean has evolved into an approach for continuous enhancement of customer value including both an operational and a strategic dimension (Hines et al., 2004). Since Ohno (1988) introduced the Toyota Production System to the world and Womack, Jones and Roos (1990) coined the term “Lean production”, the concept of Lean has grown in popularity (Husby, 2007).

To achieve a competitive supply chain strategy, it must be aligned with the business strategy, the customers' needs and the company's power position or influence (Cohen and Roussel, 2005). Just as for other parts of the business, global companies have to consider the degree of standardization in the management of their supply chains. As a result of increased globalization and technological advancements in transportation, new opportunities for standardization within supply chain management have arisen (Segal-Horn, 1993). There is a critical balance between local orientations for operations and global orientations for strategy (Skjøtt-Larsen et al., 2007). In a global supply chain, it can be difficult to perceive the full network, especially on the operating level. At times, decisions that are counter-active in the context of single units may be required to gain the supply chain as a whole.

### **1.1.3 The Case Study at Tetra Pak Korea**

The study of this thesis is based on a case at Tetra Pak's market company in Korea. The story behind the case is a new strategy and target set out by the management of the Northeast Asia and Oceania (NEA&O) cluster, in which Tetra Pak Korea is part. In addition to Korea, the market companies of Japan and Oceania are also included in the cluster. In the spring of 2011, discussions started in the cluster management regarding the external warehouses for finished goods currently used by the market companies within the cluster. Customers are today able to order products from the

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

factories and store them in Tetra Pak's external warehouses until the time of usage, at which point the products are delivered by Tetra Pak. In Korea, the warehouse solution was set up as a way to ensure the customers business as usual after the local factory was closed in 2007. During 2010-2011, a standardized warehouse solution, which connected the warehouse system to Tetra Pak's global ERP system, was invested in and implemented.

The content of the cluster management's discussions in 2011 was that finished goods warehouses are not considered in line with Tetra Pak's global make-to-order strategy. In the majority of markets around the world, Tetra Pak's products are transported directly to the customer from the factory to make the process as simple and effective as possible for both Tetra Pak and the customers. The warehouses create excessive inventory levels and make the supply chain process unnecessarily complex. As a result of the discussions and in line with Tetra Pak's global strategy, an ambition to implement direct deliveries and remove the external warehouses was formulated. Accordingly, a target of 100 percent direct deliveries with a vision of fulfillment by 2014 was set, and it was communicated to the market companies to investigate the possibilities of implementation.

Direct delivery is a concept that has already been introduced to Tetra Pak Korea's customers, offered together with a discount as financial incentive through a letter in 2010. For several customers, the letter was followed up through customer visits and further discussions. In the beginning of 2012, approximately half of the packaging material volume was delivered directly to the customers. However, an implementation for the remaining customers does not seem to be easily achieved. To start with, despite financial incentives, the remaining customers have not shown interest in changes of delivery solution. Furthermore, some of the customers' inventory levels at the external warehouse are today high in combination with a low turnover of inventory; an indication of the size of changes needed to reach the goal. Last but not least, the Korean supply chain differs from most markets in the way that all products are transported by ship and in containers, causing long lead times and additional challenges as not all customers are able to unload containers at their factory sites. There seems to be several factors to manage and challenges to overcome in order to reach the cluster goal of 100 percent direct deliveries in Korea.

## **1.2 Problem Discussion**

The NEA&O cluster management has set a target of 100 percent direct deliveries, which has now been communicated to the local market company with an ambition of implementation within a few years. From a global point of view, direct delivery has been identified as a Lean and more efficient supply chain strategy than warehousing and is part of the global make-to-order strategy. In order for Tetra Pak Korea to follow the cluster goal and thereby company strategy, the warehouse

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

should therefore be removed and replaced by other types of delivery solutions. However, what is regarded as Lean from a global perspective can, but does not necessarily have to be, defined as a Lean alternative for a single market's supply chain operations.

As described above, there seem to be some challenges regarding an implementation of 100 percent direct deliveries in Korea. Because of Korea's geographical location, all products are transported by ship in containers, which some customers cannot receive at their sites. Furthermore, the customers have not responded to the earlier offered financial incentives for direct delivery. Instead, some of the customers today have high inventory and low turnover at the warehouse. Could the high inventory and low turnover at the warehouse be the result from poor collaborative planning between Tetra Pak and its customers, or are there other aspects that can explain the situation? For example, the customers might be particularly prone to delivery reliability and therefore willing to refrain from the discount for the possibility to store products at the external warehouse. With these obstacles in mind, it is possible that direct delivery is not the delivery scenario most favorable for the local market in Korea. Today's warehouse setup might be a more feasible solution from a local perspective.

Through the implementation of direct deliveries, Tetra Pak wants to achieve a standardized process and reap the benefits accessible thereby. Although, as described in the background, there will always be tradeoffs to consider in the choice between standardization and adaptation. Through an implementation of direct deliveries Tetra Pak would probably benefit from advantages related to standardization, but the company would also have to deal with the local impacts caused thereof. At the same time, not fulfilling the goal could result in advantages regarding market responsiveness, but disadvantages connected to that Tetra Pak Korea would not follow the company's strategy and standardized processes. According to previous studies (e.g. Lemak and Arunthanes, 1997), the extent of standardization should be decided based on the individual company's circumstances, which include strategy as well as environment and management orientation. In Tetra Pak's case, it is possible that the local challenges caused by the implementation of direct deliveries are regarded as less of a problem than the consequences of the current solution. Therefore, local challenges could be seen only as obstacles needed to be overcome in order to achieve other benefits. On the other hand, it is possible that the impacts of the obstacles are too big to be ignored and that a certain extent of adaptation needs to be considered.

To find out how Tetra Pak Korea best can handle the situation, there is a need to further investigate the challenges and associated tradeoffs connected to an implementation of direct deliveries. What are the challenges and local prerequisites

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

that need to be considered, and how should Tetra Pak handle the tradeoffs that arise because of these? Are the greatest advantages achieved through an implementation of the cluster goal, or would Tetra Pak benefit more from a solution adapted to the Korean conditions? How could Tetra Pak Korea proceed in the case of the 100 percent direct delivery goal, and what would be the effects thereof?

### **1.3 Purpose**

The purpose of this thesis is to investigate how Tetra Pak Korea could handle challenges and associated tradeoffs that arise from the desired implementation of a global, standardized delivery strategy. Furthermore, through this investigation, the purpose is to contribute to the case company's development and to the general, academic discussion regarding the balance between standardization and adaptation in global supply chain strategies.

### **1.4 Research Questions**

- What are the financial impacts of an implementation of different direct delivery scenarios (which are introduced in chapter 5 "Financial Impacts")?
- What are the consequences of an implementation of the standardized process?
- How could the tradeoffs related to standardization and adaptation be handled?
- How could Tetra Pak Korea further develop its delivery strategy?

### **1.5 Delimitations**

The investigations at Tetra Pak Korea are limited to the supply chain activities within Korea. Therefore, the activities included in the scope are the ones occurring between arrival of goods at a Korean port and delivery at customer site. Earlier activities within the supply chain, such as production and transportation from the converting factory to Korea, are thereby not considered in the thesis. Nevertheless, the authors are aware of that changes in the Korean part of the supply chain can affect earlier activities as well. For instance, the converting factories could be affected by changes in order behavior among Korean customers, a possibility that is recommended to be further deployed if considering an implementation of changes to the process in Korea. In line with that no earlier activities are considered, conditions set by parties at earlier stages of the supply chain are not seen as subject to change. As a result of this, as well as of the geographical and political situation at the Korean peninsula, the condition of all goods being delivered to Korea in containers is seen as a given fact not likely to change for the foreseeable future.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

In line with the delimitation described above, the investigations and analyses of both quantitative and qualitative nature address Tetra Pak's situation at the Korean market specifically. The financial calculations do only consider activities and costs from the point in the supply chain where goods arrive in Korea. As mentioned above, it is possible that earlier activities are affected by changes as well, causing financial impacts outside of Korea. However, as an implementation of direct deliveries would not result in any additional or removed activities outside of Korea, the risk of such impacts is considered limited and the authors have therefore chosen to disregard this matter. On the contrary, it has along the way become clear that a corresponding delimitation in the qualitative analysis can be harder to validate. It is possible that qualitative reasons for standardization exist on a global level, but cannot be identified through a case study in Korea. To compensate for this limitation, comparisons are made with the markets of Oceania and United Kingdom. Oceania is part of the same cluster as Korea and is thereby part of the same direct delivery ambition. The markets of Korea and Oceania are also similar in terms of delivery setups, as no local converting factories exist. United Kingdom is used for comparison as the local factory was recently closed, resulting in the establishment of an external warehouse. Comparisons are based on high level analyses, as no in-depth research on the other markets has been made.

Besides packaging material, which is the type of products addressed in the thesis, Tetra Pak also delivers additional material, such as caps and straws, to their customers. In Tetra Pak Korea, this order and delivery process is separated from the packaging material process and has not been considered in the thesis. The authors are aware of that changes regarding the packaging material process might lead to changes in the additional material process as well, but as no such decisions have been made and opinions pointing in both directions have been highlighted by the company, these potential changes have been disregarded.



## 1.6 Disposition

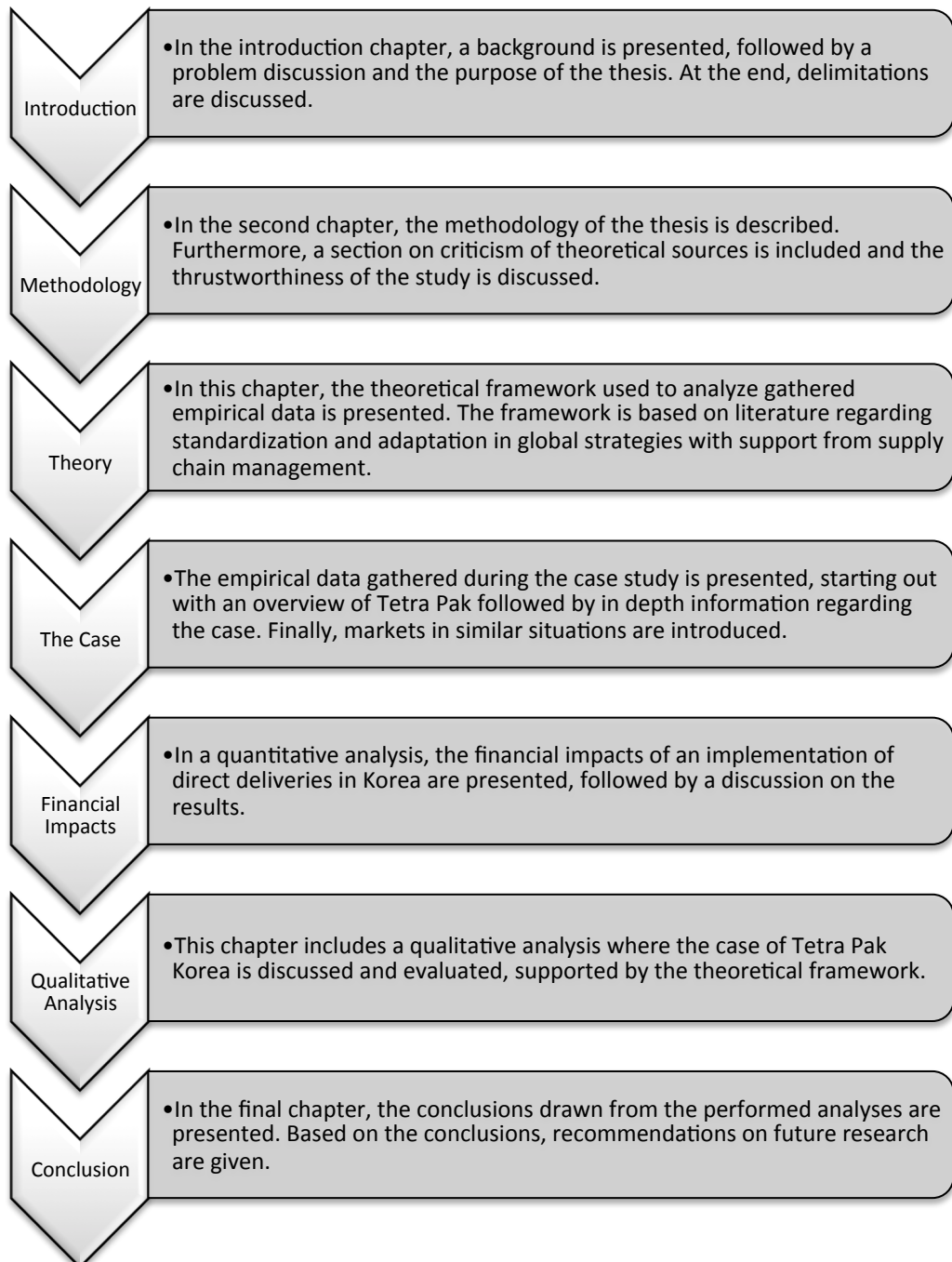


Figure 1 Overview of the disposition of the thesis

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

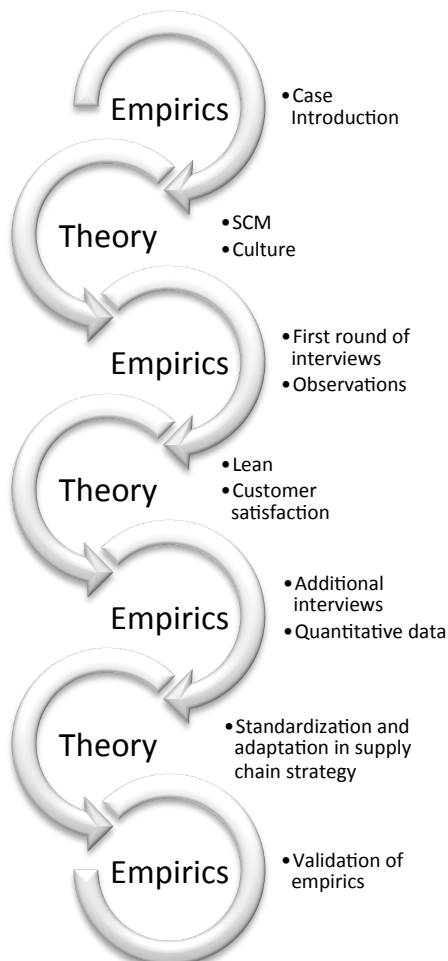
## 2 Methodology

---

*In the following chapter, the methodology used for the conduction of the thesis is described and motivated. The descriptions are arranged based on the areas presented by Bryman and Bell (2005), namely methodological approach, research strategy, research design and research method. Furthermore, the theoretical framework of the thesis is described and the analysis methodology is motivated. Finally, credibility aspects of the thesis are discussed and a section on criticism of theoretical sources is included.*

---

### 2.1 Methodological Approach



**Figure 2** An overview of the iterative approach of the thesis, where the authors have altered between theory and empirics.

The methodological approach in this thesis has mainly been of an iterative (Bryman and Bell, 2005) nature, as illustrated in figure 2. The starting point of the execution of the thesis was the definition of a problem, built on the introduction to an empirical situation at Tetra Pak Korea. However, in the beginning of the process, the empirical problem was believed to be of a different nature than what was finally concluded. The problem was believed to be specific to the Korean market, and the initial theoretical gathering was therefore connected to cultural issues in supply chain management. As the authors gained an enhanced understanding of the empirical problem, the theoretical reviews evolved. After a number of different detours, it became clear to the authors that the main problem and research area to investigate in the case of Tetra Pak Korea was the balance between standardization and adaptation in supply chain strategy. The winding road up until the final interpretation of the problem has not been optimal, but has resulted in a broad and deep understanding of the studied case. The

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

theoretical detours have also helped create the final theoretical framework, as many different areas and perspectives have been taken into consideration.

