Outsourcing Production to China

Risks and Benefits Based on Cases

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Abstract

This study is intended to provide an understanding of how outsourcing production to China can benefit a company and what kinds of risks that might be involved. China is a growing developing country with huge growth and potential, and being the world’s second largest economy and the third largest exporter of goods and services it is easy to understand the recent increased interest in the country. Nowadays, more and more national and international companies establish production in China through outsourcing as companies attempt to focus on core competence, achieve cost-cutting, etc. An outsourcing venture is potentially a good measure to create value, but it is, however, not without risks.

The study is a multiple case study, where the empirical data has been collected through interviews with leading representatives from six large Swedish companies that have outsourced a part of their production to China: Nefab, Autoliv, Ericsson, Sandvik, ABB, and Hemtex.

The major benefits with outsourcing production to China identified in this study are lower production and labor costs, closeness to the Chinese market and Chinese customers, as well as shorter delivery times and global presence. The major risks identified are quality standard issues, difficulty to keep the Chinese staff, IPR problems, etc. Following the identification of these benefits and risks, a risk avoidance model is developed, where major risks in different stages in the outsourcing process are presented, as well as suggestions on how to systematically work to avoid them while keeping the benefits.

Keywords: outsourcing, production, risks, benefits, China, Sweden
摘要

中国是一个经济发展最快的发展中国家之一，如今成为世界第二经济大国和世界第三产品出口大国。最近这几年的发展变化吸引了不少外国投资者，特别是在外购和制造业方面。但是外国企业在华发展制造业和给企业创造价值的同时也会遇到许多困难和风险。

我们的论文主题就是针对这方面的研究，去发现瑞典公司在华成立制造业和外购的风险以及收益。也就是说，我们的目的是通过搜集六个瑞典大公司在华制造和生产的过程信息以及他们所积累的经验，把实践和理论结合起来。

然后做出我们自己的总结，创造出我们自己的理论去帮助那些对中国感兴趣的外国投资者如何最大限度在避免外购风险。

主题词：采购，生产，风险，好处，中国，瑞典
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1 Introduction

This chapter is intended as an introduction to outsourcing and puts it in a context with traditional motivations as well as to give the reader an understanding of the problem that is studied in this thesis. Following the problem statement is a delimitation of the problem and essential definitions. The chapter is concluded with an overview of the structure of the thesis.

1.1 Background

In this section we briefly introduce the concept of outsourcing and give some traditional motivations of why this concept attracts companies. This is followed by a short presentation of China as an outsourcing destination.

1.1.1 What is Production Outsourcing?

International outsourcing of production is the act of allocating production, previously performed by the organization, or under contract in the home country, to a third party or a wholly-owned subsidiary in a foreign country. This is generally referred to as the make-or-buy decision (cf. Section 3.3.3); where the choice is to either buy goods or services from a third party or to produce them in-house. In recent decades the number of outsourcing ventures has soared where large and small firms are relocating or outsourcing production to cost-effective locations as never before (BPO, 2006). This calls for an increased understanding of the benefits and risks associated with production outsourcing—a need responded to in this study.

1.1.2 Motivation for Outsourcing Production

Why is production outsourcing interesting in the first place? In a manufacturing firm, production is the single most costly part in a firm, often constituting up to 60% of total costs, whereas some sources even put the figure as high as 80% depending on industry (Dubois and Pedersen, 2001). Considering this, any cost-cutting in production will significantly raise the profit margin in any manufacturing firm and thus increase firm value. With outsourcing to low-wage, low-cost countries being one of the most radical cost-cutters, it is easy to understand the recent increase in interest for outsourcing as a concept.

The traditional driving forces behind an outsourcing decision are typically cost reduction, organizational restructuring and focus on core competence. Outsourcing
can result in significant benefits for both customers and sellers, but if not handled correctly it can, however, prove to be a disappointing venture (Bengtsson et al., 2005). Thus, in order to be successful in outsourcing production, companies have to assess the risks associated with the decision and weigh these against the possible benefits expected to be achieved. Ideally, the company should also come up with strategies of how to avoid the risks while keeping the benefits, e.g., by employing research results in the area. This is where the results of this study could be useful.

1.1.3 China as an Outsourcing Destination

China is a growing developing country with huge potential, which represents a massive market for any kind of industry. As China becomes more integrated into the world economy and opens its borders, its producers are becoming more and more sophisticated and better equipped, which attracts international companies that desire to outsource their production. Consequently, many tasks and production contracts are being moved to China from other parts of the world (Shine, 2006).

1.2 Problem Description

In this section we formalize the problem investigated in the thesis.

1.2.1 Problem Specification

As we have seen above, the need to establish and be aware of the risks of outsourcing is critical. However, most traditional literature in the area praise outsourcing as the future and emphasize the benefits such as cost-saving and mass production. Is there, however, another side to outsourcing that in reality makes it less beneficial than it first appears? In this thesis we work with case companies to discern any common unforeseen risks that could threaten an otherwise promising outsourcing venture. We also focus on how to avoid these long-term risks of production outsourcing while keeping the benefits. This study should be of interest both from a theoretical academic point of view as an addition to outsourcing risks in China, and from a managerial viewpoint for firms that are considering outsourcing production to China.

1.2.2 Research Question

The question we will be investigating is:

What are the risks and benefits of outsourcing production to China?

1.3 Purpose of Study

This study is aimed at investigating how outsourcing production to China can benefit a company and what kinds of risks that might be involved. The results are put to use in a risk avoidance model, giving suggestions of how to avoid the risks for companies outsourcing production to China.
1.4 Delimitation
We delimit the study to outsourcing of production only, omitting the problems of outsourcing R&D, IT, design, maintenance, etc, and we only consider outsourcing at an organizational level, i.e. risks and benefits tied to the organization, and not to industries, or nations. The focus is on large Swedish firms that have at least a part of their production outsourced to China either by contracting or by subsidiaries (FDI). We do not consider indirect export/import. The companies are also required to have had the production in China for several years, in order to be able to provide the insight needed to contribute to the study.

In the study, companies in different stages of outsourcing are included, from contract manufacturing to employing subsidiaries (cf. Section 3.2). We do, however, not limit ourselves to any specific industry, since at the level of benefits and risks studied in this thesis it is expected that these are fairly similar over industries, making the study more generally applicable.

1.5 Definitions
This section presents definitions of the terms outsourcing and offshoring, which are terms that are easily confused.

Outsourcing
There has been much debate in the literature over the exact definition of outsourcing, often also called contracting-out. Wasner (1999, p. 24), e.g., defines outsourcing as a means to turn over the control of a previous in-house activity, or an activity for which an immediate ability exists of performing it internally, to an external vendor. Lei and Hitt (1995), on the other hand, define it as “reliance on external sources for manufacturing components and other value-adding activities”. It does not exist “one” definition, but rather a whole spectrum depending on researcher and context.

In this thesis we define outsourcing as: when a company or a business hires another company (a supplier, service provider, or vendor) or subsidiary to manufacture components or sub-systems for them either by contract manufacturing or by owning the factories. In this thesis we will only be concerned with international outsourcing, i.e. cross borders, and specifically outsourcing to China.

Offshoring
Offshoring can be defined as relocation of business processes to another country, especially an overseas country. This includes any business process such as production, manufacturing, or services. Since we in this thesis only are concerned with international (overseas) outsourcing, we will use the terms offshoring, offshore outsourcing and outsourcing interchangeably.
1.6 Thesis Structure
The thesis is divided into seven chapters: Introduction, Methodology, Theoretical framework (two chapters), Empirical results, Analysis, and Conclusions. Suggested reading orders for three user groups are presented in Figure 1: executive readers, users of the results in this thesis, and researchers willing to verify or use results in research.

Figure 1 Thesis overview
2 Research Methodology

This chapter presents different approaches to conduct research. It gives an overview of the prevalent research methods, along with the disadvantages that are associated with each of these methods. Following is a discussion of the methods used in this study, and how the data collection is carried out in this thesis. The chapter is concluded with an overview of the research process and design.

2.1 Research Perspectives

Generally, there are two basic perspectives for conducting research, the positivistic and the hermeneutic perspective. According to the positivistic perspective, a theory must be able to be tested and the result should be absolutely objective and be devoid of any value judgments. It can neither involve a personal opinion, nor any subjective estimation (Bryman, 2002). In a hermeneutic perspective personal experiences and sympathetic involvement in the study are crucial parts of the research. According to the hermeneutic perspective, humans can never be absolutely objective and there is no such thing as a single observable and measurable reality as the positivistic followers advocate (Merriam, 1998).

In this study, we take a hermeneutic perspective to our research. The motivation for this choice is the complex social context of our study. The research question is about perceived risks and benefits of outsourcing by case companies, which is not well suited to be investigated using a strictly positivistic approach. As motivated below (cf. Section 2.5), we use a case study approach based on interviews, thus we need to interpret the answers from the interviewees, leaving a hermeneutic perspective more suited than a positivistic.

2.2 Quantitative and Qualitative Methods

After having chosen research perspective, there are in principle two different methods with which empirical data can be collected and analyzed; one is using a quantitative method and another is using a qualitative method. The main focus of quantitative methods is on the testing theories rather than generalizing (Bryman, 2004). These methods are used when studying measurable objects, where the results can be presented numerically. A quantitative method is especially aimed at reaching an accurate and reliable outcome, such as in a statistical analysis, and is often the preferred method in positivistic studies.
Qualitative methods are, compared to quantitative, less stringent and less structured. These methods mainly point to the understanding and the interpretation of the empirical data in its proper context and environment. Qualitative methods are often used in hermeneutic studies, where the object of study is not measurable and where the intention is to create meaning. Qualitative research assumes that the world cannot be perceived objectively and cannot only be understood in one way. It thus exists a reality for each person perceiving it, where the data collected is a function of personal interaction and subjective perception, different for each person (Merriam, 1998).

Since we are studying a non-measurable phenomenon, and because the purpose of our research is to get an understanding of the perceived realities of the case companies, we employ a qualitative method. This choice is preferred since we do not have a controlled environment, but rather a real-life scenario where the findings are hard to predict and have few boundaries.

2.3 Inductive and Deductive Approaches

Inductive and deductive reasoning are two different approaches to create theory. A deductive approach starts off with an existing theory or a hypothesis and test these based on empirical observations. An inductive approach, on the contrary, is based on collected empirical data, which then can be used to draw conclusions and generate theories. The relationship between inductive and deductive approaches is illustrated in Figure 2. The inductive approach is generally utilized in quantitative research, whereas the deductive is closer related to qualitative research. However, the deductive usually contains some features of inductive reasoning while the inductive often includes some features from deductive reasoning (Bryman, 2004). As presented in Figure 2, the process between the two ways of reasoning shows a movement from empirical data towards theories via induction, and from theories via deduction to explanations and predictions, which in turn can change the ways we see the empirical data.

In this thesis we utilize a combined approach, being both inductive and deductive in different stages of the study. We take a deductive approach when we analyze general risks and benefits models (presented in Section 3.4) and compare them with the empirical results obtained (cf. Section 6.4). An inductive approach is employed when we develop a risk avoidance model (cf. Section 6.5), based on the empirical data obtained from the interviews (see Section 2.3 below). The use of an inductive approach allows us to keep an open mind for any unexpected results of interest.
2.4 Reliability and Validity

Every study has to rely on valid and reliable data as a wrong conclusion in a study often is due to poor data (Lekvall and Wahlbin, 2001). In the following we discuss objectivity, reliability, and validity in our study.

2.4.1 Objectivity

Performing research objectively is to do a study without any personal bias or coloring. The concept of objectivity is about separating the existence of material from the human conceptual reality, and thus making the knowledge independent of human conceptions. The opposite is subjectivity. Knowledge that is generated objectively should give reliable results in the sense that they are not colored by the human behind it. However, when studying social phenomena with a hermeneutic approach an absolute objectivity can be very difficult to achieve, if not impossible (Gustavsson, 2004).

2.4.2 Reliability

The term reliability refers to the authenticity and trustworthiness of the research results. Reliability is a measure of whether it is possible to replicate the research and reach the same results (Lekvall and Wahlbin, 2001). It also means that, e.g., a qualitative researcher that repeats for example an ethnographic study needs to go into a similar social roll that the first one did, otherwise what the researcher heard and seen could not be compared to the original study. It is, however, difficult to reach high reliability with qualitative research methods due to the constantly changing social environment in which most studies are performed. As we are employing such a method, this has to be considered when using the results from this study.
2.4.3 Validity

Validity is a way to judge whether a method or a data set measures what it claims to (Eriksson et al., 1997). Put in another way, it is a measurement of whether the researchers actually investigate what they are intending, i.e. if they are solving the correct problem. If the methods or data used are of low validity, the research results will most often be invalid.

Validity can also be seen from an external point of view, usually referred to as external validity. This is a measurement of whether the results are possible to generalize and applicable outside the boundaries of the study (Merriam, 1994). Using a qualitative method of data collection (e.g. case study) does not grant a high external validity of the results. The results from this kind of study are generally only valid for the objects included in the study. However, Merriam (1994) states that generalization from a case study is possible, given the same conditions that the study was based on are fulfilled, which supports a more general validity of our study. The internal validity of results describes whether the results conform to reality, i.e. whether the empirical data collected is consistent with any developed theories.

2.5 Method of Research

In this section we motivate our choice of research method and look at how this translates into the practical steps to take in order to perform our studies.

2.5.1 Choosing a Method of Research

In current outsourcing research, Jiang and Qureshi (2006) have identified five categories of research methods: case study, survey, conceptual framework, mathematical modeling, and financial data analysis, the former half being qualitative methods and the later half being quantitative. The case study and survey categories are by far the most common methods, used in over 65% of all outsourcing studies presented in the literature. Jiang and Qureshi (2006) argue that the reason for the overwhelming use of these two self-reporting methods is the difficulty to aggregate the total benefits from financial figures over departments, and also the inside knowledge needed to obtain these unit-level figures. The inherent problem, however, with self-reported data, such as those obtained with case studies, is that there is no real way of controlling whether the perception of the interviewee is correct. This drawback does, however, not tip the scale for quantitative methods for our study. We have thus chosen to use the well-established method of case study to perform our investigation, focusing on in-depth interviews. The case study and interviewing methods are examined below.

