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*The Truth Behind Outsourcing Deals*  
*- a study from a strategic decision process perspective -*

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# SAMMANFATTNING

<b>Titel:</b>	The Truth Behind Outsourcing Deals – a study from a strategic decision process perspective
<b>Seminariedatum:</b>	2004-12-20
<b>Kurs:</b>	FEK 581 Kandidatseminarium, 10 poäng
<b>Författare:</b>	Michael Kucharski Mikael Lexholm
<b>Handledare:</b>	Docent Gösta F. Wijk
<b>Nyckelord:</b>	Outsourcing, strategi, strategisk beslutsprocess, evolution, rationalitet
<b>Syfte:</b>	Syftet med denna uppsats är att utöka förståelsen för och kunskapen av, de strategiska beslutsprocesserna som föregår företags övergångar till outsourcing i organisationer med en relativt liten erfarenhet av strategin, respektive, organisationer som har en längre historia av strategin
<b>Metod:</b>	Uppsatsen är av explorativ karaktär och är skriven i form av två fallstudier som analyseras utifrån givna teoretiska begrepp. Ansatsen är abduktiv.
<b>Teoretiska perspektiv:</b>	Strategiskt Beslutsteoriskt perspektiv, Traditionellt Beslutsteoretiskt perspektiv, Evolutionärt perspektiv
<b>Empiri:</b>	Gambro Lundia AB, Tetra Pak Carton Chilled AB
<b>Slutsatser:</b>	I "Make-or-Buy" stadiet av beslutsprocessen minskar företagets mångsidighet och djupet av analysen, när organisationen får större erfarenheter av outsourcing. I stadiet där företaget väljer leverantör substituerar djupet av analysen dess mångsidighet, när organisationen får större erfarenheter av strategin. Detta kan förklaras med att organisationen utvecklar ett organisatoriskt minne och organisatoriska rutiner. En modell utvecklas av författarna som början av en definitionsutveckling och grund till fortsatt forskning inom området.

# ABSTRACT

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<b>Title:</b>	The Truth Behind Outsourcing Deals – a study from a strategic decision process perspective
<b>Seminar date:</b>	2004-12-20
<b>Course:</b>	Bachelor thesis in business administration, 10 Swedish Credits (15 ECTS)
<b>Authors:</b>	Michael Kucharski Mikael Lexholm
<b>Advisor:</b>	Docent Gösta F. Wijk
<b>Key words:</b>	Outsourcing, strategy, strategic decision process, evolution, rationality
<b>Purpose:</b>	The purpose of this thesis is to enhance the understanding for and the knowledge of the strategic decision processes' preceding transitions to outsourcing in organisations that have relatively little experience of outsourcing, respectively in organisations that have a longer history of outsourcing.
<b>Methodology:</b>	The thesis has an explorative character and is conducted in the form of two case studies that are analysed from the perspective of a given theoretical framework. The approach is adductive.
<b>Theoretical perspectives:</b>	Strategic decision process perspective, Traditional decision model perspective, Evolutionary perspective
<b>Empirical foundation:</b>	Gambro Lundia AB, Tetra Pak Carton Chilled AB
<b>Conclusions:</b>	In the Make-or-Buy stage of the strategic decision process, extensiveness & comprehensiveness of analysis diminish when the organisation gains further outsourcing experiences. In the supplier selection stage of the process, extensiveness of analysis substitutes comprehensiveness when the organisation gains further experiences of the strategy. The explanation lies in the development of organisational memory & organisational routines. A model is developed by the authors as the start of a concept development and ground for further research in the area.

# PREFACE

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*This Bachelor Thesis has been a great experience for both of us. We have gained a deeper understanding for the processes behind strategic decisions and expanded our knowledge in the area of “thinking outsourcing”. A period of intensive work we will be glad to recall.*

*Thanks to the devotion of Christer Magnusson, Jörgen Jönsson and Henrik Isaksson - the managers at Gambro, Johan Häggström, Anders Ekberg, Lennart Aveling and Lars Thelin – the managers at Tetra Pak, this study was made possible.*

*Furthermore we would like to thank our advisor docent Gösta F. Wijk for his support and guidance. It helped us to enhance the level of our work.*

*Lund, December 30, 2004*

**Michael A. Kucharski**

**Mikael H. Lexholm**

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# 1

## INTRODUCTION

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*In the first chapter we will, from a historical perspective, present a background to the topic of this thesis and explain our point of inquiry we maintain throughout the study. The general purpose of the study will be formulated, following which we will emphasise the limitations of the study. The chapter will end with a practical framework, which we during our work soon found out was necessary due to very specific terms referred to especially in the empirical presentation.*

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### 1.1 Background

”Smaller is better than large...”<sup>1</sup>

Organisations in today’s business community are said to have, through outsourcing, become more innovative, flexible and reactive to changes in the environment as well as demand and supply constellations. In the place of the portfolio diversification strategies of the sixties’, many business managers have instead taken on downsizing and de-layering as new ways of leading their organisations to sustainable competitive advantages<sup>2</sup>. Growth through risk diversification has today been put in the shadow of natural growth through focusing on core competencies leading to competitive advantage – a handful of organisations concentrate all resources in their possession on those areas they are best at.

The start of the “outsourcing era” *seems* to have had it’s roots in the hypothesis that it was difficult to, within one single profit-oriented organisation, collect consistently professional co-workers from within all functional areas. Consulting enterprises as Cap Gemini and Accenture therefore started to broaden their business portfolios of *consulting*, with *outsourcing* services. The individual client could delegate activities as IT, human resource management or accounting, to more skilled managers outside the company.

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<sup>1</sup> Palmer & Hardy. *Thinking About Management*. (2003)

<sup>2</sup> Ibid.

In the value chain concept, Michael E. Porter, differentiated between primary activities and support activities<sup>3</sup>. Primary activities are those directed at the physical transformation and handling of the final products that are to be delivered to end customers. The organisation's support activities enable and assist this transformation. The Outsourcing services offered by Cap Gemini and Accenture relate to the latter ones. Meanwhile the definition of core activities has evolved and is today termed *core competencies*, as referred to by managers, often articulated in more abstract terms and forms like *innovation* or *entrepreneurship*. This has considerably affected the outsourcing tendency among organisations towards outsourcing of primary activities and even resulted in the emergence of a giant business sector that today is offering total production capacity, leaving the customers a possibility to focus on those more "abstract terms". In only the EMS (Electronics Manufacturing Services) part of the production capacity sector, the three major players, Flextronics International Inc.<sup>4</sup>, Solectron Corp.<sup>5</sup>, and Celestica Inc.<sup>6</sup> had in 2003 accumulated net revenues of more than \$32 Billion. Customers can enter long-term agreements and purchase design-, manufacturing-, assembly-, and even test-services, not needing a single production line in-house. Companies like L.M Ericsson<sup>7</sup>, Gambro Worldwide<sup>8</sup>, Tetra Pak Global<sup>9</sup>, and a handful of other successful organisations are all examples of transitions to partial or total production outsourcing.

## 1.2 Problem Formulation

In their article "*Rethinking outsourcing in manufacturing: A Tale of Two Telecom Firms*" professor in industrial organisation, Christian Berggren and docent Lars Bengtsson<sup>10</sup> take on a critical position against the decision of outsourcing all volume-production at L.M. Ericsson in the perspectives of it's long-term implications, a process that started in the mid 1990's.

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<sup>3</sup> Van Weele. *Purchasing and supply chain management. Analysis, planning and practice.* (2002)

<sup>4</sup> [www.flextronics.com](http://www.flextronics.com)

<sup>5</sup> [www.solectron.com](http://www.solectron.com)

<sup>6</sup> [www.celestica.com](http://www.celestica.com)

<sup>7</sup> Berggren C.,Bengtsson L., *Rethinking outsourcing in manufacturing: A Tale of Two Telecom Firms* (2004)

<sup>8</sup> Supply Manager, Henrik Isaksson

<sup>9</sup> Manager Tetra Pak Purchasing Development, Anders Ekberg

*“Managers tend to only consider the present day and do not see the effects of outsourcing on product development in a longer time perspective. Regard is only taken to the cost of a certain product or service and not to transfer costs. This is much more difficult to analyse – when you have the clockwork to pass – but it is important<sup>11</sup>.”*

According to the researchers this shift in resources has significant implications for the emerging strategy of the company and its strategic position today, and tomorrow.

An outsourcing decision can be full of risks. Strategic decisions as outsourcing, most certainly form the future of companies. One of the most present names in today's business research in strategic decision making, Kathleen M. Eisenhardt, has suggested that effective strategic decision making is one of the most fundamental determinants of the strategic capabilities of organisations<sup>12</sup> hence the determinant of an organisation and its emerging strategy. Further research streams have explained what makes strategic decision processes successful. After over two decades of research it is today acknowledged and empirically proved that the breadth, defined as comprehensiveness, the depth, defined as extensiveness, and the timeframe, within which the decision is taken, are the variables of strategic decision processes that are correlated with decision quality and further firm performance<sup>13</sup>. The same researchers have studied how these characteristic variables change with regard taken to the velocity of the market in which the organisations act in. We have a different approach.

Considering the fact that outsourcing is a major strategic trend since the early 1990s<sup>14</sup>, especially that of primary activities, we are interested in how organisations' history of various outsourcing decisions can inflict on the characteristics of the strategic decision process i.e. their comprehensiveness, extensiveness and speed but most importantly how such an effect can be explained. Thus, this general inquiry as well as the reasoning above, has led us to the formulation of the following question:

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<sup>10</sup> Berggren C., Bengtsson L., *Rethinking outsourcing in manufacturing: A Tale of Two Telecom Firms* (2004)

<sup>11</sup> Prof. Christian Berggren, Linköping University, in an interview on Outsourcing. “Civilekonomerna” nr 10 (2004)

<sup>12</sup> Eisenhardt, M.K. *Strategy as Strategic Decision Making*. (1999)

<sup>13</sup> Fredrickson & Mitchell (1984), Miller et.al. (1998), Eisenhardt (1989).

*What differences exist in the comprehensiveness, extensiveness, and speed of the strategic pre-outsourcing decision processes between organisations that have less or more experience of the strategy i.e. have reached farther on an “outsourcing experience curve”? How can these differences be explained?*

### 1.3 Purpose

The purpose of this thesis is to enhance the understanding for and the knowledge of the strategic decision processes' preceding transitions to outsourcing in organisations that have relatively little experience of the strategy, respectively, in organisations that have a longer history of outsourcing.

### 1.4 Target Audience

This Bachelor Thesis is mainly directed towards a reader who is assumed to have a knowledge of and understanding for the behavioural science of Business and Management, and be acquainted with general business framework and business definitions. With regard to this assumption, we will throughout the study continuously be using general definitions and terms without submitting full theoretical explanations. In those cases where the reader feels he is not familiar with the definitions and terms used, it is in our best intent that the handful of reference literature submitted will help to eliminate the potential uncertainties that might arise.

### 1.5 Delimitations

It is not our intent, to within this dissertation, evaluate the quality of the conducted outsourcing ventures at the studied companies in terms of business performance. The intent is to develop the knowledge of and understanding for the characteristics of the strategic decision processes behind the ventures. The correlation between decision quality in terms of business performance, and the characteristics of the decision processes presented ahead in the theoretical framework, therefore serve as a means of process characterising variables.

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<sup>14</sup> Berggren C., Bengtsson L., *Rethinking outsourcing in manufacturing: A Tale of Two Telecom Firms* (2004)

We have chosen not to include transaction cost theory and network theory in our theoretical framework as the purpose of the study relates to the pre-outsourcing process and not the implementation of outsourcing. These theories would therefore only have a prescriptive character for the problem we have formulated.

## 1.6 Practical Framework

### 1.6.1 Outsourcing

We would like to emphasise the often neglected boundary between outsourcing and simply having one or several systems suppliers. If an enterprise does not have volume production this does not necessarily imply that the specific enterprise has been involved in outsourcing production to third party actors. If this was the business idea from the very beginning the enterprise simply only has one or several systems suppliers delivering material or products that just make up a large part of the final product's value-added. It is however by no means a form of outsourcing.

Outsourcing involves a transition of activities from in-house to a separate, unrelated organisation. Hence, there is a change in responsibilities and resources for a specific activity. In order for this change to occur, the activity must, at some earlier point, have been conducted in-house.

### 1.6.2 Outsourcing as a Strategic Decision

We see the decision to outsource as a strategic decision of the activities that are to be transferred to a separate, unrelated organisation, as long as the activities influence the added value to the final customer. Hence the decision to hire manpower to run an enterprise's reception is surely a decision concerning outsourcing (under the condition that the reception was earlier run by the enterprise itself) but is by no means a strategic decision as it does not in a direct manner inflict on the final customer's value-added.

### 1.6.3 Production

We assume that the term production is applicable also in cases where a significant part of the final product's value-added is made up by purchased

products, modules, or systems. If e.g. the business idea behind an enterprise is to purchase system components, put them together, and test the final product this implicitly becomes a form of production, that is based in value chain management.

### 1.6.3 Lean Philosophy & Management

A Japanese management philosophy, first applied and recognised in the Toyota Production System (TPS), that is based on value chain management<sup>15</sup>. There are three types of operations that can be undertaken within an organisation: Non-Value-Adding (NVA), Necessary but Non-Value-Adding (NNVA) and Value-Adding (VA). The first of these is pure waste which means that it involves unnecessary actions which should be eliminated completely as they do not result in value for the end customer<sup>16</sup>. There are seven commonly accepted wastes recognised within the Toyota Production System<sup>17</sup>:

1. Overproduction
2. Waiting Time
3. Unnecessary Transportation
4. Inappropriate Processing
5. Unnecessary Inventory
6. Unnecessary Worker Motion
7. Product Defects

In a Lean Enterprise each of the “value chain members” actively reduce wasteful activity both inside and between their organisations<sup>18</sup>.

### 1.6.4 VMI – Vendor Managed Inventory

Vendor Managed Inventory (VMI) is a collaborative strategy between a customer and supplier to optimise the availability of products at minimal cost to the two companies. The supplier takes responsibility for the operational management of the inventory within a mutually agreed framework of performance targets which

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<sup>15</sup> Hines et.al. *Value Stream Management. Strategy and Excellence in the Supply Chain.* (2000)

<sup>16</sup> Ibid

<sup>17</sup> Ibid

<sup>18</sup> Ibid.

are constantly monitored and updated to create an environment of continuous improvement<sup>19</sup>.

### 1.6.5 JIT – Just-In-Time Management

The principle of JIT management means that all materials and products become available at the very moment when they are needed in the production process, not sooner and not later, but exactly on time and in exactly the right quantity. The major objective underlying this approach is to continuously tackle and solve manufacturing bottlenecks within, and interface problems between, consecutive steps in the manufacturing process<sup>20</sup>.

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<sup>19</sup> Hines et.al. *Value Stream Management. Strategy and Excellence in the Supply Chain.* (2000)

<sup>20</sup> Van Weele J.,Arjan. *Purchasing and Supply Chain Management. Analysis, Planning and Practice* (2002)

## 2

# METHOD

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*In the following chapter we will explain why we have made the specific choices we have and give the reader a presentation of the methodological approach that has been used.. The chapter will end with a discussion of the methods available, where we will further motivate our research approach.*

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### 2.1 Field of Inquiry

Today, outsourcing has a permanent presence in literature used in all kinds of business education and is nonetheless a field of continuous research among various business researchers. This can be seen as an impulse from the academic community, triggered by the fact that outsourcing has become a permanent tendency in the strategies of several organisations. Various research and theoretical models emphasize the entire process of entering outsourcing partnerships and implementing outsourcing strategies *per se*. Whether to conduct activities in-house or to pursue outsourcing strategies i.e. the make-or-buy decision, is in available literature and research (e.g. Van Weele) limited to the decisive criterion whether the activity concerned contributes to achieving a competitive advantage or not. The make-or-buy decision has therefore indeed been carefully examined by top researchers, but in a more generic manner.

Extensive research has at the same time been conducted in the field of strategic decision making. This research is rather normative as a result of a handful of more quantitative studies. The framework developed has therefore been generalized to all types of strategic decisions. With certainty, do outsourcing decisions fall by and large in the categories of strategic decision making research

This state of being is also what triggered us to conduct this study, where we link outsourcing framework with strategic decision making framework. Surely has the make-or-by decision been seen as a strategic choice affecting the future success of entire organisations by both academics and practitioners, however the main

paradigms of the strategic decision process have not always been taken into account when it comes to the pre-outsourcing processes

Our strength as researchers in this study is made up by the fact that we have the relevant knowledge in both fields. We believe that to effectively conduct research in the field of pre-outsourcing processes, an understanding for strategic decision making processes is needed - and the other way around – to gain deeper understanding of strategic decision making, the characteristics of the strategic problem itself has to be investigated.

## 2.2 Choice of Study Objects

In order to conduct our study it was necessary to come into contact with two companies that had experiences of outsourcing and moreover were willing to offer their full cooperation. The companies also needed to display different historical patterns of outsourcing.

As we, since earlier projects, had a contact with the procurement manager at Tetra Pak Global Technical Support, it seemed rational to take use of this. The manager gave us references to other managers within Tetra Pak Carton Chilled, who later cooperated for the purpose of the study. We also had a basic knowledge of Tetra Pak's intense outsourcing experiences since as good as the very start of the company.

After extensive research we found that Gambro Lundia has had a pattern of outsourcing since 1991, consistent with our "historical requirements". Product Line Director Jörgen Jönsson submitted us contacts to managers that would offer us full cooperation.

Both companies further acted in a similar environment that is relatively stable. This made it possible to concentrate on the differences in decision process patterns regarding solely the organisations' historical records of outsourcing.