An alternative to the chosen iterative approach could have been a deductive approach, starting from a theoretical perspective with the aim to test existing theories, instead of alternating between empirics and theory as in the case of an iterative approach (Bryman and Bell, 2005). The reason why the deductive approach has not been regarded as the most suitable one has mainly been the perceived complexity of the empirical problem. This complexity made it hard to determine the specific theoretical content best describing the problem before the empirical investigation had started off and made some progress. The identification of theoretical content will be further described in the section "Theoretical Framework". An additional reason why an iterative approach has been regarded more suitable than a deductive approach has been the openness to not only confirmation but further development of existing theories.

Another alternative could have been an inductive approach, where the empirical research of the case would have been used for creation of new theories (Bryman and Bell, 2005). However, as the topic of the case is within an area of research, which has been debated for several years (O'Donnell and Jeong, 2000), it has been the authors' opinion that earlier research could be of use for comparison and support as well as to reveal the areas of the case not covered by earlier research.

## **2.2 Research Strategy**

The research strategy of this thesis has been a combination of both a qualitative and a quantitative nature. The quantitative strategy has been needed to create an understanding of the current situation of the case, as well as to calculate financial impacts of different implementation scenarios. However, a purely quantitative strategy has not been considered suitable, as the purpose and research questions of the thesis also include content in need of more complex and profound information than what can be obtained through a quantitative strategy. For this content, both investigating and exploring questions have been needed, as well as interpretation of the information withdrawn from these questions. Therefore, a qualitative research strategy, emphasizing an interpretive approach by the use of both interviews and observations, has been needed. One could argue that the thesis could have been performed using a qualitative strategy alone, focusing on the aspects of the purpose in need of a qualitative analysis but leaving the financial perspective aside. However, as financial performance is an essential part of company strategy, the authors have regarded it desirable and close to necessary to include the financial perspective as well, thereby calling for the inclusion of a quantitative strategy.

### **2.3 Research Design**

The thesis has had the research design of a case study. The main reasons for the use of a case study have been that the purpose of the thesis intends to answer the question of how Tetra Pak could handle tradeoffs and proceed in the case of delivery strategy, and that the study is dependent on contemporary events. According to Yin (1989), a case study is preferably used when a “how” or “why” question is stated, when the authors have little control of the events or when the focus is on a contemporary phenomenon within a real-life context. In addition to the reasons supported by Yin, there are two other reasons why a case study has been regarded suitable. Firstly, the case study provides the opportunity to examine the problem thoroughly and up close. As described under research strategy, complex and profound information has been needed to fulfill the purpose of the thesis and with the help of a case study it has been possible to achieve such information. Secondly, the case study is appropriate given the iterative approach of the study, as it is suitable both for testing and generation of theories (Eisenhardt, 1989).

An alternative to a case study could have been a multiple case study, a comparative design where a number of case studies are performed (Bryman and Bell, 2005). This kind of study could for example have included other markets within Tetra Pak facing similar challenges, such as Oceania and Japan, which are subject to the same direct delivery goal. The advantages associated with a multiple case study would mainly have been the contribution to generalization of the study offered by the fact that several cases are compared and analyzed. On the other hand, if a multiple case study had been performed it would not have been possible to perform the same amount of observations and embedded research as have been the case when concentrating on a single market. As described in the methodological approach, the initial introduction of the empirical problem resulted in the perception that the problem was unique to the Korean market, which resulted in that a single case study was considered more suitable than a multiple case study. However, during the following empirical gathering the authors gained a better understanding of the problem, which made it possible that other markets experience similar problems. To compensate for the lack of comparison provided by the single case study, complementary interviews regarding the situation at other markets have been performed.

### **2.4 Research Method**

As earlier described, the research strategy of the thesis has been of both a qualitative and a quantitative nature. For gathering of qualitative information, interviews and observations have been the main methods used, complemented by different kinds of secondary sources. The gathering of quantitative data has mainly

been done through the use of Tetra Pak Korea's internal ERP system. The methods of data collection are further described below.

#### **2.4.1 Interviews**

One of the main methods for data collection has been qualitative interviews. Qualitative interviews have been regarded more suitable than quantitative interviews, as varied and in-depth information has been needed. Since the qualitative interviews allow a flexible interview process, the interviewee can talk freely and the interview can be focused on the areas regarded as important by the interviewee (Bryman and Bell, 2005). A detailed interview guide can be found in appendix 2.

The interviews have mainly been of a semi-structured nature, where a questionnaire has been prepared in advance but where deviations have been possible depending on the answers of the interviewees (Bryman and Bell, 2005). The semi-structured interview has been chosen because of its combination of freedom and control. Even though the responses of the interviewee will have an impact on the development of the interview, the guidance of the questionnaire makes sure that all questions of importance are included. For some of the interviews, Tetra Pak's internal documents for information on the area of the interview have been used as questionnaires supporting the interview. In these cases, the documents have either been sent out in advance to be filled out, or the interviewee has been asked to fill them out after the interview. During the interview, the documents have been used as basis for the discussion and questions asked. In addition to the semi-structured interviews, unstructured interviews have been performed. As the authors have been on site in Korea for three months semi-structured interviews have often been followed by several unstructured interviews with each interview person, resulting in a big variety of questions asked. The occurrence of unstructured interviews is further described in the section on observations and embedded research.

Interviews have been performed with a variety of employees within Tetra Pak. To gather information regarding the daily operations and order management, all CSR's have been interviewed, as these are the ones who have daily contact with the customers and perform the transactional tasks connected to customer orders and deliveries. For more detailed information regarding the order and delivery process, the senior design developer and logistics manager have been interviewed. To reach beyond the purely operational perspective all KAM's and SAM's, responsible for long term customer relationships, have been interviewed. To obtain an even more strategic perspective, the opinions of the supply chain integration director and the managing director of Tetra Pak Korea have been collected.

In addition to the interviewees within Tetra Pak Korea, the logistics manager of the market company of Oceania has been interviewed. This has been done to acquire

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

information regarding direct delivery in Oceania, a market included in the same delivery goal and with conditions similar to the ones of Korea. Furthermore, a logistics coordinator at the Tetra Pak converting factory in Lund who is in charge of the transportations to the external warehouse in United Kingdom has been interviewed for additional comparisons with other markets. Interviews have also been conducted with employees at the market company in Germany and other employees at the converting factory and market company in Lund. The information acquired from these interviews has been used to achieve general understanding of Tetra Pak's processes and operations as well as for comparisons with other markets. To extend the knowledge of the Korean market and society, interviews have also been performed with academics specializing on social and cultural influences on business both in general and with experience of the Korean market in particular.

#### **2.4.2 Observations and Embedded Research**

In addition to the semi-structured interviews, observations and embedded research have contributed to the gathering of qualitative information. The observations have been performed at the office of the market company in Seoul, where most of the time used for this thesis has been spent. Through observations of the daily work, spontaneous conversations and meetings with people working with customers and/or the supply chain, qualitative information of use for the thesis has been absorbed. In some cases, the observations have led to unstructured interviews, where the person in question has been asked to share more information on the subject. The information has thereafter led either to search for additional theoretical content or new semi-structured interviews. In addition to the observations in Korea, people at the market companies in Sweden and Germany have been subject to observation during training sessions before the departure to Seoul. This has been done in order to gain understanding of general Tetra Pak processes and to learn about delivery strategy and operations at other market companies within Tetra Pak.

#### **2.4.3 Secondary Sources**

The secondary sources used for gathering of qualitative information have mainly consisted of internal documentation of Tetra Pak Korea, such as surveys and external communication material, combined with Tetra Pak's official webpage and news articles regarding Tetra Pak's business. The information has been used to acquire knowledge of Tetra Pak Korea's organization and working procedures, as well as conditions and obstacles in terms of the direct delivery goal. Secondary sources have also been the main type of source for gathering of quantitative data, where the majority of data has been obtained through Tetra Pak's internal ERP system. The quantitative information collected has mainly consisted of data and statistics on the business of 2011, including sales, inventory, transportation, and order and delivery figures.

## 2.5 Theoretical Framework

As earlier described, the research strategy has been of both a quantitative and a qualitative nature. The first part of the analysis has been based on quantitative empirical data, resulting in a quantitative analysis regarding financial impacts of an implementation of the standardized process. The theoretical content of the thesis has mainly been applied on the following qualitative analysis, where other relevant aspects than pure financial ones have been analyzed. The theories have both been used as a way to provide an understanding of the area of study and to form a theoretical framework used in the qualitative analysis. In line with the iterative approach of the thesis, the development of the theoretical framework has occurred gradually based on the progression of the empirical investigation. As earlier mentioned, the empirical problem has been perceived as relatively complex, which made it hard to determine the most appropriate theoretical content at the start.

As the theoretical content and framework have been developed throughout the process of the thesis, the search for literature has been influenced by the gathered empirical data. It has been known since the start that the problem of the case is related to local implementation of a global, standardized supply chain process in a global corporation. However, as a result of the winding road between empirical findings and theoretical reviews described in the methodological approach, it has become clearer along the way that the problem is related mainly to the balance between standardization and adaptation. Furthermore, the winding road has contributed to the theoretical framework through the findings of complementary areas of theory that can be related to standardization and adaptation in the management of Tetra Pak Korea's supply chain. One such area is Lean, of relevance since Tetra Pak has expressed a desire to achieve a Lean supply chain process. Another area is national culture, which is often viewed as an influential factor in terms of adaptation (O'Donnell and Jeong, 2000). The reason why culture has been further explored, while other factors influencing the degree of adaptation versus standardization have not, is that Korean culture's impact on business and customer relationships has been emphasized in several interviews throughout the empirical investigation.

The theoretical framework consists of different areas to consider in decisions on standardization and adaptation in supply chain strategy. The areas have been identified by the authors of the thesis based on findings from earlier research. Each area consists of different factors, which have been pointed out as supporting either standardization or adaptation in earlier studies. The areas of the theoretical framework are all discussed in the qualitative analysis, which is further supported by the additional content presented in the theoretical chapter.



The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

The theoretical content has mainly been collected through academic articles and books on the relevant subjects. The literature has been collected based on searches in Lund University's library search system Summon complemented by Google's search system Google Scholar. The searches have included different combinations of the key words standardization, adaptation, strategy, supply chain management, Lean, global, local and culture. Based on references in the collected material, additional literature has been identified. The search for literature has further been influenced by guidance from university supervisors.

## **2.6 Criticism of Theoretical Sources**

The articles from which the theoretical content has been collected have been published in renowned journals within relevant areas of research, ensuring an adequate degree of quality of the material. The books included in the sources have been written by well-known authors frequently quoted in the published articles. However, even though the sources have been considered to be of high quality, it is of importance to reflect on the material's relevance to the study in question (Halvorsen, 1992). One issue relevant to consider has been the fact that most of the collected literature on standardization and adaptation has been related to general company strategy and marketing strategy, while literature concerning supply chain strategy has been more limited. The authors have been aware of this lack of literature, but have considered literature regarding general and marketing strategy applicable to the empirical problem as the delivery strategy is both a high level strategic decision and a part of the customer proposition. Another issue to consider is that the studies included in the collected material have been conducted in many different industries and contexts, in different parts of the world. As a result of this, the conclusions drawn could be more or less relevant to the case of this thesis. The authors have taken this into consideration, but have in most cases regarded the conclusions of the studies relevant enough to use for comparison and support.

## **2.7 Method of Analysis and the Study's Result**

The method of analysis in the thesis has been both quantitative and qualitative. Based on empirical findings regarding the conditions and challenges of Tetra Pak Korea, different scenarios concerning delivery strategy have been created. Through a quantitative analysis based on the actual statistics and figures from the previous year, the financial impacts of an implementation of the different scenarios have been calculated. Due to company confidentiality, the financial figures have been modified through an index before being presented in the thesis.

In the following qualitative analysis, the result of the quantitative analysis has been complemented by aspects to consider of a more qualitative nature to reach a solution as comprehensive as possible. In the qualitative analysis, the theoretical

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

framework has been applied on the empirical study for support and comparisons. Theoretical content has also been used to provide understanding of the area of study and of the empirical problem. The analysis has been an ongoing process during the empirical gathering, where empirical findings have given the authors input for further search for literature. Both of the authors have been present during the majority of the qualitative data collection, where one person has taken notes while the other has asked questions. The gathered material has been discussed and analyzed after the interview in order to get both authors' perspective on the data.

The result of the case study consists of a recommendation on how Tetra Pak Korea could proceed in the case of delivery strategy, based on a combination of empirical and theoretical findings regarding the balance between standardization and adaptation. Furthermore, the result includes a contribution to the academic discussion on standardization and adaptation. This has been illustrated in a framework, where the theoretical framework has been further developed with the help of the findings of the case.

## **2.8 Trustworthiness**

Even though the research strategy of the thesis has been of both a qualitative and a quantitative nature, the purpose and the conclusions drawn have been regarded as mainly qualitative. When discussing trustworthiness of the study, Lincoln and Guba's (1985) four criteria for naturalistic research have therefore been used as guidance. The four criteria are credibility, transferability, dependability and confirmability.

### **2.8.1 Credibility**

The credibility of the study has benefited from the fact that the authors have been on site at Tetra Pak Korea for three out of the four months during which the thesis has been conducted. As a result of this, it has been possible to follow up and verify the collected empirical material. Furthermore, there has been time to discuss findings and interpretations with interviewees as well as both university and company supervisors. At the majority of the interviews conducted, both authors have been present. This has enabled a division of responsibility, where one person has taken notes while the other one has asked the questions. Afterwards, the person in charge of the questions has gone through the notes and the interview has been summarized verbally to ensure consensus on the acquired material. The internal validity of quantitative data has been affected by the fact that Tetra Pak Korea has changed the internal ERP system during 2011, resulting in a lack of compatibility for some data and a need for creation of assumptions. To ensure the credibility of the quantitative data, assumptions and calculations have therefore been discussed and evaluated together with the finance director and finance manager of Tetra Pak Korea.

### **2.8.2 Transferability**

The transferability of the thesis has mainly been considered theoretical, in the way that the findings of the case study can provide insights of relevance for future research within the area of standardization and adaptation in supply chain strategy. The extent of empirical transferability, where the findings can be applicable for other empirical cases, has been considered limited. To clarify in what cases either theoretical or empirical transferability can be relevant, the authors have made sure to define the system boundaries and limitations of the thesis as clearly as possible.

### **2.8.3 Dependability**

To ensure the dependability of the thesis, a journal including methodological choices, and empirical and theoretical progress and findings has been written during the execution of the study. This way, the authors have secured availability of the information later on in the process. The earlier mentioned follow up with interviewees has also been of help, as it has enabled a verification of the consistency in responses. To further ensure dependability of the information, several people within the same function have been interviewed.