2.5.2 The Case Study

Yin (1994) defines a case study as an empirical inquiry that investigates a contemporary phenomenon within a real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident. The study involves an in-
depth examination of an instance or an event, made through for example interviews. The method is meant to deliver an understanding to what happened and why, which makes it ideal for generating new theories. Yin (1994) also discusses issues related to performing a case study. The questions used are most often how and why questions. Furthermore, a single case or multiple case designs can be used. The single case design is mostly used to falsify or confirm a theory, whereas the multiple case design is generally used to generate new theories. In this study we use a multiple case approach, covering six cases, where the intention is to verify general risks and benefits models (cf. Section 3.4), but also to compile a risk avoidance model from the results (cf. Section 6.5), thus making a multiple case study ideal.

2.5.3 Interviewing

An interview constitutes asking one or more persons questions, often open-ended questions leading to a discussion. It is very important that the interviewees are prepared for a questionnaire and have the possibility to speak freely (Bryman, 2002).

There are different techniques for doing interviews: structured interviews, standard interviews, semi-structured interviews, unstructured interviews, and intensive interviews (Bryman, 2002). When collecting our empirical data, we use both semi-structured and unstructured interviews. An unstructured interview usually use an informal way to ask the questions while a semi-structured interview covers many different kinds of ways, and, in principle, is a situation where the interviewer asks questions with a prepared questionnaire (Bryman, 2002). Since most of our interviewees work in China, the interviewing process has been based on an open-ended questionnaire via e-mail where the answers given there provide the backbone for the follow-up telephone interview, making them more effective.

2.5.4 Primary and Secondary Data

When considering research methods, it is important to separate primary data from secondary data. Primary data is previously non-existing data that is gathered by the researcher for a particular study, such as via interviews. Secondary data is, e.g., previous studies and literature on the relevant area (Lekvall and Wahlbin, 2001). In order to gather primary information we use, as pointed out above, in-depth interviews as our main research method. The primary data is complemented by secondary data from the literature, previous studies, articles, and information from the Internet.

2.6 Research Process

This study has been an ongoing process from January to June 2006. The work has been divided into different phases as shown in Figure 3. The work started off with a pre-study of the area of outsourcing, which laid the foundation for the next phase, the literature review. This phase constituted reviewing relevant literature and previously conducted studies in the area, as well as identifying research methods. This second phase is the basis for Chapters 2, 3, and 4. The following phase was to
contact the case companies, which turned out to be a lengthy process. Following the contacts were the actual interviews, where the collection of the empirical data was the main goal. This phase is the basis for Chapter 5. Finally, after having collected the data, it was processed and analyzed in the final phase to reach the final results in the study. The last phase is the basis for Chapters 6 and 7.

2.7 Research Design

In this section we briefly describe the selection of case companies and the design of the questionnaire.

2.7.1 Selection of Representatives

We have selected our companies based on the delimitations we have made, which means that we have only contacted large companies present in China. The companies we initially set out to contact were Nefab, Autoliv, Hemtex, Sandvik, Ericsson, ABB, and Scania, with Scania as a reference case (not having outsourced production to China). The representatives were reached via direct contact or via contact with the headquarters in Sweden, which referred us to a contact in China, which then usually referred us in turn to another representative that was most suited to answer our interview questions. All contacts we have used have been in China except for Hemtex, present in Borås, Sweden, and ABB in Västerås, Sweden. Six out of the seven companies agreed to participate in the study, leaving Scania out.
2.7.2 Questionnaire Design

The questionnaire used in the interviews is structured into three groups of questions, named A, B, and C. Each group corresponds to an area we intend to investigate, risks, benefits, and practical advice. The number of questions has been kept to a minimum in order to focus on the important areas for our research topic, and to limit the load on the interviewees.

- **Question Group A:** Four broad questions on risks of outsourcing to China
- **Question Group B:** Three broad questions on benefits of outsourcing to China
- **Question Group C:** Three broad questions as summary and practical advice

This structure is maintained throughout the thesis to facilitate for the reader to follow the arguments. The questionnaire can be found in Appendix B.
3 Theoretical Framework I: Outsourcing in General

In this chapter, theories and models for outsourcing in general are presented. The discussion and the models in this chapter are not specific for China or any other country, but focuses on production outsourcing as a concept.

3.1 Introduction

The theoretical framework is divided into two chapters, Chapters 3 and 4. This chapter is intended to give a broad overview of outsourcing in general, whereas the following chapter discusses theories that are specific for China connected to outsourcing. Focusing on this chapter, the first section places outsourcing in a context of strategies. The following section describes the basics of outsourcing, discussing core competence and the make-or-buy decision. The last section presents models from the literature on benefits and risks with outsourcing in general, which will be verified against our empirical findings in Section 6.4. The relation between Chapters 3 and 4 is presented in Figure 4.

Figure 4 Disposition of the theoretical framework
Chapter 3 gives a broad overview of the outsourcing area and presents general risks and benefits models. Chapter 4 narrows the cope and discusses the characteristics of China related to outsourcing.
3.2 Types of Outsourcing

Outsourcing can be executed in basically two different ways, either by contracting someone to do the manufacturing or by foreign direct investment, where the factories are owned by the outsourcer. The differences between them are the amount of control that can be exerted over the production and the level of risk involved (Wild et al., 2006, and Hollensen, 2001). In this study we do, however, not focus on indirect export/import as this cannot be considered outsourcing. In Figure 5, the relation between these types is given with respect to control level and level of risk taking. The two basic types are presented below.

![Figure 5 Control and risk levels for different types of outsourcing](image)

Relationship between types of outsourcing with respect to the level risk involved on the x-axis and the level of control of the business on the y-axis (Modified from Hollensen, 2001).

3.2.1 Contract Manufacturing

Contract manufacturing is to hire a third party based on a contract to manufacture the products. This has a rather low risk as the financial commitment is limited and the third party is buffering against the overhead costs. This also creates flexibility, as the contracts can be both short-term and long-term, and if the manufacturer does not live up to, e.g., the required product quality or reliability of deliveries, it is possible to change producer after the contract has gone out. The risk is not very high, as most of the financial investments are made by another company, but this in turn leads to lower control of production. Another risk is that a subcontractor could become a competitor at the end of a contract, as he has acquired the skills needed to produce the goods.

3.2.2 Foreign Direct Investment

Foreign direct investment (FDI) is the purchase of physical assets or a significant portion of the ownership in a company in another country to gain management control. Nonetheless, FDI has risks of lack of integration with existing operation,
such as problems with communication and coordination between acquired firms; in addition, FDI spells a high investment cost. FDI inflows into developing nations in Asia were over $95 billions in 2002, of which China attracted nearly $53 billions. India, the largest recipient on the Asian subcontinent, only had inflows of nearly $3.5 billions. A significant boost in investments in China followed the country’s entry into the World Trade Organization (WTO) in 2002 (The Economist, 2005).

FDI can be divided into two basic subtypes, joint ventures and wholly-owned subsidiary, which are presented below.

### 3.2.2.1 Joint Ventures

A joint venture is a partnership between two or more parties. In international joint ventures these parties are based in different countries. The advantages of joint ventures are that the participants share the risk of failure, that they are less costly than acquisitions, and that they possibly give a better relationship with government through having a local partner. Each partner can also focus on their core competence, making the venture more profitable. By supporting joint ventures, however, the Chinese government tries to limit foreign ownership in China.

### 3.2.2.2 Wholly-Owned Subsidiaries

A wholly-owned subsidiary is a company that is fully owned by the outsourcer, which in this context produces its goods. This form of FDI gives the owner total control over its operation. The establishment can go through either buying an existing company or building an operation from scratch. The high level of control comes at a price, the increased risks associated with the huge investments needed.

### 3.3 Outsourcing Basics

In this section we discuss the basics of outsourcing, and the basis for an outsourcing decision. Economically, the outsourcing process can be expressed as that the variable costs increase for external purchasing and services, whereas the internal value increase due to that the production is lowered (Bengtsson et al., 2005).

The outsourcing decision can be illustrated as in Figure 6, a typical McKinsey matrix, where the choice stands between either to outsource, or to have an integrated product development chain. The lower triangle represents a potential for outsourcing to low-wage countries, and the upper triangle a potential for maintaining or creating an integrated production development chain. The open area in-between is a borderland where there is no obvious choice, and the decision has to be made from case to case. An example of how to use the matrix is if you have, for example, low demand for customer adaptation, delivery time, development capabilities, etc. and a high share of wage costs there is a potential for outsourcing production to a low-wage country.
3.3.1 Outsourcing Components

Outsourcing can be regarded as a sequence starting with a strategic make-or-buy decision through implementation of the decision, evolving into ongoing buyer-supplier relationships. Wasner (1999) identifies outsourcing as consisting of two parts: a make-or-buy decision and a transfer of production, expressed as:

\[
\text{Outsourcing} = \text{make-or-buy decision} + \text{transfer}
\]

It is, however, unlikely that the decision of outsourcing and the implementation/transfer can be clearly separated, due to the high complexity interrelations between them. Therefore the transfer part often has to be considered when making an outsourcing decision based on expected risks and benefits (Wasner, 1999). A theory for the make-or-buy decision is the topic of Section 3.3.3 below.

3.3.2 Core Competence

The make-or-buy decision is important, because it in a sense determines a company’s core competence, as companies decide whether to outsource or not the identification of what is core becomes central (LeanSCM, 2006). If not identified correctly, a common fear is that outsourcing a part of the core competence will result in a risk of becoming irreversibly dependent on the suppliers. Another fear is that outsourcing the core can lead to industrial decline, especially if the decisions are based only on short-term cost focus and current market position (Wasner, 1999). Outsourcing is not all negative, it is possible to use outsourcing to bring unique competencies to a company and with partnerships construct a unified value system and enhance a

**Figure 6** A model of an outsourcing decision based on two variables
The choice between the benefits of integrated product development and the benefits of outsourcing, e.g., a decision between cost reduction or customer adaptation (Modified from Bengtsson et al., 2005, p. 60, after McKinsey).
company’s competitive advantage. Mostly, however, outsourcing is used for support activities, whereas the core competence is kept in-house. This is the usual case, but, as mentioned by Harland et al. (2005), some studies have shown that activities closer to the core are also outsourced by many companies. It is important to be aware of this, since this might contradict the logic of outsourcing at a first glance, since the usual truism is to outsource peripheral activities, while keeping the core competence in-house.

3.3.3 Make-or-Buy Decision
A basic decision in the area of outsourcing is the make-or-buy decision. In this section a theory is presented indicating whether a company should make a component itself, i.e. have their own production, or buy it from a third party (Wild et al., 2006). The theory is divided into reasons to buy and reasons to make, which are presented below.

3.3.3.1 Reasons to Make
The model suggests two reasons to make:

- **Low-cost**
  If a company can manufacture a product for less than they have to pay someone else to produce it, they will choose to make it in order to reach a higher profit margin.

- **Production control**
  Making rather than buying can give managers better control over raw materials, product design, and the production process itself, all of which are important factors in product quality. The control of quality is in turn important when customers are highly sensitive to even the slightest decline in quality.

3.3.3.2 Reasons to Buy
The model suggests four reasons to buy:

- **High risk**
  The political risk in other countries is a significant risk for companies that have invested in plants and equipment abroad. It can, however, be reduced through utilizing sub-contracting.

- **Greater flexibility**
  Keeping the flexibility is increasingly important, and by buying products from external suppliers, a company can increase flexibility.

- **Market power**
  Companies can increase their power in the relationships with suppliers by becoming an important customer.

- **Barriers**
  There can be significant entry barriers connected with outsourcing, which can result in a less profitable venture.
3.4 General Risk and Benefit Models

This section takes up models of risks and benefits of production outsourcing presented by researchers in journals and books. There is a plethora of different approaches, but we have limited ourselves to three models: one classical school book model by Hollensen (2001), and two more recent case and survey results by Quélin and Duhamel (2003) and Harland et al. (2005), respectively. To be able to easily compare the empirical results with these models, the structure of our questionnaire has been designed in a similar manner as in these models, with Question Group A corresponding to risks and B to benefits. The questionnaire can be found in Appendix B.

3.4.1 Model 1: Hollensen

Hollensen (2001) describes a set of general factors that influence the mode of entry; generally speaking, the choice of entry mode should be based on the expected benefits. The general factors that according to Hollensen should be considered when outsourcing are described briefly below.

<table>
<thead>
<tr>
<th>Risks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-cultural distance</td>
<td>The difference between a firm’s home country and host country can create internal uncertainty for the firm.</td>
</tr>
<tr>
<td>Countries risk and demand uncertainty</td>
<td>Unpredictability in the political and economic environment of the host market increases the perceived risk and demand uncertainty experienced by the firm. Foreign markets are usually perceived as riskier than the domestic market.</td>
</tr>
<tr>
<td>Market size and growth</td>
<td>Country size and rate of market growth are key parameters in determining the mode of entry. Larger developing countries with the larger internal markets and their usually higher growth rate attract companies.</td>
</tr>
<tr>
<td>Direct and indirect trade barriers</td>
<td>Tariffs or quotas on the import of foreign goods and components favor the establishment of local production or assembly operations.</td>
</tr>
<tr>
<td>Intensity of competition</td>
<td>A firm should not put heavy resource commitments to an intensely competitive market and should avoid internalization as such markets as they tend to be less profitable.</td>
</tr>
</tbody>
</table>
Benefits

- **Low-cost**
  The purpose of outsourcing to another country is mainly the lower wage costs compared to in the West. A labor-intensive production can thus be profitable in low-cost labor countries.

- **High flexibility**
  Having production abroad can save both in costs and time, and allows a firm to focus on its core competence.

- **Local market experience**
  Using local market experience can be of much help for a firm to create business opportunities.

- **Expansion of sales**
  If a firm can lower its costs it can become more competitive on the domestic market, in turn increasing its sales volumes and market shares.