## 2.3 Methodological Approach

The purpose of the study is to enhance the knowledge of an understanding for our specific inquiry. Therefore the study has an explorative character i.e. there are

certain loopholes in our present knowledge that we intend to fill<sup>21</sup>. We have chosen to conduct two *qualitative case studies*. Therefore we have used an *adductive approach*, which is the most common form of method when conducting case studies. This form of method is a combination of the inductive approach and the deductive approach, taking advantage of the benefits of both. The adductive approach is evolved from empirical studies without ignoring theory but using it is an inspiration for defining patterns which will lead to new empirical inquiries<sup>22</sup>. This cycle of going back and forth between empirical studies and theory will continue throughout the study.

The advantage of performing a study from an adductive form of method is that it gives the study both a surface and a depth structure<sup>23</sup>. The surface structure of our study will consist of collecting facts from interviews with management at Gambro and Tetra Pak, which in some extent can be generalised to other companies with similar organisational and environmental prerequisites. The depth structure, of making a closer research of only two samples, complements the study investigating hypotheses and referring to theory. Theorists like Bunge<sup>24</sup> and Toulmin<sup>25</sup> recommend the adductive method when conducting explorative research as a study can never be generic through only empirical findings.

The case study methodology on the other hand involves investigating one or few study objects in a handful of regards. This, in contrast to statistical studies, where few regards are investigated from more study objects<sup>26</sup>. The case study has for many years been used as a popular research method in areas of psychological analysis and it has hence been noticed among business and management researchers for its potential of studying decision processes<sup>27</sup>. According to Bell, case studies are specifically relevant for independent research as the method gives the possibility to study a delimited issue of a contextual problem in a more in-depth manner<sup>28</sup>. In accordance to this we have chosen the adductive approach for our study.

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<sup>21</sup> Alvesson & Sköldböck. *Tolkning och reflektion. Vetenskapsfilosofi och kvalitativ metod* (1994)

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

<sup>26</sup> Wiedersheim-Paul & Eriksson. *Att utreda, forska och rapportera*. (1991)

<sup>27</sup> Ibid.

<sup>28</sup> Bell. *Introduktion till forskningsmetodik*. (1993)

## 2.4 Data Collection

### 2.4.1 Primary data

Primary data is reporting of actions from a first hand<sup>29</sup>. We will use primary data in form of interviews with managers at Gambro and Tetra Pak.

We will consistently keep in touch, as much as possible, with our contacts to confirm the correctness of our information and to get new insights along the way. The interviews were in most parts recorded. The interviewed managers are:

#### **Gambro:**

- *Jörgen Jonsson*, Product line Director. Jörgen has an engineering education and has been working at Gambro Lundia AB for 20 years. Jörgen has been involved in several outsourcing deals and was responsible for the outsourcing of the AK 95 and AK200 stands.
- *Henrik Isaksson*, Supply Manager. Henrik has a business education and has worked for the company for 7 years. He was involved in both outsourcing processes of the AK machines' stands.
- *Christer Magnusson*, Quality Manager. Christer has a technical background and has earlier worked as a technician and project leader at the company. He has been involved with Gambro Lundia AB for 25 years.

#### **Tetra Pak:**

- *Johan Häggström*, Manufacturing Director, Tetra Pak Carton Chilled. Johan, with an engineering background, has earlier worked at Tetra Pak Carton Chilled in Minneapolis, USA, and has been involved in several outsourcing deals, including the major outsourcing in Minneapolis.
- *Lars Thelin*, Supply Chain Manager, Tetra Pak Carton Chilled. Lars has an engineering and business education. He has been involved with Tetra Pak for 10 years and has experiences of several outsourcing deals.
- *Lennart Aveling*, Purchasing Director, Tetra Pak Carton Ambient. Lennart has an engineering education and also holds an Executive MBA diploma. He has been involved in several outsourcing deals.

- *Anders Ekberg*, Manager, Tetra Pak Purchasing Development. Anders has a business background and has been involved with the company for 5 years.

## 2.4.2 Secondary data

Secondary data is everything other than primary data. In other words, reported information collected by a third party<sup>30</sup>. We seek our knowledge from as many sources as possible in order to achieve a wide perspective and to give an accurate view on information. Full references to authors will be provided to enable the reader to make further research of the theory or statement. Our secondary data consists of business literature and articles from various streams of business research. We also take use of materials submitted by the companies as well as internet resources of both Gambro and Tetra Pak, as well as other companies.

## 2.5 Choice of Theoretical Perspectives

*“A theory is a set of inbound related definitions that all together illustrate and describe a delimited aspect of reality. The theory explains how these definitions are related with each other and therefore makes it possible to explain and predict the delimited aspect of reality<sup>31</sup>”.*

The choice of theoretical framework has been made in accordance to the need for identifying possible patterns of influence on the pre-outsourcing decision processes in the two case study companies. The theoretical framework has therefore strictly been chosen with the regard to it's relevance for our empirical findings.

The perspectives of evolutionary theory intend to explain why organisations act in the specific ways they act and why present strategic choices are affected by the strategic choices taken earlier<sup>32</sup>.

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<sup>29</sup> Ibid.

<sup>30</sup> Bell. *Introduktion till forskningsmetodik*. (1993)

<sup>31</sup> Patel & Davidson. *Forskningsmetodikens grunder. Att planera, genomföra och rapportera en undersökning*. (1994)

<sup>32</sup> Bengtsson & Nygaard. *Strategizing – en kontextuell organisationsteori* (2001)

The perspectives of traditional decision theory were chosen due to the fact that the variables of comprehensiveness and extensiveness are, as explained further on in the theoretical framework, parameters of rationality, and also relate to the timeframe within which strategic decisions are being taken<sup>33</sup>.

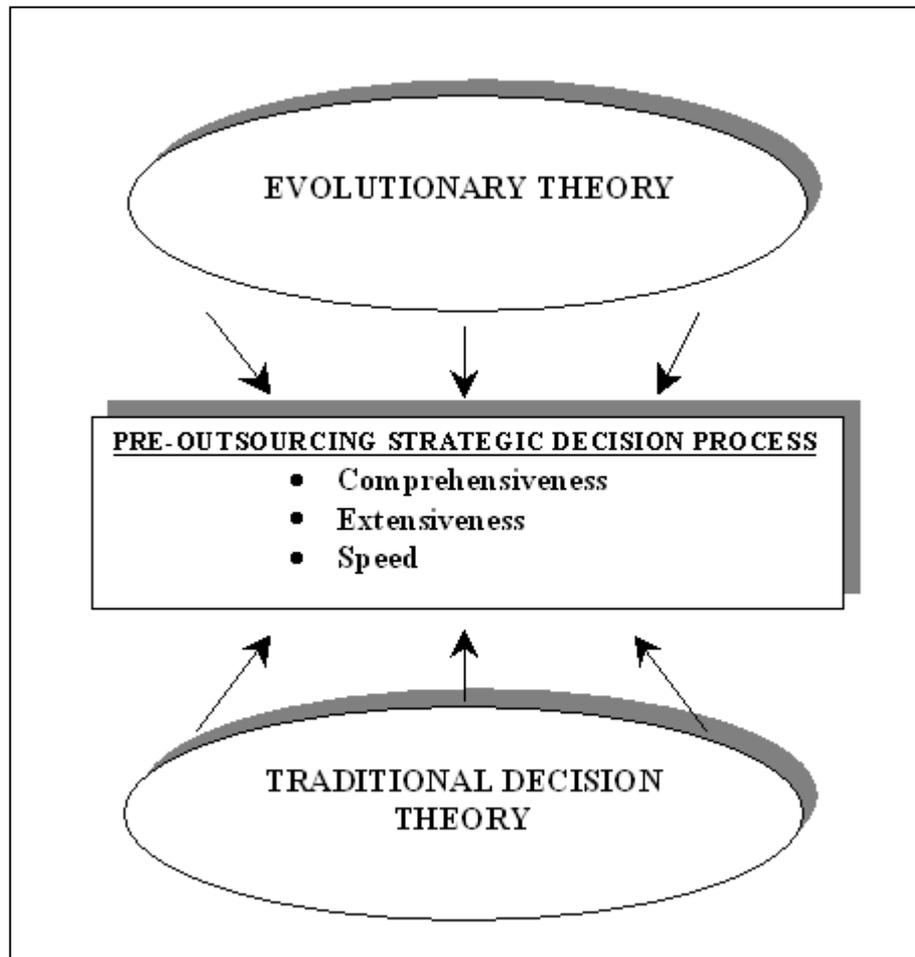


FIG.1 OUR APPROACH

## 2.6 Methodological Discussion

### 2.6.1 Qualitative and Quantitative Research

Qualitative research gives potential to a much deeper insight in the study field at issue in contrast to quantitative methods, which often result in more fragmented knowledge<sup>34</sup>. Our ambition is of course to gain deeper understanding and

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<sup>33</sup> Ibid.

<sup>34</sup> Patel & Davidson. *Forskningsmetodikens grunder. Att planera, genomföra och rapportera en undersökning.* (1994)

knowledge, necessary, to conduct a fair analysis that gives a wider view on the state of being behind strategic outsourcing decision processes.

Behind qualitative research lies a hermeneutic approach while quantitative research methods can more be addressed to a positivistic view with harsh, statistical data collection, scientifically oriented explanation models, and most importantly, a researcher's role that is objective and sort of 'invisible'<sup>35</sup>. The hermeneutic nature of this thesis concerns our role as researchers that is more open, 'subjective' and absorbed<sup>36</sup>. We are open to the upcoming of new perspectives and definitions, emphasized in our adductive approach, as well as 'subjective' to an extent that does not inflict on the objectivity of the study. Instead, it gives us the opportunity to gain further insight into a process that by and large involves subjective considerations by individuals.

## 2.6.2 Interview Process

Both quantitative and qualitative interviews put the researcher in various difficult situations which affect the strength of the primary data collection. Although a quantitative interview gives the same instructions to every 'study object', this does not necessarily imply that these instructions mean the same to everybody<sup>37</sup>. On the other hand, the qualitative interviews that we have conducted gave us room for more flexibility in the data collection process, which is of especially high significance when studying various processes. As Holme & Solvang<sup>38</sup> suggest the strategy is to try not to control the interviewee's responses but to settle the variables within which these persons are to submit their understanding of the process. A strength is that this occurs in a loose conversation that surely resembles an everyday-situation.

## 2.6.3 Validity & Reliability

We maintain a critical position in relation to the information sources we use, especially with regard to the results of the interviews. The field research has

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<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Holme & Solvang. *Forskningsmetodik: om kvalitativa och kvantitativa metoder* (1991)

<sup>38</sup> Ibid.

however been thoroughly planned in order to maintain inbound validity, outbound validity and reliability.

### 2.6.3.1 Inbound Validity

Are the interview questions formed in consistence with the purpose of the study? Do they let us know what we as researchers really need to know? This is referred to as inbound validity<sup>39</sup> and was of crucial importance in conducting the research. We had to translate our inquiry into operative sets of explicit questions in order to obtain a relevant discussion with managers. Hence, the questions were very carefully formed to give a consistent framework within which the interviews should take place.

### 2.6.3.2 Outbound Validity

Are managers' statements consistent with the real state of being<sup>40</sup>? It is not our intention to put the managers in a pre-defined defendant position and so trigger them to unwillingness of issuing objective statements. As we will interview different managers at different positions, this will further resolve the risk of interviewees giving "too subjective" answers.

### 2.6.3.2 Reliability

Reliability is a necessary pre-condition for validity and is referred to as the absence of random variables affecting the objectivity of the study<sup>41</sup>. We try not to suggest any statements or answers, nor affect these in separate companies, by having separate sets of questions. The points of inquiry are standardized across the boundaries of the organisations when it comes to managers at similar positions having similar areas of responsibilities.

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<sup>39</sup> Lundahl & Skärvad. *Utredningsmetodik för samhällsvetare och ekonomer*. (1999)

<sup>40</sup> Ibid.

<sup>41</sup> Lundahl & Skärvad. *Utredningsmetodik för samhällsvetare och ekonomer*. (1999)

## 3

# THEORETICAL FRAMEWORK

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*In this chapter follows the theoretical framework for the study. Evolutionary Theory is presented at the end of the chapter following outsourcing theory, strategic decision process perspectives and traditional decision theory.*

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### 3.1 Outsourcing Theory

Various researchers have made various definitions of outsourcing. Augustsson et. al.<sup>42</sup> defined it as:

*“Transferring an activity, that previously has been manufactured internally, to a supplier who provides the activity in question during a pre-arranged time for payment.”*

Within this definition there are three prerequisites:

- A resource, which has previously been used within the company, shall as a result of the outsourcing be transferred outside the organisation.
- The resource shall under contract stay outsourced during a prearranged timeframe.
- The supplier shall operate beyond the direct control-frame of the company.

#### 3.1.1 Motives

##### 3.1.1.1 Cost Reduction

One grand motive for a company to outsource an activity is to reduce cost by purchasing it externally from a company who has specialised in performing the activity. The cost reduction can arise from that the contracting company has superior experience or/and expertise within the area at issue, which allows them

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<sup>42</sup> Augustsson et. al. *Outsourcing av IT-tjänster*. (1999)

to perform at a lower cost<sup>43</sup>. Because the supplier has a large customer base they can utilise two main features<sup>44</sup>:

- Large purchasing batches will increase buying power in price negotiations with the subcontractor.
- In a large production volume the overhead costs are automatically divided on the number of products produced.

Grant uses the input-output model to describe the gains of economies of scale used to cut costs<sup>45</sup>:

- An increase in output does not necessarily mean an increase in input.
- Some batch sizes are indivisible, which if not used in the immediate production leads to an increase in logistic costs.
- In specialised production processes wastes are more unlikely to encounter.

It is crucial to bare in mind the transaction costs that arise when dealing with a third party. The transaction cost is everything beyond the cost of the actual outsourced activity. This can be activities like service, installation, administrative paperwork<sup>46</sup> etc. Supplier uncertainties constitute contract negotiations, secret information-exchange, production malfunctions, quality reduction, transportation etc. The decision of outsourcing is almost always corroborated by a costs reduction but when there are great transaction costs involved it can not be the single reason for the company to outsource.

### 3.1.1.2 Core competencies

A company 's competitive advantage is built upon its core competencies. To enhance its competitiveness, the company can outsource activities none related to its core competencies strengthening its position in the market. This can, according to Quinn and Hillmer<sup>47</sup>, lead to two strategic benefits:

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<sup>43</sup> Axelsson. *Företag köper tjänste*. (1998)

<sup>44</sup> Van Weele Arjan J. *Purchasing and supply chain management. Analysis, planning and practice*. (2002)

<sup>45</sup> Grant. *Contemporary strategy analysis. Concepts, techniques and applications*. (2004)

<sup>46</sup> Van Weele. *Purchasing management*. (2000)

<sup>47</sup> Axelsson. *Företag köper tjänster*. (1998)

- Maximizing profit of the internal resources by concentrating time and investments to the area which the company can perform at its best.
- building barriers against competing firms by developing its core competencies.

In the 1990:s Porter<sup>48</sup> wrote about a change in thinking of what effects a company's strategic planning. He emphasised the focus on the importance of company resources instead of the external environment that used to be the main threat taken under consideration when forming the strategic planning, and considerably affecting competitiveness. Porter grouped company resources into tangible-, intangible- and human resources.

- Tangible resources are those like financial status and physical assets.
- Intangible resources are technological patents, brand reputation, company culture etc.
- Human resources is the value of the knowledge and competencies of the personnel.

The internal resources can only create a strong competitive advantage if they are strongly integrated. To be a source of competitive advantage the activity or function must be scarce and relevant<sup>49</sup>. If it is a common resource others will follow and there will not exist an advantage. Obviously the resource will not be competitive if it is not relevant in the industry. Depending on the durability, of the resource's scarcity and relative connection to the industry, the company can keep the competitive advantage over time. Competing firms' efforts to copy the strength of the company will depend on the transferability and replicability<sup>50</sup>. Transferability refers to how easy it is to acquire the resources to imitate the strategy of the stronger firm. Some resources are less difficult to buy like raw material, components, individual employees etc. Other resources are more difficult such as geographical-bounded and/or complementary resources, imperfect information and organisational capabilities. Replicability refers to how an imitating company manages to build a resource or capability, if it is not possible to buy. Unless products have a patent they are relatively easy to replicate, but more difficult are complex organisational routines and culture. The

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<sup>48</sup> Grant. *Contemporary strategy analysis. Concepts, techniques and applications*. (2004).

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

critical resources that can stand for this criteria of a competitive advantage are imperative to keep internally for the survival of the company in the long-run. If they are outsourced the company risks losing feedback to improve the product development<sup>51</sup>. Remaining resources do not affect the company's competitiveness and are good candidates for outsourcing.

### 3.1.1.3 Flexibility

When the company is outsourcing a part of the organisation they lose control of the activity. While there are great risks attached to this as displayed above, in uncertainties in supplier relationships and the importance of controlling core competencies, there are also benefits which can serve the organisation<sup>52</sup>:

- Competitive advantage does often lie in the development of innovation within industries characterised by complex technology. This makes it easier for the company to outsource parts of the production since it is further away from its core.
- Less capital formation.<sup>53</sup>
- Customer orientation is greater in flexible organisations since it is easier to diversify the product-line and still keep the costs down.