### **2.8.4 Confirmability**

The amount of time spent on site has not only been associated with advantages. The fact that most of the work has been conducted at the office of Tetra Pak Korea could have caused lack of objectivity. To facilitate confirmability, the interviewees have belonged to different divisions and functions within the company, thereby having different objectives and providing several perspectives. Furthermore, as previously mentioned, several people within the same division and function have been interviewed. The biggest constraint in terms of confirmability has been believed to be that no opportunities for customer contact or interviews have been given, resulting in risks of dominance of a company internal perspective. The authors have been aware of this constraint and have made efforts to compensate for it. As a substitute for customer interviews, the authors have had access to recently performed customer surveys, which have enhanced the authors' understanding for customer service and satisfaction. Furthermore, to obtain an external perspective of the Korean market, people outside of Tetra Pak but with experience of business in Korea have been interviewed. In the authors' strive to uphold their objectivity the university supervisors have also been of great help.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

### 3 Theory

---

*In this chapter the theories used for support of the analysis are presented. First, an introduction to standardization and adaptation in global strategy is given, followed by a section on supply chain strategy. Secondly, standardization and adaptation are described individually and in more detail, including theories from supply chain strategy. Based on the content of this section, a theoretical framework is developed in the final part of the chapter.*

---

#### 3.1 Standardization and Adaptation in Global Strategy

According to Ghemawat (2007) business leaders and academics make two assumptions when it comes to global strategies. The first assumption is that the central challenge of global strategies is to find the right balance between economies of scale and responsiveness to local conditions, and the second assumption is that the more focus and emphasis companies place on economies of scale the more global their strategies will be. These assumptions are somewhat problematic as the main goal of any global strategy must be to manage the differences that arise at borders, whether they are defined geographically or otherwise. Both strategies of standardization and those of adaptation address these challenges and may thereby be considered as global strategies. Standardization attempts to deliver economies of scale by creating regional or global operations that involves standardized products and service offerings. Adaptation seeks to boost revenues and market share by maximizing a company's local relevance. Since the 1960's, the desirability and feasibility of standardization have been debated (O'Donnell and Jeong, 2000). The discussion has centered on the relative benefits and costs of either a standardized or an adapted strategy.

According to Chung (2007), basis for decisions on the appropriate extent of standardization should be a comparison between operations at the home market and operations at foreign markets. It is of importance that the factors related to standardization in a market are identified. Furthermore, Lemak and Arunthanes (1997) point out that the degree of standardization is depending on the company's individual circumstances; its generic strategy, environment and management orientation. The ultimate decision regarding standardization or adaptation should, according to O'Donnell and Jeong (2000), be based on the impact on organizational performance. Nevertheless, literature contains practical evidence of companies making contingency decisions regarding strategy, based on the individual conditions of each situation (Vrontis et al., 2009).

As a contrast to the above mentioned, there are also numerous authors who highlight the difficulties for a company to apply either standardization or adaptation

fully in practice (Vrontis et al., 2009). Instead they stress the importance and necessity of using the two strategies simultaneously. They suggest that a company should standardize certain tactics and adapt others depending on the market situation, rather than making the decision whether to use a strategy of standardization or adaptation alone.

## **3.2 Supply Chain Strategy**

### **3.2.1 Introduction of Supply Chain Management**

In any industrialized society, or any non-industrialized for that matter, products must physically be transported from where they are produced to the place where they are consumed (Lambert et al., 1998). The alignments of firms that together bring products or services to the market have been called supply chains, demand chains or value chains. In this thesis the term supply chain is chosen to represent such alignments. Since the late 1980's the term supply chain management has grown in use and popularity (Lambert et al., 1998). However, there still seem to be some confusion of what it really means. Foremost, supply chain management is the management of all key business processes across the members of the supply chain such as customer relationship management, customer service management, manufacturing flow management, procurement and order fulfillment. In definitions regarding supply chain management, a systems approach is used and the supply chain is seen as a single entity rather than a set of separate parts (Mentzer et al., 2001; Lambert et al., 1998; CSCMP, 2011). Of importance is the performance of the supply chain as a whole, as opposed to optimization of single parts of the chain. Furthermore, the supply chain is seen as highly interactive and complex and requires considerations regarding many tradeoffs (Lambert et al., 1998). Usual tradeoffs in need of consideration are where inventory should be held and where activities should be performed.

### **3.2.2 Lean in Supply Chain Management**

Since Ohno (1988) introduced the Toyota Production System and Womack, Jones and Roos (1990) spread the term "Lean production" through their book "The Machine that Changed the World", the concept of Lean has grown in popularity (Husby, 2007). Starting out in the automotive industry, Lean production had a "shop-floor-focus" on waste and cost reduction in manufacturing environments (Hines et al., 2004). Ohno (1988) has identified seven types of waste, where one is related to inventory. He defines excessive inventory, meaning extra inventory that at the moment is unnecessary, as non value added waste. Since Womack and Jones (2003) appointed value the first principle of Lean thinking, the concept of Lean has evolved from the initial "shop-floor-focus into an approach for continuous enhancement of customer value including not only an operational but a strategic dimension (Hines et al., 2004). Customer value can, according to this approach, be increased in two ways;

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

either through the reduction of internal waste and associated costs, thereby increasing the product's or service's relative cost-value proposition to the customer, or through additional features or activities that are valued by the customer but do not result in additional costs.

### **3.2.3 Customer Management**

A central aspect of supply chain management is customer management. Customer service represents the place component in the marketing mix and can be used to differentiate the product or service or to influence the market price, if the customer is willing to pay more for extra service (Lambert et al., 1998). Customer service is a complex subject and is usually measured by the level of product availability, speed and consistency of customer's order cycle and the communication that takes place between the seller and the customer. The most important measurement of customer service is the availability of products within a specific order cycle time, meaning the importance of the ability to deliver the right products at the right time to the customers. The second measurement is the order cycle, the time from customer's order placement to goods receipt. Customers generally prefer consistent service to fast service, since consistent service allows them to better plan their own inventory. The last measurement is communication, which refers to the company's ability to supply information about the order process to the customer.

### **3.2.4 Supply Chain Strategy in a Global Environment**

Successful supply chain management requires a change from managing individual functions to integrating activities into key supply chain processes (Lambert et al., 1998). Without sufficient supply chain management both downstream and upstream, portions of the supply chain risk interacting as disconnected entities that receive sporadic information. Operation of an integrated supply chain requires a consistent flow of information to achieve the best product flow, with primary focus on the customer. To achieve a competitive supply chain strategy, it must be aligned with the business strategy, the customers' needs and the company's power position or influence (Cohen and Roussel, 2005).

According to Skjøtt-Larsen et al. (2007), almost every supply chain is international to some degree. There are always some materials, components or services that are part of the final products of the supply chain, which origin from another country. This is however not seen as incidental as companies deliberately recognize the need to supply markets in multiple national markets, often by using overseas production or contractors. There is a critical balance between local orientations for operations and global orientations for strategy. In a global supply chain, it can be difficult to perceive the full network, especially on the operating level. At times, decisions that are counter-active in the context of single units may be required to gain the supply chain as a whole. Consequently, arguments have arisen regarding whether companies should standardize to global processes or adapt to local requirements

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

(Ghemawat, 2007). As a result of increased globalization and technological advancements in transportation, new opportunities for standardization within supply chain management have arisen (Segal-Horn, 1993). However, there are still several challenges regarding local environment that need to be considered (Chung, 2003).

### **3.3 Standardization**

#### **3.3.1 Standardization and Its Benefits**

In general supporters of standardization argue that the worldwide marketplace has become so homogenized that multinational enterprises are able to market standardized products and services across the globe (Chung, 2003). Already in the early 1980's, Levitt (1983) stated that global corporations could treat the world as a single entity where the same products could be sold in the same way everywhere. From this perspective, with the emergence and growth of the world as a single entity in mind, it could be argued that the international adaptation strategies that adjust products and practices in every market around the world are nearly extinct (Vrontis et al., 2009).

Standardization allows multinational enterprises to reap the benefits of economies of scale in the areas of production, promotion, distribution and research and development, and to reduce their use of personnel in international operations (Chung, 2003). In addition and more important, a standardized strategy provides a consistent offering towards customers across the globe and controlled procedures of the company's overseas operations.

#### **3.3.2 Standardization in Supply Chain Strategy**

The positive effects of business process standardization are mainly related to business process time, business process costs and business process quality (Muenstermann et al., 2010). According to Manrodt et al. (2004), strategic advantages can be created through global process standardization. In their study, three areas are highlighted. The first area is management of capacity utilization, where a standardized process allows for the company to transfer work responsibilities from one facility to another if needed, in case of circumstances such as a strike or external conditions affecting the business. Secondly, businesses that frequently evaluate their network locations for lowest cost options can benefit from standardized processes, as facilities can be re-located to take advantage of for example lower labor costs. Thirdly, the spread of knowledge and information regarding the process is simplified through standardization, as everyone works according to the same system and can get support from the company's central expertise. The use of automated information systems are further emphasized by Lambert et al. (1998), as it results in fewer errors regarding for example shipping,



picking and packing. As earlier mentioned, communication regarding the order process and availability of the right products at the right time are two important factors for customer service, which both can be improved by the use of a standardized information system.

### **3.4 Adaptation**

#### **3.4.1 Adaptation and Its Benefits**

According to international adaptation proponents, standardization has become conceptualized and simplified (Vrontis et al., 2009). The benefits described in the sections above are based on assumptions, which in reality are contradicted by facts. As stated by Jain (1989, p. 71) *“standardization is at best difficult and, at worst, impractical”*. Those in favor of adaptation point out differences that exist among national markets and are in need to be considered. The differences include physical environment, political and legal systems, cultures, consumer needs and preferences, product usage conditions and economic development (O’Donnell and Jeong, 2000; Chung, 2003). It is also pointed out that these are differences not likely to change in the near future (Chung, 2003).

#### **3.4.2 Adaptation in Supply Chain Strategy**

The global supply chain is more complex than the national, facing a diverse set of environmental challenges such as adapting to multiple national environments with differing cultures, political and economic systems and business practices (Skjøtt-Larsen et al., 2007). Furthermore, there are impacts of geography to consider: time and distance of the location of markets and the availability and level of infrastructure in transport and telecommunications. The most important differences are related to the customer. The global supply chain should come as close as possible to the specific markets requirements, through offering individual products and services that meet customer needs and requirements. When facing competition on the international market, companies stress to seek out the most efficient sources of supply, often resulting in conflicts in meeting customer requirements.

When competing on an international market inventories are an important factor of global logistics (Lambert et al., 1998). In general a higher level of inventory is needed to be able to service markets where no domestic production exists, due to longer transit times, greater variability in transit times, port delays, customs delays and other factors. Consequently, service equal to the one on the domestic market is not easily achieved on an international market. The cost of providing a specified level of customer service often varies, as prerequisites and requirements differ between countries. A company is advised to examine all service requirements of customers in each market and develop a logistics solution that best serves the needs. Competition, customer needs and other factors may even cause higher logistics

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

costs for some markets, resulting in lower profits. Since conditions may vary in foreign markets, it is of importance for the firm to develop inventory policies and control procedures that are appropriate for each market.

### 3.4.3 National Culture and Business in Korea

As mentioned above, culture is often pointed out as an important factor to consider regarding adaptation (O'Donnell and Jeong, 2000). Tylor (1871, p. 1) defines culture as *"that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society"*. The world is full of confrontation between people, groups and nations that think, feel, and act differently and it is important to understand this in order to achieve workable solutions (Hofstede et al., 2010). Questions of economic and technological cooperation has earlier too often been seen as simply technical and one of the reasons why solutions do not work out between partners is that these indifferences in thinking, feeling and acting between people have been ignored. Based on a thorough investigation by Hofstede resulting in a five dimensions' framework, a country's cultural preferences can be determined. The scores of South Korea are presented in table 1, together with the scores of Sweden and Australia to enable comparisons and facilitate the understanding of the scores.

**Table 1 Scores for South Korea, Australia and Sweden in Hofstede's five cultural dimensions (Itim International, 2012a)**

Cultural Dimension	South Korea	Australia	Sweden
Power Distance	60	36	31
Individualism/Collectivism	18	90	71
Masculinity/Femininity	39	61	5
Uncertainty Avoidance	85	51	29
Long Term Orientation	75	31	20

With the score of 60 in power distance, South Korea is considered a hierarchical society meaning that everyone has a place in the hierarchical order and that power among members are not distributed equally (Itim International, 2012b). The hierarchy reflects inequalities, centralization occurs and subordinates expect to be told what to do. Uncertainty avoidance expresses the extent to which the members of a society deal with the fact that the future can never be known. At the score of 85 South Korea is considered as one of the most uncertainty avoiding countries in the world. In Korea, security is seen as an important element for individual motivation. Long term orientation is very much linked to the teachings of Confucius and can be interpreted as society's search for virtue (Itim International, 2012b). South Korea scores high on long term orientation, which corresponds to the fact that the country has a long history of Confucianism. The Confucius teachings also influence South Korean business tactics (Chan, 2007). The Confucian argument lies in moral self-cultivation and the development of human virtues instead of the focus on profits.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

When trying to integrate ethics and business holistically it is important to realize that business objectives and life objectives may conflict in at least some aspects.

### 3.5 Theoretical Framework

To summarize the existing theory on standardization and adaptation in supply chain strategy, it is proposed that the appropriate extent of standardization or adaptation should be decided individually based on the circumstances of each company and case. It is also proposed that a company can have different strategies for different situations, which makes a combination of standardization and adaptation in supply chain strategy possible. There are factors that support standardization as well as factors that support adaptation. The factors can be described as follows:

#### **Standardization**

Economies of scale  
Consistent offer towards customers  
Controlled procedures of overseas operations  
Business time  
Business process costs  
Business process quality  
Management of capacity utilization  
Possibility of re-location  
Automated information systems  
Use of central expertise

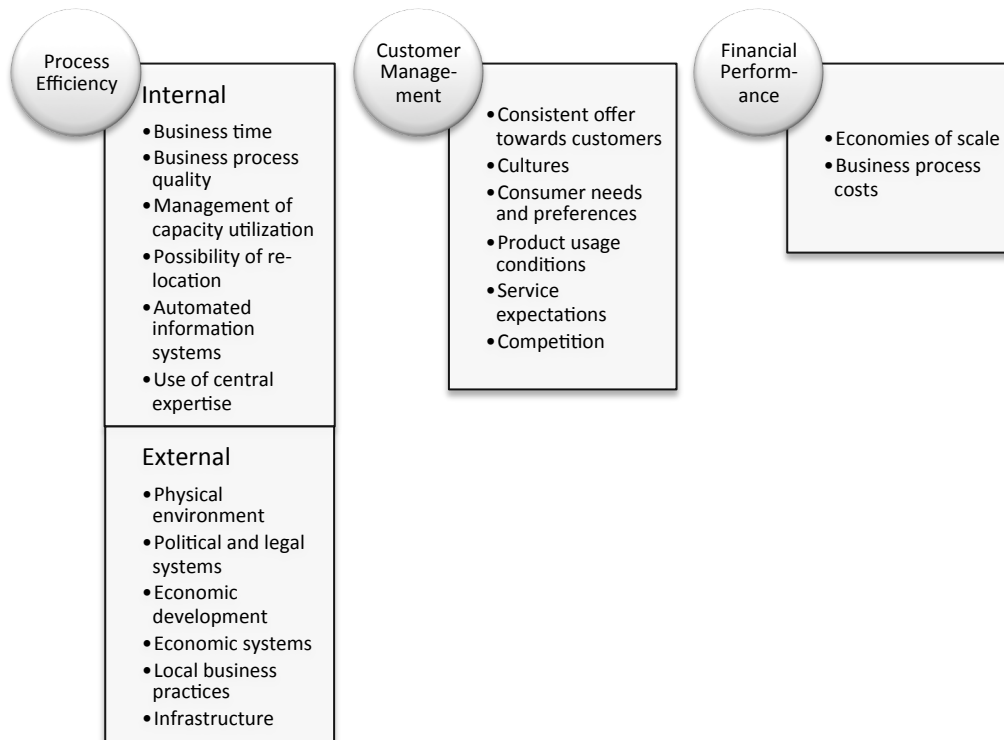
#### **Adaptation**

Physical environment  
Political and legal systems  
Cultures  
Consumer needs and preferences  
Product usage conditions  
Economic development  
Economic systems  
Local business practices  
Infrastructure  
Service expectations  
Competition

When studying the literature and factors presented above, three different areas of consideration are observed. The areas are process efficiency, customer management and financial performance. The area of process efficiency can further be divided into a company internal and an external dimension. By dividing the different factors into these areas, a theoretical framework is developed. The framework illustrates different aspects to consider in decisions related to standardization and adaptation in supply chain strategy and is presented in figure 3 on the following page. As shown in the framework, aside from “consistent offer towards customers”, the areas of customer management and external process efficiency consist solely of factors in favor of adaptation, while financial performance and internal process efficiency consist of factors supporting standardization. The framework will be used in the qualitative analysis of the case study of this thesis.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---



**Figure 3** Illustration of the theoretical framework. The three areas of consideration all contain different factors that have been identified in exiting theory and support either standardization or adaptation.