3.4.2 Model 2: Quélin and Duhamel

Quélin and Duhamel (2003) have made a study on 180 large manufacturing companies in Europe, through a survey where they asked top managers in these companies to rank the importance of the risks and benefits connected with production outsourcing. The risks and benefits used as a basis for their survey are compiled from what they have identified as the main risks and benefits, backed up in current research. These are as follows:

<table>
<thead>
<tr>
<th>Risks</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence on the supplier</td>
<td>Reduce operational costs</td>
</tr>
<tr>
<td>Hidden costs</td>
<td>Focus on core competencies</td>
</tr>
<tr>
<td>Loss of know-how</td>
<td>Reduce capital invested</td>
</tr>
<tr>
<td>Service provider’s lack of necessary</td>
<td>Improve measurability of costs</td>
</tr>
<tr>
<td>capabilities</td>
<td></td>
</tr>
<tr>
<td>Social risk</td>
<td>Gain access to external competencies and to</td>
</tr>
<tr>
<td></td>
<td>improve quality</td>
</tr>
<tr>
<td></td>
<td>Transform fixed costs into variable costs</td>
</tr>
<tr>
<td></td>
<td>Regain control over internal departments</td>
</tr>
</tbody>
</table>

From these categories, their study identifies risks and benefits that were perceived by the top managers as being more prominent than others.
Most important risks

- Risk of dependence
  This category concerns the risks of dependence on the service provider or vendor. The lack of a safety net if the service provider fails to fulfill its deliveries or is not able to deliver on time, as well as quality issues. They also mention the risk of loss of know-how in the long-term, and thus being dependent.

- Service provider’s capabilities
  The second most important category deals with the deficient capabilities of the service provider, such as financial strength, and its previous experience, as well as insight into the outsourcer’s activities.

In the following, we present the major benefits or decision criteria that Quélin and Duhamel found in their survey.

Most important benefits

- Operational cost reduction
  The authors discuss that this classical reason for outsourcing is still one of the most important reasons for outsourcing, despite the existence of other methods that has been shown to perform just as well.

- Focus on core activities
  Any activities that are non-core may be outsourcing candidates.

- Gain flexibility
  By outsourcing activities they can be used in a more “on demand” fashion, which increases the flexibility of the company to changes in business conditions.

These risks and benefits as identified by Quélin and Duhamel to be the most important will be used in the analysis in Chapter 6 to find any similarities between them and the empirical data from our study.

3.4.3 Model 3: Harland et al.

Harland et al. (2005) have more recently identified risks and benefits from different abstraction levels, organizations, sectors, and nations. In this study, we are only concerned with the organization-level risks and benefits (cf. Section 1.4), why we limit the presentation of their results to that level only. They performed their study by interviewing 25 officers from private and public sectors. Their results are presented in the risks and benefits tables below.
Risks

| • Failure to identify core | Failure to identify core and non-core may lead to an outsourcing of the core competences and thus the competitive advantages. What is core today, however, might not be core tomorrow. |
| • Difficulty in insourcing later | After having outsourced a function, it may be difficult to take it back in-house again. |
| • Loss of organizational competence | Outsourcing often leads to loss of competence in-house, which can be difficult to rebuild. |
| • Lack of skills to manage relationships | The outsourcing company might not have the skills needed to build strong enough relationships with the service provider. |

They present a number of expected benefits, which they do not specify as much as the expected risks.

Benefits

| • Focus on core activities | Focus to achieve an economy of scale |
| • Reduce costs | |
| • Provide short-term financial benefits | |
| • Balance sheet improvements | |
| • Increased flexibility | A flexibility to configure resources according to market demand. |

Harland *et al.* (2005) discuss that most of the expected benefits are explained with an economies of scale and scope thinking.
4 Theoretical Framework II: Outsourcing in China

In this chapter we present an overview of China as an outsourcing destination, and how it compares to other potential destinations, such as India and Eastern Europe. Following this we present specific benefit and risk categories characteristic to China connected to outsourcing, where the risks are divided into several categories: political/legal, economical, technological, quality, and cultural aspects. The chapter is concluded with an example of a model of how to avoid certain risks when outsourcing to China.

4.1 China as an Outsourcing Destination

In this section we discuss the characteristics and peculiarities of the Chinese market for production, and compare it to the Indian and Eastern European markets.

4.1.1 China as the World’s Factory Floor

China presents huge business opportunities for Western firms with its enormous population, and underdeveloped and expanding economy. China of today is the fastest growing market in the world and is often regarded as “the world’s factory floor” with its limitless supply of low-cost labor, and improving competitive and productivity rates. The country plays a leading role in the international manufacturing and assembly sectors with most of its exports being manufactured goods, and it is also in the top position for foreign direct investments in the developing world boosting the already high development rate of the country. China is, however, classified by many of its major trading partners as a risky location, given, e.g., its poor protection of intellectual property (IP). In order to be successful in China it takes a firm commitment and requires an accurate understanding of both the risks and rewards involved (The Economist, 2005).

4.1.2 The Development of the Chinese Market

The world trade of today is quite different from what it was a generation ago, both in direction and composition. The world has in a business sense become a smaller place, following new transportation and communication channels, which have reduced the travel time needed. In the world as a whole, as shown in Figure 8, the percentage of manufactured goods makes up the major share of world trade. The largest
developing countries are India and China, which both play important roles in world business. China is the single largest developing economy and a rapidly growing force in world trade and with more than 90% of its export consisting of manufactured goods (Krugman and Obstfeld, 2006). The global impact of China is clear.

Compared with all countries in the world, China is the second largest economy after USA, and the third largest exporter of goods and services. This, coupled with a forecast of doubling its GDP each year for the next 15 years, creates growth records, which attract foreign investors as can be seen in, e.g., the foreign direct investments (FDI) in China, which rose by 13.3% ($60.65 billions) in 2004 (The Economist, 2005). The development of global economy has resulted in fewer restraints on trade between countries, which has been beneficiary to the Chinese economy allowing it grow even more.
Following the opening of China, many production tasks are consequently being sent there. Usually, the establishment begins in one of the bigger coastal cities, such as Shanghai, Zhejiang, Shenzhen, or Guangdong (see Figure 7). The labor costs in the coastal areas are, however, much higher than in the less exploited central and western China, which subsequently becomes the target for more experienced international companies as they expand in China (Fu Tiehua, interview).

4.1.3 Comparison with Indian and Eastern European Destinations

How does China compare today to other possible countries as an outsourcing target? There are a lot of factors that determine the suitability of a country as an outsourcing destination for Western companies, such as wage costs, proximity to markets and customers, organizational costs, labor pool availability, entry barriers etc. For example, for smaller enterprises the physical distance between their base in a Western country and China, may render any advantages in China over Eastern European countries smaller because the lack of resources to manage the distance, but for larger companies the distance should not be an issue. A comparison of size between China and other possible destinations is given in Figure 9. Here we will, however, limit our discussion to differences in wages and labor pools for Chinese, Indian and Eastern European markets.

The wage costs are slightly higher in China than in India (see Table 1). This can partially be due to higher living costs in Chinese cities than in Indian cities. The demand for workers in India is currently higher than in China, which might raise wages in India in the future and even out the difference (China Daily, 2005). Given that the difference is fairly small today, and given changes in the future and factors other than wages, such as proximity to markets, organizational costs, etc., the difference does not necessarily tip the scale for India after all (Mercer, 2005). These figures are of course only averages, and can vary largely within each country, which have to be considered.
Wages in Eastern European countries are up to four times as high as in China (see Table 1). This has to be weighted against other benefits with Eastern European countries, such as the benefits of proximity, and cultural similarity. The wage difference is, however, so large that significant savings could be made in China compared to in Eastern Europe.

So what makes China a good country for outsourcing? If wage savings is the primary motive for the outsourcing venture, then China has a definite edge over Eastern European countries. It has also an advantage when it comes to potential future growth in the country, given China's large labor pool (see Table 1) compared to the Eastern European. China and India are close-calls as destinations with a small difference in both wages and labor pool, so no general rule can be given. These are of course not the only variables that affect the choice of target country. Given this, the choice has to be made for each individual case, based on preferences for the individual company.

Table 1 Average wage and labor pool
Germany is used as a baseline for comparison with Western countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Weekly pay (€)</th>
<th>Index (Germany)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>749</td>
<td>100</td>
</tr>
<tr>
<td>India</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>China</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>Latvia</td>
<td>52</td>
<td>7</td>
</tr>
<tr>
<td>Lithuania</td>
<td>71</td>
<td>10</td>
</tr>
<tr>
<td>Poland</td>
<td>119</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Inhabit. (millions)</th>
<th>Index (Germany)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>82</td>
<td>100</td>
</tr>
<tr>
<td>China</td>
<td>1289</td>
<td>1572</td>
</tr>
<tr>
<td>India</td>
<td>1065</td>
<td>1299</td>
</tr>
<tr>
<td>Poland</td>
<td>39</td>
<td>48</td>
</tr>
<tr>
<td>Lithuania</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Latvia</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
4.2 Specific Chinese Benefits

In this section, we give a brief overview of traditional benefits cited in the literature. The examples of specific Chinese risks and benefits given in this and the following section are confirmed via a telephone interview with Professor Fu Tiehua at Shanghai Fu Dan University, China.

The most prominent benefit cited is the possibility to reduce costs. Generally, three main advantages of outsourcing are given for establishing production in China:

- **Lower wage costs**
  There are lower wages in China and companies do not need to pay high costs on workers compensation insurance, social security payments, etc.

- **Employee supply**
  Labor availability is another important factor with China, especially for outsourcing of labor-intensive production.

- **Self-sufficient with raw materials**
  Material abundance is an attractive advantage for many foreign companies to outsource in China, such as a competitive price on materials.

In the case studies we are investigating what benefits the companies have expected to gain and, in hindsight, have gained, and if they have gained any benefits that they had not foreseen. This is reflected in the questionnaire in Appendix B, in Question Group B, questions 5-7. We are also interested in the one major reason in the end that made the company decide to outsource to China. This corresponds to question 9 in Question Group C.

4.3 Specific Chinese Risks

We divide the specific risks into the broad categories political/legal, economical, technological, quality, and cultural issues for easier overview and reference, inspired by categories presented by Hollensen (2001). Each category can of course hold almost an infinite number of sub-risks, so in this section, we limit ourselves to only present some examples of what kinds of risks can be expected according to the literature. These will be compared to the risks identified in our study in Chapter 6.

The categories presented here is the base for the structure of question 2 in Question Group A in the questionnaire. In Question Group A, we have also designed questions to find out what risks that were expected (question 1), what risks that were not foreseen (question 3), and the single largest risk in hindsight (question 4).

4.3.1 Political and Legal Risks

China is a communist state since 1949 and the Chinese Communist Party has been in power ever since. Market reforms enacted over the past three decades have transformed the economy and raised living standards. In order to protect the local economy the government uses tariffs and quotas and other regulations to restrict the foreign companies to intrude, which can cause problems for anyone interested in
outsourcing their production to China. At same time, however, government uses tax exemptions and similar methods to encourage foreign investments as well (Deloitte, 2006).

Another hot topic in China is the lack of protection of intellectual property rights (IPRs). As foreign companies go from simple manual labor to produce increasingly more complex and advanced products, the need to bring own developed technology in to China increases. This, however, increases the risk of losing intellectual property by it being illegally copied or stolen by competing Chinese companies, or disclosed to competitors by disloyal Chinese employees (Fu Tiehua, interview). Perceived political and legal risks by the case companies are investigated with question 2.2 in the questionnaire.

4.3.2 Economical Risks
The lower labor cost in China compared to Western countries is an attractive incentive for foreign firms to enter the country. In China, however, the costs of labor are allocated very unevenly; in the coastal cities, such as Shanghai (see Figure 7), the labor costs are significantly higher compared to the more remote areas of western and central China. This creates a possibility for potential cost benefits when choosing location (Fu Tiehua, interview). The perceived economical risks are investigated with question 2.6 in the questionnaire.

4.3.3 Technological Risks
The level of technology in China is not comparable with Western levels, but the country is developing rapidly, not only economically, but also in the high-tech production industry. Canton is the most technologically developed area compared to other provinces in China. The technological transfer and knowledge transfer is not as difficult as before. Usually, high-tech products are outsourced to Canton, Shanghai or Wuxi (coastal cities), whereas less complex production are mostly outsourced to western and central China (Fu Tiehua, interview). The perceived technological risks are investigated with question 2.4 in the questionnaire.

4.3.4 Quality Risks
There is often a loss in product quality when outsourcing to China, compared to utilizing Western factories. However, as pointed out in People’s Daily (2006), inferior products are mostly produced by small-sized Chinese enterprises, and this should not be confused with the high-quality products being produced by large Chinese factories. As an example of the increasing quality of Chinese manufactured goods, the general product quality in China has, according to a recent survey, shown signs of being improved further lately and continuing to rise (People’s Daily, 2006).

China has come a long way in quality improvements during the last decades, but the low quality that is associated with the “Made in China” label is persistent in the Western world. The “Made in China” label is often followed by a “Designed by X” or “Made by X” to reinforce the quality level and transfer good-will from a, usually,
Western country X. The quality bad-will associated with the “Made in China”, unwarranted or not, is important to consider when choosing partners in China. Albeit the low quality tint is persistent, the low quality label is bound to decline as China improves its production quality over time, and starts to produce more advanced and high-tech products, not just components as is often the case today (Fu Tiehua, interview). The perceived quality risks are investigated with question 2.5 in the questionnaire.

4.3.5 Cultural Risks

China is one of the world oldest countries, with a five-thousand-year history, and with a culture to match in age. The ancient culture has strongly shaped the Chinese mentality and behavior in business. Regional cultures are strong in China and those cultures give rise to different business mindsets. The strong regional varieties make it impossible to think of China as one single market. Another important cultural factor in China is family security, which is very important for the Chinese. Workers will do anything to safeguard the family economy, which might cause workers to look for better jobs and better opportunities all the time. Once they are offered a better employment contract, resulting in a better salary or wage, they will jump over to the new job without any doubt, unless the existing company provides a safety employment system that makes them feel a sense of belonging (Fu Tiehua, interview). The perceived cultural risks are investigated with question 2.1 in the questionnaire.