### 3.1.1.4 Capital formation

In today's competitive markets it is important to prepare for changes in customer demand and the pace of technological development in production equipment. One method of keeping the company flexible to changes in customer demand, is to minimize as much formation of capital as possible in areas where it does not affect company performance.. The outsourcing decision will transport the risk of over-capacity, when changes occur in customer demand, to its supplier. A specialised supplier often has other customers over the company at issue. Therefore the supplier can, in better extent, still enjoy economies of scale even in time of recession, than could a company conducting the activity in-house. At the same time other risks are transferred into the company when the knowledge and routines are lost to the organisation. Risks can be price increases from the

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<sup>51</sup> Axelsson. *Företag köper tjänster*. (1998)

<sup>52</sup> Ibid.

<sup>53</sup> please see 3.1.1.4. Capital Formation

supplier, over-specification from the company, supplier cartels, lack of supplier involvement in the decision process or lack of supplier performance improvement<sup>54</sup>. A vertical relationship with the supplier will solve some of these problems<sup>55</sup>. These types of relationships are though built on a close interaction. If the power-balance is uneven problems can arise, as mentioned earlier, which are important to consider when establishing a supplier relationship.

Another reason to avoid capital formation is the fact that it transfers overhead costs to variable costs. This is of much importance for companies that have problems with their liquidity because it enables them to free money for a short-term problem solution.

### 3.1.2 Strategies

The motives for outsourcing can differ from one company to another. Depending on the company's intention with its strategic decision there are various ways of outsourcing.

Depending on the level of the outsourcing intention David Oates has pointed out that there are two forms of strategic intensity in outsourcing. It can either be *tactical* or *strategic*<sup>56</sup>. The purpose of tactical outsourcing is to reduce costs in areas that are non-related to the company's core competencies. These activities, e.g. cleaning, security staff etc, do not have any real effect on the performance of the company. The risk of a tactical outsourcing is minimal and is therefore highly suited in large enterprises that need to diminish the size of its organisation by outsourcing those non-risk activities to a specialist. Strategic outsourcing is on the other hand a performance increasing strategic change with higher risks. Because these activities are directly related to the core of the company, e.g. production, business administration, IT etc, the range of the problem is more diversified since the supplier is taking part of the company's core processes, which constitutes its competitive advantage. A major part of the problem refers to a lack of trust in some degree in the supplier relationship.

The extent of the outsourcing can be on different levels. Van Weele describes two levels of the extent (Van Weele):

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<sup>54</sup> Van Weele. *Purchasing and supply chain management*. (2002)

<sup>55</sup> Grant. *Contemporary strategy analysis. Concepts, techniques and applications*. (2004)

<sup>56</sup> Oates. *Outsourcing and the virtual organization*. (1998)

- turnkey
- partial

His categorization is founded in a company's possible choice of either outsource the whole activity to a third party, turnkey, or only a part of the activity, while keeping some of the control within the organisation i.e. partial. A successful supplier relationship demands much time invested to build trust and a knowledge of each others wills. Because time is money, it is in both party's interest to maintain the relationship.

Axelsson is speaking of two aspects of transporting resources outside the company, tactical- and strategic outsourcing. This line of reasoning can be interpreted as an extension of Oates' definition of the intentions with outsourcing. Because tactical outsourcing does not involve a part, or only small part, of the organisation's core processes it is seen as a decision to *relive* the company of a resource better performed externally<sup>57</sup>. This tactical change have a limited effect on the real performance of the company but will gives the organisation a chance to focus on what it does best. In some cases the resource is therefore a hinder for evolving core skills by capital formation or organisational disorientation and is better done outside the firms control-reach. In other cases wastes in time can overburden the workload. All these aspects can lead to unnecessary tension among the workers. When referring to strategic decision making, strategic outsourcing is instead a tool for enabling the organisation to improve production lead-time, quality, technology, logistics etc by transporting competence intense functions outside the control range of the company. The activity is best of in the hands of a specialist because it is not possible to obtain the same standard inside the organisation.

Palmer and Hardy argues that companies should not outsource activities constituting a part of their core competencies. They say that outsourcing can be categorised into two strategic measures, defensive and offensive. The defensive strategy refers to reduce costs through transferring an activity the company has problems with to an external party. Offensive on the other hand is not outsourcing a problem-infested activity but rather winding up activities non-related to core processes to enhance the focus on core competencies.

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<sup>57</sup> Axelsson. *Företag köper tjänster* (1998)

## 3.2 The Strategic Decision Process

Mintzberg et.al.<sup>58</sup> defines strategic decisions as being "*important, in terms of the actions taken, the resources committed, and the precedents set*". At the same time researchers draw a line between strategic decisions *per se* and strategic decision processes.

A strategic decision is limited to a "*specific commitment to action*" (usually a commitment of resources)<sup>59</sup>. A strategic decision process, in turn, is defined as "*a set of actions and dynamic factors that begins with the identification of a stimulus for action and ends up with a specific commitment to action*"<sup>60</sup>. Strategic decisions involve some kind of strategic positioning, have high stakes, involve many of the organisation's functions, and can be considered to be representative of the process by which major decisions are made within the organisation<sup>61</sup>. Generally strategic decisions are seen as "*those infrequent decisions made by top leaders of an organisation that critically affect organisational health and survival*", as Eisenhardt and Zbaracki add<sup>62</sup>.

### 3.2.1 Characteristics of Strategic Decision Processes

During the past years a handful of research has been made enhancing the knowledge and understanding of what specifically makes strategic decisions successful.

A framework has evolved which concentrates on the determinants preceding successful (or unsuccessful) strategic decisions i.e. the strategic decision processes and their characteristics in different organisations. This research has shown positive correlation between *the comprehensiveness, the extensiveness* and *the speed* of strategic decision processes and the quality of the strategic decision *per se* in terms of emergent firm performance.

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<sup>58</sup> Mintzberg et.al. *The structure of 'unstructured' decision processes*. (1976)

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> Eisenhardt. *Charting strategic decisions in the microcomputer industry: Profile of an industry star*. (1989)

<sup>62</sup> Eisenhardt & Zbaracki. *Strategic Decision Making*. (1992)

### 3.2.1.1 Comprehensiveness

Comprehensiveness is defined as a measure of rationality that addresses the extent to which organisations attempt to be exhaustive or inclusive in making and integrating strategic decisions affecting their future “well-being” and “health”<sup>63</sup>. Janis & Mann<sup>64</sup> have through a review of decision making literature established that a comprehensive strategic decision process is characterized by seven elements. These elements can also be considered as sequential or parallel steps:

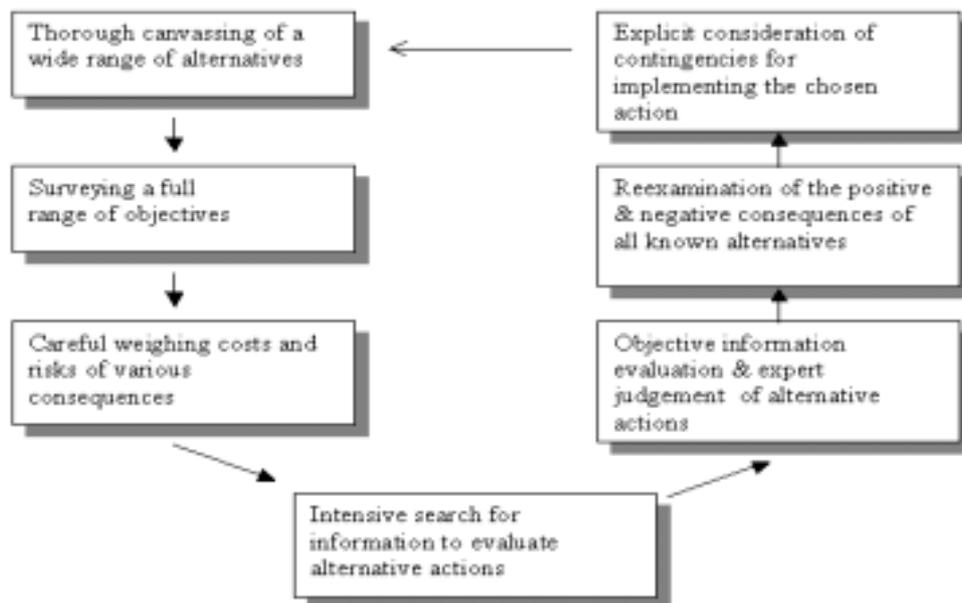


FIG. 2 ELEMENTS COMPREHENSIVENESS IN A STRATEGIC DECISION PROCESS<sup>65</sup>

Fredrickson and Mitchell<sup>66</sup> characterize the comprehensiveness of a strategic decision process as the extent to which “...an upper-echelon executive group utilizes an extensive decision process when dealing with immediate opportunities and threats”. It is thus indicated that comprehensiveness is a variable addressing short-term opportunities and threats.

The extent to which brainstorming sessions occur, the number of alternative solutions that are seriously considered as well as the extent to which quantitative analyses are conducted, are according to these researchers, the generic behavioural indicators of the level of comprehensiveness in organisations’ strategic decision processes.

<sup>63</sup> Fredrickson & Mitchell. *Strategic decision processes: comprehensiveness and performance in an industry with an unstable environment*. (1984)

<sup>64</sup> Janis & Mann. *Decision-Making*. (1977)

<sup>65</sup> Adapted from Janis & Mann. *Decision-Making*. (1977)

<sup>66</sup> Fredrickson J, Mitchell T. *Strategic Decision Processes: Comprehensiveness and Performance in an Industry with an Unstable Environment*. (1984)

### 3.2.1.2 Extensiveness

Miller<sup>67</sup> et.al. defines the variable of extensiveness in strategic decision processes as the grade to which these processes relate to long-term opportunities and threats. The same generic behavioural indicators for comprehensiveness in organisations are relevant to the extensiveness of the process, but with a noticeably different depth, according to the researcher. Thus, extensiveness is also a measure of rationality however the behavioural indicators are not put in the same context of current problem-solving for immediate opportunities and threats. Instead, the brainstorming sessions, the screening for considerable alternative solutions and the quantitative analyses, refer to a context of long-term planning. The reasoning can therefore be illustrated by the following:

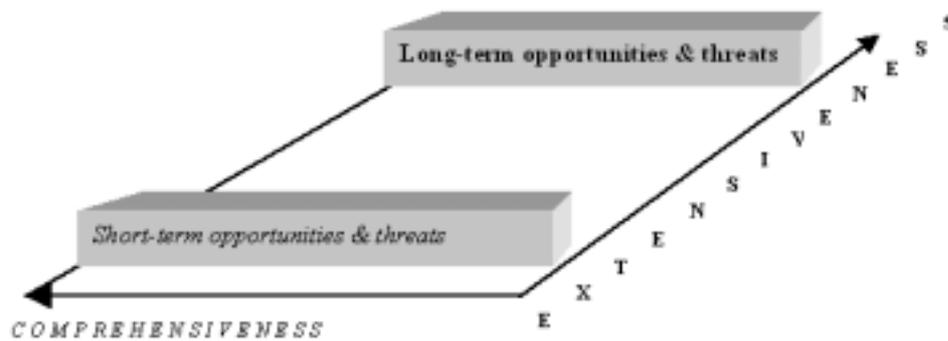


FIG.3 EXTENSIVENESS AND COMPREHENSIVENESS

As exemplified by Miller et.al.<sup>68</sup> “...an organisation might not engage in 3-, 5-, or 10-year planning that encompasses all or most of the organisation (low extensiveness), but may attack comprehensively a strategic problem that just arose regarding availability of raw materials for one of its product lines (high comprehensiveness).” Priem<sup>69</sup> et.al. establish the same difference between extensiveness and comprehensiveness and state that, in the context of strategic decision processes, there is a difference in degree between the two variables i.e. the question is whether more alternatives are evaluated in a more shallow manner, or, fewer alternatives, which in turn are evaluated in a more in-depth manner on respective alternative’s effect on long-term strategy and objectives.

<sup>67</sup> Miller et. al. *Cognitive Diversity among Upper-Echelon Executives: Implications for Strategic Decision Processes* (1998)

<sup>68</sup> Ibid.

<sup>69</sup> Priem et.al. *Rationality in Strategic Decision Processes, Environmental Dynamism and Firm Performance*. (1995)

### 3.2.1.3 Speed

Speed is a variable of strategic decision processes and is considered to be interlinked with the comprehensiveness and the extensiveness of the processes. Such a conclusion, according to Henry Mintzberg<sup>70</sup>, implies that a strategic decision process is fast when managers canvass a narrow range of alternatives whereas these alternatives are being investigated and analysed in a limited manner. Moreover is the business case made up out of information obtained from only a few sources, thus, speeding up the process of preparing the business case for a comparison of alternatives leading to a strategic choice.

Eisenhardt and Bourgeois<sup>71</sup> have, through further empirical research, proved that superior firm performance is dependant upon fast strategic decision making, especially in fast moving industries and in markets where information is not seldom unavailable or significantly limited. Studying the microcomputer industry, the two researchers found that fast decision processes are necessary for maintaining competitive advantage, due to the fact that strategic options may quickly become irrelevant for the purpose of a strategic fit with a continuously moving market. Speed is therefore a prerequisite for successful strategic decisions in high velocity paced markets.

## 3.3 TRADITIONAL DECISION THEORY

### 3.3.1 Rational decision model

The rational decision process is a model in economic theory of how decision-makers act in a rational manner and make various decisions. A rational decision process is dependant upon three prerequisites<sup>72</sup>:

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<sup>70</sup> Mintzberg et.al. *The structure of 'unstructured' decision processes*. (1976)

<sup>71</sup> Eisenhardt & Bourgeois. *Charting strategic decisions in the microcomputer industry: Profile of an industry star*. (1989)

<sup>72</sup> Bengtsson & Nygaard. *Strategizing – en kontextuell organisationsteori* (2001)

- Clear Objectives
- Full Information
- Utility Maximization

This means that the decision-maker enters a situation with clear and stable objectives and if there are numerous goals he is supposed to have a list of priority. The decision maker starts by organising all possible solutions to solve the problem. After setting up the alternatives he gathers full information to calculate the consequences of their actions. The consequences of their actions are in turn evaluated from a known set

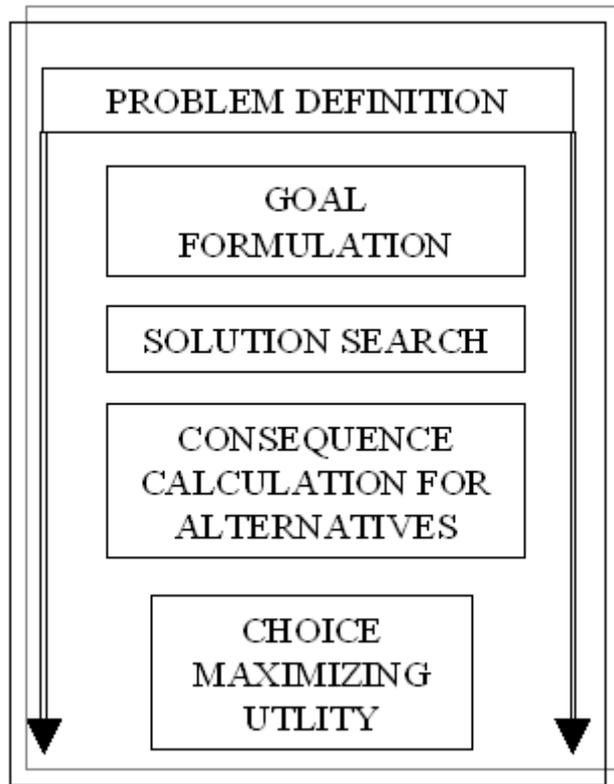


FIG.4 THE RATIONAL DECISION PROCESS

of preferences in the decision makers knowledge. In his final decision, the decision maker always maximizes his utility. This implies that the “alternative” chosen, has to match the earlier formulated goals, to the largest possible extent. In the actual process the decision-maker acts when faced with a problem<sup>73</sup>.

### 3.3.2 Bounded rational decision model

The bounded rational decision model is designed to be applicable to reality. Therefore it is stressed that the knowledge of information is always limited to a person’s perception of his context<sup>74</sup>. The lack of total information makes it impossible for someone to maximize his or her utility. Thus, this process implies that bounded rationality and organisational goals determine the bounded rational decision process. Bounded rationality means that because of a person’s limited information, that information is interpreted through his apprehension of his context. The way of dealing with arising problems is either by routine solutions or new ways. The goals are not clear nor the order of priority. This often leads the decision-maker to change his conception of his goals during the decision process. Therefore goals are rather seen as aspirations. The maximization of

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<sup>73</sup> March & Simon. *Organizations*. (1958)

utility, under these circumstances, can not be fulfilled. Therefore the aspirations of the decision maker in the process and the outcome of the decision *per se*, has rather been a discussion of “*Satisfice*”<sup>75</sup>. This term takes under consideration that the result shall be both *satisfying* as well as *sufficient*. The organisational goals are determined from internal social coalitions, where the power factor of dominant groups more or less rules over the outcome of the decision process i.e. the decision made. Through time, organisational memory<sup>76</sup> will build up with guidelines for future decision settled on historical ones. Management does not play the biggest part in this type of processes but the coalition of groups that dominate the decision process in question.

The rational decision process has been said to be an ideal model of how a decision maker should act. The reality to this model has been questioned for its cognitive assumptions:

- Simon questioned the validity of consistent, value-maximizing calculations of human behaviour<sup>77</sup>.
- Cyert and March showed through research that often goals are not consistent within the organisation and over time, search for information is local and that organisational behaviour is routine driven<sup>78</sup>.
- Carter studied executives’ search processes where he found that these are either *personnel-* or *opportunity-induced*. *Personnel-induced-search* is conducted with known objectives when entering the search, usually objectives established. *Opportunity-induced* search takes place when unexpected opportunities arise, and hence do not the decision-makers have clear objectives<sup>79</sup>.