## 4 The Case

---

*This chapter starts with a general description of Tetra Pak and continues with detailed information regarding the Korean market company. A historical description is presented, followed by information on the supply chain and Korean market. Finally, benefits and challenges related to the direct delivery strategy are presented, and a description of other market companies in similar situations is given.*

---

### 4.1 Introduction of Tetra Pak

The history of Tetra Pak runs back to the 1950's when the company started as one of the first producers of packages for liquid milk (internal documentation, 2012). Since the early 1990's Tetra Pak has expanded into liquid food processing equipment, plant engineering and cheese manufacturing. Today, Tetra Pak is one of the world's largest suppliers of packaging systems for milk, fruit juices and drinks, and many other products.

#### 4.1.1 Organization

Tetra Pak is a global organization that consists of 38 market companies and 79 sales offices across the world (Tetra Pak, 2012a). The company has 42 plants for production of packaging and packaging material, 9 packaging machine assembly factories and about 22,900 employees. Tetra Pak provides products and services to more than 170 markets across the globe. As illustrated in figure 4, Tetra Pak is divided into two business units, Packaging Solutions and Processing Solutions (Tetra Pak, 2012b). Packaging solutions have three units; commercial operations, development and service operations and supply chain operations, while processing solutions consist of a single unit; processing systems. From a geographical perspective, Tetra Pak's operations are divided into clusters, in which factories as well as market companies and sales offices are included (internal documentation, 2012).

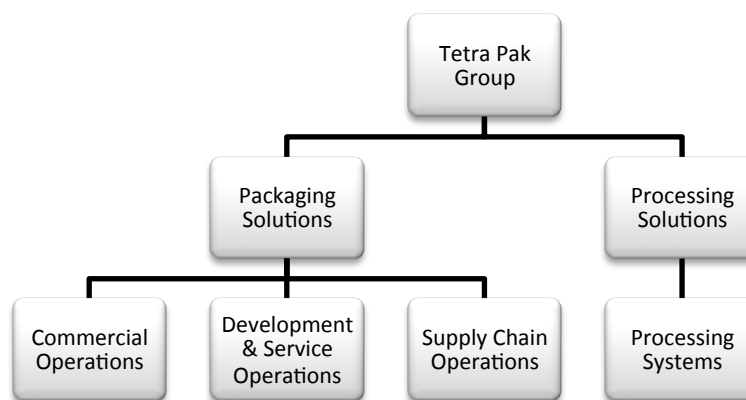


Figure 4: Tetra Pak's Organization (remodeled based on Tetra Pak, 2012b)

#### 4.1.2 Core Values

The values of Tetra Pak form the shape and essence of the company's culture (Tetra Pak, 2012c). They serve the purpose to keep Tetra Pak's employees united and re-affirm what Tetra Pak stands for everywhere in the world. Tetra Pak's core values consist of four pairs; customer focus and a long-term view, quality and innovation, freedom and responsibility, and partnership and fun. An illustration of the core values can be found in figure 5.

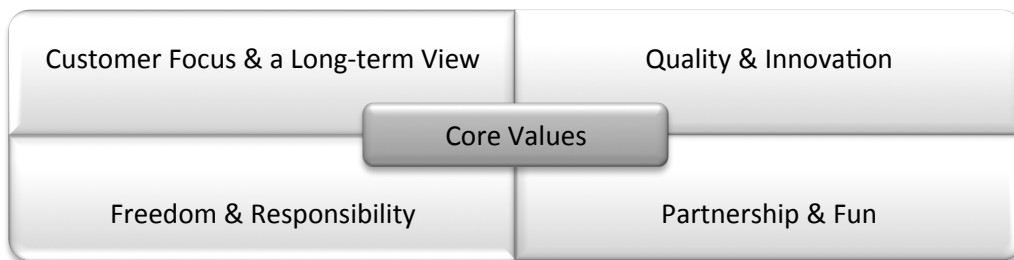


Figure 5 Tetra Pak's Core Values (remodeled based on Tetra Pak, 2012c)

Tetra Pak describes the core values in the following way (Tetra Pak, 2012c):

- Through *customer focus and a long-term view*, Tetra Pak ensures to add value and inspire its customers because, as the company recognizes, the customers come to Tetra Pak by choice. Tetra Pak listens to the customers to be able to best understand their needs in order to provide valuable solutions that exceed the customers' expectations.
- Through *quality and innovation* Tetra Pak does not compromise on quality and strive for better, fit-for-purpose solutions and breakthrough innovations.
- Through *freedom and responsibility* the employees have the freedom to take initiatives and act decisively in the best interests of Tetra Pak as well as the customers. The company takes responsibility for its actions and contributes to the communities in which it is active.
- Last but not least, through *partnership & fun* Tetra Pak employees respect and rely on one another as well as stakeholders to achieve exceptional results. They also enjoy working together and celebrate their achievements.

#### 4.1.3 Global Processes

To a great extent throughout factories and market companies across the world, Tetra Pak works according to a global company strategy, which results in global processes and systems (Bringström, 2011). One of these systems is the standardized ERP system, to which processes for areas such as design handling, order

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

management, logistics and financial transactions are all connected. Another example is the global process of World Class Manufacturing (WCM), used to reduce waste, cut impacts and minimize cost in production (Tetra Pak, 2012d). Recently, WCM was introduced for Tetra Pak's market companies as well (Bringström, 2012). The WCM working process includes many aspects and tools connected to Lean, such as Value Stream Mapping, Kaizen, 5S and 5Why (World Class Manufacturing, 2012).

An important part of the global strategy of Tetra Pak is the make-to-order philosophy, meaning that all production should follow customer orders in order to achieve an efficient, Lean supply chain. In line with this philosophy, warehouses for finished packaging material are uncommon within Tetra Pak as the products are usually shipped out directly from the converting factory to the customer.

## 4.2 The Market Company in Korea

### 4.2.1 Organization

Tetra Pak Korea is one of the 38 market companies within Tetra Pak (internal documentation, 2012). Together with Oceania and Japan, Korea forms the NEA&O cluster. The market company in Korea consists of 8 divisions, as illustrated in figure 6. The supply chain integration division, which is the division primarily in focus for this thesis, is a relatively new division within the market company. As the name implies, the main role of the division is to integrate and manage the supply chain all the way from production at the converting factory to delivery at customer site (Bringström, 2011).

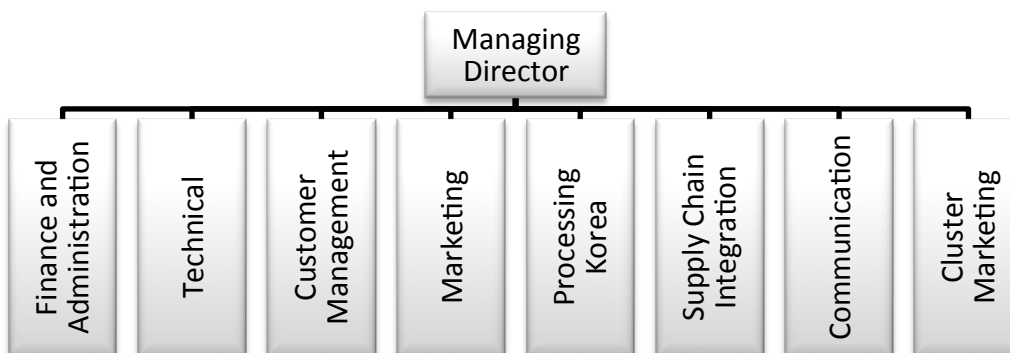


Figure 6 Overview of the organizational structure of Tetra Pak Korea (remodeled based on internal documentation, 2012)

Tetra Pak has 19 customers in Korea, which are divided into key accounts, middle accounts and small accounts (internal documentation, 2012). The key account customers have high market shares in their respective businesses, and are therefore

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

of great importance for Tetra Pak's business. In 2011 Tetra Pak provided the customers with packaging material for almost 1300 million packages. Out of the 19 customers, 10 customers are call-off customers, meaning that they are currently using Tetra Pak's external warehouse for storage of their products. The 10 call-off customers will from now on be called Customer A-J.

#### **4.2.2 History of Delivery Strategies**

In 2007 Tetra Pak decided to close its local converting factory in Korea after 21 years of operations (The Chosunilbo, 2007). According to Desmond Joseph, Tetra Pak Korea's marketing director at the time, the shutdown was part of Tetra Pak's reorganization of overseas production bases. When the converting factory was set up in 1986 the purpose was to serve both the Korean and the Japanese market. At the time of the decision to close the factory it produced 2.5 billion packages per year and 45 percent were exported to Japan. However, another decision had been taken, stating that the Japanese factory should produce all products for the Japanese market after complaints about products coming from Korea. Over previous years several other foreign companies have shut down their production in Korea due to labor unrest. According to Professor Kim Tae-ki at Dankook University, labor concerns had been one of the main reasons for foreign companies to reorganize their global production bases.

Almost all the packaging material delivered to Korean customers is today produced in Tetra Pak's converting factory in Kunshan, China, resulting in longer lead times for the Korean customers compared to when a local factory existed (Bringström, 2011). In addition, when the local factory supplied the Korean market, the customers were used to get deliveries of one or two pallets on short notice (Kim, Jimmy, 2012). To manage the longer lead time from Kunshan as well as the customer behavior, Tetra Pak Korea set up a solution with an external warehouse to offer business as usual. Up until 2010 Tetra Pak Korea used two different external warehouse suppliers to serve their customers with packaging material.

In 2010 a decision was taken to integrate the external warehouse with Tetra Pak's other operations to gain better control of the process and to be able to offer an improved solution to the customers (Bringström, 2012). Instead of two different warehouse suppliers an integrated solution with one supplier, providing both transport and warehouse business for Tetra Pak, was applied. The project's intention was to implement Tetra Pak's global ERP system at the Korean market company in order to align the operations to the global processes of Tetra Pak. Money was invested to integrate the external warehouse system with Tetra Pak's ERP system and today it is fully utilized.

In addition to the external warehouse solution mentioned above Tetra Pak also offers customers the possibility of direct delivery in combination with a discount.



The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

Over the past years Tetra Pak has experienced increasing inventory levels and as a countermeasure to bridge these problems Tetra Pak started offering the customers direct delivery during the summer of 2010 (Kim, Jimmy, 2012). The offer was communicated to all customers through letters, in some cases followed up by visits and further discussions. As an extra incentive for the switch of delivery solution, a discount was offered to the customers, and the original offer is still used today. The idea behind the direct delivery strategy is to minimize finished goods inventory as the products are being shipped directly from converting factory to final customer. One of the customers that have changed to direct deliveries has during 2011 been able to reduce its total inventory, e.g. inventory held by customer plus inventory held by Tetra Pak, by 50 percent. Today there are two different direct delivery solutions that Tetra Pak uses to provide its customers with packaging material. The existing solutions are described in section 4.2.3.1 Delivery Process.

Despite the successful implementation of a global ERP system and the integration with the external warehouse, a decision regarding the delivery strategy in Korea was taken at cluster level (Bringström, 2012). In line with Tetra Pak's global philosophy and processes a goal was set for 100 percent direct deliveries in the Korean market targeting 2014. The goal was set at the verge of finalizing the implementation of the ERP system and the integrated external warehouse solution.

### **4.2.3 Supply Chain Process**

In the following section, the supply chain process of Tetra Pak Korea will be described. The section includes the three areas delivery process, order management, and warehouse and transportation.

#### **4.2.3.1 Delivery Process**

There are currently three different delivery processes in Korea, one process regarding the external warehouse, also called call-off, and two processes regarding direct delivery (Kim, Jimmy, 2012). Since the introduction of direct deliveries in 2010, the number of customers using direct deliveries has steadily increased and does today account for approximately half of the packaging material volume delivered. However, a further increase of the share of direct deliveries is considered tougher, as many challenges in the transition between call-off and direct delivery exist for the remaining call-off customers. The current delivery processes are described below, starting with the warehouse solution followed by the two direct delivery processes. Since all activities before arrival at port in Korea are equal among the different processes, only the activities in Korea are considered.

##### *External warehouse*

At the Korean port, after goods are customs cleared, the container is transported to the external warehouse. Upon arrival at the warehouse the pallets are unloaded and stored until final delivery. When the customer requests products a delivery order is

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

created and the packaging material is loaded into a cargo truck and transported to customer site.

*Direct delivery container*

At port in Korea, after goods are customs cleared, the container is transported directly to customer site. The customer receives a discount compared to the price for the external warehouse setup.

*Direct delivery customer pick up*

At port in Korea, after goods are customs cleared, the container is picked up by the customer's carrier provider and transported to customer site. The customer receives a bigger discount than for the setup of direct delivery container.

#### **4.2.3.2 Order Management**

The Customer Service Representative (CSR) is responsible for order management including sales order handling, delivery order handling and invoicing (Lindgren, 2011). Depending on the size of the customers the CSR is responsible for either one or several customers. The objectives of the order management are to drive the supply chain packaging material order management operations while securing the supply chain integration and efficiency and driving the best customer interests and needs.

The process starts when the CSR receives a sales order from the customer with information regarding type of product, number of products and delivery date. The size of the sales order can vary depending on customer but it can never be smaller than the minimum order quantity set individually by Tetra Pak for each product. The production philosophy at Tetra Pak is make-to-order, resulting in no produced packages until the customer has placed a sales order. After the sales order is received the CSR inputs the order in an information system, where it can be monitored all the way from order placement to delivery.

When the packaging material has been produced a delivery order is created by the CSR and in the majority of Tetra Pak's markets one sales order equals one delivery order (Lindgren, 2011). In the case of Tetra Pak Korea this logic is not the absolute truth. Since Tetra Pak Korea offers an external warehouse to the customers the CSR creates a first delivery order, referring to delivery of packaging material from the converting factory to the external warehouse. When the customer requests its goods the CSR creates a second delivery order, referring to delivery of packaging material from the external warehouse to the customer site. With the current warehouse solution in Korea the sales order is often divided up in several delivery orders from warehouse to customer, as the customer might not need all of the produced packaging material at the same time (Cho, 2012). As there are no

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

additional costs for the customers to store their packaging material at Tetra Pak's external warehouse there are some products stored for a long period of time. This situation exists due to the fact that customers have limited or no storage space at their factories. The external warehouse is today seen as a service towards the customer in order to offer business as usual when a local factory no longer exists.

#### **4.2.3.3 Warehouse and Transportation**

To provide customers in Korea with packaging material Tetra Pak uses an external warehouse supplier to store finished goods. As described above, the customers do not pay any additional fees for utilization of Tetra Pak's external warehouse and there is no maximum number of storage days (Woo, 2012). However, Tetra Pak pays handling fee and storage fee for each pallet, making it a costly solution. The handling fee consists of unloading and loading of pallets and storage fee is paid for each day a pallet is stored in the external warehouse. The ideal transportation solution would be to transport the products directly from converting factory to customer site (Bringström, 2012). Due to the fact that the local factory closed quite recently and the external warehouse solution was implemented fully as late as last year, there is currently no organized process through which inventory levels are monitored. This has resulted in excessive inventory, where the turnover of stock is low compared to order lead times, even though the lead times are relatively long. One reason for the excessive inventory is that customers do not pay for storage. In addition to the external warehouse service offered, the customers do not pay for the transportation cost either (Woo, 2012). This results in increased transportation costs as the customers can request deliveries of small quantities without paying extra.