4.3.5.1 Hofstede's Classical Model

The main theory when it comes to cultural studies is the Hofstede cultural dimensions. In his early work, Hofstede proposed four dimensions for classifying a culture (Hofstede, 1980), but in a later study he decided to add a fifth dimension (LTO), relating to oriental values and Confucius (Hofstede, 1991). This later dimension has received a lot of critique, which is outlined in Section 4.3.5.3. The five cultural dimensions and their meanings are as follows:

- **Power distance (PDI)**
  The dimension concentrates on the degree of inequality and equality between people in the society. A high power distance indicates that the power and wealth is not allocated in an equal way. A lower power distance indicates that equality and equal chances for everyone is more important.

- **Individualism (IDV)**
  The dimension focuses on the degree of the social interpersonal relationships. A high individualism tends to indicate a more self-centered culture, whereas a low such stands for a more collectivistic nature where the group is more important than the individuals.

- **Masculinity (MAS)**
  This dimension concerns the degree of masculine dominance. A high masculinity degree indicates that males dominate the major positions of power within the society, whereas a low means that there is no discrimination between men and women.
4.3.5.2 Cultural Comparison between China and Sweden

A comparison of China and Sweden according to Hofstede’s dimensions is given in Figure 10.

The power distance (PDI) is much larger in China compared to Sweden, which would indicate that the Chinese are more acceptable to inequalities and a central elite than in Sweden, where a more equal power distribution is preferred. This is probably due to a long tradition of sole ruling emperors in China. Another strong difference is the focus on individualism (IDV) in Sweden, whereas in China the group is more important than the individual. This is most certainly due to the communist legacy in China. China is also somewhat more masculine (MAS) than Sweden, indicating a more masculine dominance in China compared to more equal rights in Sweden. Uncertainty avoidance (UAI) is low, and fairly similar between the two countries. Notably, China has the highest long-term orientation (LTO) of all countries in Hofstede’s study (118, off
scale), indicating the Chinese’s attitude of persevering, i.e. overcoming obstacles by time, will, or strength. The Swedish LTO is very much lower, indicating a more impatient attitude (Hofstede, 2003).

4.3.5.3 Critique of Hofstede’s Model
Hofstede’s work is in its earliest form more than 30 years old, and has a lot of weaknesses, but is, however, still the most comprehensive work on culture, and forms the base for most research in culture, either to criticize or to build upon. Many researchers have criticized the model on different points. For example Fang (2003) has brought forward critique on the new fifth dimension, as being a Western construction of an oriental view-point. He draws upon classical Chinese values and personal experience to prove his point.

Fang (2006) presses on by declaring a new paradigm in culture studies, where he wants to change from the traditional “onion” model of culture, epitomized in Hofstede, where the culture is modeled with layers of the onion, to a new “ocean” metaphor, where the paradoxical nature of culture is addressed. This new approach is interesting as it is important to understand that Hofstede’s theory is flawed. This critique in itself, however, will be of limited use in this thesis, as the focus is not on cultural differences and similarities.

4.4 Model for Avoiding Risks
In this section we present a normative model for companies interested in outsourcing to China for avoiding risks and keeping the benefits. The model is presented by Dickinson (2006). There are many models like this one out there, so this is just the pick-of-the-bunch. This model will be compared to the results of our analysis in Chapter 6.

4.4.1 Five Steps Model
This model is intended to prevent problems and mitigate risks relating to outsourcing production to China, especially legal problems. Many companies that have outsourced to China can do little or nothing to protect themselves because they have not taken the necessary preparatory steps or because they are not prepared for problems that may arise due to the difference in cultures. According to Dickinson (2006), the following five basic suggestions are supposed to greatly help companies to reduce risks when outsourcing production to China:

1. Create and properly register your intellectual property rights in homeland.
   Companies need to register its copyrights with patent and trademarks and need to carefully identify and protect its logos and slogans.

2. Register your trademarks in China
   Register the trademarks in China to prevent Chinese competitors from registering the same trademarks or illegally copying your products.
3. **Product quality and payment terms**
   It is best to wait with the payment until you are sure that the quality of products is as you require. It is also good to have a clear procedure for dealing with any problems as they arise.

4. **Use written agreement to protect your know-how**
   It is necessary to have written agreements with Chinese partners to protect your intangible assets, typically know-how and trade secrets. You have an ally in the Chinese laws, as they permit companies to protect their know-how by contracts.

5. **Use comprehensive production agreements with each manufacturer.**
   It is not enough to only have a purchase order when entering into the Chinese manufacturing business. This is because the purchase order only protects the Chinese manufacturer, and not you. A written agreement in both English and Chinese with each Chinese manufacturer you deal with is very important.
5 Empirical Studies

In this chapter the empirical results are presented from the cases. The initial section provides an overview of the case structure, and is followed by a short discussion of how the case companies have been contacted. The rest of the chapter is devoted to a summary of the empirical data from each interview. The chapter is concluded with a summarizing table of the answers for easy overview.

5.1 Case Structure Overview

As discussed in the research methodology in Section 2.5, the primary research method is in-depth interviews with representatives in case companies. The companies have been contacted via e-mail and via visits. Representatives (interviewees) have been found by inquiring people in leading positions and have them redirect us to the most suitable person or persons. Suitable persons are generally purchasing managers or general managers with insight into the production in China.

The interview questions are divided into three categories for easy reference and overview, as discussed in Section 2.7. The categories are, corresponding to Question Groups A-C in the questionnaire in Appendix B:

1) **Perceived risks** (Question Group A)
   Here we inquire about any risks connected to outsourcing, as viewed by the representative. The answers are presented both under each case company, and summarized in Table 2.

2) **Perceived benefits** (Question Group B)
   In this category we inquire about any benefits that come with outsourcing, as perceived by the representative. The answers are presented both under each case company, and summarized in Table 3.

3) **Practical advice** (Question Group C)
   Here the interviewee is asked to name five pieces of practical advice for establishing production in China. The advice is presented in Table 4 in the end of the chapter.

The empirical data will be presented case by case and then summarized in three tables at the end of the chapter for easy reference and overview. There is, however,
no general structure under the perceived risks and benefits headers, as the companies stress different points, which would make a general division unwieldy. An overview of each case company is given in Appendix A.

Figure 11 Main locations of the case companies
These are the main locations for the case companies. This is not a complete listing of locations, as many of the case companies have plants in number of regions of China. Most notable are Ericsson and ABB that are present almost all over China, with the Ericsson Chinese headquarters in Beijing (base map from Perry-Castañeda, 2006).

5.2 Method of Contact
The method of establishing contact with representatives from the different companies has been through e-mail correspondence and telephone calls. The representatives that have the required knowledge to answer the questionnaire are most often expatriates in China. This has always been the case when the company is established in China, whereas in companies not yet present in China, in our study only Hemtex (is expected to enter in 2007), the representative was located in Sweden. In the case of ABB, a former expatriate now in Sweden turned out to be the best contact. The interviews have been conducted via an initial e-mail questionnaire to form the basis for an in-depth telephone interview.
We have interviewed representatives from six case companies: Nefab, Sandvik, Autoliv, Hemtex, Ericsson, and ABB. The primary location or locations of each of the case companies are shown in Figure 11. Of the companies we have contacted every company except one have answered and agreed to participate in an interview. Scania, which was a non-response, was intended as a reference case as they have chosen not to outsource their production (Bengtsson et al., 2005). This non-response is probably due to the failure to find an appropriate contact. The reason for choosing these companies is because they are well-known large Swedish companies present in China with a part of their production, and thus fitting our delimitation (cf. Section 1.4). The questionnaire used can be found in Appendix B.

5.3 Case 1: Nefab

*Representative:* Ditar Isai, General Manager at Nefab China  
*Outsourcing type:* wholly-owned subsidiary

5.3.1 Perceived Risks

Ditar Isai discusses risks that Nefab had considered to be a problem when they first entered China. He stresses four such important factors:

- Financial risks as in any other investment.
- Dealings with local government with fear of extensive red tape.
- Securing of critical raw materials, thus fear of inadequate product quality.
- Securing accounts receivables, and fear of bad debts.

After having been in China for numerous years, Nefab has not experienced any cultural problems, which, according to Ditar Isai, is due to their extensive use of local staff that is able to deal with the Chinese customers and workers without much friction. Nefab has not experienced any political and legal problems either. The red tape had been perceived as fearful initially, but the company has not had any serious legal obstacles yet. Other risks the company has run into has had to do with the way the company has developed its business concept from being a commodity supplier to being a solutions provider. These problems are mainly related to its business concept and not to the country as such, and thus outside the scope of our study (cf. Section 1.4).

Ditar Isai comments on the lower technology level used in China compared to in the West. They employ manual labor to a larger extent, aided by simpler machinery. Apart from the lower technology level, however, the work process is very much the same in China as in the West. He also points out the problem of poor product quality. Where the quality assurance from suppliers is an issue, and this coupled with a strong price pressure makes a certain quality level harder to maintain in China. He stresses, however, that they do not accept any jeopardizing of their quality, and if you are aware of this it is possible to work towards securing it by, e.g., forcing more
rigorous quality assurance on the suppliers. Ditar Isai concludes that he feels that the competition is fiercer in China than elsewhere in the world.

5.3.2 Perceived Benefits

A good investment
Ditar Isai says in the interview that Nefab has not actually moved any production to China; they have established new operations in the country. In their production facilities in China they only produce for the Chinese market and other Asian countries. The choice of establishing in China has been very important, as they consider China to be a key location for their packaging business, and the profit has been good from the venture, in spite the fact that they have only been selling their products to the Asian market. He marks out that the market development has been good for them and is expected to continuing to be bright.

More profit possible
Being present in China, the company has been able to secure deals with Chinese customers that would not have been possible in the West. This has led to larger profits than expected. Due to this unexpected benefit, the company focuses on being the only international company in packaging in China that competes with quality rather than with quantity.

A foothold in China and a global supplier
By the outsourcing to China the company has secured itself as a global supplier, which creates value for its Chinese customers, but also their Western customers as its presence in China is a very important sales argument when the company sells its products/services to international customers.

Low cost of labor
Since the technology used in China is less sophisticated compared to its sister subsidiaries in the West, the company uses manual labor to a greater extent aided by simple machinery only. This is made possible by the lower labor costs in China. In other aspects, however, the work is carried out in pretty much the same way.

5.4 Case 2: Autoliv

Representative: Benny Mattsson, General Manager of Purchasing at Autoliv China Ltd.
Outsourcing type: wholly-owned subsidiary

5.4.1 Perceived Risks

Benny Mattsson points out that one of the biggest concerns initially was to find good people and to keep them. This has continued to be a problem for them, and still is.

Cultural differences
Autoliv has not experienced any real problems with cultural differences. There have, however, been some concerns regarding the lack of team work among the Chinese employees, and the tendency for them to always seek an escape goat instead of trying
to solve the problems. There have also been cases of Chinese people in the office accepting bribes. When these cases were discovered, those individuals were asked to quit.

**Legal/political issues**

Benny Mattsson says that they have not had any problems with the Chinese legal and administration system. He has, however, noted that if you have a good relation with the custom clearance office, imports and exports seem to go much faster and to a lower cost.

Violations of intellectual property rights (IPR) have been a problem for Autoliv. They have had products illegally copied and sold under another name. As they are currently setting up a technical center in China, the concerns regarding IPR have increased.

**Gap between departments and quality problems**

Benny Mattsson also mentions that there is a problem with a gap between R&D and other departments that exists due to the Chinese tradition of every department working independently. Moreover, there is also a lack of understanding in China regarding quality assurance and process control. There does not seem to be any system in place to safeguard quality.

In hindsight, Benny Mattsson identifies the largest risk for Autoliv to be the lack of proper raw materials in some cases. The needed materials may have to be imported from overseas, which adds significantly to the price of the materials.

**5.4.2 Perceived Benefits**

Benny Mattson identifies three main reasons that motivated them to move their production to China:

- Lower production cost, which means lower cost for components if local raw material is available.
- Local raw material source and the low price on magnesium die casting which is used by Autoliv.
- Low labor cost.

**5.5 Case 3: Sandvik**

*Representative:* Svante Lindholm, CEO at Sandvik China  
*Outsourcing type:* wholly-owned subsidiary

**5.5.1 Perceived Risks**

**IPR problems**

The main risk that Sandvik has perceived is the unauthorized transfer of technology, as well as the problem with violations of intellectual property rights (IPR) and with
thefts. Due to this fear of being illegally copied, Sandvik has as of yet not transferred any of their own developed technology to China.

No quality problems
Sandvik has not experienced any product quality problems up to date, nor have they had any significant cultural conflicts.

Problem with finding managers
Svante Lindholm says that to find qualified managers has turned out to be the single largest risk with their presence in China. An unexpected problem has also been the high turnover of personnel. The Chinese staff does not seem to be loyal to any company, which makes the process of building up human capital difficult.

5.5.2 Perceived Benefits
Svante Lindholm points out three factors that he considers being the main benefits with their outsourcing venture:

- Close to customers in China.
- Access to the Chinese market, since they are regarded as a local manufacturer.
- Lower production costs.

5.6 Case 4: Hemtex
Representative: Stefan Ahlén, General Manager of Purchasing at Hemtex
Outsourcing type: contract manufacturing

Hemtex is different from the other case companies as it is not a manufacturing company in itself; they have up to date limited their outsourcing activities to contract manufacturing (cf. Section 3.2.1). In 2007, however, they have planned to enter China with a local purchasing office for managing relations with their contract factories. The company has moved its contracted manufacturing from Southern and Eastern Europe to China, and this change of supplier, from Europe to China, is an indirect movement of production, since the bulk of orders for European suppliers decrease, why this is also considered as outsourcing, albeit in a more indirect sense (Bengtsson et al., 2005).

5.6.1 Perceived Risks
Stefan Ahlén identifies three risk factors they had expected to encounter when using Chinese producers:

- Longer lead-times.
- Quality problems due to language difficulties.
- Difficulty to find local staff.
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Cultural differences
Stefan Ahlén points out that a Chinese cannot say “no”, which according to him is bound to lead to a lot of misunderstandings. This is especially true when it comes to quality issues, where Stefan Ahlén points out that loss of quality is most often due to failure in communication and misunderstandings. Another problem has been corruption of local employed staff and local suppliers, where they have been, e.g., accepting bribes. Stefan Ahlén concludes that corruption is the single largest problem in China.