Mintzberg came to the conclusion that the rational decision model could be accepted if slightly altered. The classic stages of the rational decision process occur once in a specific order which in real life varied both in order and repetition<sup>80</sup>. He also found that the stages most commonly followed various

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<sup>74</sup> Simon. *Models of man*. (1957)

<sup>75</sup> Simon. *Models of man*. (1957).

<sup>76</sup> please see Chapter 3.4 *Evolutionary Theory*

<sup>77</sup> Simon. *Models of man*. (1957)

<sup>78</sup> Cyert and March. *A behavioural theory of the Firm*. (1963)

<sup>79</sup> Carter. *The behavioural theory of the Firm and top-level corporate decisions*. (1971)

<sup>80</sup> Mintzberg et al. *The structure of ‘unstructured’ decision processes*. (1976)

routines<sup>81</sup>. Studies of the decision process have showed that the complexity and political aspects<sup>82</sup> of a decision, strongly affects the shape of the process. The rationality have been found negatively influenced by a larger size<sup>83</sup> of the organisation, threatening environments, high uncertainty and external control<sup>84</sup>. Even though the rational decision process is time consuming<sup>85</sup>, a positive correlation over time has been established between rationality and performance in complex and turbulent<sup>86</sup> but also high velocity<sup>87</sup> environments. Long experience tend to make decision makers rely on their knowledge to make quick decisions rather than examine all information before deciding on a strategy<sup>88</sup>. In most cases the decision process is characterized by bounded rationality, but due to the aspects of the problem at hand, the decision maker moves from being more or less comprehensive<sup>89, 90</sup>.

### 3.3.3 The anarchistic decision model

The anarchistic model, or *garbage can* as it is often referred to, is an unstructured model of an organisation in contrast to the two previous models of hierarchy. Much of the research conducted, have been case studies on non-profit organisations but there have also been on profit orientated<sup>91</sup>. The model itself can be applicable to either one. The garbage can model is built on an *organised anarchy*. Three principal sets of ambiguity characterise the model<sup>92</sup>:

- Problematic preferences that can emerge any time during the decision process.

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<sup>81</sup> please see 3.4 *Evolutionary Theory*

<sup>82</sup> Hickson et al. *Top Decisions: Strategic decision making in organizations*. (1986)

<sup>83</sup> Mintzberg & Waters. *Tracking Strategy in an entrepreneurial firm*. (1982)

<sup>84</sup> Dean & Sharfman. *Procedural rationality in the strategic decision making process*. (1992)

<sup>85</sup> please see 3.2 *The Strategic Decision Process*

<sup>86</sup> Fredrickson and Iaquinto. *Inertia and creeping rationality in strategic decision processes*. (1989)

<sup>87</sup> Eisenhardt & Bourgeois. *Charting strategic decisions in the microcomputer industry: Profile of an industry star*. (1989)

<sup>88</sup> Isenberg. *Thinking and managing: a verbal protocol analysis of managerial problem solving*. (1986)

<sup>89</sup> Nutt. *Making tough decisions: Tactics for improving managerial decision making*. (1989)

<sup>90</sup> please see chapter 3.2 *The Strategic Decision Process*

<sup>91</sup> Magjuka. *Garbage can theory of decision making*. (1988); Levitt and Nass. *The lid on the garbage can: Institutional constraints on decision making in the technical core of college text-publishers*. (1989)

<sup>92</sup> Cohen et al. *A garbage can model of organizational choice*. (1972)

- Unclear technology leads to an incremental cognitive understanding of means and goals.
- Participants are fluently involved during the process.

There is no clear connection between goals, means and the decision in the garbage can model. It sees those factors as vaguely defined because of a lack of information and a complex relationship with their context. Further difficulties arise with many individuals involved in the decision process, who are only spending a part of their time devoted to the specific problem, diminishing the information spectrum. The process itself has four streams of situations<sup>93</sup>, which may occur parallel in the organisation to approach the problem:

- Reasons for decisions, e.g. meetings etc.
- Problems, e.g. bad products, unsatisfied customers etc.
- Solutions, e.g. suggestions, ideas etc.
- Individuals in the organisation involved in the decision process with time to find solutions to the problems, e.g. occupied leaders and elected representatives with many assignments.

Empirical findings indicate that the timeframe is an important variable if an organisation acts from the garbage can model. Shorter timeframes often leads to a more linear decision process, bounded rationality, and less randomness of events. These characteristics are opposite to the ones that characterise the core of the garbage can model<sup>94</sup>.

Research has over time questioned the three principal sets of ambiguity of the garbage can model. Preferences have been found to be ambiguous but at the same time the participants still had mutual goals throughout the decision process<sup>95</sup>. The fluent involvement of participants have been proved partially wrong. Even though a number of participants have the opportunity to be involved only a few were, regularly<sup>96</sup>. This has been found to be influenced by institutional roles, politics and the phase of the process but also in some cases on a psychological and demographic level rather than individual<sup>97</sup>. Finally Pinfield found the streams

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<sup>93</sup> please see 3.2 *The Strategic Decision Process*

<sup>94</sup> Olsen. *Choice is an organized anarchy*. (1976); Cohen et al. *A garbage can model of organizational choice*. (1972)

<sup>95</sup> Olsen. *Choice is an organized anarchy*. (1976)

<sup>96</sup> Kreiner. *Ideology and management in a garbage can situation*. (1976)

<sup>97</sup> Pinfield. *A field evaluation on perspective on organizational decision making*. (1986); Magjuka. *Garbage can theory of decision making*. (1988)

of problems, opportunities and solutions to be strongly integrated with the concerning issue<sup>98</sup>.

### 3.4 Evolutionary Theory

In their book from 1982, “An Evolutionary Theory of Economic Change”, Nelson and Winter<sup>99</sup>, present a framework for how organisations make various, both strategic and operational, decisions, as well as how organisations evolve during their life-cycle. All this is presented in a perspective radically different from what is traditional economic theory paints up. Three concepts lie behind the foundations of evolutionary theory:

- *Market Selection.* The market sets the definition for success. Organisations that fall outside that definition (usually in terms of financial results) are not seen as candidates for any cooperation e.g. strategic alliances.
- *Organisational Genes.* Organisations have genes that affect various process procedures and therefore their ability to gain competitive advantage and financial superiority
- *Evolution.* Organisations develop during a longer time-frame. As a result decisions and actions can not be seen as isolated solutions to static problems. Decisions and actions must be seen as consequences of earlier choices and experiences.

#### 3.4.1 Organisational Routines

Nelson and Winter<sup>100</sup> define organisational routines as “coordinated and repeated actions in an organisation, that can be said to be regular and predictable”.

Organisational routines are seen as implicit decision rules that evolve during the evolution of an organisation, and after time, make it competitive relative to other organisations. Routines are like biological genes for the organisation as they include all the knowledge the management team can take into use when making strategic moves. At the same time these routines are developed from explicit activities, by the management team, as the main logic behind organisational

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<sup>98</sup> Pinfield. *A field evaluation on perspective on organizational decision making.* (1986)

<sup>99</sup> Nelson & Winter, *An Evolutionary Theory of Economic Change.* (1982)

<sup>100</sup> Ibid.

routines is their way of making the organisation more and more efficient at the same time when they lessen the need for managerial control from above<sup>101</sup>.

Without implicit decision rules, activities such as e.g. product-strategies, technical production standards or investment in new assets, can be performed in a handful of ways. This can therefore, according to Nelson and Winter's reasoning, lead to a situation of organisational chaos where the prerequisites for reaching competitive advantage and nonetheless reaching positive financial results, are minor. Decision makers are thus seen as boundedly rational as the intended outcome of their decisions follow a pattern of "satisfice" without implicit decision rules (routines).

The authors make a distinction between three types of routines:

1. Long- term Routines that affect the strategic choices of an organisation and its investment profile.
2. Periodic Routines that affect the investment pattern of an organisation in a production perspective as e.g. the choice of input products in production or investment in new machinery.
3. Short- term Routines that affect everyday activities. These routines are strictly dependant upon the organisation's strategic investments, periodic investments and earlier strategic choices in general.

Organisational Routines are ineffective if they are not backed up with the capabilities of individual members of the organisation. Nygaard<sup>102</sup> et.al. exemplify that if a member of the organisation, does not have the capability of using a personal computer, there is no direct benefit of creating the routine that the technical specifications for all raw material used in production are to be registered in an electronic database. They further emphasize the problem of tacit knowledge that is created by routines. When the organisation evolves and develops, there is an active programming of routines that activate those capabilities that the employees really do have. This in turn leads to a situation where the better these individuals become in using their capabilities in a routine manner, the larger the risk of capabilities becoming tacit knowledge. This means that it becomes more difficult for the individual to change his routines or share

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<sup>101</sup> Nelson & Winter, *An Evolutionary Theory of Economic Change*. (1982)

<sup>102</sup> Nygaard C., Norus J., Hull P. *Strategen skapar rutiner – evolutionär teori*

his capabilities with new members of the organisations. Nygaard<sup>103</sup> et.al therefore emphasize how important the balance between organisational routines, capabilities, and tacit knowledge is in order to enhance the prerequisites for reaching competitive advantage.

### 3.4.2 Organisational Memory

Routines are “stored” in the organisation’s “memory”<sup>104</sup>. This “memory” coordinates the members of the organisation in an automatic cooperation manner when making short-term, periodic, or long-term decisions. Routines are created through establishing generic processes built upon specific standards that will secure the smoothness of the organisations operations. Such standards as well as the documentation of operations and actions, are what makes up the organisational memory. The main logic behind it is therefore that the sequences of routines are conducted without the direct interference of the top-management team but instead through the formal or informal cooperation between individuals in the organisation. The role of the top-management team will therefore be limited to interference in cases where the normal programme for routines does not secure its intended result i.e. when specific problems arise that are too complicated to be solved within the frames of the programmed routines<sup>105</sup>. Nelson and Winter withstand that many organisational innovations are developed through solving such problems and in parallel creating new combinations of existing routines that become more efficient than the existing<sup>106</sup>.

Routines, however, cannot be changed in the same pace as market conditions change. Programmed routines lock and organisation to a trait as they are an integrated part of its decision rules, and therefore limit the organisations possible behaviour. Changing existing routines *per se* also becomes a bounded process as these existing routines directly affect the search and construct process for new ones. Nelson and Winter therefore mean that organisations are dependant upon their history i.e. what they can do today depends on what they did yesterday. Organisational routines are hence seen as something that can enhance the

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Nygaard C., Bengtsson L., *Strategizing – en kontextuell organisationsteori* (2002)

<sup>103</sup> Nygaard C., Norus J., Hull P. *Strategen skapar rutiner – evolutionär teori*

Nygaard C., Bengtsson L., *Strategizing – en kontextuell organisationsteori* (2002)

<sup>104</sup> Ibid.

<sup>105</sup> Ibid.

<sup>106</sup> Ibid.

competitiveness of the organisation, but also risk a lock-in to a trait that might turn out catastrophic if the market conditions radically change. Therefore the authors come to a conclusion that organisations work best in relatively stable environment<sup>107</sup>.

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<sup>107</sup> Nelson & Winter, *An Evolutionary Theory of Economic Change*. (1982)

## 4

# EMPIRICAL PRESENTATION

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*In this chapter we intend to give a brief background about the two companies we have chosen to study and display their pre-outsourcing decision processes. From the background of the decision, through the make-or-buy evaluation, to the final stages of the supplier selection process, we will present the two companies.*

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### 4.1 GAMBRO



#### 4.1.1 Background

Gambro is a global corporation within the field of medical engineering and healthcare solutions. The company was started by the industrialist and entrepreneurial spirit Holger Crafoord in 1964. The start-up was triggered by the innovation made by professor Nils Alwells in constructing the first artificial kidney, which Crafoord felt he was obliged to develop. The initial development of artificial kidneys soon began in Lund, Sweden, under the present name “Gambro”. Mass production of single-use artificial kidneys and dialysis machines started in 1967 and the company soon began to internationalise. Dialysis treatment is the cleaning of the blood by artificial means. This treatment is provided to patients with acute or chronic kidney failure with the help of a dialyzer i.e. an “artificial kidney”. The Dialysis Machine administers and controls the flow of blood and dialysis fluid through the artificial kidney during the treatment. The machine also prepares the dialysis fluid from water and concentrate<sup>108</sup>.

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<sup>108</sup> [www.gambro.com](http://www.gambro.com)

Today, Gambro, with a staff of 21.100 employees present in more than 40 countries worldwide, has an annual turnover of approximately USD3,2 billion<sup>109</sup> and is since 1983 publicly listed on the Stockholm Stock Exchange. The organisation is divided in three main business areas that are formally known as Gambro Renal Products, Gambro Healthcare, and Gambro BCT.<sup>110</sup>

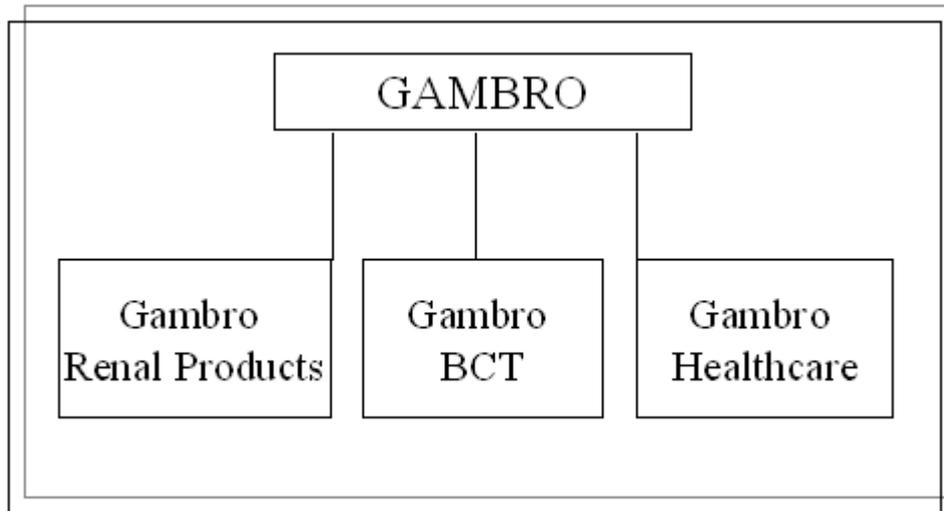


FIG. 5 GAMBRO WORLDWIDE BUSINESS AREAS<sup>111</sup>

- *Gambro Blood Component Technology (BCT)* provides technology and products to blood centers and hospital blood banks around the world.
- *Gambro Healthcare* delivers holistic patient care, often crucial to successful dialysis treatment<sup>112</sup>.
- *Gambro Renal Products* offers a wide range of products for hemodialysis, peritoneal dialysis and renal intensive care.

#### 4.1.2 Gambro Lundia AB

Gambro Lundia is situated in Lund, and is a business unit within *Gambro Renal Products*. Gambro Lundia carries on the production of dialysis machines and dry concentrates, crucial for dialysis treatment.. The unit is divided into product lines and the managers that cooperated for the purpose of the study were involved in the dialysis machines' line. Research and Development of significant strategic importance is also being conducted in the facilities of the unit and is the most significant unit for development of all dialysis machines worldwide. In a

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<sup>109</sup> Gambro 2003 Annual Statement

<sup>110</sup> [www.gambro.com](http://www.gambro.com)

<sup>111</sup> Ibid, adapted

<sup>112</sup> In parallel with this study Gambro divested

worldwide perspective, the biggest production share of all dialysis machines within Gambro, can be addressed to Gambro Lundia<sup>113</sup>.

Gambro Lundia is the unit within Gambro that has cooperated with us for the purpose of this study.

#### 4.1.2.1 Industry Characteristics

Gambro Lundia AB acts in a stable and mature environment. Product development in the area of dialysis treatment has rather become stagnated as most innovations in the business area took place during the 1980s.<sup>114</sup>

#### 4.1.2.2 Production

Gambro compares its' dialysis machines to "a process industry in miniature"<sup>115</sup>, which means that a final machine is made up of electronic and mechanical components. Production at Gambro Lundia consists of :

- an assembly phase and
- a testing phase.

The assembly phase is conducted on a regular production line whereas the testing phase occurs in two separate stages<sup>116</sup>. The assembly and the preliminary testing phase occur in work-groups of five to six people. After completing these phases the machine is put through a final test. The testing activities are controlled in a very rigorous manner, as they must comply with national and international standards for quality assurance in production of medical equipment<sup>117</sup>, as e.g. the standards set up by the American Food and Drug Administration (FDA).

Today Gambro Lundia produces two general models of dialysis machines, the *Artificial Kidney 95 Machine (AK95)* and *Artificial Kidney 200 Machine (AK200)*

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it's US Operations of Gambro Healthcare

<sup>113</sup> www.gambro.com

<sup>114</sup> Supply Manager, Henrik Isaksson

<sup>115</sup> www.gambro.com

<sup>116</sup> Empirical Observations

<sup>117</sup> www.gambro.com

#### 4.1.2.3 Core Competencies

The mission statement of Gambro Worldwide is to “... save lives and improve the quality of life for the people the company serves.”<sup>118</sup>. In the design and production of dialysis machines this therefore implies it necessary to have the professional knowledge and deep understanding for how a user interface should be formed in relation to how a dialysis treatment works<sup>119</sup>. Thus, the core competence is the knowledge about dialysis treatment and its implications for product design and development<sup>120</sup>.