#### **4.2.4 The Korean Market**

##### **4.2.4.1 Competition**

Tetra Pak is not a unique provider of packaging material in Korea. Competition exists on the market, which is something to consider. In addition to Tetra Pak some of the customers also use one of Tetra Pak's competitors as supplier of packaging material (KAM interviews, 2012). Tetra Pak competes on quality and service as well as costs of the customer's total operations, rather than on packaging material price. An external warehouse is a service that is not included in the offer of some of Tetra Pak's biggest competitors. In addition to the existing competitors on the Korean market, there are emerging companies from China interested in market shares in Korea (Strömblad, 2012).

##### **4.2.4.2 Customer Relationships**

Regarding business in Korea, all that matters are relationships (Ackalin, 2012). It is important to make a decision regarding seniority and in that way establish the hierarchical order of the relationship. In a buyer-supplier relationship the customer is considered as king, thus the customer can more or less tell the supplier what to

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

do. For example, although the customers are aware of the lead times provided by Tetra Pak for their specific products, a need for rush orders seems to exist (Cho, 2012; Kim, A., 2012; Kim, June, 2012; Kim, P., 2012; Park, 2012). An order becomes a rush order when the customer is demanding the products in shorter time than the communicated lead time (Cho, 2012). Since it is important to maintain customer satisfaction this sometimes calls for additional transportation methods such as costly transportations by air in order to supply the customer with sufficient packaging material on time.

Tetra Pak Korea's customers are picky regarding design and a lot of modifications of designs are made (Choi, 2012). This can be due to new ingredients in the products or plain design modifications. There are some designs that at the moment are running in their eighteenth version. With these frequent new modifications of designs some products already ordered and delivered to the external warehouse risk to become obsolete and unusable for Tetra Pak's customers. The customers were not satisfied with the closedown of the factory. For example, the customers could no longer visit the local factory for onsite approval of designs, and the long lead times connected to overseas production required the customers to plan their production further in advance.

### **4.3 Direct Delivery Strategy in Korea**

#### **4.3.1 Identification of Benefits**

Through the interviews and observations at Tetra Pak Korea, several benefits of an implementation of direct deliveries have been pointed out by the employees. To start with, the risk of having to scrap packaging material, due to exceeded expiration dates or designs being out of date, would decrease. Furthermore, since the material no longer would be stored at the external warehouse, the cost of working capital tied up in stock would decrease. Additionally, the material would go directly to the customer without being handled at the external warehouse, resulting in minimization of the risk of claims regarding damaged goods during handling.

All of Tetra Pak's reporting procedures are linked to the global strategy and standardized processes. As external warehouses run by market companies are not included in the standardized processes, the ERP system is not designed according to this setup. As a result, the employees in Korea experience some difficulties in reporting and information sharing. The external warehouse solution is only offered by a few market companies around the world, which makes the incentives to adapt the ERP system and build a tool for such reporting low. If direct deliveries would be implemented, all figures that are subject for reporting would be supported by the ERP system, resulting in a more efficient work process.

### **4.3.2 Identification of Challenges**

Through interviews and observations at Tetra Pak Korea, a number of challenges connected to an implementation of direct deliveries for the remaining call-off customers have been identified. The challenges are both connected to supply chain conditions and customer related circumstances and are presented in the sections below.

#### **4.3.2.1 Supply Chain Conditions**

There is one main condition that is directly linked to Tetra Pak's supply chain and relevant for all customers; that all products are delivered to Korea using sea freight. Linked to this condition there are three main challenges. Firstly, all products are delivered from converting factories across the world in containers to the port in Busan, Korea. Currently Tetra Pak receives products from two ports in Busan, the old port and the new port. Secondly, the lead times of sea freight are long compared to other transportation solutions. Thirdly, use of sea freight causes risks connected to bad weather, which can result in delays of shipments (Woo, 2012).

#### **4.3.2.2 Customer Challenges**

In case of an implementation of the direct delivery goal, three main challenges connected to Tetra Pak's customers have to be considered; container handling, storage capacity and container payload. The three challenges are described in more detail below.

##### *Container handling*

Many of the call-off customers today lack possibilities to handle a container at their sites (KAM interviews, 2012). At their local warehouse connected to the factory there are no container docking or any other service that could unload a container. In some cases the customers' factories do not have room to install container docking, or even enough space at the factory for a container truck to enter the premises.

##### *Storage Capacity*

As mentioned earlier, warehouse space at customer site is limited for several reasons (KAM interviews, 2012). The main challenges that have been identified are:

- Customer hold competitors' stock
- Customer's warehouse size
- Warehouse systems that cannot handle Tetra Pak's products
- Many different products with small, irregular consumption compared to minimum order quantity, resulting in a need for safety stock and big order volumes compared to consumption

#### *Container Payload*

When containers are transported to the external warehouse today, small customers' orders can be co-loaded together within the same container, maximizing the payload and minimizing costs (Kim, Jimmy, 2012). If implementing direct deliveries in containers there will no longer be any possibilities of co-loading, which could result in a decrease of payload.

### **4.3.3 Markets in Similar Situations**

#### **4.3.3.1 Oceania**

The market company of Oceania serves about 25-30 customers, mainly located in Australia and New Zealand (Merizalde, 2012). As part of the NEA&O cluster, the market of Oceania is included in the same direct delivery goal as Korea. Just as in the case of Korea, no converting factory is located in Oceania and all products are transported by ship and delivered at the ports in containers. Oceania is a wide spread market with great logistic challenges, due to large distances between customers and ports and an eight hour time difference at the most. This resulted in a setup of a total of four warehouses when the local factory closed. Australia experienced high inventory levels at the warehouses with staggering costs as result. Therefore, Oceania introduced a warehouse agreement where customers could store products for three months free of charge and after that the products were shipped out to the customer. However, Tetra Pak wanted a more efficient process and an implementation of the more profitable direct delivery strategy started.

As for the Korean market, the market of Oceania also struggled during the implementation of direct deliveries with customers not always equipped with container handling possibilities, customers not able to receive full containers and customers that could not fill a container (Merizalde, 2012). To bridge these challenges Tetra Pak has helped the customers with investments in container handling and has also offered cross-docking services to reload the goods from containers to cargo trucks. With the help of these countermeasures, today approximately 90 percent of the packaging material volume of Oceania is delivered directly to the customers. However, there are still two call-off customers left, one in Australia and one in New Zealand. The one in Australia is in transition to become a direct delivery customer and Tetra Pak plans to close its warehouses in Australia in the near future. Regardless, the one left in New Zealand is a big volume customer, where challenges regarding warehouse space still exist. This causes a big problem, and collaboration with the customer regarding planning is extremely important to reach the goal of 100 percent direct deliveries. As of today no exact solution on how to proceed is known other than the importance of involving the customer in collaborative planning.

#### **4.3.3.2 United Kingdom**

Another market company with similar conditions as Korea is United Kingdom. When Tetra Pak's local converting factory closed in early 2011 a decision was taken that Wrexham, where the factory was located, should continue to house the company's commercial operations for the markets of United Kingdom and Ireland (Packaging Business Review, 2011). In addition, a new finished goods warehouse was set up to serve the customers. The majority of the customers are utilizing the warehouse setup, but there are a few special cases where customers receive direct deliveries (Leek, 2012). United Kingdom is, since the closing of the local factory, also provided with packaging material from overseas production facilities, resulting in shipments in containers. With the warehouse solution Tetra Pak is able to co-load products from different customers within the same shipment, resulting in higher payload.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---



## 5 Financial Impacts

---

*In this chapter the financial impact of an implementation of direct deliveries in Korea will be described. First off is a presentation of different scenarios, which is followed by the financial impacts of each scenario. Finally the result of the calculations and the different scenarios will be analyzed.*

---

### 5.1 Description of Scenarios

To be able to analyze the financial impacts of an implementation of 100 percent direct deliveries, different scenarios have been developed by the authors based on the empirical situation and challenges of Tetra Pak Korea. In the scenarios, differences from the current warehouse setup exist regarding what party that is accountable for the cost of an activity. Descriptions of the scenarios, denoted from A to E, are given below and a summary of the changes is presented in table 2 at the end of section 5.1. What all the scenarios have in common is that the customer receives a discount on packaging material for the direct delivery solutions, a discount that was offered to the customer already in 2010 and is not considered as subject to change. The discount is higher for the scenario where the customer handles the inland transportation.

#### A. Direct delivery container



**Figure 7 The direct delivery container process (used by Tetra Pak Korea today)**

The setup of the first scenario is one of the direct delivery setups offered by Tetra Pak Korea today. In this scenario, Tetra Pak delivers goods directly from port to customer in containers (see figure 7). Compared to the current warehouse setup, Tetra Pak does not carry the costs for the warehouse in terms of unloading and loading fees, storage fees and costs of working capital tied up in stock. However, the customer will carry the costs of working capital tied up in stock as payment will occur at an earlier stage compared to current setup. Furthermore, Tetra Pak avoids transporting costs from port to warehouse and warehouse to customer, though these are replaced by the transportation cost from port to customer.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

*B. Direct delivery customer pick up*



**Figure 8** The direct delivery customer pick up process (used by Tetra Pak Korea today)

The direct delivery customer pick up scenario is the other setup currently offered by Tetra Pak Korea. The scenario is almost identical to scenario A, except that the customer picks up the container upon arrival at port (see figure 8). As for scenario A, Tetra Pak avoids all costs related to the warehouse and the customer has to carry the costs for working capital tied up in stock. The difference compared to scenario A is that the customer is accountable for transportation from port to customer.

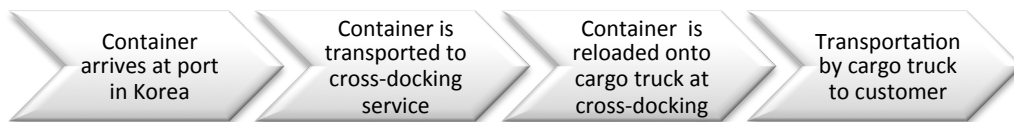
*C. Semi-direct delivery*



**Figure 9** The semi-direct delivery process (developed by the authors)

A possibility in order to overcome the challenge of container docking at container sites would be to reload the products onto cargo trucks after arrival in Korea. In the semi-direct delivery scenario goods are sent in containers to the external warehouse where they are reloaded onto cargo trucks and sent by Tetra Pak to the customer (see figure 9). The difference from current setup is that Tetra Pak does not have to pay for storage fees at the warehouse or costs for working capital tied up in stock. As the customer receives all goods directly, costs for working capital tied up in stock are added for the customer.

*D. Cross-docking service*



**Figure 10** The cross-docking service process (developed by the authors)

Today Tetra Pak gets competitive prices for unloading and loading at the external warehouse, since the company also uses it for storage of products. If Tetra Pak no longer uses the warehouse for storage of products, the negotiating power for competitive prices on reloading from container to cargo truck could possibly be decreased (Woo, 2012). With a cross-docking service, goods are instead reloaded into cargo trucks at an external cross-docking center in the new port (scenario D:1)

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

or either the new port or old port (scenario D:2) in Busan and sent by Tetra Pak to the customer (see figure 10). In the case of cross-docking service Tetra Pak avoids costs for the warehouse in terms of storage fees, unloading and loading fees and costs for working capital tied up in stock, however as for the other scenarios the customer has to carry the cost for working capital tied up in stock. Tetra Pak also avoids transport costs from port to warehouse and from warehouse to customer. In addition to previous costs Tetra Pak is charged for cross-docking fees in terms of unloading and loading and transportation costs from port to customer. Furthermore, for scenario D:1 where only one cross-docking center is used, transportation costs from the old port to the new port are added for goods arriving at the old port.

*E. Third party warehouse*



**Figure 11 The third party warehouse process (developed by the authors)**

For all the earlier described scenarios, the challenge of limited warehouse space remains. To overcome this challenge, a third party warehouse solution could be used. In this scenario, goods are transported by Tetra Pak in containers to a third party warehouse (see figure 11), where the customer stores the goods until consumption. Instead of Tetra Pak carrying the warehouse costs the customer does, resulting in costs for the customer regarding storage fees, unloading and loading fees and cost for working capital tied up in stock. Instead of Tetra Pak the customer also pays for the transportation cost from warehouse to customer. Tetra Pak is still charged for the cost of transportation from port to warehouse.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

**Table 2 Allocations of costs between Tetra Pak and customer (cstmr) in the direct delivery scenarios included in the study**

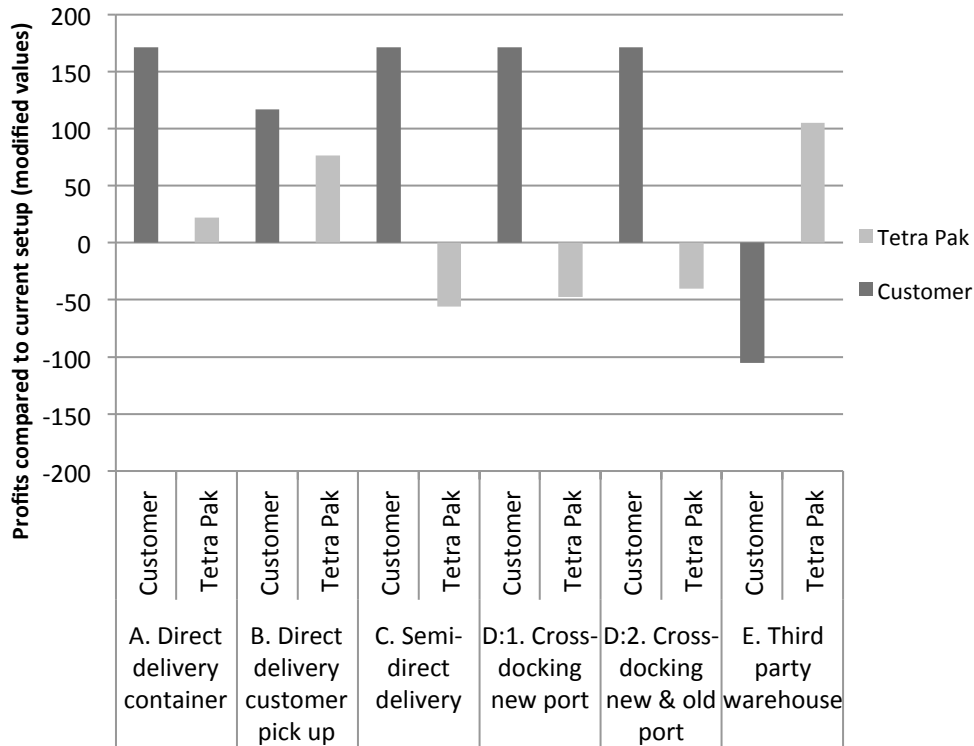
	<b>Current setup</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D:1</b>	<b>D:2</b>	<b>E</b>
<b>Storage cost in warehouse</b>	Tetra Pak	-	-	-	-	-	cstmr
<b>Cost for working capital tied up in stock</b>	Tetra Pak	cstmr	cstmr	cstmr	cstmr	cstmr	cstmr
<b>Unloading and loading cost at warehouse</b>	Tetra Pak	-	-	Tetra Pak	-	-	cstmr
<b>Transportation cost from port to warehouse</b>	Tetra Pak	-	-	Tetra Pak	-	-	Tetra Pak
<b>Transportation cost from warehouse to customer</b>	Tetra Pak	-	-	Tetra Pak	-	-	cstmr
<b>Transportation cost from port to customer</b>	-	Tetra Pak	cstmr	-	Tetra Pak	Tetra Pak	-
<b>Unloading and loading cost at cross-docking</b>	-	-	-	-	Tetra Pak	Tetra Pak	-
<b>Transportation cost between old and new port</b>	-	-	-	-	Tetra Pak	-	-

## 5.2 Financial Impacts of Scenarios

For the financial calculations of the different scenarios, actual data and order behavior from 2011 have been used. The discounts from the initial direct delivery offer have been considered absolute and additional information needed for the calculations has been collected. Detailed information on calculations can be found in appendix 1.

