Faculty of Education and Economic Studies  
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A Case of Combining Sustainable Quality with Cost Reduction through Outsourcing

- Ergorapido of Electrolux produced in the PRC

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ABSTRACT

Title: A Case of Combining Sustainable Quality with Cost Reduction through Outsourcing– Ergorapido of Electrolux produced in the PRC

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Aim: Combining Sustainable Quality with Cost Reduction through Outsourcing, according to the case study of Electrolux’s outsourcing

Method: Case study and in investigate

Result & Conclusions: Outsourcing has reduced the cost of production for Electrolux, while on the other hand, it retained the high-quality standard that Electrolux guarantee for their products. The low-cost outsourcing options in China assist in giving competitive advantage to enterprises in Sweden.

Suggestions for future research: Almost all appliance manufacturers who can afford to outsource are facing the same business climate which consists of higher production costs, and higher employee dismissal costs in Sweden. The study reviews Electrolux, the second largest appliance manufacturer in the world. Therefore, for further study purposes, it is important to explore how small and medium-sized enterprises keep the balance between low-cost and high-quality through outsourcing.

Contribution of the thesis: We hope our research is helpful for small and medium-sized enterprises in Sweden.

Key words: Outsourcing; Sustainable Quality; Cost Reduction; Sweden; China.
Abstract

With the development of the economy in today’s business world, competitiveness became more important than ever before in every sector. How to keep advantages during global trade and survive the strong competitive environment has become an issue which multinational enterprises also have to face. Outsourcing occurred under these circumstances. This study has integrated outsourcing theories and the empirical study aims to analyse the method and strategy to combining sustainable quality with cost reduction through outsourcing.

This study was done in the context of outsourcing from Sweden to China. Ergorapido of Electrolux is the example-case study used to investigate methods in both cost reduction and quality control. The data was collected by questionnaires, interviews and tele-conference interviews. The paper found that outsourcing has three stages. The first stage is the assessment of the motivations and risks associated with the process of outsourcing. The second stage is the decision making process involved in outsourcing and the arrangement of the outsourcing. The third stage is the management of the relationship with suppliers. Furthermore, both of the participants can benefit from outsourcing no matter whether it is the OEM supplier or the outsourced supply company.

Electrolux is a famous company which is successful as a result of outsourcing. All Swedish share enterprises, whether small, medium or large, share the same domestic and international trade climate. If Electrolux can successfully outsource on a global basis, so can they.

Key words: Outsourcing; Sustainable Quality; Cost Reduction; Sweden; China.
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1. Introduction

1.1 Background

In today's business world, competitiveness is getting tougher resulting from customers expecting more than before, and business becoming more de-regulated and global. In other words, companies have to face increasing problems in many aspects of their business processes. To survive in this ever-changing business environment, companies try to improve their competitiveness through a variety of methods, of which outsourcing is one. McIvor (2005) stated that outsourcing has become a key issue for many organizations (P1). Outsourcing is not a new concept and has been discussed since the beginning of the 20th century (Enarsson, 2006). After World War II, there was a trend toward integration both horizontally and vertically, and this trend peaked during the 1970s as companies became conglomerates. With the development of the economy in the late of 20th century, market forces drove companies to focus on their core business. This meant that a firm could either outsource its primary supply chain by determining the firm’s level of vertical integration, or alternatively by outsourcing its support activities; or both (Enarsson, 2006, cited in Lonsdale, Cox, 2000).

The reason why companies need to trade has been presented in many theoretical systems. Adam Smith stated that if one country can supply another with a commodity cheaper, then the buyer should proceed to purchase at the low price.

This simple but classical principle shows the typical motivation for outsourcing. If firms can produce some part of the goods at a lower cost than in other countries, and correspondingly if it is possible for us to purchase other parts of the goods at a lower cost from foreign countries it is clear that it would be best for us to trade our relatively cheaper goods for their relatively cheaper goods. In this way, both countries can gain from trade.