IPR problems
Stefan Ahlén also mentions that they have had problems with IPR, where there have been Chinese companies that have tried to sell them production designs that belonged to others, in clear violation of IP rights.

Quotas
Hemtex has had problems with quotas for exportation out of China. Quotas that previously have been removed have been re-introduced for certain categories, vital to Hemtex. These quotas have led to worse result than otherwise could have been reached.

Packaging problems
Stefan Ahlén stresses that there have also been problems with packaging of products, and marking them correctly, which have caused identification problems when delivered to Sweden. Another area that has been problematic is the documentation of the products, as the Chinese do not seem to care much about proper documentation. They have, however, not had any significant problems with the transportation itself from China to Sweden.

Low loyalty
A problem Hemtex had not expected to run into is how little skilled workers are loyal to an employer in China, which gives rise to fluctuations of personal, and additional costs.

5.6.2 Perceived Benefits
Lower costs
Stefan Ahlén finds the lower cost and thus lower prices for manufactured products in China to be the one most motivating factor for Hemtex to have their products made in China.

Higher margins
The lower cost and price of products from China gives the company a competitive advantage with higher margins than otherwise.

Quality better than expected
The quality of the products manufactured in China had better quality than Hemtex initially had expected, which has led them to increase their activity in China.
5.7 Case 5: Ericsson

Representative: Chief Manager at Ericsson in Canton. The representative has chosen to remain anonymous.

Outsourcing type: wholly-owned subsidiary

5.7.1 Perceived Risks

The Chief Manager identified three types of risks they had expected to encounter when they entered China:

- Cultural differences, which give rise to problems in communication.
- English level of the Chinese.
- Problem to attract expatriates to cities outside the major areas.

Cultural differences

The Chief Manager discusses that problems often occurred when it came to management issues, such as decisions and managing staff. This is due to a difference in how the Chinese and the Europeans perceive the role of the manager, with different ideas on how the hierarchy is supposed to work. Sometimes, the extensive informal Chinese “relations” made the formal organization in itself work ineffectively.

Legal problems

They have had problems with obtaining work permits for their expatriates, which has led to delays in staff transfers. Since, according to the Chief Manager, IPR as a concept does not exist in China, they had to secure it by controlling it themselves, which created unforeseen costs.

Quality issues

According to the Chief Manager, the average Chinese employee does not have any concept of quality, so in order to secure the quality of the products; you have to build up a control system to achieve the same quality level as in Swedish production. This will of course add to the total cost, bringing down the benefit of the venture.

Infrastructure problems

Ericsson has had a lot of production delays due to loss of electricity, which is problematic to remedy due to the general poor condition of the power network. Also, the late planning of holidays by the government in China makes it difficult to plan the production properly.

Problem to retain staff

The Chief Manager notes that the Chinese workers do not seem to be loyal to the company they are employed by in the same way as we where used to in Sweden. “As soon as an employee reached a senior level and someone offered him an attractive job, he would quit,” he says. They have tried to manage this by bounding systems.
5.7.2 Perceived Benefits
The Chief Manager marked out three benefits they had expected to gain from the outsourcing:

- Lower production costs.
- Closer to Chinese customers.
- More sales due to local production.

What they had not expected was that a deeper understanding of the Chinese culture would boost their sales significantly. He mentions that in hindsight the most significant benefits are more sales due to local production and that the local Chinese customers trust them better when they had and could show their production units within China.

5.8 Case 6: ABB
Representative: Mats Åhgren, Production Engineering Manager at ABB
Outsourcing type: wholly-owned subsidiary

5.8.1 Perceived Risks
Gap in communication
Mats Åhgren identifies the largest risk with outsourcing to China to be the gap in communication between representatives in Sweden and in China, due to, e.g., the time difference between the countries.

Poor product specification
He also points out that in China a less accurate product specification is normal, since it is generally not considered by the Chinese to be very important. This lack of specification in turn makes it very difficult to control the quality of products, since the quality is dependent on the product specification.

Loss of integration
Another major risk that Mats Åhgren perceives is the loss of integration between R&D and production when the production is moved to China.

5.8.2 Perceived Benefits
Mats Åhgren identified three types of benefits that ABB had expected to encounter when they entered China:

- Shorter delivery time and lower cost.
- Local customization.
- Close to the emerging Chinese market.

Owing to the lower production cost and labor cost in China, the company’s marginal profit has risen, while reducing the delivery time to local Chinese customers.
5.9 Summary
The empirical data collected is summarized in the three tables on the following pages. Perceived risks are given in Table 2, perceived benefits in Table 3, and practical advice in Table 4.

Table 2 Summary of perceived risks

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<th>Nefab</th>
<th>Autoliv</th>
<th>Sandvik</th>
<th>Hemtex</th>
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Fredrik Arnell and Sally Wei
Outsourcing Production to China - Risks and Benefits Based on Cases

<table>
<thead>
<tr>
<th>IPR problems</th>
<th>• Yes</th>
<th>• Yes, have had products copied</th>
<th>• Yes, and theft</th>
<th>• Yes, have being sold designs owned by others</th>
<th>• Yes</th>
<th>• Yes</th>
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<tbody>
<tr>
<td>Single largest risk, in hindsight</td>
<td>• None</td>
<td>• Lack of some raw materials</td>
<td>• Find qualified managers</td>
<td>• Corruption</td>
<td>• Retaining staff</td>
<td>• Communication between Sweden and China</td>
</tr>
</tbody>
</table>

Table 3 Summary of perceived benefits

<table>
<thead>
<tr>
<th></th>
<th>Nefab</th>
<th>Autoliv</th>
<th>Sandvik</th>
<th>Hemtex</th>
<th>Ericsson</th>
<th>ABB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected benefits</td>
<td>• Global presence</td>
<td>• Lower production costs</td>
<td>• Lower production costs</td>
<td>• Lower production costs</td>
<td>• Lower production costs</td>
<td>• Shorter delivery times</td>
</tr>
<tr>
<td></td>
<td>• Close to Chinese customers</td>
<td>• Lower costs if available local raw materials</td>
<td>• Close to customers</td>
<td>• Higher margins</td>
<td>• Closer to customers</td>
<td>• Customization</td>
</tr>
<tr>
<td></td>
<td>• Seen as local</td>
<td></td>
<td></td>
<td></td>
<td>• Seen as local</td>
<td>• Lower production costs</td>
</tr>
<tr>
<td>Unforeseen benefits</td>
<td>• Secure local deals not possible in the West</td>
<td>• None</td>
<td>• None</td>
<td>• Higher quality than expected</td>
<td>• Understanding of Chinese culture</td>
<td>• Increased sales in China, trusted</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Close to Chinese market</td>
</tr>
<tr>
<td>Single largest benefit, in hindsight</td>
<td>• Global presence</td>
<td>• Local raw materials</td>
<td>• Close to customers</td>
<td>• Cost reduction</td>
<td>• Increased sales in China, trusted</td>
<td>• Close to Chinese market</td>
</tr>
<tr>
<td>Met initial expectations?</td>
<td>• Yes</td>
<td>• No, but possibly in the future</td>
<td>• Yes</td>
<td>• Yes, but could have been better</td>
<td>• Yes</td>
<td>• No, cost of outsourcing vs. benefits</td>
</tr>
<tr>
<td>Major reason for production in China</td>
<td>• Market potential in China</td>
<td>• Lower labor costs</td>
<td>• Access to market</td>
<td>• Lower production costs</td>
<td>• Lower production costs</td>
<td>• Presence on an emerging market</td>
</tr>
<tr>
<td></td>
<td>• Close to customers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4 Practical advice from the case companies

<table>
<thead>
<tr>
<th></th>
<th>Nefab</th>
<th>Autoliv</th>
<th>Sandvik</th>
<th>Hemtex</th>
<th>Ericsson</th>
<th>ABB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>• Setup an organization</td>
<td>• Move already existing business into China</td>
<td>• Secure access to qualified personnel</td>
<td>• Have our own organization, headed by people you trust, probably European</td>
<td>• Use senior management that are used to work in China</td>
<td>• Solve problems at home</td>
</tr>
<tr>
<td>2</td>
<td>• Understand the parameters influencing the production costs and the local conditions</td>
<td>• Invest step by step, not more than needed, utilize investments</td>
<td>• Accept a long learning time</td>
<td>• Check that your partners understand all your demands</td>
<td>• Build up good relations with the local government</td>
<td>• Secure communication R&amp;D and production</td>
</tr>
<tr>
<td>3</td>
<td>• Keep close control over and communication with the local organization</td>
<td>• Bring knowledge into China</td>
<td>• Learn the market and distribution patterns</td>
<td>• Check again</td>
<td>• Ensure to have a system to retain senior staff</td>
<td>• Have a good contact in China</td>
</tr>
<tr>
<td>4</td>
<td>• Ensure quality, do not take anything for granted, and be patient</td>
<td>• Hire a local to help you understand the culture</td>
<td>• Do not over-invest in terms of money</td>
<td>• And again</td>
<td>• Put energy on (formal) control systems</td>
<td>• Choose the right location</td>
</tr>
<tr>
<td>5</td>
<td>• Have a long-term view</td>
<td>• Hire a good local lawyer</td>
<td>• Secure your technology</td>
<td>• Have patience, and accept the Chinese ways and administration</td>
<td>• Secure IPR</td>
<td>• Calculate total costs, not only labor costs</td>
</tr>
</tbody>
</table>
6 Analysis

In this chapter, we analyze and discuss the empirical results obtained in this study, as presented in Chapter 5, and compare it to the general models presented in Section 3.4 and the Chinese specific categories presented in Section 4.3.

6.1 Introduction

The analysis is divided into four parts:

1. **General risks and benefits categories** (Sections 6.2 and 6.3)
   A general discussion of the perceived risks and benefits from the empirical data and how it relates to the theoretical framework in Sections 4.2 and 4.3.

2. **Comparison with theoretical models** (Section 6.4)
   The results from above are compared to the theoretical models in Section 3.4.

3. **Risk avoidance model** (Section 6.5)
   The resulting risks are used to formulate a model of how to avoid the risks of outsourcing production to China while keeping the benefits.

4. **Wider problems** (Section 6.6)
   A discussion of wider problems with outsourcing outside the direct research question, such as impact to society.

The empirical data is referred to in the rest of the thesis with (name, company) of the representative that provided the answer. An example reference to the representative from Sandvik is (Svante Lindholm, Sandvik).

6.2 Risks

Here we discuss the empirical data given in questions 2.1-2.6, divided into each of the risk categories presented in Section 4.3 for easier overview.

6.2.1 Cultural Risks

We will in this work not dwell on all the complexities that are connected with cultural studies, which itself could in warrant a entire thesis, or even a few. Instead, we treat culture as a variable, and both the empirical data and the following discussion we only touch the subject briefly.
Most of the case companies have had little or insignificant problems with cultural differences. This was an unexpected result, as we would have expected cultural clashes to be a more prominent problem, when we started off. The reason for this might be that the companies all have been present in China for a long time, which has made them aware of the culture, and thus this is not considered as severe anymore. Hemtex seems to have had most problems with cultural clashes, judging from the interviews, which corresponds well with this reasoning, since Hemtex is in an earlier phase of their outsourcing venture, compared to all the other case companies, and perhaps still finds the cultural differences intimidating. The solution to minimize the cultural problems provided by, e.g., Nefab is to employ Chinese staff to reduce any cultural friction (Ditar Isai, Nefab). The same was suggested by Anonymous (Ericsson).

A worry among some of the case companies was that the Chinese would not have sufficient English language skills, as mentioned by, e.g., Mats Åhgren (ABB), and Anonymous (Ericsson). The English level is, however, improving in the coastal regions, whereas in the central and western parts of China, the language is still not very widespread. In the future, however, with English education from primary school, the Chinese are expected to become more proficient, reducing this problem to a minimum. Moreover, corruption is widespread within the Chinese business culture, which especially creates problems when dealing with, e.g., suppliers, and customs, but also with some Chinese staff members, that, according to some interviewees are not foreign to taking bribes (Stefan Ahlén, Hemtex). There is no easy permanent solution, but stricter control of Chinese employees is a temporary mitigation of the problem.

Another trait of the Chinese business culture, that has caused problems for the case companies is the lack of teamwork among Chinese employees, and the tendency to blame problems on others (Benny Mattsson, Autoliv). This unwillingness to stand out from the crowd and be different is reflected in Hofstede’s individualism dimension (cf. Section 4.3.5), where the Chinese have a more collectivism nature than the Swedish culture. This is a very real problem, and can be hard to overcome, since it is deeply rooted in the Chinese system and mindset. For now, it is probably best to accept that this is how most Chinese people are, and work onwards from that point.

Misunderstandings can also easily arise due to the fact that the Chinese usually answer “yes” to just about any question (Stefan Ahlén, Hemtex). This kind of problem can, however, rather easily be avoided if the European representatives are aware of this trait, and know how to handle it. When it comes to ways of managing a business there are differences between the Chinese and the European ideas of how it should be done (Anonymous, Ericsson). This corresponds with the Hofstede power distance dimension (cf. Section 4.3.5), where the Chinese have more respect (higher index) for a hierarchy and accept an authority more than Swedes do. If not handled
correctly, with clear guidelines and an established company philosophy, this could render the entire organization ineffective.

6.2.2 Legal and Political Risks

Generally, the case companies have not had any significant problem with the Chinese red tape, apart from IPR problems (discussed below). Ditar Isai (Nefab) mentions that they had first thought it would be a problem, but has shown later not to be. Some bureaucracy problems have, however, come up during the interviews; most prominent are problems with getting work permits for expatriates, as mentioned by Ericsson, but also a basic corrupted business environment, such as corrupted suppliers and employees (Stefan Ahlén, Hemtex). Another problem discussed by both Mats Åhgren (ABB) and Benny Mattsson (Autoliv) is the importance of having good customs relations in order to be able to smoothly import and export from and to China.

IPR has shown to be the single largest legal problem with establishing production in China. All the case companies have had problems relating to IP rights. Examples of these problems are:

- Autoliv has had their products illegally copied by Chinese companies (Benny Mattsson, Autoliv).
- Sandvik does not bring their proprietary production technology into China, to avoid it being copied (Svante Lindholm, Sandvik).
- Hemtex has been sold textile designs by Chinese firms that have belonged to others (Stefan Ahlén, Hemtex).