#### 4.1.2.4 Outsourcing

In 1997 functional circuit cards for functional control of the dialysis machines were laid out to a third party. The heavily exploited machine park for the circuit card production had to necessarily become replaced for an efficient production in the future. The managers were therefore put in a situation where heavy capital needed to be invested for keeping the activity in-house and outsourcing did seem as the best solution. This was the case as a handful of suppliers in the market had already invested heavily in the such machines. The make-or-buy decision was therefore seen as either entering a heavy capital formation or purchasing the necessary economies of scale from the suppliers in the market. The latter option was therefore chosen. Another case of outsourcing was moving out functions not directly falling under the company’s core competencies. In terms of specific production, such was the case of outsourcing the stand for the AK200 and AK95 dialysis machines. Here the managers concluded that this specific production function did not address the need for specific competencies that ought to be in possession of Gambro Lundia. Jörgen Jönsson was in charge of the project:

*“The AK 200 stand was a simple OEM-product. Outsourcing gave us the ability to focus on what we were best at, while giving a more competent supplier the possibility of offering us the same solution. The AK 95 stand had on the other hand integrated flow components connected to the machine itself. The motive in that case was connected to resource scarcity.”*

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<sup>118</sup> [www.gambro.com](http://www.gambro.com)

<sup>119</sup> Product Line Director, Jörgen Jönsson

<sup>120</sup> Ibid

Although Gambro Lundia considers itself to have travelled a considerable way on the “outsourcing experience curve” in comparance with e.g. sister-companies in Italy, on an inter-company arena the experiences are less radical<sup>121</sup>. Gambro has been involved in a number of outsourcing ventures but started to outsource activities in 1991 with the AK95 stand. Both Supply Manager Henrik Isaksson and Quality Manager Christer Magnusson emphasize:

*“Too broad outsourcing of production bears significant risks of losing the production competencies, which make up the link for feedback between production and product design and Research and Development. Knowledge-intensive activities should be kept in-house. How will our engineers know what to improve in product design if the production is outsourced...?”*

Henrik Isaksson emphasizes :

*“We did not and do not see outsourcing as an explicit strategy that is to be followed.. Outsourcing is not an integrated part of our Strategic Planning.”*

Outsourcing can according to Henrik Isaksson therefore not be seen as something that the managers continuously bear in mind when facing tuff choices and problems. As Product Line Director Jörgen Jönsson however notes, it cannot be excluded that in the future the company will have outsourced everything apart from it’s testing activities. He further adds that a lot of activities might in that future also be outsourced abroad, where the factor conditions are much better:

*“We have already sunk the ships in Sweden. The train is leaving and Gambro has to be aboard on that train...”*

### 4.1.3 Pre-Outsourcing Decision Process

#### 4.1.3.1 Decision Background

As good as every manager at Gambro Lundia can bring up the issue of outsourcing<sup>122</sup> as long as it is within the regulatory framework. The framework specifies that the activity to be transferred has to have a value-added of 60 % or

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<sup>121</sup> Product Line Director, Jörgen Jönsson

result in a better product due to the specific competencies of the supplier<sup>123</sup>. Gambro Lundia is a unit with full profit responsibility however outsourcing decisions may sometimes come from a group level as well. This was the case with the Circuit Cards' case where top management at a group level concluded that this activity should not be kept in-house. To this point of time the propositions for outsourcing have though mostly come from within the management of the Lund unit not including the outsourcing of these circuit cards. In these local cases a project manager is set up for evaluating whether the outsourcing will be beneficiary or not<sup>124</sup>. This project manager is therefore the central figure in the decision process in terms of taking into account explicit calculation models for conducting cost-benefit.

#### 4.1.3.2 Make-or-Buy Evaluation

What managers at Gambro Lundia bear in mind when facing problems and choices are the principles of lean management.

*“Lean management is what we work with. We continuously try to map, identify, and eliminate wastes in our production flow using the best possible solutions.”<sup>125</sup>*

Outsourcing is therefore only seen as one of the options that are to be considered when faced with a problem, or more specifically a certain waste of e.g. unnecessary inventory forming capital. It is however by no means the only solution to e.g. capital formation, relatively inefficient production flow or long lead times. Several alternatives can always be considered, and when wastes occur, they are also thoroughly evaluated. Excessive capital formation, due to excess inventory, can e.g. be solved through a Vendor Managed Inventory system whereas Just-In-Time supply chain management can significantly shorten the lead times and all in all make the company keep an activity in-house.

*“The project manager looks through all of the possible alternatives and makes all the necessary calculations in order to give us a fair view on whether we should keep the activity in-house or purchase it!”<sup>126</sup>*

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<sup>122</sup> Quality Manager, Christer Magnusson

<sup>123</sup> Product Line Director, Jörgen Jönsson

<sup>124</sup> Ibid

<sup>125</sup> Supply Manager, Henrik Isaksson

<sup>126</sup> Product Line Director, Jörgen Jönsson

Long-term planning is today crucial at the company. What makes an outsourcing decision even more difficult is the fact that when the decision to buy has already been made it is much more difficult control the process, which in turn can lead to the risk of driving prices up in a long-term perspective.

*“What I would change if I once again approached the decisions that are today already taken, is the value-added percentage included in the activity considered for outsourcing. From that point of view the AK 95 stand outsourcing was not a good decision. It will probably be taken back in-house and the supplier will be given an activity with a larger value-added part in his production. Today we do have a regulatory framework...”<sup>127</sup>”*

Considering the characteristics of the dialysis machines and the maturity of the product, there is a continuous threat in long-term supplier relationships for cost control and efficiency<sup>128</sup>. Development of existing product lines consists of adding new versions of components while eliminating old ones. This, sometimes affects the production processes at the supplier’s facilities. If the outsourced activity consists of a value-added of 10% and the remaining part are goods purchased, the supplier will want to add mark-ups, the control of costs will be merely impossible and therefore strictly has to be considered prior to closing the contract.

*“If we, after the contract has been closed, slightly modify the product which will mean a 1 SEK higher unit-cost for the supplier, he will put a mark-up with 20 SEK for that 1 SEK per unit...”<sup>129</sup>”*

With regard to this Jörgen Jönsson has set up a regulatory framework which specifies when outsourcing is allowed to be considered. According to the framework 60% of the value-added in the activity or very specific competencies embedded in the potential outsourcing-partner are a must. Also taken into account are the supplier’s overhead costs. Outsourcing does not mean that overheads disappear – the supplier’s overheads become Gambro’s indirect costs. The costs of arrival controls, quality controls and storage costs can also increase<sup>130</sup>.

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<sup>127</sup> Ibid.

<sup>128</sup> Ibid

<sup>129</sup> Ibid

<sup>130</sup> Supply Manager, Henrik Isaksson

#### 4.1.3.3 Supplier Selection Process

If the project manager believes that outsourcing will be the most efficient alternative, the time comes for choosing an adequate supplier for partnership. Here supply market research consists of looking at both old as well as new suppliers. This occurs with regard to price, quality and competence:

*“In both stand cases for the AK200 and AK95 products we submitted the suppliers with a design specification and a functional specification for the products. We looked at four new suppliers and also the old one that to that time had been supplying us with separate components we assembled in-house. All the suppliers were therefore able to submit their own solution to the problem. Price was crucial. I would lie if I would say it wasn’t. However location, quality, and the supplier’s construction and purchasing competence were all variables affecting the decision.”<sup>131</sup>*

The supplier is furthermore always evaluated in terms of financial standpoint and referencenes. Taken into account are the supplier’s specific market position as well as past earnings<sup>132</sup>.

Process quality is the most important feature of quality control at Gambro Lundia<sup>133</sup> due to the standards set by international and national institutions as the FDA<sup>134</sup> regarding production routines in medical engineering. This addresses the suppliers as well, therefore great emphasis is put on the issue when deciding for production outsourcing. The role of the Quality Department in the pre-outsourcing process is to evaluate, qualify and acknowledge the contracting party in terms of process quality. If the chosen party does not meet the relevant requirements, the Quality Department issues a contingency plan for how appropriate process quality is to be met before the first delivery from the supplier. Although the outsourcing decision is a joint decision, the Quality Department is not involved in the explicit make-or-buy decision. This was the case in all the earlier mentioned projects. The choice was often made on economic and logistical grounds by the purchasing department. It was therefore

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<sup>131</sup> Product Line Director, Jörgen Jönsson

<sup>132</sup> Quality Manager, Christer Magnusson

<sup>133</sup> Quality Manager, Christer Magnusson

<sup>134</sup> Food & Drug Administration, USA

up to the Quality Department to develop the supplier's process quality in order to have the supplier acknowledged.

As Quality Manager Christer Magnusson notes :

*“We tend to become involved in the Outsourcing process already when the make-or-buy decision has been taken, after a partner has been selected... I would want to see us involved in the process as soon as the thought to outsource first appears. At that stage, there would be a couple of suppliers to consider in terms of quality. If such would have been the case in earlier decision processes, the make-or-buy decisions and the outsourcing structure might have been different today.”*

Quality Manager Christer Magnusson also adds that, when the proposition comes from within the business unit in Lund, it gives a larger potential for evaluating whether the right prerequisites exist in terms of choosing a contracting party. In cases the decision comes from Gambro Worldwide i.e. as a global strategic venture where the global supply market is scanned for the most cost-efficient alternatives, the requirements are rarely met by the selected suppliers. In the pre-outsourcing process of the circuit cards for the dialysis machines the decision, which prior had been made on a group level, also included the specified supplier meant for the contract. The role of the Quality Department was very much limited:

*“The decision came from above and the supplier had already been selected. Our role in terms of quality assessment was therefore more to endorse a decision that by and large had already been made, instead of submitting an objective evaluation of process quality at the supplier's facilities. I think we miss a bit in those parts – consciously or unconsciously – a supplier has to have the adequate prerequisites for taking part in the tender. This is not true if the supplier does not understand our requirements<sup>135</sup>.”*

However as both the Quality Manager and the Product Line Manager add, if the potential of the chosen outsourcing partner is considerably limited as a result of significantly low process quality this can, after a revision of the Quality Department, without doubt reverse the outsourcing decision.

#### 4.1.3.4 Process Time & Objectives Formulation

A time-frame is specified when approaching the make-or-buy decision.

*“We do a budget for everything...especially the time-frame for submitting the business case.”<sup>136</sup>*

Henrik Isaksson feels that the capacity is usually restrained on a short-term basis and the problem has to be solved during the time it is still relevant.

Meanwhile the objectives of what is to be accomplished in order to solve a specific problem or e.g. a waste, develop continuously during the process until the business case is put forward. As goals have to be clear in the business case in order to evaluate possible ways of conduct this also implies a more natural business case development, in relation to the budgeted timeframe,<sup>137</sup>.

The budgeted timeframe is dependant upon the complexity of the problem<sup>138</sup>. This complexity in turn affects the scope of involvement from other parts of the organisation. Jörgen Jönsson notes:

*“The degree of involvement of other functions in the decision process has to be set in relation to the complexity of the problem. Making the process too complex, per definition, is not the top thing...it only makes the process too time-consuming...”*

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<sup>135</sup> Quality Manager, Christer Magnusson

<sup>136</sup> Supply Manager, Henrik Isaksson

<sup>137</sup> Ibid.

<sup>138</sup> Product Line Director, Jörgen Jönsson

## 4.2 TETRA PAK



### 4.2.1 Background

Just into the 21st century Tetra Pak Global is a world-renowned Multinational Enterprise owned by the third generation of the Rausing family - Kirsten, Jörn and Finn. The group has its registered headquarters in Switzerland, owned by a Dutch foundation<sup>139</sup>, and over 20 000 employees around the world. Tetra Pak Global is today supplying complete processing-, packaging- and distribution systems in more than 165 markets<sup>140</sup>. Their products consist, altogether, of around 50 000 components and are delivered by a supply base of close to 1100<sup>141</sup>.

The great entrepreneur and an innovator Dr. Ruben Rausing, founded Tetra Pak in 1943. By expanding the way of thinking at that time, he changed the food distribution world-wide through designing a milk package that required little material while providing maximum hygiene. Since the 1950:s Tetra Pak has become one of the world's largest suppliers of many products within the business area of their expertise. Tetra Pak today is the only international company providing integrated processing and packaging solutions for food manufacturing. By 2003 Tetra Pak had a net revenue of approximately 7,3 billion Euro and the core of the organisation still includes innovation and entrepreneurship leading to high technological development<sup>142</sup>.

Today Tetra Pak Global is divided into three business areas<sup>143</sup>:

- Tetra Pak Carton Ambient
- Tetra Pak Carton Chilled
- Tetra Pak Processing Systems

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<sup>139</sup> Manufacturing Director, Johan Häggström

<sup>140</sup> [www.tetrapak.com](http://www.tetrapak.com)

<sup>141</sup> Manager Tetra Pak Purchasing Development, Anders Ekberg

<sup>142</sup> Ibid

<sup>143</sup> Ibid

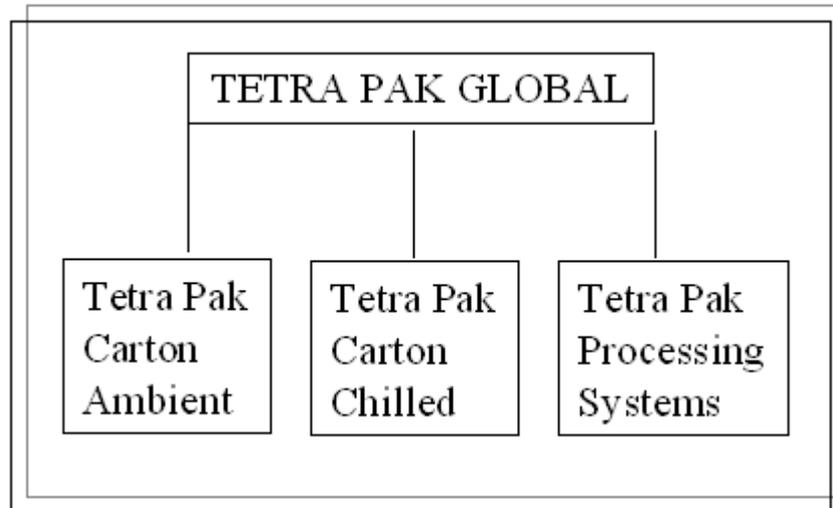


FIG.6 TETRA PAK GLOBAL BUSINESS AREAS<sup>144</sup>

#### 4.2.2 Tetra Pak Carton Chilled AB

To have a chance to get a grasp of the decision process in the company we had to narrow down our research of Tetra Pak to Tetra Pak Carton Chilled, referred to by us in this study as TPCC. Seated in Lund, Sweden, TPCC is an international company within the Tetra Pak Group, active all over the world. TPCC works in the industry of developing packaging- and filling systems along with paperboard for the part of the dairy industry requiring packaging ensuring low temperatures. It is the paperboard which constitutes most of both Tetra Pak Global's as well as TPCC's profit.

##### 4.2.2.1 Industry Characteristics

The industry in which TPCC is active is characterised by a mature environment. There is still a high degree of development but rather a tendency of diversifying and improving existing products than revolutionising the market with new products<sup>145</sup>.

##### 4.2.2.2 Production

TPCC produces non-aseptic filling- and packaging machines for cold fluids. The machines are built out of components into separate functioning units i.e.

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<sup>144</sup> www.tetrapak.com, adapted

<sup>145</sup> Manufacturing Director, Johan Häggström,

modules, which are assembled into a final product. Today, the modules are mainly manufactured by suppliers and transported to TPCC for final assembly and final test before they are sent of to the end customers. TPCC's manufacturing strategy follows five principles<sup>146</sup>:

- Standardise platforms and offer a variety of options and variants.
- Construct all products into modules so that it will be easier to declare ownership and objectives among other things which will help to track down problems and detect possibilities.
- Lean Management Will reduce wastes in the production.
- Outsource module production to system suppliers to focus on core competencies.
- Standardise between products and within products to reduce costs in the production and to minimise the number of suppliers.

#### 4.2.2.3 Core Competencies

The Core Competencies of TPCC is the development of paperboard, filling- and packaging machines and offering an overall solution. Areas like assembly and test are areas where core competencies and knowledge exist. Managers tend to express the organisation's definition of core competencies in more abstract terms:

*“Innovation and enterpreneurship is the true core of Tetra Pak Global's competencies as well as offering an overall solution<sup>147</sup>.”*

#### 4.2.2.4 Outsourcing

Top management at Tetra Pak Global has formed an explicit strategy to outsource all activities not being part of the company's core competencies<sup>148</sup>. Purchasing Development Manager, Anders Ekberg emphasises:

*“Outsourcing is an integrated part of Strategic Planning at Tetra Pak - within all the business areas and units...”*

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<sup>146</sup> Presentation held by Management of Tetra Pak Carton Chilled towards co-workers and supplier groups.

<sup>147</sup> Manager Tetra Pak Purchasing Development, Anders Ekberg

Both Supply Chain Manager Lars Thelin as well as Manufacturing Director Johan Häggström confirm this. Right from the start, Rausing focused on innovation as a core competence. While purchasing manufacturing capacity from a third party he took care of the assembly. During its growth, Tetra Pak continuously started to transfer responsibilities of more and more assembly to its suppliers<sup>149</sup>. Today TPCC follows an outsourcing strategy as it is believed that suppliers possess economies of scale, specific knowledge in terms of methods, processes, etc and a culture conscious of costs and lean environments. Regard is also taken to maintaining a flexible organisation by transferring risks of capital formation in production equipment, further education for personnel and new technology. The company therefore strictly relies on the competencies of the suppliers and through this aims to have a market growth of 50% in five years from customer satisfaction and improved performance on cost, quality and time as well as profitability<sup>150</sup>.