Enarsson stated that globalization can mean both increasing and decreasing the number of available jobs in the country (p51). It depends on the situation of the participating countries. Related to the general outsourcing condition around the world, a developed country means a country that companies outsource to (Enarsson, 2006).
The most significant market development is matching supply and demand. For instance, the development of transportation and information technology, makes it possible to integrate resource in different countries or areas. In addition, as a consequence, many organizations emerged, such as WTO (World Trade Organization), which was founded in 1995 as a successor to the GATT (General Agreements on Tariffs and Trade, which had been the basis for the Multilateral Trading System for about 50 years). Then there is the EU (European Union), ICC-CAPA (International Chamber of Commerce Commission on Asia and Pacific Affairs), IDO (Organization for Economic Cooperation and Development), ICA (International Commodity Association), ICA (International Co-operative Alliance), and APEC (Asia-Pacific Economic Cooperation).

This study focuses on how to make low-cost decisions and keep quality high through the outsourcing process. Ergorapido’s, an Electrolux product, achieved this and act as a good example for small-and-medium-sized enterprises in small appliance industry in Sweden which has the same requirement for outsourcing. This paper may help them to some extent.

1.2 Research objectives

The study concerns cost reduction through the process of outsourcing. It uses the Electrolux group product known as Ergorapido to explain the special significance in

<table>
<thead>
<tr>
<th>Developed countries</th>
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<tr>
<td>• More jobs</td>
<td>• Economies of scale</td>
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<td>• Increased economy</td>
<td>• Openness</td>
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<tr>
<td>• Cultural interchange</td>
<td>• Increasing employment</td>
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<tr>
<td>• More products</td>
<td>• Standardized products</td>
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<tr>
<td>• Focus on core competence</td>
<td>• Higher tax incomes</td>
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<td>• Growing companies provide benefit to the home countries</td>
<td>• Spread of democracy</td>
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<td>• Trade liberalisation trend</td>
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<td>• Improved technology and quality standards</td>
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<td>• Foreign investment</td>
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<td>• Etc.</td>
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Table 1.1: Advantages of outsourcing for developed and developing countries
each stage of the supply chain. Depending on the objective we designed, we will try to answer the questions as follows:

● **What is it?**
  -- What is the scope and aim of enterprise outsourcing?
  -- What are the motivations and risks of outsourcing?
  -- What strategies does Electrolux utilize to balance low cost against high quality through outsourcing?

● **How to manage it?**
  -- How many factors should be taken into account while making the outsourcing decision? What are they?
  -- How to run cost-quality strategies through outsourcing?
  -- What are Electrolux’s strategies in cost-quality issues through outsourcing?

● **Evaluations.**

Irrespective of the size of appliance manufacturers in Sweden, if they can afford to outsource, they all face the same business climate as Electrolux, which currently consists of higher production costs and higher costs in the event of firing an employee (China Economic Net, 2008). If Electrolux can successfully outsourcing and keeping balance between low-cost and high-quality, so can medium size manufacturers.

### 1.3 Problems

Although it is convenient to outsource in today’s business world, it is also hard to ignore the pitfalls of outsourcing. As a typical example, TOYOTA had to recall several types of car in the early 2010s and in total recalled more than 8 million cars. This exceeded their total sales in 2009 of 6.98 million cars. This decreased Japan’s GDP by 0.12% (Yong Su, 2010). As TOYOTA accelerated it is expansion to compete with GE AMERICA, this lead to a negative situation where TOYOTA had to outsource more and more spare parts. It was stated that one of the disadvantages of
outsourcing is supplier failure” (Thinking made easy, 2009). To some extent, a failing supplier is equated to the failure of a company.

In this case, suppliers become TOYOTA’s main risk, consisting of both quality problems and supplier management agencies. It is a reminder that outsourcing companies should not focus on low-cost but keep an eye on high quality, and it also means companies should improve skills while outsourcing.

1.4 Limitation

In outsourcing, the OEM company and the supplier are equally important. Although much useful information about outsourcing to China was obtained from Electrolux as the OEM company, data related to outsourcing from a Chinese suppliers perspective is limited.

The first primary data was collected through questionnaire interviews and telephone interviews.