The IPR problems are severe and need to be addressed and solved before China really can be considered “the world’s factory floor” (cf. Section 4.1). The problem is, however, hard to solve since its solution would involve both significant changes in the legal and political systems in China, as well as a mental shift in the Chinese mind towards piracy and the right to own a design. This is something not easily achieved. With this risk in mind, however, it would be possible to create a working business environment in China, given that it will take some extra resources and, of course, time. The problematic IPR situation in China seems to be well known, as it is, e.g., treated by Dickinson (2006) in the Five Step Model presented in Section 4.4, and as cited in the theoretical framework, in Section 4.3.1. Since the accession into WTO, China has, however, made an overhaul of the regulations, implemented to improve the protection of the IPRs. It has committed to full compliance with the WTO agreement on “Trade-related Aspects of Intellectual Property” (TRIPS), but enforcement remains weak and with penalties frequently failing to be imposed, the impact of the agreement has so far been weak (The Economist, 2005).

6.2.3 Competitive Risks

Competition is intensive all over the world, and China is no different, and it may in some aspects be even fiercer (Ditar Isai, Nefab). None of the case companies say
they have any problems with competition, but if they had we are sure they would not have mentioned it, so the reliability of the answers to this question is rather low.

In China each department works independently, which causes problems with integration between them. This is especially true when it comes to R&D and production integration, which to, e.g., Autoliv is a competitive disadvantage (Benny Mattsson, Autoliv), as will be discussed in more detail below. This is also mentioned by Mats Åhgren (ABB).

6.2.4 Technological Risks

Half of our case companies have not had any problems with technology differences in China compared to Europe (Ericsson, Hemtex, and Autoliv). Nefab and ABB, however, both use simpler production technology in China than elsewhere in the world, and they utilize much more manual labor. Sandvik has chosen no to transfer any of their own developed production methods to China, due to fear of IPR problems (as discussed in Section 6.2.2 above), such as illegal copies in other factories. This technology limitation limits the productivity possible in Chinese factories, since the propriety technologies could have significantly improved the efficiency of the plants. The results obtained in technological risks are consistent with the ones presented in the theoretical framework, Section 4.3.3.

6.2.5 Quality Risks

All case companies except Sandvik have had quality issues with their products. Both Autoliv and Nefab mention the lack of quality assurance from Chinese suppliers. Hemtex has had quality losses due to misunderstandings. Anonymous (Ericsson) goes even further, saying that the Chinese do not have any sense of quality, and that a tight control system is the only way to keep the quality at a constant high level. Ditar Isai (Nefab) agrees that it is hard to keep up the quality level without constant control. One of the reasons for the problem of keeping the quality up is the lack of documentation and specification by the Chinese manufacturers, which makes it hard to have adequate quality control (Mats Åhgren, ABB), and (Stefan Ahlén, Hemtex).

An interesting comment comes from Stefan Ahlén (Hemtex) who says that the quality level of the products they had made in China was above their expectations. This is very different from all the other answers about Chinese quality. How can this be? One possibility is that they managed to get one of the few Chinese manufacturers that really did care and takes care of the quality, which would stress the breadth of different manufacturers in China. Another possibility would of course be that their initial quality expectations were low, but given that they have had production in both Southern and Eastern Europe, where quality is considered high, especially in the south, it is hard to imagine that they would demand less from their Chinese manufacturers.

All the representatives agree on the fact that you have to make the specifications clear to the Chinese and make sure they understand them, and the importance of
following them. For example, Mats Åhgren (ABB) says that, if the specifications are agreed upon and understood, the quality will be at the same level as in any European country. The importance of this point is stressed in, e.g., the practical advice given by Stefan Ahlén (Hemtex), in Chapter 5, where three out of five pieces of advice repeat this point.

None of our case companies has mentioned the potential “low quality” label of “Made in China”, as discussed in Section 4.3.4. This might indicate that China today, after all, not is that associated with low quality. That China in fact has started to grow up, being one of the major players in the world economy, comparable to any Western nation in production.

6.2.6 Other Risks
This category is intended to catch any specific problems the case companies might have had that is not covered by the above categories.

None of the representatives has mentioned any problems with transportation from China to Sweden. We believe this is due to that most companies that have production in China also sell most of their products within China. An exception is Hemtex that export all their products to Sweden. They have, however, not had any transportation problems. Stefan Ahlén (Hemtex) mentions further the risks of faulty packaging and marking, causing problems at arrival in Sweden.

6.3 Benefits
The main reason and benefit for outsourcing production to China, as stated by all the case companies, is to lower production and labor costs. A study presented in Bengtsson et al. (2005, p. 57) also shows that cost reduction still is the main reason for companies to outsource. Other important factors highlighted in the study are freeing resources, focusing on core activities, and gaining flexibility. There are, however, no clear connections between increased performance and outsourcing according to Bengtsson et al. (2005). Our empirical data does, however, not support this claim. It may well be that the representatives answering our questions do not have a full overview of the actual cost reductions correlated with the outsourcing, so these answers may not challenge this study after all. We have chosen not to dig deeper into this, since it is well outside the purpose of this thesis. Some of the case companies have, however, mentioned that the total cost for establishing production in China has been higher than expected (Mats Åhgren, ABB, and Ditar Isai, Nefab). This is the same benefit as given in the theoretical framework, Section 4.2, where lower wage cost is cited as one of the main benefits of outsourcing to China.

Another set of benefits with outsourcing to China is geographical, where the companies are close to the Chinese market and their Chinese customers (Nefab, Sandvik, Ericsson, ABB), and seen as a local business (Sandvik, Ericsson), which have resulted in increased competitiveness, and increased sales both in and out of China, and also the possibility to seal deals within China otherwise not possible
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(Ditar Isai, Nefab). These are rather unexpected benefits, especially since many interviewees have stressed them in hindsight as being among the most important benefits with their outsourcing decision. Why is that? Probably China has grown up compared to the China studied in more classical works, where the lowering costs, core focusing, and gaining of flexibility seems to be considered the most prominent benefits. China today has become a big and very important market in itself for international companies, where the presence is more about doing business than simply cutting costs for the Western companies by using “the world’s factory floor” (cf. Section 4.1.1). This corresponds well to what is discussed by Shine (2006), who says that lower labor costs is not everything in China, increased competitiveness is just as important.

Additional benefits mentioned by some of the companies were a shorter delivery time (Mats Åhgren, ABB), and a global presence (Ditar Isai, Nefab). Benny Mattsson (Autoliv) also discusses importance of having available raw materials within China, and the large costs associated with acquiring it from abroad if it is not available, which might overturn an otherwise healthy outsourcing investment. The raw material benefit is consistent with the benefits cited in Section 4.2, where China is said to be self-sufficient with raw materials to a great extent.

Core competence and focus on core has not been discussed as a benefit by any of our interviewees. We believe the reason for this is that they have all (except Hemtex) been present in China for some time. The benefit of focusing on core has perhaps faded as the operations in China have become the usual way of business in the company. Despite this, it is of course an important benefit to consider for a first time outsourcer. The benefit of labor availability, as cited in Section 4.2, has not been mentioned by any of the interviewees either. The reason might be that most companies have their factories in the coastal cities, where labor supply is not very different from any Western city. The availability of labor might also be thought of as natural, since this has been the case in China for a long time.

6.4 Model Comparisons
We discuss in this section how the three models by Hollensen (2001), Quélin and Duhamel (2003), and Harland et al. (2005) presented in Section 3.4, compare to our empirical data.

6.4.1 Comparison to Model 1
The model by Hollensen (2001) presented in Section 3.4.1 is very general, with broad risks and benefits that in a practical situation probably would be of very limited use. It is, however, a good point to start the discussion as it may work as a theoretical base for similar, more detailed, models, such as Model 2 and Model 3 discussed in Sections 6.4.2 and 6.4.3 below.
An example of the breadth of the risk categories discussed by Hollensen is one he calls “risk of socio-cultural distance”, i.e. cultural distance between the target country and the outsourcing country, which in turn is very similar to Hofstede’s work (Hofstede, 1980). This category is so broad that it serves merely as an introduction to the subject rather than giving any useful advice to anyone considering outsourcing. He also discusses the risk of entering a competitive market and the potential loss of profits due to fierce competition. As we have noted in the interviews, China is as competitive as any market, and some even say it is more fiercely competitive than some Western markets (Ditar Isai, Nefab). This would seem to contradict Hollensen’s recommendation to not enter highly competitive markets; however, with the phenomenal growth of the Chinese market, the cake is constantly growing, and making room for additional players.

Hollensen points out a couple of general benefits with outsourcing, such as low cost, high flexibility, and expansion of sales. These are all important factors, and are worth studying more closely. We do, however, feel that Hollensen does not fully penetrate the complexity of these benefits; he merely treats them as facts in his model. We will discuss them in more detail in the two following models below.

6.4.2 Comparison to Model 2
Quélin and Duhamel (2003) have presented a model with general risks and benefits, and have ironed out the most important such, presented in Section 3.4.2. Here we will discuss some of the risks and benefits presented by them in comparison with our findings.

Risk of dependence on service provider
This is mitigated if the provider is incorporated in the company, as a subsidiary company, such as being employed by most of the case companies, where its providers are part of the concern. For companies where the outsourcing is based solely on contracts with manufacturing third parties, such as with Hemtex, this risk is much more prominent. So the relevance of this risk category is very much connected to the context in which the outsourcing is taking place.

Risk of service provider’s deficient capabilities
This risk is also, according to our studies, mostly applicable for the first steps in outsourcing, where the outsourcer is using contract manufacturing (cf. Section 3.2) with a third party service provider. This is a major issue for Hemtex, where they have to identify the capabilities of the factories they are contracting, whereas for the larger companies, such as ABB, Sandvik, and Ericsson, they have more control over their businesses in China, often being wholly-owned subsidiaries.

Benefit of operational cost reduction
This has, in our case study, shown to be a very important reason for placing production in China for all of the case companies. This was of course an expected result from our part. According to most responses from the representatives, cost reduction due to less labor costs is just part of it; other important factors are
closeness to customers in China in terms of support and transportation, but also the
ability to make local deals that were otherwise not possible.

**Benefit of gaining flexibility**

None of our case companies have mentioned the increased flexibility as a major
benefit unprovoked. We are, however, sure that if they were asked the question
specifically they would certainly agree that it is important. However, judging from the
fact none has brought it up, it might be possible to argue that to outsource to China
today has more to do with being close to customers in China and reducing the
production costs by the geographical closeness, as pointed out as a major reason by
many of our interviewees, rather than purely adding flexibility to the Swedish
“mother company”.

**Evaluation of Model 2**

Judging from the risk stated in their model, the major risks identified by Quélin and
Duhamel are clearly aimed at smaller companies outsourcing through contracts with
local factories, not so much for larger companies using wholly-owned subsidiaries
(this is in itself odd since their empirical base has been larger companies, see Section
3.4.2). This is, however, in our opinion, an indication of the very specific context in
which these risks are intended to be used, which limits the generality of their use.
The importance of context when it comes to risks and benefits of outsourcing has
shown to be a significant finding in this study. Risks and benefits relevant to one
context may not have any value when considering to outsource in another context,
e.g., to another country or by contracts. This is an important point to keep in mind
with general risks and benefits models, such as the ones presented in Section 3.4.

**6.4.3 Comparison to Model 3**

Harland *et al.* (2005) have presented another model with general risks and benefits,
described briefly in Section 3.4.3. Here we will discuss some of the risks and benefits
presented by them in comparison with our findings.

They discuss the risk of difficulty to insource later. None of our representatives has,
however, even mentioned the insourcing issue. Why? All of our interviewees have
seemed very happy about their presence in China, and do not give any indication that
they will leave China any time soon. They all agree that China is an important
location and that the future lies in the East. So why would they be considering
insourcing?

Harland *et al.* (2005) also discuss problems with properly identifying the core. This
has not been discussed in any detail in our interviews, probably because these case
companies have been in China for some time now, and the decision of what to
outsource and the identification of the core activities are not as important anymore.
After having been present in China for so long, the subsidiaries in China have started
to develop their own core competence, which makes the discussion of core
competence of the mother company less important for them.
They also discuss loss of organizational competence and lack of skills to manage relationships. These are important areas to keep in mind, and have been touched by some of our interviewees, but we limit our discussion to the two points discussed above. The overall benefit of outsourcing, according to Harland et al. (2005), is an achieved economy of scale, which gives rise to cost reduction and increased flexibility, which is discussed under Model 2 above.

Evaluation of Model 3
This model does not correspond very well to our empirical data. One reason could again be a difference in context. If so, this would even more highlight the importance of contextualizing the risks and benefits before they are of any use. It may well be that general risks and benefits are of limited use when considering a specific outsourcing project. Instead, the only interesting models are the more specific, in terms of country and stage in the outsourcing process.

6.5 Risk Avoidance Model
Often risks and benefits models, such as those presented in Section 3.4, give broad categories without any real context in which these are relevant, as discussed above in Sections 6.4.2 and 6.4.3 and by Quélin and Duhamel (2003). It may be insufficient to just have a list of generic benefits and risks categories, indifferent to regional differences, to base a specific outsourcing decision on. In order to remedy this deficiency we formulate a model for a specific context in this section, which is meant as a guideline of how to avoid the risks perceived in this study and keep the benefits in the context of outsourcing production to China for larger Western European companies.

This model is mainly derived from the empirical data in the “practical advice” part of our interviews, i.e., Question Group C, question 10 (cf. Table 4 in Chapter 5), but it also draws from the risks and benefits answers in Question Groups A and B.

In the first part, Section 6.5.1, we develop the model, and in the following part, Section 6.5.2, we describe the dynamics (i.e. connections over time) between the components in the model, and in the final part, Section 6.5.3, we compare our model with the five step model presented in the theoretical framework (cf. Section 4.4.1).

6.5.1 Model Development
We have chosen to divide the model into two parts, one containing setup steps that are important for any initialization of an outsourcing investment, not just the first step, and the other containing continuous activities that are meant to be running in parallel with the normal business in order to secure smooth operations in China. The setup steps concentrate on strategies needed to startup a new investment and relations with Chinese partners, whereas the continuous activities are strategies to be kept in mind when operating in China and they point out critical factors that have to be constantly monitored, such as IP rights and government relations. The two parts
are each discussed and motivated below. A model figure showing the steps and activities and their interrelations is available in Chapter 7, Figure 12.