The overall financial impacts for each of the six scenarios mentioned in the first section of this chapter are presented in figure 12. The figure shows all customers' accumulated financial impact for each scenario compared to the current setup with an external warehouse, i.e. whether or not a 100 percent implementation of a scenario is profitable or not for Tetra Pak compared to today's solution. An overview of the profitability of each scenario for Tetra Pak as well as for customers is presented in table 3.

**The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?**



**Figure 12** Accumulated financial impacts compared to current setup for customers and Tetra Pak for each scenario, given an implementation of 100 percent. The customer values refer to the accumulated result for all customers. Values are modified due to company confidentiality.

**Table 3** Overview of scenario profitability for Tetra Pak and customers

Profitability per scenario	Tetra Pak	Customer
A. Direct delivery container	4 out of 10 customers	10 out of 10 customers
B. Direct delivery customer pick up	9 out of 10 customers	8 out of 10 customers
C. Semi-direct delivery	2 out of 10 customers	10 out of 10 customers
D:1. Cross-docking new port	2 out of 10 customers	10 out of 10 customers
D:2. Cross-docking new & old port	2 out of 10 customers	10 out of 10 customers
E. Third party warehouse	9 out of 10 customers	1 out of 10 customers

### 5.3 Analysis of Financial Impacts

From a pure financial perspective there are three scenarios that would be profitable for Tetra Pak if a 100 percent implementation was achieved; the currently used direct delivery container (A) and direct delivery customer pick up (B), and the third party warehouse solution (E). The semi-direct delivery (C) and cross-docking (D)

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

scenarios would not be financially positive for Tetra Pak compared to the current warehouse setup. These two scenarios can overcome some of the challenges that have been identified (for example the lack of container handling at customer site), but not all of them (such as the lack of storage space). An implementation of either scenario C or D would not lead to a significantly simplified or more efficient delivery process as the products still must be unloaded from the container truck onto a cargo truck before they are delivered to the customer. Therefore, the risks when handling the goods would not decrease compared to the current setup.

The only scenario that takes all challenges into consideration is the third party warehouse scenario (E). However, this solution would only be profitable for one out of 10 customers, which makes such an implementation difficult to motivate. Both scenario A and B would be financially beneficial for Tetra Pak if a 100 percent implementation is achieved and scenario B would be most beneficial for Tetra Pak. As the customer has already been offered both scenario A and B, the customer is free to choose any of the solutions. As the customer is benefiting more from scenario A, where Tetra Pak delivers the goods, it might be difficult for Tetra Pak to convince the customer to refrain from scenario A and implement scenario B. An exception would be if the customer own its own carrier solution or has connections within the carrier business, resulting in a more cost efficient transportation solution than the one included in the calculations. As both scenario A and scenario B already are offered to the customer, a combination of the two scenarios could result in the most beneficial outcome for Tetra Pak and the customers. In other words, from a financial perspective, scenario A and scenario B are the reasonable scenarios for Tetra Pak to offer. With this in mind, though, it should also be remembered that scenario A is dependent on four customers in order to be profitable for Tetra Pak, as table 3 on the previous page and figure 13 on the following page show.

Both scenario A and B lack the possibility to eradicate the challenges that have been identified in the case without any additional investments. One way to get rid of the container handling problem is installations of container docking at customer sites. The total cost of installations at the required factories would result in a payback time of five years for Tetra Pak. Nevertheless, even if the container issue would be removed, challenges regarding warehouse systems would still remain for some of the customers, for which an implementation is needed in order for Tetra Pak to profit from scenario A.

## A. Direct Delivery Container

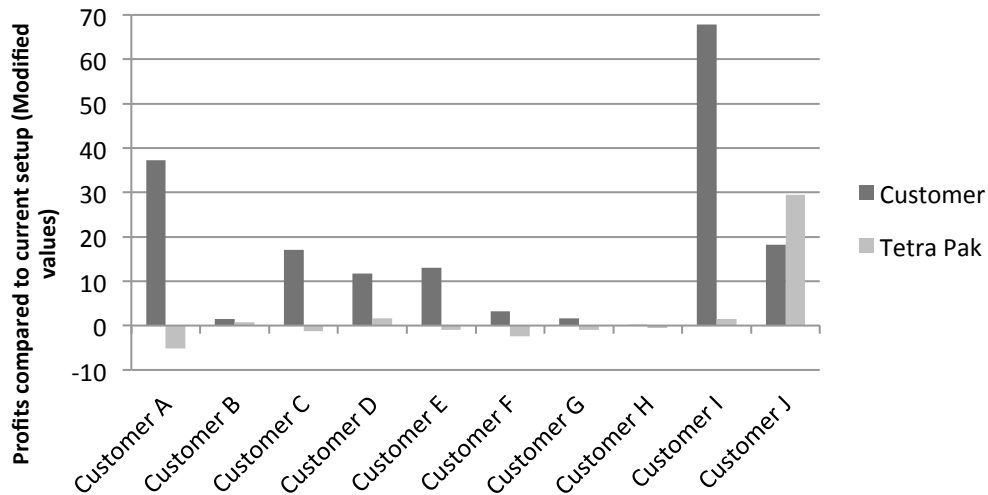


Figure 13 Financial impacts compared to current setup per customer at a 100 percent implementation of scenario A

The only scenario that would solve all identified challenges without any need for further investments is scenario E, which as shown would have a negative financial impact for most of the customers. The reason why the customers would not benefit from scenario E is that they would carry the costs of an external warehouse, which are today carried by Tetra Pak. As earlier described, there are problems in terms of high inventory levels and low turnover of stock for some customers. A possible alternative to an external warehouse paid by the customer could be an improvement of the current warehouse setup. As previously done in Oceania, a service level agreement could be set up in order to achieve a more cost efficient process while still avoiding the challenges of direct delivery. It is interesting to see what the financial impact of such a service level agreement would be if implemented in Korea. The financial impact of such a solution has therefore been calculated, where the calculations are based on the following agreement:

- Storage the first 90 days is free of charge
- Storage between 90-180 days is paid by customer
- After 180 days the goods are shipped out and invoiced
- Two deliveries per sales order are free of charge
- Additional deliveries are paid by the customer

If actual data and order behavior from 2011 is used for calculations, the financial impact of a 100 percent implementation of this kind of service level agreement would for Tetra Pak equal 180 percent of the profits from an implementation of

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

direct delivery container (scenario A) and 52 percent of the profits from an implementation of direct delivery customer pick up (scenario B). Basis for calculations regarding the service level agreement can be found in appendix 1.

On top of the financial discussions above is that Tetra Pak's strive for 100 percent direct deliveries in Korea is in line with a global ambition and strategy. Therefore, factors to consider regarding the implementation might reach beyond the financial perspective only. The direct delivery strategy might be associated with other benefits than the ones included in a quantitative calculation of profitability. Furthermore, an implementation could result in complications that are not visible through a financial calculation, such as decreased customer satisfaction. Both these circumstances call for a qualitative analysis.



## 6 Qualitative Analysis

---

*In the following chapter, a qualitative analysis of the case study performed will take place. The analysis is structured based on the areas included in the theoretical framework of the thesis, namely process efficiency, customer management and financial performance. First, the case of Tetra Pak Korea is analyzed with regard to each of the three areas separately. After that, the overall findings of the case are discussed and a model illustrating the case with the help of the areas of the theoretical framework is presented.*

---

### 6.1 Process Efficiency

#### 6.1.1 Internal Dimension

The main internal process related changes connected to an implementation of direct deliveries would be the removal of the external warehouse and that goods are transported directly from port to customer instead of from port to warehouse and from warehouse to customer. From a company internal process perspective, this is a simplified and more effective process compared to today's warehouse setup. The new process would lead to fewer times of loading and unloading, no time of storage and fewer people and parties involved, which result in a reduction of risks for both Tetra Pak and the customer. In turn, improvement of quality and reduction of damages on goods delivered to customers could be achieved, which are stated to be essential parts of customer service. The working capital that is today tied up in stock for Tetra Pak would be reduced, as it would instead be carried by the customers.

Another internal process advantage of the simplified process is the reduction in workload for the personnel involved. Instead of one delivery order to the warehouse followed by several delivery orders from warehouse to customer, only a single delivery order per sales order needs to be handled. This would result in less workload for CSR's, who make all the delivery orders, and for the logistics personnel, who plan and book the transportations. Furthermore, no co-loading would be made and thereby no work for coordinating these would be needed. With the warehouse gone, no inventory management would be needed by the CSR's, who instead would be able to focus on corporate planning and other improvements together with the customer. On the other hand, a change to direct deliveries could possibly result in more, smaller orders as the customers do not have enough space to keep large quantities in stock at their sites. This could in turn reduce the positive effect on workload achieved by the reduced number of delivery orders. Furthermore, it could result in a reduction of container payload, causing increased costs per pallet for transportation and other related activities. However, these increased costs could be compensated by an improved negotiating position regarding container trucks as more transportations of the same type of truck would be needed.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

As described by theory, one advantage of standardization is the automated systems used, which can make it easier to keep track on the order process. If used properly, the amount of on time, in full deliveries as well as customer communication regarding the order process can increase. However, in the case of Tetra Pak Korea, an automated system has already been implemented through the reorganization of converting factories and implementation of a global ERP system. Therefore, these advantages, as well as the use of company central expertise, have been achieved despite the local delivery solution. There are some small usage limitations connected to that Tetra Pak Korea has an external warehouse, but nothing essential that cannot be solved with a little amount of extra time spent. On a high level, Tetra Pak can still achieve the information needed for performance measurements, evaluation and comparisons with other markets.

The standardization of the delivery process in Korea is partly motivated by the removal of inventory, which would increase the internal process efficiency. However, supply chain theory suggests that a greater extent of inventory is needed in international supply chains than in domestic supply chains. This approach is supported by theories on Lean, suggesting that it is the excessive inventory that should be considered as waste, not necessarily all inventory. Tetra Pak Korea does have problems regarding excessive inventory at the warehouse, indicated by the low turnover of stock compared to lead times. However, this problem could be reduced through an improvement of the warehouse solution, instead of a removal of the entire warehouse. To improve the warehouse solution, Tetra Pak Korea could implement a service level agreement like the one previously used in Oceania. This way, the process would become more efficient without removing the entire inventory. The service level agreement's effects on customer management and financial performance will be discussed further down.

### **6.1.2 External Dimension**

In the case of Tetra Pak Korea, the external process efficiency is strongly influenced by the physical environment. The main aspect in terms of physical environment is the delivery of goods to Korea, where all goods are transported by sea freight and in containers. As many customers cannot handle containers at their sites, additional activities or investments would be needed in order to deliver the goods directly to these customers. Furthermore, as described above, the transportation in containers could impact the payload of deliveries. Both of these issues are in turn connected to the area of financial performance, and will be further discussed in that section of the analysis.

Another aspect connected to the physical environment is that direct deliveries from factories in China, Japan and Europe could make it harder to guarantee on time deliveries to the customer, as the transportation from these factories are longer than the transportation from the warehouse. Longer transportation means a higher

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

degree of risk, especially in the case of sea freight where weather related problems are common. Adding to these risks, the level of inventory at customer site is, as will be further described in the section on customer management, likely to be smaller than the current inventory level at the warehouse. As a result, the customers will be even more exposed to the risks of delayed deliveries.

In Tetra Pak Korea's case, there are also aspects to consider related to local business practices. Korean business practices are to a large extent influenced by the local culture, which in particular impact customer relationships. As a result, the external process efficiency is affected as well, but as the main area is connected to customers, this topic will be discussed in the section on customer management.

## **6.2 Customer Management**

A factor included in the area of customer management, where Tetra Pak could benefit from an implementation of the global strategy, is the communication towards existing and potential customers. It could be of gain for Tetra Pak as a global company to be able to provide the same picture of the business strategy and services to all customers worldwide. Furthermore, the improvements of the internal process described above could result in fewer risks for the customers in Korea. On the other hand, there are many factors within customer management that could be negatively affected by the direct delivery implementation and removal of the external warehouse. For example, many of the customers in Korea have limited storage space at their sites. On top of that, they have a large range of products, which are small and irregular in consumption. At the same time, though, there is a minimum order quantity for packaging material, meaning that the customer has to order more than what is needed for the nearest period of time. For these products, the warehouse setup has been of great help, and a removal of the warehouse would cause problems for the customers.

By providing storage space at the external warehouse, Tetra Pak today offers its customer an extra service. Tetra Pak provides the customer the service to solve the issue of limited storage space, a service that is currently not offered by many of Tetra Pak's competitors. If this service would be removed, there is a risk that incentives for customers to choose Tetra Pak as supplier over competitors who offer a lower price would decrease, potentially resulting in a loss of market share for Tetra Pak. As some of the customers already use multiple suppliers, moving more of the volume to other suppliers would not be very difficult to arrange. In addition to the potential loss of customers to existing competitors, there are new competitors searching for opportunities to enter the Korean market. A removal of one of the incentives for the customer to continue with Tetra Pak as supplier could potentially result in openings for new competitors to enter the market. On the other hand, it should also be considered that the external warehouse is only one of the services

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

offered to the customers by Tetra Pak. Even if this service would be removed, there are still other service related incentives that could motivate the customers to continue using Tetra Pak as supplier.

As mentioned in the internal dimension, the working capital tied up in stock would affect the customers instead of Tetra Pak at an implementation of direct deliveries, as the customers would have to store the products themselves. On the other hand, it has been calculated that earlier call-off customers have reduced their stock with as much as 50 percent after changing to direct deliveries. It can be argued that the remaining customers would make similar changes when they have to provide storage space and pay for the products in advance. In addition to the low turnover of stock, this reduction of inventory when previous customers have started to use direct deliveries is another indication of that there is excessive inventory at the warehouse. Since the customers reduced their inventory when they started financing it themselves, it seems like the high levels of inventory reflects a perceived need rather than an actual need of inventory. However, as described earlier, there are ways to deal with excessive inventory without removing the entire inventory.

A service level agreement could be of help to keep inventory levels down, without removing the customer service of warehouse space. It could be argued that even this kind of agreement would lower the service level towards the customer as it, in comparison to today's solution, could cause additional costs for the customer and decreased delivery flexibility. On the other hand, this decline in service level would still be smaller than the one caused by the implementation of direct deliveries. Tetra Pak would still offer the customer a higher service level than its competitors on the Korean market. Through the service level agreement, it could be said that new possibilities to increase the service level would in fact arise, as Tetra Pak could help the customer to avoid the associated costs through increased collaborative planning. With the help from Tetra Pak and the new incentive to hold stock levels down, the customer could improve its order behavior, resulting in a reduced risk of excessive inventory for Tetra Pak and obsolete products in stock for the customer.