1.5 Suggestions for future study

Almost all appliance manufacturers who can afford to outsource are facing the same business climate which consists of higher production costs, and higher employee dismissal costs in Sweden. The study reviews Electrolux, the second largest appliance manufacturer in the world. Therefore, for further study purposes, it is important to explore how small and medium-sized enterprises keep the balance between low-cost and high-quality through outsourcing.
2 Theory

2.1 Concept of outsourcing

There are many different ways to define outsourcing. The concept concerns not only different actors, but also different processes. Laabs states that outsourcing is when an external supplier is contracted to supply a service normally performed in-house (Laabs, c. 1997). Outsourcing is dependent on a company’s strengths, and a small company cannot integrate resources as widely as a big company (Embleton and Wright, 1998). It’s also different when outsourcing a small product as opposed to and an entire production process.

Historically, the common idea of outsourcing has been identified as a simple decision model of make-or-buy, where a brand owners concern is about reducing cost and finding the cheapest alternative to widen the profit zone (Enarsson, 2008). The reasons for this is the circumscribed transportation and information transfer, which leads to a common action that companies use to sign a contract with next door companies. Nowadays, with the development of information and transportation technologies, international co-operation among different countries and areas has become possible (Skjott-Larsen, 2000).

Generally outsourcing can be divided into two parts, primary and secondary outsourcing. Primary outsourcing means that the actions adopted by a firm may add value to the products directly, and a firm’s decision to make-or-buy should be considered in this process. On the other hand, the firm has to know that they are competent at keeping valuable resources and protecting their core know-how. The actions which do not add value to the products but make a contribution to the functionality of the firm is called secondary outsourcing, such as a service company or a manufacturing company outsourcing their service department (Enarsson, 2008).

In a word, the closest definition of today’s outsourcing should be Mark’s (2005) definition which states quite simply that if you are not doing it yourself it is outsourced.
2.2 Motivations and risks for outsourcing

2.2.1 Motivations of outsourcing

There are three major reasons for outsourcing, cost, strategy and politics. The first two usually apply to private companies and the third to public organizations (Kakabadse and Kakabadse, 2000a; Kremic, Tukel and Walter O., 2006). Although each of these three categories has standalone characteristics, outsourcing activities are likely involved in more than one factor. For example, in China, Electrolux adopts elements of outsourcing activity from both cost and strategy.

Each of the above three categories is described in the following sub-sections.

Cost-driven outsourcing

Obviously, outsourcing can reduce both direct and indirect costs. The most vital and primary characteristic of outsourcing has shown that outsourcing can free up assets and reduce costs in the immediate financial period (Lamming and Walker, 2005).

Theoretically, outsourcing for cost reasons can occur when suppliers’ costs are low enough that even with added overheads, profit, and transaction costs suppliers can still deliver a service at a lower price (Harler, 2000; Kremic, Tukel and Walter O. Rom, 2006). Clients believe a staff decrease points to a significant cost reduction (Gonzalez, Gasco and Llopis, 2010). As Bryson and Ngwenyama noted, that that the potential for cost saving has led many senior managers to enter into various types of contracts with vendors (2000). Compared with a company doing everything itself, outsourcing activities may support a firm in saving money on capital expenditure and operating expenditure in order to invest in core competencies.

In modern society, industries have been segmented a lot more than before, so most external resources can be integrated effectively and it is often cheaper for a company to do it themselves. However, those suppliers who can realize economies of scale prefer to offer outsourced solutions (Fedex, 2010).

Strategy-driven outsourcing

For the outsourcing company outsourcing is a strategic change which has to be considered. This means that reviews and revisions have to be on the agenda. Market forces may lead companies to outsource everything except their core competences.
(Gupta and Gupta, 1992). Outsourcing gives companies more time and energy to pay attention to their core business (Willcocks et al., 2006). Traditionally the main motivation for outsourcing has been defined as a cost issue, but due to fierce competition in recent years, the main drive has been shifted from a cost to a strategy issue. The literatures also discusses outsourcing as a strategy, particularly as it can improve business performance in various dimensions. Competitors are mainly encounter on the basis of core competency and flexibility (Wright, 2001). Consequently resources integration should be directed at core functions of the firms where the greatest impact will be achieved (Kremic, Tukel and Walter O. Rom, 2006).

Although resource utilisation issues is a core competence, other strategy functions such as restructuring, developing technology, rapid competitiveness, and the greater flexibility capability requirement for a company to manage swings must be taken into account (Lankford and Parsa, 1999; Large, 1999, Kakabadse and Kakabadse, 2000a). According to strategy-driven outsourcing, flexibility has become an important driver in a company’s strategy, from both a scale perspective as well as scope of product perspective (Kremic and Tukel and Walter O., 2006). Firms can similarly use outsourcing as a strategy to achieve flexibility during a restructuring or reorganization process (Gonzalez, Gasco and Llopis, 2010).