6.5.1.1 Setup Steps
From the “practical advice” given by the representatives, the following five setup steps have been identified as the most crucial to consider. They have been labeled from A to E for easy reference.

A. Have a long-term view and focus on total costs
A big problem with outsourcing, as is commented by Ditar Isai (Nefab), is the lack of considering long-term effects, and how it will affect the organization in the “mother company”. He does not recommend deciding to outsource only based on a wish to reduce costs (cf. discussion in Section 6.6.1). This problem has only been discussed by Ditar Isai, and not by any of the other representatives. Nonetheless, it is our belief, judging from the literature (e.g., Bengtsson et al., 2005), that this is a very important point to consider when deciding on an outsourcing investment, which is why it is included in the model. Mats Åhgren (ABB) touches on the subject as he stresses the need to focus on total costs, instead of on labor costs only. This is a sound approach, instead of throwing yourself into an outsourcing venture based on fantasy figures, which most certainly will make the investment a disappointment.

B. Make sure your demands are clear to the Chinese partners
It is important to make your demands and specification clear to the Chinese partners, as a misunderstanding often can lead to poor product quality or even faulty products (Stefan Ahlén, Hemtex). This is a crucial point when building relations with the Chinese production plants. This is, however, mostly true when you do not have your own organization in China, and thus are not able to constantly control the products, such as is the case with Hemtex, which is why Stefan Ahlén (Hemtex) stressed this as the most important step to remember (cf. Table 4, Chapter 5). Ditar Isai (Nefab) cements this by stating that it is necessary to ensure quality on your own and not to take anything for granted.

C. Get to know the Chinese ways and culture: be patient
Stefan Ahlén (Hemtex) brings up the subject of getting to know the Chinese ways and culture is the key to success in China. Benny Mattsson (Autoliv) suggests that the best way to do this is to hire local staff to cope with any culture differences. It is a strategy that has worked well for them. He also recommends hiring a good local lawyer to help with any local legal problems. The Chief Manager at Ericsson agreed with this and said that when they understood the Chinese culture their sales boosted.

Stefan Ahlén (Hemtex) goes on by stressing the need to be patient with the Chinese ways, since things are bound to take more time than initially expected. Ditar Isai (Nefab) concurs, saying it will most certainly consume more effort, time and resources than initially planned.
D. **Invest step-by-step**

Benny Mattsson (Autoliv) points out the need to invest step by step and to utilize the investments properly before rushing ahead. The needs will probably not be the same as were first expected, and huge initial investment decisions taken in Sweden will maybe not be as effective as first imagined. Svante Lindholm (Sandvik) provides us with same recommendation to not over-invest initially in terms of money.

E. **Have your own organization**

Ditar Isai (Nefab) recommends to set up an own organization in China, and not just place production without any supervision. Regarding expatriates, The Chief Manager at Ericsson suggests to use senior management that are used to work in China, and Stefan Ahlén (Hemtex) adds that this should be people you trust, probably Europeans.

### 6.5.1.2 Continuous Activities

The continuous activities have been identified as four major factors to consider, presented in the following. To keep from confusing the activities with the steps above, the labeling is continued, going from F to I, instead of starting from A again.

F. **Secure and control IPR**

In China IPRs do not exist as a concept and do not enjoy much legal protection (Chief Manager, Ericsson). So to bring IP into China can prove to cause significant damage, with piracy and illegal product copies as a consequence. All the representatives in our interviews agreed on that there is a serious IPR problem in China, and stressed by many as a big problem (e.g., Chief Manager, Ericsson). Sandvik does not even bring their own developed production technology to China due to the perceived high risk of unauthorized transfer of their technology (Svante Lindholm, Sandvik).

There are, however, ways to be able to bring IP into China and avoid being copied. The key factor is to be aware of the problem and take measures to protect the IPRs. This will, however, result in additional costs, bringing down the profit of the outsourcing venture, but will have to be a priority since to in order to be productive in China you have to bring knowledge (Benny Mattsson, Autoliv).

G. **Keep close control and contact with the local Chinese organization**

This is connected to having our own organization setup in China (as discussed under label E above), to easier being able to control and have contact with the production plants, which is essential to ensure quality (Ditar Isai, Nefab).

H. **Adapt to the Chinese administration**

The Chinese administration is notorious for its significant red tape. The advice is to get to know the Chinese administration (Stefan Ahlén, Hemtex), and adapt yourself to any changes, by building up a good relationship with the local government (Chief Manager, Ericsson). In addition, having good relations with the Chinese customs clearance makes everything take less time and at a lower cost. And if, despite the
efforts, the legal problems stack up it is ideal to have a good local lawyer that knows
the system (Benny Mattsson, Autoliv).

I. Have a system to retain staff
Another problem concerns the Chinese workforce and staff. As noted by many of
the representatives, the Chinese workers and managers are not very loyal to the
company they are working for. Sandvik has had a high turnover of personnel, which
was not foreseen by them, resulting in significant problems with keeping the
production running (Svante Lindholm, Sandvik). Hemtex had not foreseen the high
fluctuation of skilled personnel in China either, and the high level of disloyalty of
Chinese employees (Stefan Ahlén, Hemtex). Autoliv has had the same problem, with
finding and keeping good people (Benny Mattsson, Autoliv). Ericsson had had more
problems with retaining senior staff than workers. The Chief Manger at Ericsson
agrees that the Chinese workers are not at all loyal to a company, instead, as soon as
a Chinese employee has reached a senior level and is offered an attractive position,
he quits. Their solution was to use bounding systems, which in effect forced people
to stay (Anonymous, Ericsson).

6.5.2 Model Dynamics
The model as a figure is available in the conclusion, Figure 12. The model constitutes
the two main parts described above, the setup steps and the continuous activities. The
model also consists of a “set up” bubble (as shown in the middle in Figure 12),
which refers to an execution of changes or of a new investment, and a follow-up
arrow, to the right in the figure.

6.5.2.1 The Case of First-time Outsourcing
When considering outsourcing for the first time, the setup steps A to E (as shown in
the top square in Figure 12) are relevant to go through and to establish a solution to
counteract each of the risks. When all the steps A to E have been considered and
taken care of, and if the outsourcing investment is still looking profitable, it is time to
set up the investment in China, i.e. outsource production.

When the outsourcing has been completed, and the production is on the way, it is
time to observe the continuous risks, labeled continuous activities F to I (as shown in
the lower square in Figure 12). The activities are meant to run in parallel with the
normal business (either in the home country or in China), to monitor the IPR risks,
keeping control over the Chinese organization, continuously building the relations to
the Chinese government, and maintaining a system to retain the Chinese staff.

The continuous activities is a constant and active monitoring process, but every now
and then, e.g., every year or every month depending on business, it is crucial to make
follow-ups and thus going back to the setup steps (as indicated by the multiple thin
feedback arrows in Figure 12), and evaluate the current business to make sure the
solutions to the risks A-E is still effective. If not, changes have to be made, and
implemented, going through a “set up” of the changes, returning to the continuous activities, and the day-to-day monitoring.

6.5.2.2 The Case of an Extended Outsourcing

If production already is in place in China from an earlier outsourcing venture, we will be in the continuous activities square, monitoring the continuous risks. When making a new investment, e.g., a new outsourcing process or an extension of a current outsourcing venture in China, we take similar steps as when doing a follow-up, going back to the setup steps and considering the risks A to E for the new investment, and, if profitable, set it up as a part of the existing venture, coming back to the continuous activities.

6.5.3 Comparison with the Five Step Model

After having formulated a model with strategies to avoid the risks with outsourcing production to China, we compare it in this section to the five step model by Dickinson (2006) presented in the theoretical framework in Section 4.4 in order to find any similarities or differences.

The most obvious similarity is the focus on securing IPR, where label F in our model covers roughly the same points as the first and fourth suggestion in the five step model regarding the need to register the IPRs and know-how. Dickinson’s model, however, additionally stresses the fact to be registered both in the home country and in China. Then there is also the need to ensure quality, where Dickinson focuses on the need to wait with payment (third suggestion), whereas our model stresses the need for a control system and having an organization present in China (labels G, and E). The other similarity between the two models is the requirement to make sure the specifications and demands are clearly spelled out for the Chinese manufacturer, represented by label B in our model and the fifth suggestion in Dickinson’s model.

Apart from the similarities pointed out above, the model presented in this thesis gives a much broader cope of suggestions (such as labels I, H, D, and C), whereas the five step model mainly is focused on legal contracts and agreements, as well as about securing the IPRs. Given the somewhat different scopes of the models, there are striking similarities between them (such as the IPR and demand for clear contracts discussed above), and since the five step model is just the pick-of-the-bunch (cf. Section 4.4), it would indicate the importance of these areas for companies outsourcing production to China, as well as confirm the validity of our study.

6.6 Wider Problems

In this section we discuss other problems that may arise due to outsourcing in a wider perspective.
6.6.1 Is Outsourcing Paying Off?

Harland et al. (2005, p. 835) comment that outsourcing does not always perform in the long-run. They refer to a survey quoted in McIvor (2000) and Lonsdale (1999), where only five per cent of the companies reported having achieved any significant benefits from their outsourcing venture. How does this correspond to our empirical results? Have initial expectations been met with production outsourcing to China? Four out of our six case companies are satisfied with the performance of their production in China. Autoliv and ABB are the only companies not fully satisfied with their achieved result, and have not reached their initial goals with their presence in China. This is, according to Benny Mattson (Autoliv), mostly due to higher component costs than initially expected. He does, however, believe that the component costs will decrease in the future and make the venture more profitable. Mats Åhgren (ABB) says that the costs of the outsourcing venture has been higher than expected, since there are a lot of additional costs cancelling much of the benefits of lower wages. Our result obviously is very different from the one obtained in the survey quoted by Harland et al. (2005), since 67% of our companies are satisfied. The reason for this discrepancy is probably connected to the low reliability of the answers, i.e. what is “being satisfied”? Since this is not of primary interest for this study we have not dug deeper into this, since it could warrant a thesis on its own.

Some sort of answer to why so many are dissatisfied with their outsourcing venture can, however, be found in McIvor (2005, p. 63), who cites another study made by the American Management Association, where the results showed that three-quarters of the respondents reported that their outsourcing project had not met their expectations in terms of cost reductions, and some even had to bring back the activities in-house. McIvor suggests that most companies do not make a strategic evaluation of the long-term effects, but focus solely on short-term cost reduction, which might cause the outsourcing project to fail to live up to expectations. This explanation was also given by Ditar Isai (Nefab) (cf. Section 6.5.1.1).

6.6.2 Loss of R&D Synergy

One problem that can be significant with outsourcing production is the loss of integration between R&D and production units. Bengtsson et al. (2005, p. 23) discuss the loss of communication and feedback between production and product development due to outsourcing of production. They take the examples Scania, Siemens, and Sandvik Coromant, which have chosen to keep their production in Sweden. For these companies the solution has instead been to use increased automation, and look at the cost difference in the long-run and the all the costs, not just the short-run savings on labor cost, as Bengtsson et al. (2005) put it.

The usual truism about outsourcing is that production is outsourced to low-wage countries, and R&D is retained in the home country. However, Bengtsson et al. (2005, p. 68) show that outsourcing of production is often followed by an outsourcing of R&D, which contradicts this assertion. However, even with both R&D and
production in China, there are problems with integration between them according to our interviews. According to Benny Mattsson (Autoliv) departments in China work very independently, even though being part of a Swedish company, which creates integration problems. These problems are also confirmed by Mats Åhgren (ABB), as he stresses the problem with a gap in communication between R&D and production, which can have significant repercussions on productivity.

The problem could be eliminated if sufficient resources were given to ensure proper communication between R&D and production, so that the new products being developed are possible to produce and can be done at the lowest possible cost. This, however, adds to the total cost of the outsourcing venture, making it less profitable.

Another potentially serious problem related to this integration, is that companies may choose to move R&D as well to a foreign location to mitigate this problem, creating an “R&D floor of the world” (compare Section 4.1.1). This could threat the Western nations, leaving them without both production and R&D. This leads us into the next section, how outsourcing affects the outsourcing societies.

6.6.3 Impact on Society

There are not only problems associated with the outsourcer itself; the outsourcing phenomenon might also affect the society as a whole. Obviously, outsourcing production moves jobs out of the country, and the bulk of these jobs are usually low qualified, which can, if not counteracted properly, lead to increased unemployment in the outsourcing country.

One might ask how many production jobs in Sweden that actually is lost due to international outsourcing. Bengtsson et al. (2005) provide us with the figure of 6000 lost jobs in the last three years (as of 2005), most of which have been transferred to low-wage countries, such as China, India, and Eastern Europe. The figure is based on a survey among larger Swedish manufacturing companies (with more than 50 employees). According to another study by The Confederation of Swedish Enterprise (Svenskt Näringsliv) in 2005, the amount of lost employments in Sweden due to outsourcing is 1.5 times higher through indirect outsourcing than direct outsourcing, which highlights the importance to consider the indirect effects of suppliers’ shifts, as in the case of Hemtex, which potentially could have utilized a Swedish subcontractor for production.

Apart from direct and indirect job losses, such as the ones discussed above, there is also a significant part of new investments that are made directly in foreign countries (Bengtsson et al., 2005). It is our belief that this might be the biggest threat when it comes to job losses in Sweden in the long term. The money earned is not reinvested in Sweden, but rather abroad, which might stall the development in Sweden, seen in a long-term perspective.
7 Conclusions

In this chapter we summarize the results reached in the analysis in the previous chapter. In the first section general conclusions are summarized. The second presents an overview of the risks and benefits identified, as discussed in Sections 6.2, and 6.3, followed by a summary of the risk avoidance model developed in Section 6.5. In the next section, we evaluate our work from a critical viewpoint. The final section provides some suggestions for future research in the area.

7.1 General Conclusions

In this section we summarize some of the general conclusions we have drawn about outsourcing production to China, as discussed in Chapter 6.