In the evaluation of the above discussed ways in which the customers would be affected, it is also relevant to take Korean culture into consideration, as a need of adaptation is often motivated by culture. To start with, Korean people are seen as uncertainty avoidant in the studies of Hofstede. In the case of Tetra Pak, this could result in bigger complications than in other parts of the world when delivery reliability and safety stock are at stake for the customers. It could also result in bigger difficulties than in other countries to get the customer to trust that Tetra Pak is able to deliver on time. Another aspect of Korean culture of importance to consider is Confucianism, which has influenced the Korean society for centuries. According to Confucianism, the customer is considered king in the relationship with

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

the supplier, a role that has been observed in the case of Tetra Pak through the customers' pickiness and frequent demands on shorter lead times than the ones provided. The hierarchy in the customer-supplier relationship is further supported by Korea's high score of power distance in Hofstede's studies, indicating that people accept hierarchies and inequalities of power in society. With this in mind, to make decisions on substantial changes as a supplier could be regarded inappropriate and could potentially harm the relationship with the customer to a greater extent than in other cultures. The customers were not positive about the closedown of the Korean factory and would probably not like that the external warehouse, offered in order to provide business as usual after the closedown, was closed as well.

### **6.3 Financial Performance**

As shown in chapter 5, a 100 percent implementation of direct deliveries in containers (scenario A and B) would have a positive financial impact compared with today's solution for both Tetra Pak and the customers. However, there are challenges related to an implementation of direct deliveries in containers. As described in the section of external process efficiency, a lot of the customers lack the ability to unload a container at their factory sites since no container docking facilities exist. In addition, many customers lack storage space. Furthermore, for some of the customers needed in order for Tetra Pak to benefit from an implementation, there are challenges related to the warehouse systems. It is therefore unlikely that Tetra Pak would be able to implement direct deliveries without further investments while at the same time maintaining good relationships with the customers.

There are a number of actions and investments that could be made together with the customer in order to overcome some of the challenges. One of these investments could be to install container docking at the sites in need of it. The payback time of such an investment would, as earlier mentioned, be five years. Five years of payback time can seem reasonable, but on the other hand, there are two reasons that make it uncertain if the investments would be enough. Firstly, it is not guaranteed that an installation of container docking will be feasible at all sites. Secondly, the warehouse space and warehouse system problems would still remain. As the customers with warehouse system challenges are needed for scenario A to be beneficial for Tetra Pak, it can be argued that no investments regarding other customers should be done until this problem is solved. Unlike the container docking problem, the warehouse system problem seems to be a lot harder and more expensive to solve.

If the direct delivery strategy would not be implemented, an alternative could be the earlier discussed service level agreement in order to improve the warehouse solution. As has been described in chapter 5, such a solution could save Tetra Pak a

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

lot of money, while still avoiding the challenges associated with direct deliveries in containers. If the main reason for implementation of the standardized direct delivery solution would be financial, a service level agreement could be just as profitable.

#### **6.4 Overall Findings**

To summarize the sections above, the internal process efficiency of Tetra Pak Korea would benefit from an implementation of direct deliveries, both regarding business time and business process quality. On the other hand, the advantages of an automated information system have already been achieved through earlier standardizations, which have led to possibilities to use central expertise as well. It has also been discussed that there are other ways of improving the internal process efficiency, such as the implementation of a service level agreement. The external dimension of the process efficiency is affected by the challenges regarding physical environment and local business processes, and is therefore not considered to benefit from an implementation of direct deliveries.

Within the area of customer management, a positive aspect of an implementation would be the possibility of a consistent offer towards customers. Furthermore, as a result of the improved business process quality and time, the customers would be exposed to fewer risks connected to the delivery process. However, these advantages are overshadowed by the problems and disadvantages related to culture, consumer needs and preferences, service expectations and competition. The financial performance is favored by the improvements of the internal processes, but because of the challenges connected to the external process and customer management, the overall financial impact of an implementation is likely to be negative. Just as for the internal process efficiency, it is possible to improve the financial performance through a service level agreement, which would have less of a negative impact on customer management than the implementation of direct deliveries.

Based on the performed analysis, it is the authors' interpretation that the standardized strategy of Tetra Pak has mainly been set with regard to the internal process efficiency, where the aim has been to improve the company's internal supply chain process. By doing this, it has also been believed that financial benefits could be achieved. Tetra Pak has been aware of potential negative effects within customer management as a result of the increased internal process efficiency, but has also identified advantages in terms of fewer risks. As illustrated by the theoretical framework, the factors included in the internal process efficiency area support standardization, which makes it reasonable that an action of standardization has positive effects on this area. Likewise, the factors included in the area of financial performance support standardization. However, these factors are influenced not only by the internal process related factors, but by the factors of

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

external process efficiency and customer management as well. Therefore, despite the positive effects of standardization in existing literature, the financial performance is negatively affected by the implementation of direct deliveries in the case of Tetra Pak Korea.

The customer management area does mostly consist of factors supporting the need of adaptation. If looking at the effects of internal process efficiency improvements, though, the customer management area would both be benefiting and suffering from the standardization, which could make an implementation reasonable from the internal process perspective. However, customer management is also linked to the external process efficiency factors, causing a lot bigger disadvantages and risks than the changes of the internal process. When both areas of process efficiency are taken into consideration, it is clear that customer management does not benefit from the implementation of direct deliveries.

As illustrated in figure 14 on the following page, Tetra Pak seems to have started out from the point of view of internal process efficiency, and has reviewed the effects of an improved internal process on the areas of customer management and financial performance. The problem with this approach is that the effects on customer management and financial performance caused by factors related to the external parts of the process have not been taken into account. In the same way, the effects on financial performance caused by customer management related factors have not been considered. As a result, the implementation of direct deliveries has been regarded positive when the overall effect appears to be negative for both Tetra Pak and the customers.

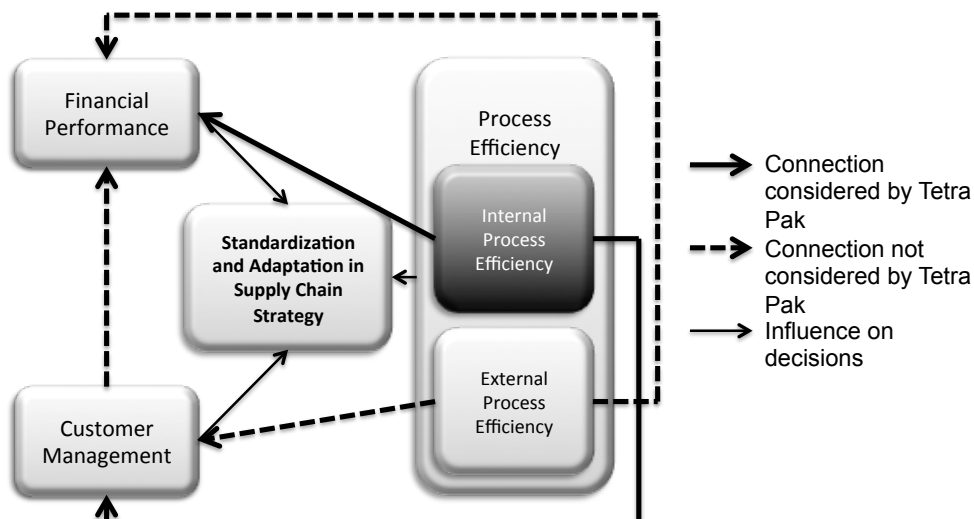


Figure 14 The authors' perception of the approach used by Tetra Pak in the analysis of direct deliveries in Korea.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

Instead of using the perspective of one specific area of the figure, the analysis of the case would benefit from the use of an overall approach where all the areas are equally considered. This way, all effects and connections between the areas could be discovered and a clearer overall picture of the impacts of the direct delivery implementation could be achieved. If the case of Tetra Pak Korea is analyzed from an overall perspective, an improvement of the existing warehouse solution appears to be a more appropriate change of today's delivery process than a 100 percent implementation of direct deliveries. This way, a lot of the risks related to the customers, such as decreased customer service and increased opportunities for competitors, could be reduced. At the same time, the financial performance could be improved and the supply chain process could become more efficient than with today's solution.

In addition to the finding regarding an improvement of the warehouse system, two other findings observed from an overall perspective can be highlighted. The first finding is related to the closedown of the local factory in Korea and the following setup of the external warehouse and call-off system. The factory closedown was said to be part of a global reorganization of Tetra Pak's overseas production bases. Instead of a local factory, it was decided that the Korean market would import packaging material from other factories. Though, to ensure the customers business as usual, an external warehouse and call-off system were set up. From a theoretical perspective, the reorganization of overseas production could be described as an action of standardization, while the call-off and warehouse setup could be seen as a needed adaptation in order to make the global reorganization work at the local market. From this point of view, the removal of the external warehouse is not only a question of standardization of a process, but about standardization of a previous adaptive action that was regarded necessary when the factory was closed. Existing theory supports the previous decision of adaptation in the form of an external warehouse and call-off setup, as it is stated that a certain amount of adaptation is often necessary in order to make the implementation of a standardized solution possible. For Tetra Pak Korea, the need of adaptation in the form of a warehouse can be explained by the negative effect on financial performance, which in general is positively influenced by actions of standardization according to theory. The mindset also seems to be shared by the market company in United Kingdom, where a warehouse was recently set up after the closedown of the local factory.

The other finding is the potential tradeoff between Tetra Pak's global make-to-order and direct delivery strategy and the company's core value "customer focus and long term view". For many of the Korean customers, it seems to be rather clear that direct delivery is not the most attractive solution, and a decrease in customer satisfaction may be unavoidable if direct delivery is implemented. On the other hand, if it is not implemented, the global delivery strategy would not be fulfilled.



The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

When looking at the case from the internal process point of view, the make-to-order and direct delivery strategy is in focus since this strategy is closely connected to internal process efficiency. However, what is not as closely considered is the indirect effect on the core value of customer focus. Both of these findings point out the importance of an overall perspective, where all areas of consideration are tackled and analyzed in the same way, in order to fully understand the impacts of a decision on standardization or adaptation in supply chain strategy.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

## 7 Conclusion

---

*In the following chapter, the conclusions of the thesis are summarized and discussed. The conclusions are illustrated by an illustrative framework, where the theoretical framework of the thesis has been further developed. In addition, proposals for future research are presented.*

---

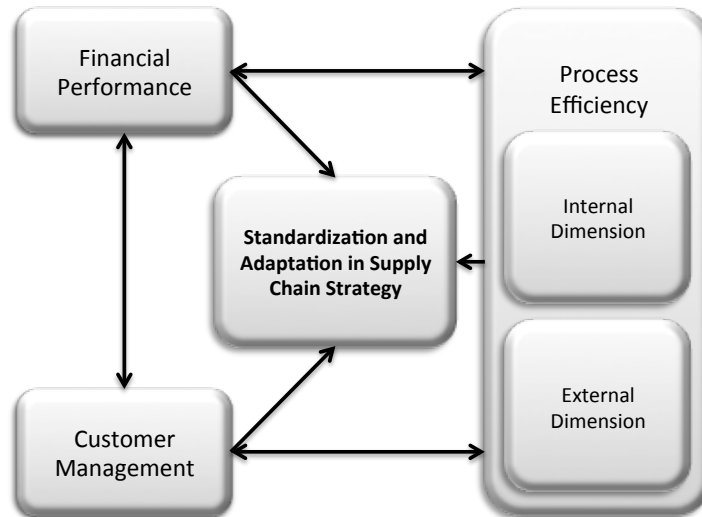
### 7.1 Conclusions of the Study

The purpose of this thesis has been to investigate how Tetra Pak Korea could handle challenges and associated tradeoffs that arise from the desired implementation of a global, standardized delivery strategy. Furthermore, through this investigation, the purpose has been to contribute to the case company's development and to the general, academic discussion regarding the balance between standardization and adaptation in global supply chain strategies. Through a literature study, a theoretical framework including different areas to consider in decisions on standardization and adaptation has been developed. The areas are process efficiency (including both an internal and an external dimension), customer management and financial performance. As has been illustrated by the case study, all of these areas influence and are influenced by decisions on standardization and adaptation. Furthermore, all areas influence each other. Because of this, it is of importance to use an overall approach, where all the areas are regarded equally, when analyzing a potential implementation of standardization or adaptation in supply chain strategy. This way, all effects and connections between the areas can be discovered and a clearer overall picture of the impacts and tradeoffs can be achieved. In figure 15 on the following page, a description of the relationships between the different areas is presented.

The case has also illustrated that it is not only tradeoffs between standardization on one hand and adaptation on the other that can arise and need to be considered. If standardization is implemented based on the accessible advantages of one area, such as internal process efficiency, advantages of other areas generally associated with standardization, like financial performance, are not necessarily achieved. As all areas, those connected to standardization as well as adaptation, influence each other, tradeoffs can arise between factors that in theory are both considered to profit from standardization. In addition to the overall approach, it is therefore important to analyze each case individually and to avoid labeling a certain factor to profit from either standardization or adaptation in all situations.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---



**Figure 15** Areas that influence decisions on standardization and adaptation in supply chain strategy. As illustrated, the areas are all connected.

When evaluating the conclusions of this thesis, it is important to consider that the findings are based on a single case and that the framework presented above is based on the discoveries of this specific case. The generalization and transferability to other cases are therefore limited. However, the conclusions can be used as inspiration and guidance for future studies within the field of standardization and adaptation in supply chain strategy.

## 7.2 Future Research

As this thesis is based on a single case study, where the degree of generalization of the findings is limited, it would be of interest to investigate the same phenomena in a study including a bigger sample of corporations. Another study of interest would be a case study or a multiple case study with a deductive approach, evaluating the degree of generalization of the framework presented in this study to find out if tradeoffs and findings in other cases are similar to the ones in the case study of this thesis.

Although the situation of the market company in Korea has been considered from a corporate perspective and analyses on the corporate level have been performed, the problem of this case study has mainly been addressed from a local, operational perspective. In future research, it would therefore be of interest to perform a similar study from a corporate perspective, or alternatively a study that addresses both perspectives to the same extent. This way, the effects on the corporate level of the choices between standardization and adaptation could be analyzed more

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

thoroughly. Furthermore, it could provide insights in what factors that trigger the drive for standardization on the corporate level.

A final suggestion for future research is to investigate similar problems in other parts of the world. As earlier discussed, the Korean situation is special from both a geographical and a cultural point of view. It would therefore be of interest to investigate if the relationships between the different areas are the same, if other areas or relationships need to be considered or if some of the findings identified in the case of Tetra Pak Korea are of less importance in other parts of the world.

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

## 8 References

### Published Sources

Ang, Zhiyi and Massingham, Peter (2007) "National Culture and the Standardization versus Adaptation of Knowledge Management", *Journal of Knowledge Management*, vol. 11, issue 2, pp. 5-21

Bryman, Alan and Bell, Emma (2005) *Företagsekonomiska forskningsmetoder*, Liber.

Chan, Gary, Kok Yew (2008) "The Relevance and Value of Confucianism in Contemporary Business Ethics", *Journal of Business Ethics*, vol. 77, pp. 347-360

Cohen, Shoshanah and Roussel, Joseph (2005) *Strategic Supply Chain Management – The Five Disciplines for Top Performance*, The McGraw-Hill Companies, Inc.

Eisenhardt, Kathleen M. (1989) "Building Theories from Case Study Research", *The Academy of Management Review*, vol. 14 no. 4, pp. 532-550

Ghemawat, Pankaj (2007), "Managing Differences: The Central Challenges of Global Strategy", *Harvard Business Review*, March, pp. 1-13

Halvorsen, Knut (1992) *Samhällsvetenskaplig metod*, Studentlitteratur.

Hines, Peter, Holweg, Matthias and Rich, Nick (2004) "Learning to Evolve – A Review of Contemporary Lean Thinking", *International Journal of Operations & Production Management*, vol. 24, no. 10, pp. 994-1011

Hofstede, Geert, Hofstede, Gert J. and Minkov Michael (2010) *Cultures and Organizations: Software of the Mind*, The McGraw-Hill Companies, Inc.