Outsourcing may be a vital strategy as part of an organization’s risk mitigation strategy, by sharing the risk with suppliers. In this sense, outsourcing partnerships are so important that they will impact on an organization’s ability to deliver a world-class performance.

**Politically-driven outsourcing**

Government regulations heavily influence national outsourcing and sourcing decisions. Different legal standards in different countries may bring problems to OEM companies if they are unknown. These trade policies depend on each nation’s government or the rules of the trade zones, in which they are resident, or party to. These are governmental actions, which directly aim to influence the volume of trade imported or exported. In order to interfere in foreign trade so as to protect domestic industry, the following instruments are commonly used to a varying degree (Bassler, 2001):
Tariff policy is a tax imposed on imported goods. This is the simplest form of trade policy. In this way, government revenue is created (Enarsson, 2006).

Quotas. Put means limitations on the quantity of imports and exports.

Other non-tariff trade barriers. These kind of barriers are often restrictions or impediments in the administrative area that restrict imports, without doing so formally. They just make it difficult to do business, and thereby slow the process down.

Voluntary export restraints means quotas on trade are imposed by the exporting country instead of the importers. Actually, it is normally not voluntarily, but a consequence of governmental pressure within the importing country.

Dumping occurs when any article is exported from one country to another at less than its normal value, or below the average cost of production. The importing country’s government may then impose an anti-dumping duty on these imports.

Keller (2001) stated that trade in intermediate goods is one of the important channels for transmission of technology to developing countries and the easiest way to benefit from technological spillovers, and that allows for an increase in total factor productivity (Somwaru, Tuan, Gehlhar, Diao & Langley, 2007, cited in Coe and Helpman, 1995; Coe, Helpman, and Hoffmaister, 1995; Keller, 2001). China is a country which can exploit effective protection policies that are involved in a reduction of tariffs on intermediate goods while the effective rate on the final cargo increases.

### 2.2.2 Risks of outsourcing

*Additional costs in outsourcing*

Although organizations may make the decision to outsource as a result of cost issues, there is guarantee that the expected cost saving will be achieved (Kremic, Tukel and Walter O. Rom, 2006). There are some further costs that could be experienced, such as contract performance cost, oversight cost, intangibles and transition cost and social cost. Contractors are at times less willing to pay the fees for the education and development of employees. Contractors prefer to support larger companies that are
facing greater risks in respect of quality of products and brand reputation. Consequently, the mainly risk is that expected savings in cost may not be realized, yet they still have to face the risks associated with product quality. However, the issues in respect of outsourcing on the basis of costs savings have are not been fully understood, and the relationship between the two may be more complex than expected.

The Total Cost of Ownership (TCO) has been described in different forms for a considerable number of years. Ellram and Seigerd created the TCO model for obtaining better information on recessive cost. The TCO model helps companies to identify potential costs and manage them.

![TCO Model Diagram]

Table 2.1, *Purchasing activities as a contribution to Total Cost of Ownership*

*Source: Ellram, Seiferd, 1993*

According to this table, *quality* includes costs for the choice and confirmation of supplier, the valuation of the supplier’s performance, the understanding of the supplier’s process, and for maintaining relations with the supplier. *Delivery* includes costs such as accepting part of a delivery, the processing of late orders, and arrangements for dealing with both correct and incorrect orders. *Management* includes the costs of creating purchasing strategies that are consistent with the company’s mission. *Service* costs include the installation and maintenance of equipment to meet the customers’ needs desires. The *communication* is costs incurred in communicating with their suppliers, in respect of e-mail, fax, telephone and EDI, and the maintenance of the information system for the purchasing of goods and service. The costs *price* includes parameters in the contract which burden the purchasing company’s costs, which include quality, quantity, delivery terms, freight
costs, quantity discounts, length of contract, and the degree of co-ordination and co-operation (Enarsson, 2008).