7.1.1 The Dilemma of Outsourcing

As Bengtsson et al. (2005) put it, outsourcing is a dilemma and it is about choice. This is a very true conclusion, since there is always going to be risks associated with outsourcing production no matter how well prepared you are. You have both benefits and drawbacks, and you have evaluate if the benefits are more worth than the drawbacks. The McKinsey model in Section 3.3 illustrates this choice, but in a more limited context, where lower wage cost is the benefit and customer adaptation, delivery time, etc. are the risks. The model itself is of course of limited use as it is, being very simple, but it serves a purpose by highlighting this choice very clearly. One could think of a more accurate model, which consists of several of these McKinsey matrices, plotting each risk against each benefit. The bottom line, however, is that outsourcing is about a choice, a choice between getting the benefits and having to cope with the risks, or not getting the benefits and being free of the risks. The model developed in Chapter 6 to help those going with the first alternative is summarized in Section 0. The risks and benefits identified in this study are summarized in Section 7.2 below.

7.1.2 Importance of Context

The importance of context of the risks and benefits has become evident during the course of this study (as discussed in Sections 6.4.2 and 6.4.3). It is important to use the right set of risks in the right context. General risks and benefits models are of limited use if they have identified their risks and benefits in another context (other country, other stage in outsourcing) than the one they are being used in. However,
they are worth considering, even if in the wrong context, as they provide an overview of possible risks. It might be tempting to use and generalize these models, but, if doing so, it is important to keep the importance of context in mind, since these models may not give you all the risks in your specific context. The best approach, as always, is to employ several models, and compare their suggestions, complemented with field studies, to form your own opinion about the risks at hand. This conclusion is backed up in the analysis in this study, where none of the general risks and benefits models (cf. Section 6.4), turned out not to provide much useful advice for a manufacturing company outsourcing production to China.

7.1.3 China has Grown Up

China seems to have grown up according to our study (cf. Section 6.3). The Chinese market is just as competitive as any Western market, especially the coastal areas, where the resemblance to European and US cities is clear. The virgin, however, still partially exists in the more remote areas in central and western China, where people are screaming for work and the exploitation of labor to ultra low wages still is possible. There will not be long, however, until these areas are just as westernized judging from the current growth in China. If radical cost-cutting is the goal, perhaps soon it is time to start looking elsewhere.

7.2 Risks and Benefits with Outsourcing Production to China

This study of six case companies has resulted in an identification of major risks and benefits with outsourcing production to China. In the following we present these risks and benefits in summarized listings (cf. Sections 6.2 and 6.3 for discussion).

7.2.1 Risks

These are the major risks identified in this study:

- Difficulty to find qualified local staff
- Loss of quality control
- Incomplete protection of IP rights
- Chinese employees disloyal to the company
- Difficulty to transfer knowledge

7.2.2 Benefits

These are the major benefits identified in this study:

- Low-cost labor
- Low-cost production
- Gain flexibility
- Improvement of efficiency
- Close to customers and local market
- Raw material availability
Figure 12 The risk avoidance model developed in Chapter 6
The model consists of four parts: 1) Setup steps, the upper square, where entry risks are presented, details in Section 6.5.1.1, 2) Set up, central bubble, where, if the outsourcing is profitable, the venture is executed, 3) Continuous activities, the lower square, where continuous risks are presented, details in Section 6.5.1.2, 4) Follow-ups, the feedback arrow, which is utilized when considering an extension of a current outsourcing venture or a regular follow-up.
7.3 Avoiding the Risks and Keeping the Benefits

This is a model of risks to avoid when outsourcing production to China, which is based on the “practical advice” given by the interviewees. The model is depicted in Figure 12. The context is mainly larger Western companies, but could also be used by medium companies. The development of the model is presented in Section 6.5.1, and the dynamics in Section 6.5.2. The four components of the model are (as given in Figure 12):

1. **Setup steps** (the upper square), where set up risks A to E are presented, with details in Section 6.5.1.1.
2. **Set up** (central bubble), where, if the outsourcing is profitable, the venture is executed, considering the set up risks.
3. **Continuous activities** (the lower square), where continuous risks F to I are presented, with details in Section 6.5.1.2.
4. **Follow-ups** (the feedback arrow), which is utilized when considering an extension of a current outsourcing venture or making a regular follow-up.

7.4 Critique of Study

Since we have been using a qualitative method as our research method, conducting interviews through e-mails and in-depth telephone interviews, there are subjective and perceptive artifacts from the interviewers (basically, “how we have interpreted the responses”), which cannot easily be avoided using this kind of research method. That is to say the qualitative results are to a large extent based on our own perception and understanding of what is important and meaningful for our study. The findings from interviewing a person will never reach as high validity and reliability as a quantitative study does. However, since we are studying a social phenomenon, which is constantly changing and is irreversibly intermixed with other social phenomena, it is close to impossible to freeze the situation and study the phenomenon in isolation, as would have been required utilizing a quantitative method.

Furthermore, using a qualitative research, the results are not easy to generalize properly outside the situation we have been studying. The results can, however, be generalized or transferred with caution in mind, understanding that the empirical data used as a base for the results only comes through a few unstructured interviews and since the population of case companies in the study is rather low, where the chosen interviewees cannot be regarded as representatives for the entire population, as well as that the representatives do not have a perfect knowledge of the world and of all conflicts that have taken place in the company, and are thus probably not able to convey all the risks that are actually there.

As with all qualitative studies, the reliability of the empirical data may be rather low, since the answers given by the interviewed representatives would likely not be exactly the same if we asked them again in a year’s time or even the following week. It is hard for the representative to think of all the things that have gone wrong during the
short time of an ordinary interview, which might have resulted in not all problems being mentioned. We are sure that if the representatives would read through what the other representatives have answered, they would have concurred with most answers at least to some degree. This is why the technique of the e-mail questions and the follow-up telephone interviews we have utilized during this study have proven to be a good method to conduct long distance interviews, improving the reliability of the answers somewhat. It has given time to the representatives to think over their answers over the slower e-mail communication, and then followed up by a telephone interview, with the e-mail answer at hand. Ideally, a video conferencing system would have been the best possible solution, but with the lack of any unified system, the setup of such a system would have required significant effort on the side of the interviewee. Of course, it would have been even more beneficial if we had had the funds to go to China and conduct the interviews face-to-face, which might have produced even more detailed empirical data. In hindsight, however, we believe that the loss due to this is minimal, since most telephone interviews provided little extra information beyond the e-mail answers. Given this, it is only fair to assume that, having met face-to-face would not have changed the answers very much, they might just have been a tad more detailed and put more into context as we would have been able to see their operations as well. As stated above, the only reason we did not perform face-to-face interviews was the lack of funds to go to China.

7.5 Suggestions for Future Research
Here we present some interesting areas that are worth further study, which have not been covered in this study.

- In this study, we have only briefly touched on the cultural problems related to outsourcing. Further study is needed to compare Sweden/Western Europe and China with the Hofstede dimensions, but also more recent cultural theories in an outsourcing context. This could be a fruitful area to investigate further.
- We have not focused on the entry modes of outsourcing, so it should be of interest to investigate the entry steps when outsourcing from Sweden/Western Europe to China, such as studying the make-or-buy decision, which is usually the first and most decisive step in outsourcing.
- Further questions that have arisen during this study are whether outsourcing is paying off at all, and whether outsourcing is worth the effort. Studying these with a quantitative method and a larger population could be interesting.
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**Other Resources**


**Interviews**

Svante Lindholm (Sandvik), April 12, 2006

Ditar Isai (Nefab), April 22, 2006

Benny Mattsson (Autoliv), April 23, 2006

Stefan Ahlén (Hemtex), April 24, 2006

Chief Manager, anonymous (Ericsson), May 1, 2006

Mats Åhgren (ABB), May 4, 2006

Prof. Fu Tiehua (Shanghai Fu Dan University, China), May 21, 2006
Appendix

Appendix A: Company Overviews
In this appendix an overview is given of each of case companies: Nefab, Autoliv, Sandvik, Hemtex, Ericsson, and ABB.

Nefab Company Overview
Nefab is a global company of Swedish origin present in the world’s key industrial regions, most notable for this thesis is their presence in China. The core business is complete packaging solutions. The primary market segments are in the telecom and automotive industries, with focus on multinational companies manufacturing high-value, transport sensitive or theft-prone products. The company was established in 1949 and has, as of 2006, 1,133 employees all over the world. The headquarters are in Jönköping, Sweden. The total sales in 2003 amounted to slightly above $125 millions. The company is listed on the Stockholm Stock Exchange (Nefab, 2006).

Autoliv Company Overview
Autoliv is a world-wide leader in automotive safety based in Sweden. The products and services are for example seat belts, airbags, high-technology safety systems as well as crash tests. The customers are all the leading automobile manufacturers in the world. The biggest markets are in Europe and North America, representing 80% of the sales. Autoliv has approximately between 30% and 50% of total automotive safety market share, depending on area. The company has 80 manufacturing subsidiaries and joint ventures in a total of 30 countries all over the world, and employs 38,900 people globally, and total sales of over $6 billions.

The company’s manufacturing strategy is to produce component in relatively few locations to reach economies of scale, while assembly plants are located close to the customers to enable just-in-time delivery. Autoliv’s production lines and equipment are developed by Autoliv itself and produced by its manufacturing machinery company Autoliv Automation. To reduce costs Autoliv has recently moved and started to allocate production to low labor-cost countries, such as China, which has resulted in a shift in headcount in such countries, from 10% four years ago to 35%
today. The company is listed on the New York Stock Exchange and the Stockholm Stock Exchange (Autoliv, 2006).

**Sandvik Company Overview**

Sandvik is a high-tech engineering group with advanced tooling products. The company is in a world-leading position within selected areas in 130 countries. Its annual sales are approximately SEK 63 billions. Sandvik regards the world as their home market, and the Chinese market is one of the ten largest markets in 2005. The Sandvik Group conducts operations within three core areas: Sandvik Tooling, Sandvik Mining and Construction, and Sandvik Materials Technology.

The mission of Sandvik is to be the first choice of supplier and to provide the best possible value for its stakeholders, i.e. customers, shareholders, and employees. The business concept is to work close to the customer as a partner. The Asian business was the part of the world that during 2005 posted the strongest industrial growth for the company. The strong growth continues in, e.g., China, India, and Taiwan. The Chinese business reported strong industrial growth throughout the year, reaching 16% (Sandvik, 2006).

**Hemtex Company Overview**

Hemtex is the leading Nordic home textile retail chain store, with a total of 153 stores, of which 122 are located in Sweden, 22 in Finland, 8 in Denmark, and 1 in Norway. Under a common brand the stores sell home interior decorations products with a focus on home textiles. Sales in the consumer operations amount to SEK 1.3 billions annually. During the period February 2005 – January 2006, the Hemtex Group’s sales amounted to SEK 1.1 billions.

Hemtex business concept is to sell contemporary home furnishing products that offer value for money in order to attract more customers. Hemtex’s overall goal is partly to remain the leading position and most successful chain stores in the retail industry, and partly to show a good growth of sales and profitability. The financial goal is to have an annual average turnover growth with 10% and have a business margin exceeding 12% (Hemtex, 2006).

**Ericsson Company Overview**

Ericsson is a world-leading provider of telecommunications equipment and related services to mobile and fixed network operators globally. Its core values are professionalism, respect and perseverance. Ericsson invests heavily in R&D and this reflects its ongoing commitment to technological leadership, and has one of the most comprehensive intellectual property portfolio in the industry containing over 20,000 patents. In addition, over 1,000 networks in 140 countries utilize its network equipment and 40% of all mobile calls are made through Ericsson systems. Ericsson is one of the few companies worldwide that can offer end-to-end solutions for all major mobile communication standards (Ericsson, 2006).
ABB Company Overview

ABB is a global leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The company has 105,000 employees in around 100 countries. Its technology leadership, global presence, and application knowledge provide customers with systems, solution and services which improve their operations and productivity.

Focusing on its core competence ABB strives for organic profitable growth. The company is present globally. The customers can either buy products directly from ABB, or through distributors, wholesalers, or other partners (ABB, 2006).
Appendix B: Questionnaire

This questionnaire contains the questions asked to the interviewees, and forms the empirical base of our study.

**Research Questionnaire:**

Risks and Benefits of Outsourcing Production to China

**Question Group A: Risks**

1. What types of risks had you expected to encounter when moving production to China?
   
   Answer:

2. Have you encountered any of the following problems when placing production in China?

   *We are especially interested in problems that have grown with time or problems that at first were significant but have subsided with time (i.e. have been overcome to some degree). If so, please specify.*

   **2.1. Cultural**
   
   Problems in dealing with the Chinese and the Chinese culture.

   Answer:

   **2.2. Legal/political**
   
   Any problems with differences in legal system, unstable political system, etc., fraud, bribes.

   Any problems with intellectual property rights (IPR).
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<tr>
<th>2.3. Competitive</th>
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<tbody>
<tr>
<td><em>E.g.: Loss of competitive advantage, any problems with competitors. Loss of integration between R&amp;D and production.</em></td>
</tr>
<tr>
<td>Answer:</td>
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<th>2.4. Technological</th>
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<tr>
<td><em>Differences in production technology.</em></td>
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<td>Answer:</td>
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<th>2.5. Quality</th>
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<td><em>E.g. loss of quality.</em></td>
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<td>Answer:</td>
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<th>2.6. Other</th>
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<td><em>Anything not mentioned above. E.g. transport problems.</em></td>
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<td>Answer:</td>
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<tr>
<th>3. What types of risks did you meet that you had <em>not foreseen</em>?</th>
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<tr>
<td>Answer:</td>
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</table>
4. What turned out to be the single largest risk/drawback, in hindsight?
Answer:

5. What types of benefits had you *expected* to gain from moving production to China?
Answer:

6. What types of benefits did you get that you had *not foreseen*?
Answer:

7. What turned out to be the single most important benefit, in hindsight?
Answer:
Question Group C: Summary and Practical Advice

8. Has the outsourcing of production to China met your initial expectations?
   Answer:

9. What, in the end, was the major reason that made your company decide to move the production to China?
   Answer:

10. If you were to give five pieces of practical advice to a company that is planning to outsource production to China, what would that be?
    Answer:
    1)
    2)
    3)
    4)
    5)