The last example of a major outsourcing decision, at TPCC, took place in 2002. Tetra Rex, a business unit within TPCC, conducted a significant production outsourcing. Tetra Rex had previously manufactured their whole product-line from a component level as the products were constructed as one single piece in-house, from scratch. The outsourcing venture was therefore made up of reconstructing the product design in order for it to be built up of separate system units i.e. modules. This in turn made it possible to transfer all the assembly activities concerning the component level to the suppliers. Final assembly in-house therefore only consisted of putting modules together<sup>151</sup>.

*“The outsourcing decisions that have been made are consistent with our global strategy and we have no intention to ever insource those activities again, since our suppliers have much better knowledge within those areas<sup>152</sup>.”*

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<sup>148</sup> Manager Tetra Pak Purchasing Development, Anders Ekberg

<sup>149</sup> Manufacturing Director, Johan Häggström

<sup>150</sup> Manager Tetra Pak Purchasing Development, Anders Ekberg

<sup>151</sup> Manufacturing Director, Johan Häggström

<sup>152</sup> Ibid.

## 4.2.3 Pre-Outsourcing Decision Process

### 4.2.3.1 Decision Background

The strategic direction towards outsourcing to a larger extent, set by top management applies to all business units including Tetra Pak Carton Chilled. This does however not imply that single specific outsourcing decisions are taken on a group level. On the contrary, the need for specific make-or-buy decisions is continuously identified at a business unit level, at TPCC<sup>153</sup>.

*“Depending on the extent of the outsourcing decision and whom it effects, personnel representing different divisions in the organisation are present during the decision process<sup>154</sup>.”*

The decision processes concerning larger ventures involve all managers in a matrix manner. Smaller decisions can be characterised by a process that is more linear from one set of participants, like the production manager, purchasing manager and module manager, who all together calculate alternatives and make a decision<sup>155</sup>.

Business units have been managed very independently, which has evolved in different ways of approaching issues throughout the organisation as a whole.

*“Routines in decision processes vary from one business unit to another<sup>156</sup>.”*

*“Everyone does their own thing. That is something we are currently working on, centralising purchasing routines<sup>157</sup>.”*

To take advantage of possible synergies, like easier information exchange and customer service of a more centralised and convergent decision process, a pilot project is under implementation at Tetra Pak Carton Ambient. A preliminary regulatory framework is being constructed by managers at Tetra Pak Carton Ambient in collaboration with representatives from all business units within

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<sup>153</sup>Supply Chain Manager, Lars Thelin

<sup>154</sup>Ibid.

<sup>155</sup>Ibid.

<sup>156</sup>Purchasing Director, Lennart Aveling

<sup>157</sup>Manager Tetra Pak Purchasing Development, Anders Ekberg

Tetra Pak Global. The framework is in the near future is intended to apply to all units within the group.<sup>158</sup>

#### 4.2.3.2 Make-or-Buy Evaluation

TPCC follows the strategy set on corporate level by top management and therefore never questions, from one case to another, if outsourcing will interfere with the competitiveness of the company in the future. The question is rather where core competencies are and hence to what extent more “buy-decisions” are to be taken. This implies that outsourcing is always considered as a natural step when the organisation cannot further reduce wastes<sup>159</sup>.

*“We believe our suppliers have more expertise and better performance in the outsourced areas which in turn will give us competitive advantages by focusing on making our core competencies more efficient<sup>160</sup>.”*

This has led to that no alternatives are taken under consideration oppose to outsourcing and no evaluation of future competitiveness, as a consequence of the given strategy, is made on local level. TPCC still performs numerous calculations for establishing cost and effects for producing an activity in-house or transferring it to an external company. Through the supplier, TPCC anticipates that they will benefit from cost reduction and improvements in shorter lead-time because the supplier has better efficiency from experience. Since the supplier does not have TPCC as its only customer he will enjoy economies of scale, a bigger production volume will spread over-head costs per produced unit. The specialisation will also lead to quality improvements<sup>161</sup>. Haggström says that Chilled has kept final assembly in-house because management feels that they need some feedback of their own to keep competitive advantages in their research and development<sup>162</sup>.

#### 4.2.3.3 Supplier Selection Process

In the supplier selection process the outsourcing partner must possess great production processes and continuity in quality and lead-time, for not creating

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<sup>158</sup> Purchasing Director, Lennart Aveling

<sup>159</sup> Manufacturing Director, Johan Haggström

<sup>160</sup> Ibid.

<sup>161</sup> Supply Chain Manager, Lars Thelin

<sup>162</sup> Manufacturing Director, Johan Haggström

bottleneck situations. Other important features are great communication capabilities as well as to provide an insight to their operation<sup>163</sup>.

*“When comparing to earlier experience of inquiries that have gone outside the old supplier base, the result has been worse<sup>164</sup>.”*

More importantly the supplier has to be acclimatised into TPCC’s specific routines. Häggström explains that a closely united supplier relationship means more to TPCC, in the long run both operational wise as well as financial wise, than scanning the market for better adjusted candidates<sup>165</sup>.

*“To teach a new supplier the Tetra Pak way of doing business takes an enormous effort and most often we do not have time for it...this of course constitutes a risk of inbreeding...<sup>166</sup>”*

Since it takes a lot of time and energy to start up a new relationship with an unknown supplier there is a tendency among managers to only choose from Tetra Pak’s current list of suppliers. TPCC has earlier not had a documented decision process framework, specifically for outsourcing. However one was created in the Tetra Rex. First TPCC identified the problems after which they formulated the objectives. After that a survey is conducted of a number of suppliers<sup>167</sup>. These are selected from three prerequisites<sup>168</sup>:

- The supplier has to produce modules better than TPCC
- The supplier has to add value to the business needs of TPCC
- The supplier has to prevent and minimise losses

In the first draft around 10 candidates are assessed according to predetermined criteria formed in the regulatory framework. The investigation is divided into three parts. First, the supplier has to pass some criteria which are called “must have”. These are inspection capabilities, low lead time, available capacity and financial stability. Second, they have to be evaluated from two groups of

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<sup>163</sup> Manufacturing Director, Johan Häggström

<sup>164</sup> Supply Chain Manager, Lars Thelin

<sup>165</sup> Manufacturing Director, Johan Häggström.

<sup>166</sup> Ibid.

<sup>167</sup> Presentation held by Management of Tetra Pak Carton Chilled towards co-workers and supplier groups

<sup>168</sup> Manager Tetra Pak Purchasing Development, Anders Ekberg

characteristics called “high want to have” and “want to have”. These constitutes factors like minor testing and design capability for “high want to have” and training employees, communication skills and the ability to change production pace according to current demand for “want to have”. All is weighed in the evaluation along with written comments if something is not covered by the investigation.

*“Review all suppliers but focus on key suppliers and impact suppliers<sup>169</sup>.”*

From this stage a selection of three to four suppliers are evaluated in a long term perspective of historical data in gathered in a group level database. This data includes records of the effectiveness in quality control, lead time/distribution and risk analysis<sup>170</sup>. Suppliers are also evaluated from their ability to be involved and influence upon the product development and maintenance projects, through their specific competences and insights. In this way management can evolve cost efficient design solutions, prevent disturbances in the manufacturing process and with shortened lead time improve the pace of introducing new models on the market with a better impact. Of great importance is also the question whether the potential supplier’s strategies and values are in the same direction as Tetra Pak’s, for a successful relationship<sup>171</sup>. After all factors have been weighed into the evaluation, a supplier is selected. The final stages of the explicit process concern contract signing<sup>172</sup>. All affected personnel are involved in a matrix evaluation process of the outsourcing decision in relation to selecting the right supplier candidate. There does not exist a special quality division, evaluating the supplier’s process capabilities, instead all the involved managers are assumed to be quality orientated. Tetra Pak strives to have one supplier per module in order to create learning between business systems and suppliers, to standardise production for cost efficiency and because it is easier to manage. In cases where the selection of a supplier is within the old supplier base it is not necessarily the supplier who previously has had the most value added production that are assigned the job but rather the one who best fits the specific prerequisites in that case. To build a strong competitive relationship with suppliers over time demands a lot of trust which is one of the main reasons suppliers most often are

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<sup>169</sup> Presentation held by Management of Tetra Pak Carton Chilled towards co-workers and supplier groups

<sup>170</sup> Ibid.

<sup>171</sup> Manufacturing Director, Johan Häggström,

chosen from Tetra Pak's old supplier list. One trust-breaking situation taken into account is mark-ups in price in a longer time-perspective<sup>173</sup>.

*“In the pre-outsourcing process such unpleasant surprises are regulated by contracts, formed by us. According to these, price-changes can only comprise mark-ups that address value-adding activities.”<sup>174</sup>*

Discussions also take place, before the final papers have been signed, to create an understanding of individual responsibilities and mutual needs. The supplier list constitutes all suppliers that are or have been in contact with any Tetra Pak business unit<sup>175</sup>.

*“We see the supplier relationship as a marriage, if there are problems we will try to solve them”<sup>176</sup>.*

#### 4.2.3.4 Process Time and Objectives Formulation

*“Outsourcing is evolutionary in Tetra Pak. It is no revolution - we have always been outsourcing. It has reached a point where the decision to outsource production is not questioned”<sup>177</sup>.*

Tetra Pak, as well as TPCC, has a long history of outsourcing and since it has become an integrated part of the strategic planning, outsourcing has been central for making the organisation more effective. Since the organisation is constantly trying to improve its efficiency by lean management objectives are formulated, after a problem has been identified, often leading to outsourcing. Process time depends on the complexity of the issue at hand<sup>178</sup>.

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<sup>172</sup> Presentation held by Management of Tetra Pak Carton Chilled towards co-workers and supplier groups

<sup>173</sup> Manufacturing Director, Johan Häggström

<sup>174</sup> Ibid.

<sup>175</sup> Presentation held by Management of Tetra Pak Carton Chilled towards co-workers and supplier groups

<sup>176</sup> Manufacturing Director, Johan Häggström

<sup>177</sup> Ibid.

<sup>178</sup> Manufacturing Director, Johan Häggström

*“In problems, with lower complexity like such comprising efficiency improvement on a single product, the decisions are made rather quickly and undramatic<sup>179</sup>.”*

*“In the case of Tetra Rex, the process was consciously out-drawn, as a natural timeframe, because the extent of the outsourcing made it necessary to create a thorough evaluation<sup>180</sup>.”*

The initiative to outsource an activity has, due to the strategic planning, become routinised and is therefore made more quickly. Clear objectives are defined directly from the start and because a lot of time and money is invested in an outsourcing decision much focus lies on establishing a good supplier relationship also right from the start. This supplier selection process is on the other hand, in contrast to the outsourcing initiative, more time consuming. Hence, speed is very much related to the characteristics of the problem at hand and differs from time to time<sup>181</sup>.

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<sup>179</sup> Supply Chain Manager, Lars Thelin

<sup>180</sup> Manufacturing Director, Johan Häggström

<sup>181</sup> Ibid.

5

ANALYSIS

*In this chapter we will analyse the empirical findings from the case studies. The analysis will be conducted separately for each company, which we believe will give the reader a possibility of comparing the pre-outsourcing decision processes at each studied company.*

With regard to the purpose of this study i.e. to give a view on the strategic decision processes in terms of comprehensiveness, extensiveness and speed, depending on organisations’ experiences in the field of outsourcing, our analysis is structured into three separate sections for each of the case study companies respectively. In the first section of each case study analysis we will identify patterns of comprehensiveness, extensiveness, and speed, of the strategic decision processes. The second section will in it’s first part deal with an analysis from a rational point of view i.e. analysis of objectives, information and utility. These will be used in analysis despite the fact that traditional decision theory consists of three generic models: the rational, boundedly rational and garbage can, with regard to the fact that the latter two evolved in a responsive manner to the original rational decision model. The second part of the section includes an analysis from an

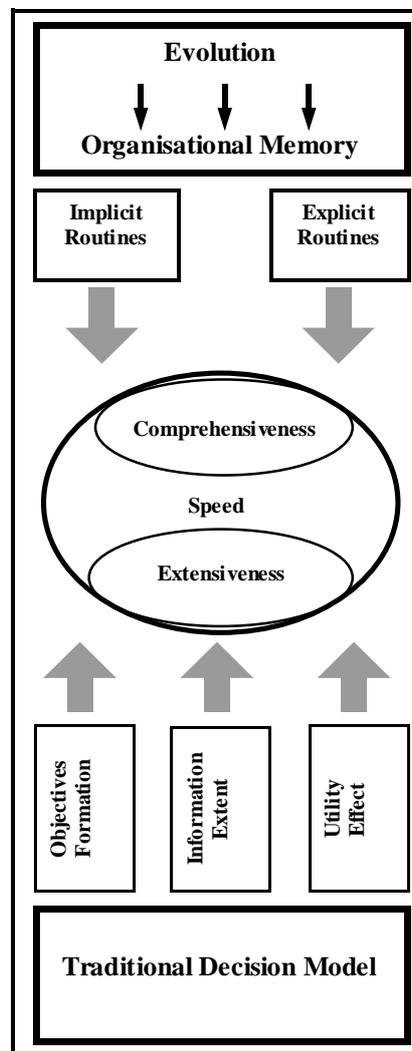


FIG.7 ANALYTICAL APPROACH

evolutionary point of view. Nelson and Winter state that every organisation develops over a longer period of time. It is therefore assumed that the strategic decisions cannot be seen in an isolated manner or as solutions to static problems.

Past strategic decisions and experiences i.e. the strategic history of the organisation, also affect present strategic decisions. Decisions and actions must hence be seen as indirect consequences of earlier choices and experiences. The second section of the analysis is therefore intended to explain the specific patterns of comprehensiveness, extensiveness and speed in each of the studied companies. The third section will in short summarise the analysis of each company's strategic decision processes behind outsourcing.

## 5.1 GAMBRO LUNDIA AB

### 5.1.1 Strategic Decision Process Analysis

#### 5.1.1.1 Comprehensiveness

Gambro Lundia does not limit itself to looking at one single alternative. Even though the "make" possibility can be regarded as the only one alternative to outsourcing, it has to be noted that the production in-house has to be more efficient than it can be traded-off at the supplier's facilities. Hence the production efficiency must be enhanced where various alternatives exist. If the managers face excessive capital formation in stock logistics of specific modules they most surely take logistics solutions as VMI or JIT into account. Indirectly such logistics solutions can hence be considered as alternatives for outsourcing at the company.

Transferring the responsibility of evaluation to one person by setting up a project manager can be considered as means of following an objective assessment of the cost and benefits of the various alternatives also including outsourcing. This therefore must be seen as means of eliminating the risk of only endorsing the decision that e.g. prior to entering a calculation model could have been implicitly made in the brainstorming sessions (in discussions) between the Supply Manager and the Product Line Director.

In the supplier selection process both new as well as old suppliers are looked at. It has to moreover be noticed that there is a significant comprehensiveness further on the level of functional and design technical specification of the product that is to be purchased. The company does not limit itself to their own explicit

solution but only sets up a framework within which the produced product has to fall in terms of design and functionality. The explicit solutions of the design and functionality can thus be proposed by the suppliers taking part in the tender and give the company a better solution which otherwise may not have been considered or come across.

#### 5.1.1.2 Extensiveness

Production knowledge and production competence and its role as the feedback link to product design and development must be considered to be the main explanatory determinant of why Gambro Lundia is in a position relatively early on the outsourcing experience curve. This can be identified as the most significant extensive element of the pre-outsourcing decision process.

In addition to the above, the decision process focuses on the issue of control of the outsourcing relationship with significant emphasis put on future cost control and is also one of the most appearing long-term perspectives. There is a continuous brainstorming concerning this loss of control in a following outsourcing venture. Fear for ineffective strategic cost management in the long run is the main topic. Managers' decisional freedom has therefore been limited through the regulatory framework set due to past implicit decisions that did not take the percentage of "value-added" of the , activities transferred.

The decision concerning the circuit cards outsourcing, taken on group level, did on the other hand not imply problems with strategic cost management in the long run of following the contract and therefore had to address the topic. Whether this can be generalized or not, is however to be seen in future group outsourcing decisions.

Process quality is taken into account on a supplier selection level however the Quality Department is first involved when a supplier has already been specified. This implies that the Quality Department fits a "window" i.e. in terms of enhancing the supplier's process quality when this is necessary. The fact however, that the Quality Department's finding of insufficient process quality can reverse outsourcing decisions, has to imply that long-term quality in general, is taken into account most seriously. It affects the make-or-buy decision positively in extensiveness of analysis

### 5.1.1.3 Speed

*“...making the process to complex...is not the top thing.”*

Jörgen Jönsson

As illustrated by this quotation, the decision speed is specifically dependant upon the business case per se. It is therefore, in accordance to what was prior indicated in several empirical studies<sup>182</sup>, correlated with the comprehensiveness and extensiveness of the process. The complexity of the potential outsourcing venture considered, determines the involvement of various parts of the organisation as e.g. the Quality Department. In cases where the complexity is relatively low the process is speeded up through giving responsibility to e.g. the Purchasing Department acting on economic or logistical grounds.

## 5.1.2 Rationality & Evolution

### 5.1.2.1 Rationality Analysis

#### *Objectives*

As Isaksson considers, the objectives are developed throughout the analysis of the business case. An evidence of such a formulation of objectives is the fact that the Product Line Director sets up a project manager who analyses all the relevant alternatives. We see it as a process of opportunity-induced search as capacity or resources are often restrained in the short run. As Jönsson sees it, this will determine the extent to which other parts of the organisation will be involved in the decision process. This must imply that the objectives are formed naturally from the beginning of the problem identification throughout the analysis and development of the business case. It is however not clear that the scenario involves personnel-induced objectives formulation as managers at the company work along a lean philosophy where every one is supposed to reduce wasteful activities, as this is the main idea behind implementing lean management and manufacturing. A fact further reinforcing the statement that the objectives are formed throughout the process is that the strategic planning at the company does not include outsourcing.