Husby, Paul (2007) "Becoming Lean", *Material Handling Management*, August 2007, pp. 42-45

Jain, S. C. (1989) "Standardisation of International Marketing Strategy: Some Research Hypotheses", *Journal of Marketing*, vol. 53, pp. 70-79

Lambert, Douglas, M., Stock, James, R. and Ellram, Lisa, M. (1998) *Fundamentals of Logistics Management*, The McGraw-Hill Companies, Inc.

Lemak, David J. and Arunthanes, Wiboon (1997) "Global Business Strategy: A Contingency Approach", *Multinational Business Review*, vol. 5, issue 1, pp. 26-37

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

Levitt, Theodore (1983) "The Globalization of Markets", *Harvard Business Review*, May-June, pp. 92-102

Lincoln, Yvonna and Guba, Egon (1985) *Naturalistic Inquiry*, Sage Publications Inc.

Manrodt, Karl B. and Vitasek, Kate (2004) "Global Process Standardization: A Case Study", *Journal of Business Logistics*, vol. 25, no. 1

Mentzer, John T., DeWitt, William, Keebler, James S., Min, Soonhong, Nix, Nancy W., Smith, Carlo D. and Zacharia, Zach G. (2001) "Defining Supply Chain Management", *Journal of Business Logistics*, vol. 22, no. 2

Muenstermann, Bjoern, von Stetten, Alexander, Laumer, Sven and Eckhardt, Andreas (2010) "The Performance Impact of Business Process Standardization: HR Case Study Insights", *Management Research Review*, vol. 33, issue 9, pp. 924-939

O'Donnell, Sharon and Jeong, Insik (2000) "Marketing Standardization within Global Industries: An Empirical Study of Performance Implications", *International Marketing Review*, vol. 17, issue 1, pp. 19-33

Ohno, Taiichi (1988) *Toyota Production System: Beyond Large-Scale Production*, Productivity Press

Powers, Thomas L. and Loyka, Jeffrey J. (2007) "Market, industry, and company influences on global product standardization", *International Marketing Review*, vol. 24, issue 6, pp. 678-694

Segal-Horn, Susan (1993) "The limits of global strategy", *Strategy & Leadership*, vol. 24, issue 6, pp. 12-17

Skjøtt-Larsen, Tage, Schary, Philip B., Mikkola, Juliana H. and Kotzab, Herbert (2007) *Managing the Global Supply Chain*, 3<sup>rd</sup> edition, Copenhagen Business School Press, Liber

Tylor, Edward B. (1871) *Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, art and Custom*, vol.1, Bradbury, Evans and Co., Printers, Whitefriars

Womack, James P, Jones, Daniel T. and Roos, Daniel (1990) *The Machine That Changed the World*, Free Press



The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

Womack, James P. and Jones, Daniel T. (2003) *Lean Thinking - Banish Waste and Create Wealth In Your Corporation*, Free Press

Yin, Robert, K., (2008) *Case Study Research: Design and Methods*, SAGE Publications Inc

### **Internet Sources**

CSCMP (2011) *CSCMP Supply Chain Management Definitions*,  
<http://cscmp.org/aboutcscmp/definitions.asp>, collected 25-04-2012

The Chosunilbo, (29-03-2007), *Tetra Pak to Shut Korean Plant*,  
[http://english.chosun.com/site/data/html\\_dir/2007/03/29/2007032961022.html](http://english.chosun.com/site/data/html_dir/2007/03/29/2007032961022.html),  
collected 23-04-2012

Itim International (2012a) *Countries*, <http://geert-hofstede.com/countries.html>,  
collected: 21-03-2012

Itim International (2012b) *South Korea*, <http://geert-hofstede.com/south-korea.html>, collected: 21-03-2012

Packaging Business Review (01-02-2011) *Tetra Pak to Close UK Carton Facility*,  
<http://packagingservices.packaging-business-review.com/news/tetra-pak-to-close-uk-carton-facility-010211>, collected 02-05-2012

Tetra Pak (2012a) *Tetra Pak in figures*,  
[http://www.tetrapak.com/about\\_tetra\\_pak/the\\_company/facts\\_and\\_figures/pages/default.aspx](http://www.tetrapak.com/about_tetra_pak/the_company/facts_and_figures/pages/default.aspx), collected 08-05-2012

Tetra Pak (2012b) *Organisation chart*,  
[http://www.tetrapak.com/about\\_tetra\\_pak/the\\_company/organisation/Pages/default.aspx](http://www.tetrapak.com/about_tetra_pak/the_company/organisation/Pages/default.aspx), collected 08-05-2012

Tetra Pak (2012c) *Our Core Values*,  
[http://www.tetrapak.com/about\\_tetra\\_pak/the\\_company/core\\_values/pages/default.aspx](http://www.tetrapak.com/about_tetra_pak/the_company/core_values/pages/default.aspx), collected 08-05-2012

Tetra Pak (2012d) *Our operations*,  
[http://www.tetrapak.com/environment/performance/our\\_operations/Pages/default.aspx](http://www.tetrapak.com/environment/performance/our_operations/Pages/default.aspx), collected 08-05-2012

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

World Class Manufacturing (2012) *Gratisresurser*,  
<http://world-class-manufacturing.com/svenska/leanverktyg.html>, collected 08-05-2012

### **Verbal Sources**

Ackalin, Jan (2012) General Manager, Alfa Laval Corporate AB. Telephone interview on the 19<sup>th</sup> of January 2012

Bringström, Jesper (2011) Supply Chain Integration Director, Tetra Pak Ltd. South Korea. Telephone interviews November-December 2011

Bringström, Jesper (2012) Supply Chain Integration Director, Tetra Pak Ltd. South Korea. Interviews January-April 2012

Cho, Angela (2012) Senior Customer Service Representative, Tetra Pak Ltd. South Korea. Interviews February-April 2012

Choi, Maggie (2012) Senior Design Developer, Tetra Pak Ltd. South Korea. Interviews February-April 2012

KAM interviews (2012) Key Account and Senior Account Managers, Tetra Pak Ltd. South Korea. Interviews March-April 2012. Interviewees:

- Cho, Steve
- Kil, Kevin
- Kim, Allen
- Shim, Jeff

Kim, Andrey (2012) Customer Service Representative Manager, Tetra Pak Ltd. South Korea. Interviews February-April 2012

Kim, Jimmy (2012) Customer Service Representative Manager, Tetra Pak Ltd. South Korea. Interviews February-April 2012

Kim, June (2012) Customer Service Representative, Tetra Pak Ltd. South Korea. Interviews February-April 2012

Kim, Priscilla (2012) Customer Service Representative, Tetra Pak Ltd. South Korea. Interviews February-April 2012

Leek, Carina (2012) Shipping Coordinator, Tetra Pak Packaging Material Lund AB. Telephone interview on the 4<sup>th</sup> of May 2012

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

Lindgren, Sara (2011) Global Trainer, AB Tetra Pak. Interview on the 21<sup>st</sup> of December 2011

Merizalde, Felipe (2012) Logistics Manager Oceania, Tetra Pak Marketing Pty Ltd. Telephone Interview on the 4<sup>th</sup> of May 2012

Park, Chris (2012) Customer Service Representative, Tetra Pak Ltd. South Korea. Interviews February-April 2012

Strömblad, John (2012) Managing Director, Tetra Pak Ltd. South Korea. Interview on the 19<sup>th</sup> of April 2012

Woo, Jenny (2012) Supply Chain Manager, Tetra Pak Ltd. South Korea. Interviews February-April 2012

### **Company Internal Sources**

Collection of internal documentation:

- Orbis – Tetra Pak's global intranet
- External communication material of Tetra Pak Korea

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

## **Appendix 1 – Financial Calculations**

### ***Basis for Calculations***

It has been assumed that the customer could get the same carrier offer as Tetra Pak if transportation would be handled by the customer, thus the transportation costs are equal between the customers and Tetra Pak. As third party warehouse, Tetra Pak's external warehouse costs have been used, resulting in equal storing cost and distances from warehouse to customer for the customers and Tetra Pak. Eventual costs that arise outside of Korean borders, due to for example added freight costs because of increased numbers of containers or changed production schedules in converting factory, have not been included.

In order to calculate every scenario, an additional collection of information has been needed. Transportation costs from port to warehouse are based on quotation from Tetra Pak's current carrier supplier. The cross-docking costs and transportation between old and new port have been based on quotations from cross-docking centers located in Busan.

### ***Storage Cost in Warehouse***

*Storage cost = Pallets × days in warehouse × storage fee*

### ***Cost of Capital Tied Up in Stock***

*Cost of capital = Packages × sales price × days in storage × interest rate*

### ***Unload and Load Cost at Warehouse***

*Unload and load cost = Pallets × (unload fee + load fee)*

### ***Transportation Cost from Port to Warehouse***

In Tetra Pak's accounting system the cost from port to warehouse is consolidated. In order to calculate the impact on customer level, an assumption has been necessary. The assumption is that the amount of standard packages (std packs) delivered to the warehouse is basis for container utilization and thus the allocated cost of transportation per customer. The standard package is of a certain size into which other products are converted in order to be able to compare different package types and sizes equally. The finance division provided the total transportation cost from port to warehouse 2011.

*Std packs delivered to warehouse = std packs in WH by end of 2011 + std packs sold during 2011 – std pack in WH by end of 2010*

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

*Allocated transportation utilization per customer = std packs delivered to WH per customer during 2011 / Total number of std pack delivered to WH during 2011*

*Transportation cost per customer = Allocated transportation utilization per customer × Total transportation cost from port to warehouse during 2011*

***Transportation Cost from Warehouse to customer***

Calculations are based on actual number of cargo trucks going from warehouse to customer during 2011.

*Transportation cost = Number of cargo trucks × Price per cargo truck from warehouse to customer*

***Transportation Cost from Port to Customer***

Today no transportations are made from port to customer regarding the call-off customers. The future cost from port to customer could be either from a container truck or a cargo truck and the calculations have therefore been divided into two sections.

***Container Truck***

To estimate the amount of goods transported from port to customer in containers the weekly consumption for each customer has been identified. The weekly consumption, number of pallets, has then been considered possible to consolidate into either 20 feet or 40 feet containers, based on an optimized payload. Today, containers arrive both at the new and old port in Busan. The ratio between arrivals at the two ports has been estimated based on previous year's arrivals in order to calculate the transportation cost, since transportation prices differ between old and new port.

*Transportation cost = (Number of 20 feet containers arriving in new port × price per 20 feet container from new port) + (Number of 20 feet containers arriving in old port × price per 20 feet container from old port) + (Number of 40 feet containers arriving in new port × price per 40 feet container from new port) + (Number of 40 feet containers arriving in old port × price per 40 feet container from old port)*

***Cargo Truck***

The transportation cost from port to customer in cargo trucks is based on the actual amount of transportations made last year from the warehouse to the customer. The figures are then multiplied by the cost from port to customer.

*Transportation cost = Number of trucks sent from warehouse to customer × Price of cargo truck from port to customer*

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---

**Unloading and Loading Cost at Cross-docking**

The handling costs are different in old and new port, as the cross-docking centers charge per container in old port and per pallet in new port.

*Old port*

*Unload and load cost = (Number of 20 feet containers arriving in old port × Price per 20 feet container) + (Number of 40 feet containers arriving in old port × Price per 40 feet container)*

*New port*

*Unload and load cost = Pallets × (Unload fee + Load fee)*

**Transportation Cost between Old and New Port**

Since there are two scenarios regarding cross docking, the calculations have been divided in two parts.

*Cross-docking at new port*

*Transportation cost = (Number of 20 feet containers arriving in new port × Price per 20 feet container from new port to cross-docking in new port) + (Number of 40 feet containers arriving in new port × Price per 40 feet container from new port to cross-docking in new port) + (Number of 20 feet containers arriving in old port × Price per 20 feet container from old port to cross-docking in new port) + (Number of 40 feet containers arriving in old port × Price per 40 feet container from old port to cross-docking in new port)*

*Cross-docking at new and old port*

*Transportation cost = (Number of 20 feet containers arriving in new port × Price per 20 feet container from new port to cross-docking in new port) + (Number of 40 feet containers arriving in new port × Price per 40 feet container from new port to cross-docking in new port) + (Number of 20 feet containers arriving in old port × Price per 20 feet container from old port to cross-docking in old port) + (Number of 40 feet containers arriving in old port × Price per 40 feet container from old port to cross-docking in old port)*

**Payback Time Container Docking**

*Payback time = Investments needed for container docking / Annual profits from 100 percent implementation of direct delivery container (scenario A)*

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

---



## Appendix 2 – Interview Guide

### Examples of Questions Asked at the Interviews

The questions presented below have been the initial questions in each semi-structured interview and have supported the authors as guidance. Based on the interviewees' answers to the different questions, an interesting discussion has evolved where the root cause of the problem for the specific customer and logistic problem could be identified. Important to point out is that the questions below alone would not be enough to collect the necessary information. It is the following interaction and discussions between the interviewers and the interviewees based on the questions posed that have provided the in depth, qualitative information needed. For the unstructured interviews, ad hoc questions have been posed based on problems and challenges identified through the observations and embedded research. This has led to valuable additional information and validation of the gathered empirical information.

### Supply Chain Related Questions

1. Can you please describe the current call-off setup?
  - a. How many external warehouses do you use?
  - b. Where are these located?
  - c. Are there any agreements with the customers regarding maximum time of storage, number of call-offs or the like?
2. What kind of direct delivery solution do you provide your customers with?
3. Have you experienced any supply chain challenges connected to the implementation of direct deliveries?
  - a. If yes, what are the challenges?
  - b. If no, could there be other challenges that need to be considered?

### Customer Related Questions

1. How many customers do you have?
  - a. Which customers do you have?
  - b. For how long have they been Tetra Pak customers?
2. How many factories do the customers have?
3. Where are the different factories located?
4. What type of delivery solutions are the customers using?
5. Have the customers been introduced to direct deliveries?
  - a. When were the customers introduced to direct deliveries?
  - b. Have a follow up meeting occurred after the introduction of direct deliveries?
6. What do you think are the main constraints to why the customers do not want direct deliveries?

*What could be a possible solution to these constraints?*

The Standardization-Adaptation Dilemma:  
Emphasizing Global Processes or Local Conditions in Supply Chain Strategy?

Overview of Conducted Interviews

Interviewee	Position	Type of interviews	No. of interviews	Avg. time per interview (h)
Ackalin, Jan	General Manager	Telephone interview	1	1
Bringström, Jesper	Supply Chain Integration Director	Semi-structured & unstructured interviews	~15	1
Cho, Angela	Senior CSR	Semi-structured & unstructured interviews	~10	0-75
Choi, Maggie	Senior Design Developer	Semi-structured & unstructured interviews	2	0.75
KAM interviews	Key Account and Senior Account Managers	Semi-structured & unstructured interviews	3	1
Kim, Andrey	CSR Manager	Semi-structured & unstructured interviews	~5	0.5
Kim, Jimmy	CSR Manager	Semi-structured & unstructured interviews	~10	0.5
Kim, June	CSR	Semi-structured & unstructured interviews	~5	0.5
Kim, Priscilla	CSR	Semi-structured & unstructured interviews	~5	0.5
Leek, Carina	Shipping Coordinator	Semi-structured & telephone interview	2	0.5
Lindgren, Sara	Global Trainer	Semi-structured interview	1	2
Merizalde, Felipe	Logistics Manager Oceania	Telephone interview	1	0.75
Park, Chris	CSR	Semi-structured & unstructured interviews	~5	0.5
Strömblad, John	Managing Director	Semi-structured interview	1	1
Woo, Jenny	Supply Chain Manager	Semi-structured & unstructured interviews	~10	0.5