### *Information*

We have identified two separate types of information. First, there is information regarding the opportunities and threats, of the outsourcing, in the short run affecting the potential for comprehensiveness. Second there is information about opportunities and threats that can arise in a long run defining the prerequisites for possible extensiveness. Short term opportunities and threats are, as we see it, e.g. opportunities of obtaining a relatively low price from a potential supplier. The threat can on the other hand be extended lead-times that will become apparent when this supplier is to deliver the first products as set by the contract. Long term opportunities or threats can arise due to strategic cost management or e.g. the process and product development capabilities of the supplier.

*“...we looked at four new suppliers and the old one...”*

Jörgen Jönsson

We consider there is no difference between the availability of information between the new ones and the old supplier in terms of short-term aspects as e.g. price affecting the comprehensiveness. Thus, all the suppliers were given the same possibility of submitting their tenders and Gambro Lundia could with ease choose the one that offered the most cost-efficient price. Market scanning for price is can therefore be seen as fully comprehensive. In the long run perspective, however, when considering earlier unknown suppliers, it is impossible to obtain full information and prepare for all possible contingencies regarding the supplier's future process cost management or development capabilities. This affects the extensiveness negatively.

Gambro Lundia has full information in looking for contract prices, but in an extensiveness perspective, due to the fact that the search for suppliers is relatively comprehensive, it is impossible, to without historical data of strategic importance to the supplier, evaluate the future contingencies of entering an outsourcing partnership with an unknown supplier.

### *Utility*

*“We tend to become involved first when the make-or-buy decision already has been made...”*

Christer Magnusson<sup>183</sup>

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<sup>182</sup> Eisenhardt, Miller et.al., Fredrickson & Mitchell

<sup>183</sup> Quality Manager

*“The degree of involvement of other functions in the decision process has to be set in relation to the complexity of the problem. Making the process too complex, per definition, is not the top thing...it only makes the process too time-consuming...”*

Jörgen Jönsson<sup>184</sup>

These two quotations fairly illustrate the ambiguity of utility in the process, from the point where outsourcing is being considered, to the final stages of the decision process, where a supplier has already been selected. During our interviews we noticed that there was a diversity in problem perspective perception between the production department and the quality department. We therefore believe that there is a difference in the perception of how to maximise the utility of the company in the two departments. As the quality departments negative opinion has the possibility of cancelling the supplier selection decision and moreover the outsourcing in general, This leads to a situation where it comes to a compromise between the speed and effectiveness of the pre-outsourcing process. In terms of comprehensiveness and extensiveness the final decision will be satisfied.

#### 5.1.2.2 Evolutionary Analysis

##### *Evolution*

Gambro Lundia AB is still early on the outsourcing experience curve, both in our minds, as well as according to the managers at the company. The first decisive outsourcing was made in the beginning of the 1990's concerning the AK 95 stand. Neither has outsourcing from that point of time been integrated in the company's strategic planning, which further reinforces this relatively low experience. It also gives a sign of the organisation's emergent attitude towards outsourcing. Product Manager Jörgen Jönsson though notes that it cannot be excluded that in the future the company will have outsourced everything apart from it's testing activities. If earlier experiences therefore affect later strategic decisions, this is surely one of them. The comprehensiveness is by and large affected by no “strategic planning integration”.

We believe that the business case of the AK 95 stand outsourcing is being regarded by the managers as “the negative outsourcing experience.

*“What I would change if I once again approached the decisions that are today already taken, is the value-added percentage included in the activity considered for outsourcing. From that point of view the AK 95 stand outsourcing was not a good decision...”*

*Jörgen Jönsson*

Gambro Lundia AB has full profit responsibility and that specific case, where there is less value-added and more component purchasing in the supplier's production, influences negatively on the financial performance in the long run, due to exaggerated mark-ups. Therefore today, and in the future, the outsourcing decisions will only be actual where the value-added is more than a certain percentage or the supplier has specific superior competencies. This is by all means a result of the negative experiences of the AK 95 stand however we also see it as an indirect result of the evolution of the dialysis industry, where focus today is more put on enhancing the product design in terms of functionality.

#### *Organisational Memory & Routines*

*“What I would change if I once again approached the decisions that are today already taken, is the value-added percentage included in the activity considered for outsourcing [...] Today we do have a regulatory framework...”*

*Jörgen Jönsson*

Previous outsourcing deals, except that of the circuit cards, taken on a group level, did not take into consideration this specific aspect that the Product Line Director is speaking of. The regulatory framework, exactly specifying when outsourcing can be considered as a strategic option or as a means of solving a problem, can be seen as having the purpose of reducing the needs for micro-management in the different areas of the organisation. This therefore has to imply that before it's introduction, there were no specific routines i.e. implicit routines, as Gambro Lundia is yet too early on the outsourcing experience curve. An implicit organisational memory has yet not developed. Furthermore there is a project manager set up for the cost-benefit analyses of each business case. In our opinion this is a sign of the fact that outsourcing decisions are more made in an explicit manner, with few routines. On the other hand the regulatory framework

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<sup>184</sup> AK Product Line Manager

created by Jörgen, can be seen as the start of the development of an explicit organisational memory in the organisation.

Gambro Lundia began to dispose activities outside the organisation first in the early 1990's , starting with the AK 95 stand. To that point of time the company had as good as all activities in-house and therefore needed to have a fragmented supply base with less intensive partnerships than the case would have been in outsourcing. Today the managers hence do not have the availability of accumulated extensive data on previous supplier performance.

Following the reasoning of Nelson and Winter, the regulatory framework set by the Product Line Director can be considered as an explicit long-term routine. The motivation behind this statement lies in the fact that each outsourcing decision, at Gambro Lundia, in a large extent defines the future strategic position of the company.

5.1.3 Illustrated Analysis Summary

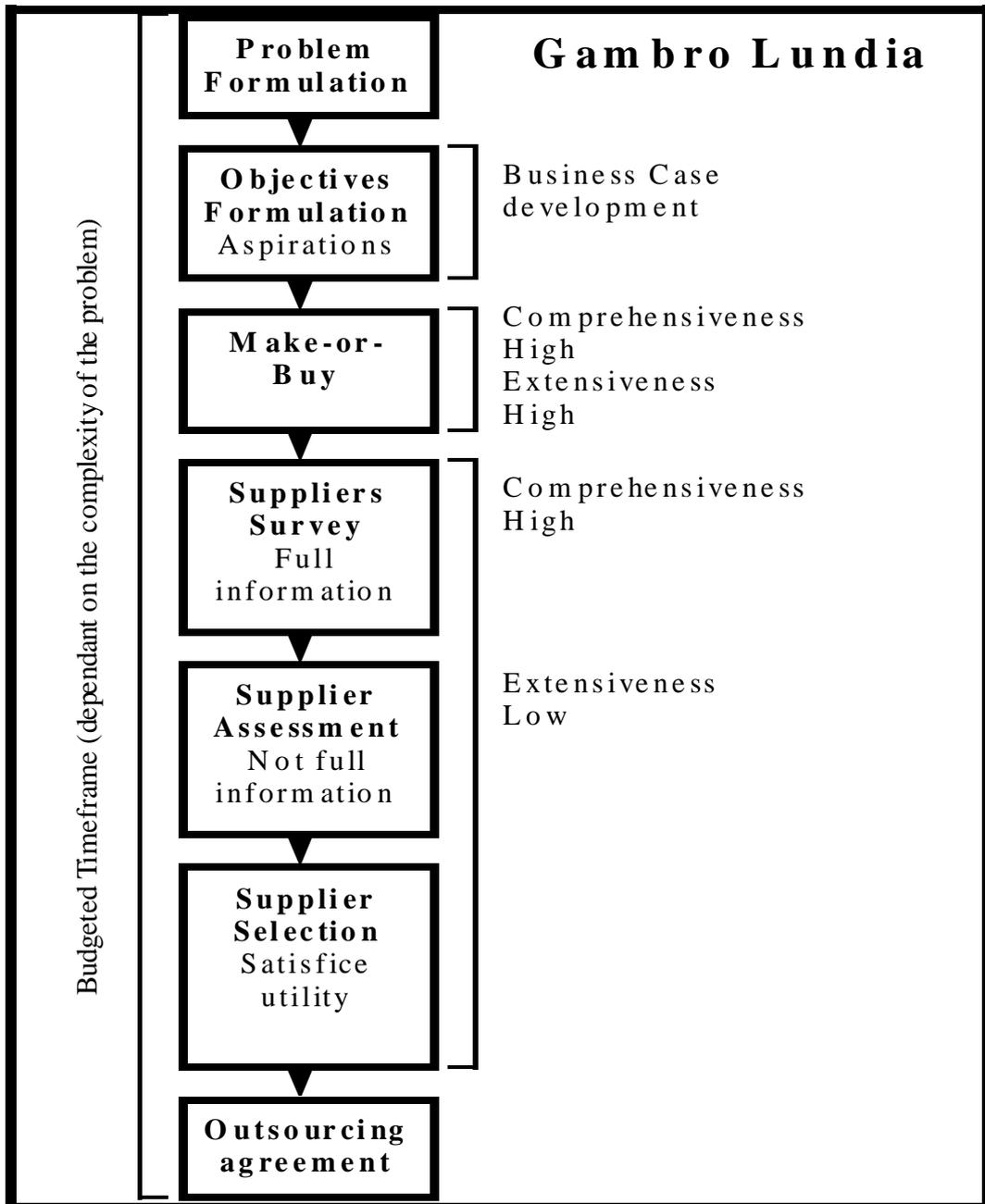


FIG.8 GAMBRO LUNDIA ANALYSIS SUMMARY

## 5.2 TETRA PAK CARTON CHILLED

### 5.2.1 Strategic Decision Process Analysis

#### 5.2.1.1 Comprehensiveness

The make-or-buy decision at TPCC has reached the point where outsourcing automatically becomes the given choice when wastes, mostly in terms of lead-time, can no longer be reduced internally. Therefore no other alternatives are being considered. As Häggström confirms the strategy has already been set on corporate level. It is still up to TPCC to identify what core competencies constitutes, hence what is going to be outsourced.

When the process enters the partner selection phase TPCC does not search outside Tetra Pak's old supplier list for other potential partners, even if these could provide better price and service.

*“When comparing to earlier experience of inquiries that have gone outside the old supplier base the result has been worse.”*

Lars Thelin

As Häggström explains it usually takes too much time and money to start up a new relationship. Hence, the comprehensiveness of supplier evaluation is low as the managers do not scan for other potential contractors. This implies that their focus in outsourcing ventures is not put on price but deep relationships with known suppliers.

#### 5.2.1.2 Extensiveness

TPCC has early on outsourced production because it has not been recognised as a core competencies. This has been the case ever since Rausing founded Tetra Pak. The outsourced production capacity forces TPCC to rely on feedback from their suppliers. This is the reason why TPCC focus on close supplier relationships. Some production knowledge is still kept within TPCC through final assembly and testing.

TPCC evaluates the prime candidates for the supplier position with regard to a long-term perspective by analysing their previous performance with Tetra Pak.

*“We see the supplier relationship as a marriage, if there are problems we will try to solve them.”*

Johan Häggström

Häggström indicates how TPCC searches for good supplier relationships. This comes easier when choosing an old supplier because TPCC has the possibility to analyse future effects through historical data. Thinking of outsourcing in a long-term perspective with the supplier will enable the company to strengthen their own position as long as the supplier does not misuse TPCC's lack of information of suppliers outside the database. Since the supplier possesses the greater expertise, he is active from the very beginning of a product's life cycle.

A risk analysis, based on previously mentioned historical data, in relation to given tenders and quality analysis is the base for finding the most suitable partner. No special quality division for assessing the production processes exists in Tetra Pak but instead all personnel are to think in terms of quality. We see a potential risk when the same decision maker has to balance economical and quality issues. As we interpret it, the competitive advantages in TPCC's outsourcing is built on good supplier relationships, which will allow them to use their outsourcing strategy to endorse their core competencies. Because focus does not, according to us, seem to be directly on price, the intention of the decision-makers will probably not reflect badly on quality aspects. The thorough investigation of suppliers, based on previous relationships with Tetra Pak, makes the evaluation very much extensive, which in this case have had a negative effect on the comprehensive part due to a limited selection of candidates.

#### 5.2.1.3 Speed

*“...It has reached a point where the decision to outsource production is not questioned.”*

Lars Thelin

We found that the time consuming aspect of the outsourcing process is related to the supplier selection process and not to the part where an initiative is taken to outsource.

*“In problems, with lower complexity like such comprising efficiency improvement on a single product, the decisions are made rather quickly and undramatic.”*

Lars Thelin

Thelin’s statement on outsourcing concerns a less complex outsourcing situation.

*“In the case of Tetra Rex, the process was consciously out-drawn because the extent of the outsourcing made it necessary to create a thorough evaluation.”*

Johan Häggström

Häggström declares that the decision processes, of a more outdrawn process of a more complex situation, will take time due to a demand for deeper and more accurate reflection of the supplier and the environmental pressures that reflect on the competencies needed for TPCC to stay competitive.

In either case, objectives are declared right from the start. This shows that the speed factor is totally dependent on the complexity of the issue, which will determine the amount of information gathering concerning comprehensiveness and extensiveness, that will be acquired.

## 5.2.2 Rationality & Evolution

### 5.2.2.1 Rationality Analysis

#### *Objectives*

We consider the formulation process of objectives behind outsourcing decisions as twofolded. Firstly the strategy of outsourcing is set on a group level, which therefore implies that the main objectives set by the group management team are transferred down to the objectives of separate business units. However as problems might arise within the business unit in an incremental manner the objectives must be translated in such a way that they meet the specific needs of that business unit. The objectives of outsourcing set in the strategic planning conducted by group management can therefore be regarded as personnel-induced, and so the translation of these objectives to the level of the specific need and problems of the business unit must be personnel-induced. Therefore on a local level clear objectives are identified explicitly in the beginning of the process.

### *Information*

We have identified two separate types of information. First, there is information regarding the opportunities and threats, of the outsourcing, in the short run. Second there is information about opportunities and threats that can arise in the long run, if a contract is entered. Short term opportunities and threats are, as we see it, e.g. opportunities of obtaining a relatively low price from a potential supplier. The threat can on the other hand be extended lead-times that will become apparent when this supplier is to deliver the first products as set by the contract. Long term opportunities or threats can arise due to strategic cost management or e.g. process and product development capabilities of the supplier.

*“To teach a new supplier the Tetra Pak way of doing business takes an enormous effort and most often we do not have time for it...”*

Johan Häggström

Normally TPCC does not search for suppliers outside the Tetra Pak supplier base. We see that this constitutes to a relatively narrow scope of information for a short term perspective as the managers seem reluctant to search for new suppliers outside the ‘preferred supplier’ list, despite the possibility of finding offers with better prices. The comprehensiveness hence becomes lower. On the other hand the managers have access to full information regarding the long term perspective because of the information databases that exist within Tetra Pak Global with references to known suppliers. This information gives the managers valuable information which enables them to make proper quality and risk analyses, which otherwise would not be available. A possibility for extensive analyses and evaluation is therefore created.

### *Utility*

The strategic direction towards outsourcing at TPCC is set by group management. As subordinated to this group management, the TPCC managers are therefore bound to take actions consistent with that strategic direction. This should therefore eliminate the risks of diversified problem perspective perception and hence different set of goals that could lead to optimised decisions and sacrifice. Furthermore all managers have to evaluate suppliers on the basis of the same sets of parameters submitted in the regulatory framework for supplier selection. According to us smaller insignificant conflicts may occur between the managers involved but over all TPCC follows a utility maximisation as far as it is

possible without limiting the process to one decision maker. There is therefore a limited risk for a trade-off between comprehensiveness and extensiveness.

#### 5.2.2.2 Evolutionary Analysis

##### *Evolution*

According to the managers we have interviewed, TPCC has since long had a history of an explicit outsourcing strategy set on group level, which we understand, is a concept that has become familiar throughout the entire organisation. We believe that they have been able to set this kind of strategy because their core competencies have early on been very abstractly identified as innovation and entrepreneurship<sup>185</sup>, which has left room for outsourcing in-house activities core to most companies, in a higher extent than others. According to Thelin, it has become a natural step in the process to outsource an activity if the TPCC themselves can not improve the efficiency internally. Due to the long history of outsourcing and the close relationships with the suppliers, TPCC has a very high level of experience, which enables them to maximise the efficiency in their pre-outsourcing process<sup>186</sup>. The broad history of outsourcing deals has also led the managers to become less restrictive to this strategic option and therefore enhanced their knowledge and capabilities in it. Furthermore, the focus for outsourcing does not seek to minimise costs in a short-term perspective through scanning the global market for low-cost supplier options but rather reducing costs over time by extensive supplier relationships. This has over the years led to a state of being where Tetra Pak Global has created itself an integrated supply base that is extensively known to the managers at TPCC.

##### *Organisational Memory & Routines*

*“Outsourcing is evolutionary in Tetra Pak. It is no revolution - we have always been outsourcing. It has reached a point where the decision to outsource production is not questioned<sup>187</sup>.”*

Lars Thelin

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<sup>185</sup> Purchasing Director, Lennart Aveling

<sup>186</sup> Manufacturing Director, Johan Haggström

<sup>187</sup> Supply Chain Manager, Lars Thelin

This quotation fairly illustrates the relatively low extent of involvement and explicit control from higher levels of the organisation in the pre-outsourcing process. This is also what Nelson and Winter see as the main logic behind an emerging organisational memory and emerging organisational routines.

With regard to the company's long experience of outsourcing and focus on long-term outsourcing partnerships, we have identified two types of organisational memory:

- *Explicit Organisational Memory* i.e. Documented frameworks and recorded historical information
- *Implicit Organisational Memory* i.e. the high level of experience in outsourcing embedded within the individuals of the organisation

The historical patterns of the cooperation with the integrated supply base have been continuously recorded during the years. This has led to an accumulation of data regarding specific suppliers that is today stored in the central information database where, as Haggström says, managers can come across all types of information regarding the suppliers' past performance with companies of the Tetra Pak Group.

There is moreover a high level of managerial experience and knowledge of outsourcing per se and outsourcing decisions. Because of the continuous tendency towards "more outsourcing" and "never insourcing" that we noted, there are few managers that have not been involved in more than several outsourcing ventures, regardless of the ventures' degree. This implicit organisational memory is therefore the common ground for the presence of implicit routines.

- Implicit routines are however not exclusively present in making the decisions.
- Explicit Routines are present in the stage where suppliers are being selected and regulatory framework sets a "red thread" in the process.

We identify the sets of routines present in specific make-or-buy situations at the company to be periodic routines, in consistence with Nelson's and Winter's definition, routines that affect the investment pattern of the company in a production perspective. This, due the fact that the main motives for further

outsourcing is enhancing the production effectiveness in terms of e.g. lead-times. Even though specific make-or-buy cases might have a potential to affect the future of the company's strategic position, they cannot be seen as long-term routines, as the general strategic direction towards outsourcing is set on a group level.

5.2.3 Illustrated Analysis Summary

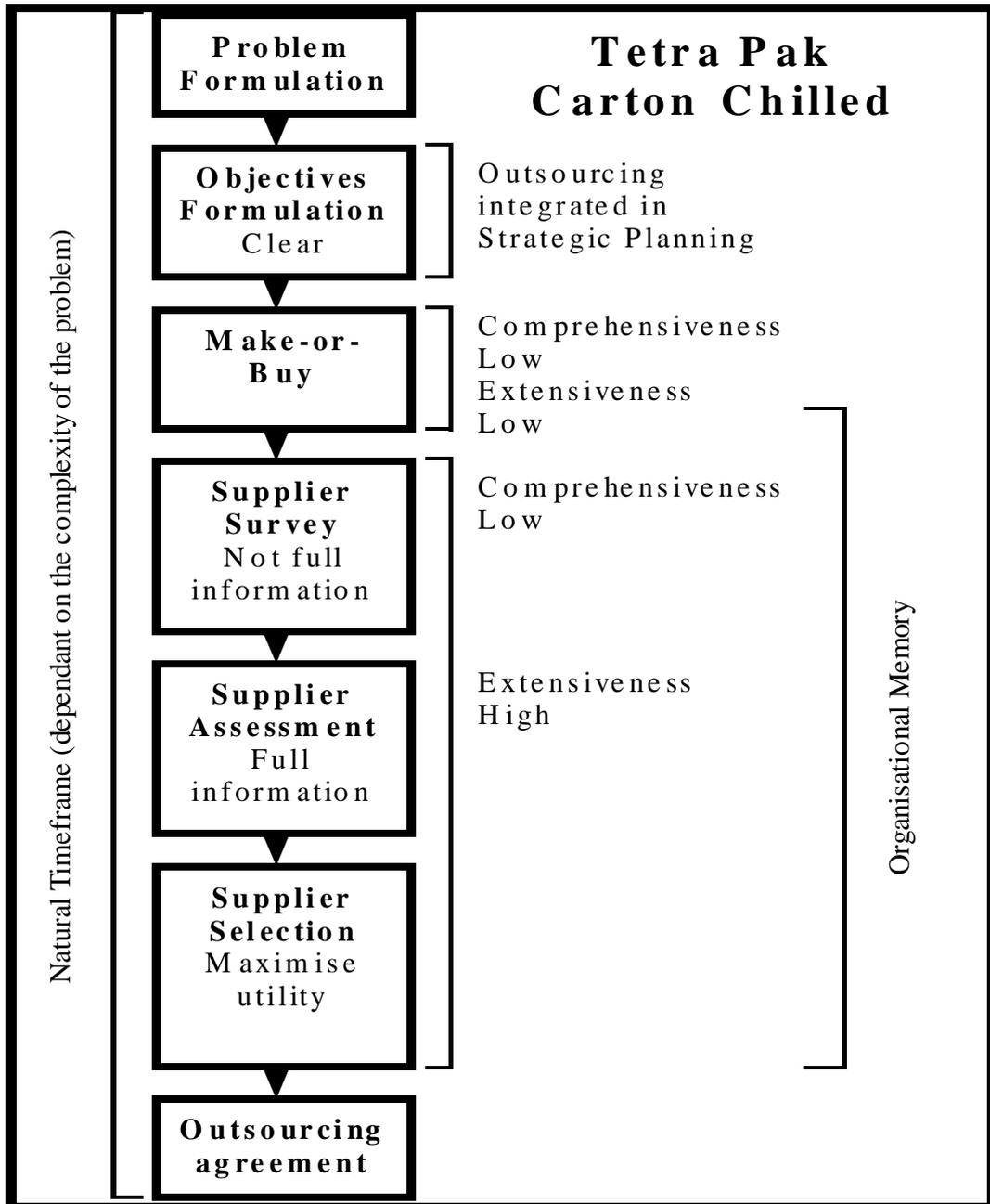


FIG.9 TETRA PAK CARTON CHILLED ANALYSIS

6

DISCUSSION

*This final chapter will through a discussion come to a conclusion and emphasise the contribution of our findings for future research. For this purpose a model will be developed by the authors.*

6.1 Discussion

Our intention throughout the analysis has been to enhance the knowledge of and understanding for the pre-outsourcing decision process. In the beginning of our work we asked ourselves the question what inter-organisational differences - dependent upon the organisational experience of outsourcing - exist in the strategic decision processes of companies in terms of comprehensiveness, extensiveness, and speed. We recall the results of our analysis of Gambro Lundia and Tetra Pak Carton Chilled:

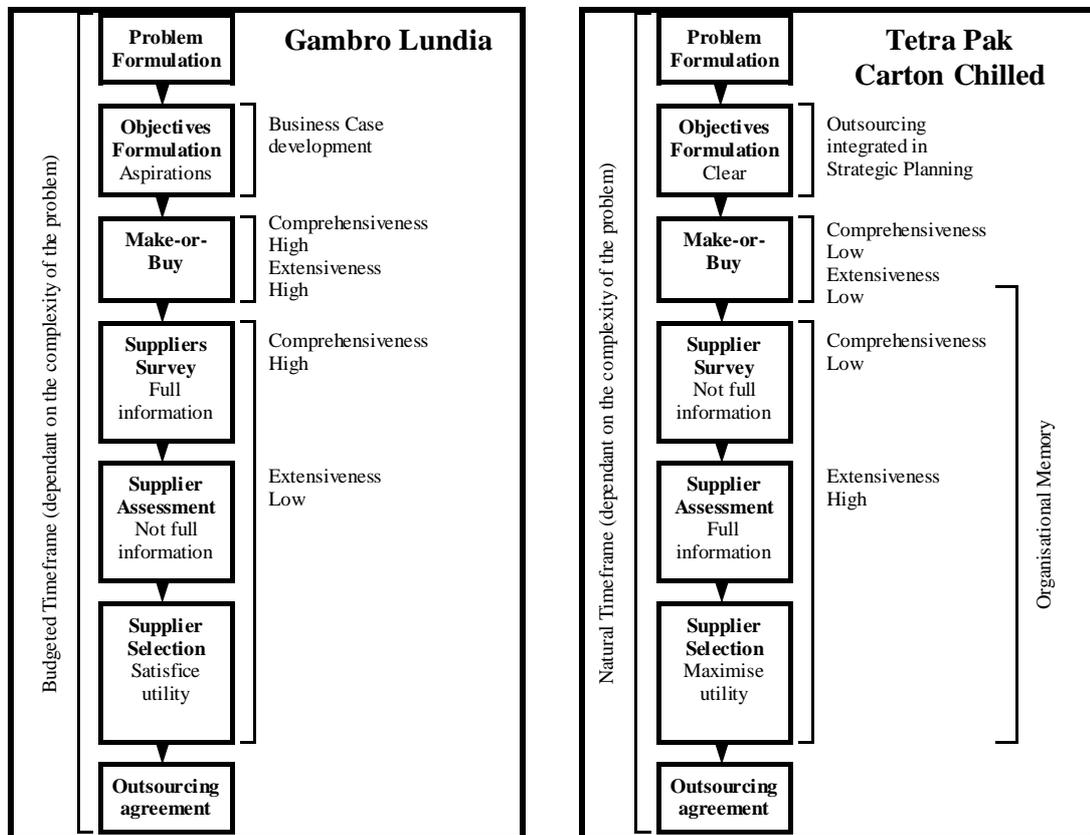


FIG.10 INTER-ORGANISATIONAL PROCESS DIFFERENCES

We conclude that differences lie in the degree of comprehensiveness and extensiveness in the strategic decision processes, whereas speed is a variable that is not affected by the historical patterns of each company, as it is strictly dependent upon the complexity of the problem. The differences in comprehensiveness and extensiveness are however not absolute in the perspective of the whole process but can be observed in two separate stages of the decision processes. They concern:

- *the make-or-buy decision stage*
- *the supplier selection stage*

Gambro Lundia is both extensive and comprehensive in the first stage preceding the supplier selection process. Tetra Pak Carton Chilled is both less comprehensive and less extensive at the same stage. This is a result of the integration of outsourcing into Tetra Pak's strategic planning as well as the development of organisational memory and routines, which all together make the managers' decision to outsource a natural step in leading the company forwards. In Gambro Lundia's case on the other hand, an outsourcing decision is a significant shift into the unknown for the managers, which implies that all possible strategic options have to be evaluated, and where the strategy *per se* is needed to be evaluated in an extensive manner. The second explanation is that the managers at Tetra Pak Carton Chilled enter the decision process with clear objectives, prior formulated by corporate management, as a result of the translation of personnel-induced objectives formulated in the organisation's strategic planning. Gambro managers meanwhile develop their objectives in the process of analysing and submitting the business case which involves an opportunity-induced objectives' formulation.

In the second stage where the "buy" option is chosen, and the supplier selection process follows, the two variables interchange. The extensiveness of Gambro Lundia diminishes whereas Tetra Pak Carton Chilled enters extensive analyses of suppliers, but with a more narrow comprehensiveness. Evolutionary theory explains this paradigm through the concepts of the development of an organisational memory and organisational routines. The availability of historical data as well as experiences, form an organisational memory enabling an extensive evaluation of potential partners at Tetra Pak. Routines also make the supplier survey and evaluation at Tetra Pak Carton Chilled more objective whilst

in Gambro Lundia different departments evaluate the supplier from different perspectives and can lead to an optimised decision with a trade-off between comprehensiveness and extensiveness.

In both organisations speed was seen as a relative variable. As both chosen case study companies act in relatively stable environments, decision process speed was defined and determined in proportion to the complexity of the problem. Hence, also the degree of involvement from other parts of the organisation. This therefore verifies Henry Mintzberg's hypothesis<sup>188</sup> that extensiveness and comprehensiveness are interlinked with the speed of the process. As our case study companies however do not act in a high velocity paced market, it is not speed that determines the former, as Eisenhardt concluded. Even though there is a difference between the budgeted time-frame of Gambro, and the natural time-frame of Tetra Pak, we did not find significant proof of that this difference was correlated with the historical patterns of outsourcing.

None of the two companies showed any signs of the characteristics significant for the garbage can model. Instead both show more of a linear decision process with insertions of the characteristics of both the rational as well as the boundedly rational elements.

## 6.2 Conclusion

Evolutionary theory states that earlier choices and experiences affect organisations' strategic choices. Clearly the study shows that the different historical patterns of outsourcing in the two companies have determined the comprehensiveness and extensiveness of the strategic decision processes. Organisational memory and long-term organisational routines develop and affect the nature of the strategic decision processes. This also seems like the logical explanation to the fact that in our "more experienced" case study company, outsourcing had been integrated into the strategic planning. Therefore the company had a less comprehensive and extensive make-or-buy evaluation. The make-or-buy evaluation is however only the beginning of the process. Between the specific commitment to action and the beginning of the venture lies the

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<sup>188</sup> Please see 3.2.3 *Speed*

supplier selection process consisting of choosing the right partner, who in turn will determine the effect of the whole deal.

Our conclusion is therefore that the extensiveness and comprehensiveness of the strategic decision process on a make-or-buy decision level diminish when the company develops further experiences of outsourcing. In the supplier selection stage of the process the extensiveness of analysis substitutes its comprehensiveness. The explanation can be found in the evolution of organisations where organisational memory and routines develop. This evolution in turn sets the potential effect of how objectives formulation, information availability and utility division affect the comprehensiveness and extensiveness of the strategic decision processes. Speed was only related to the complexity of the outsourcing deal and can hence be seen as unaffected by the experiences.

### 6.3 Contribution to Further Research

Given the purpose of this study i.e. to enhance the knowledge of and understanding for the strategic decision processes preceding outsourcing, we have developed a model that brings together our findings of how outsourcing decisions are being taken with regard to the experiences of the strategy in organisations.

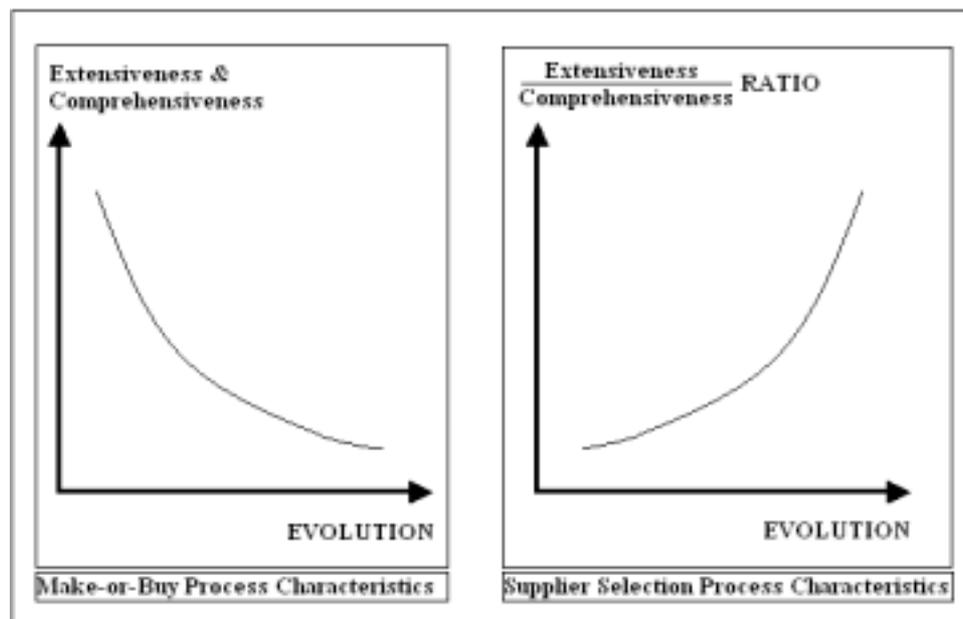


FIG.11 EXTENSIVENESS & COMPREHENSIVENESS vs EVOLUTION<sup>189</sup>

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<sup>189</sup> Speed = Constant

The model, as well as our study, can be considered to be the start of a concept development and a solid ground for future research of how strategic outsourcing decisions are taken. It allows researchers as well as managers to gain a deeper understanding for how organisations make outsourcing decisions, how the strategic pre-outsourcing decision processes are affected by decision makers, and last but not least, how organisations and decision makers make trade-off's between short-term goals, opportunities and threats, and, long-term goals, opportunities and threats.

### 6.3.1 Suggestions for further research

- To study the strategic decision processes behind In-sourcing in organisations that develop a negative attitude towards outsourcing over time.
- To study the effects of organisational evolution on outsourcing decisions in two companies with different historical patterns of the strategy, yet, both companies acting in a turbulent environment.
- To study whether the effects of organisational evolution on comprehensiveness and extensiveness on the pre-outsourcing decision processes can be generalised to strategic decisions not concerning the buyer-supplier relationship.

## INTERVIEW GUIDE

- Can you state that there is an outsourcing tendency in the organization?
- Where does this tendency come from?
- Is outsourcing an integrated part of your strategic planning ?
- Are other strategic options evaluated besides outsourcing?
  - Do you work with other options?
- Describe the supplier selection process?
  - Do you investigate new as well as old ones?
  - What sets of parameters are taken into account?
- Is the in-house activity holder given the same possibility of tendering as the potential outsourcing partner?
- What long-term threats and opportunities are considered when confronted with a make-or-buy situation? Do you see any?
- Do you work against a deadline in the pre-outsourcing process?
- Was the pre-outsourcing decision process an extended process if you e.g. compare with a regular investment decision ?
- Which managers are involved in the decision process? Who has most authority?
- When you enter the pre-outsourcing process, do you feel that the objectives are clear right from the beginning or do they develop over time?
- To what extent is the purchasing department and the quality department involved respectively?
- Do you recall any outsourcing ventures that you believe did not succeed?
  - What would you change in the previous outsourcing deals?

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## Internet Resources

[www.gambro.com](http://www.gambro.com)

[www.tetrapak.com](http://www.tetrapak.com)

[www.flextronics.com](http://www.flextronics.com)

[www.solelectron.com](http://www.solelectron.com)

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## Other Resources

Presentation held by Management of Tetra Pak Carton Chilled towards co-workers and supplier groups. Author: Manufacturing Director, Johan Häggström.