*Quality risks through outsourcing*

As indicated in figure 2.1, the delivered quality presents large risks for OEM brand reputation when outsourcing. Another quality risk is loss of technical knowledge, where the original company may lose part of its core technology, or due to the supplier’s inability to adapt to new technologies. The net result is that providers may not deliver satisfactory quality goods to the OEM company.

*Other potential pitfalls in outsourcing*

It is also possible that when outsourcing, companies may give away the crown jewels if they are not careful, with major strategic consequences (Kremic and Tukel and Walter O., 2006, cited in Gillett, 1994). IBM is an example of a company that took a wrong turn in their outsourcing as it related to the operating system.

As Earl said, if organizations choose the wrong directions in outsourcing they may widen the gaps between their business and market opportunities in future. Particularly with the development of technologies and in highly integrated traditional businesses, business testing systems may lead to outsourcing too much or the incorrect functions.

Other risks involved in the process of outsourcing are a lack of actions consistent with the contract by the suppliers when managing relationships with suppliers (Gonzalez, Gasco and Llopis, 2010). The more a supplier matches the contract, the less risk the OEM company will be exposed to in respect of delivery quality.

2.3 Outsourcing arrangement and decision context

2.3.1 Decision-making procedure

According to the analysis of the motivations and risks of outsourcing, the outsourcing decision-making process can be described as shown in Figure 2.2.
OEM companies should decide on the motivation for outsourcing based firstly on their own business’ condition. Benefits and risks should be taken into account and assessed. This may help managers determine whether the company needs to outsource.

If the answer is yes, then the item can be outsourced with many factors, such as costs, environment and strategy already assessed, as most of these factors can impact possible outsourcing functions. Last but not least, after evaluating and comparing all the functions determined, an organization has to select which functions should be outsourced.

2.3.2 Arrangements of outsourcing

Marks designed seven types of outsourcing arrangements for companies. These are traditional outsourcing where a company co-operates with suppliers to do something that it cannot do or does not want to do. Co-outsourcing occurs when a company co-operates with the supplier to contribute to the common target. Co-operation outsourcing happens when a company enters into a new market with a competitor, and the aim of this action is to strengthen customers’ satisfaction by using an arrangement between competitors. Business transformational outsourcing (BTO) is totally different from other types, as it is a combination of outsourcing and consulting. This approach is selected when the OEM company operates in a specific area or has a specific period of time within which to deliver. When the shift strategy is completed, the outsourcer will reclaim the function and move on to other suppliers. Commodity outsourcing is when functions have become commodities in a company and multi-client shared service outsourcing emphasizes the resources of service suppliers that can be rented out to many clients simultaneously. In this situation, customers can share the function with someone else. Business process outsourcing (BPO) occurs when a company outsource the whole process to someone else.
Each outsourcing activity can be defined in many different ways, a preliminary decision may be made based on the company’s requirements for outsourcing and the different options available. So far definitions, synonyms, different perspectives and outsourcing activities can be summed up in figure 2.3 as below.
2.4 Relationships with suppliers

2.4.1 Supplier selection

First of all, a complete Request for Quotation (RFQ) is the basis for supplier selection (Enarsson, 2008). In the beginning of supplier selection, this is a significant aspect for both the buying company and potential suppliers (bidders). For the buying company’s team, they need to clarify whether this bidding is developing in the right direction. According to the principles of the buying company, the buying team should meet the objectives to communicate the buying company’s strategic direction and intention, to clarify the required items in the bidding package; to respond clearly to the suppliers questions and to communicate how the package will be evaluated.
Once the closing date of the RFQ is reached, the next stage is to analyze the bids and select suppliers. This step aims to determine which supplier is best suited to the buying company’s requirements, from the perspective of costs, quality and service.

The variance level should be determined in advance in order to assist in identifying and selecting the correct bidder. The OEM company can measure the variance between historical price and bidding price and define a tolerance zone. For example, if the accepted tolerance level is 70% and the formula used to identify whether the bidding price falls outside the tolerance zone is:

\[-70% < \frac{\text{Original Price} - \text{Bid Price}}{\text{Original Price}} > 75%\]

Generally, out-of-tolerance items arise when potential suppliers make errors such as quoting for the wrong item or quoting prices for quantities other than those listed on the RFP (request for proposal).

2.4.2 Negotiation

In part it is to focus on gaining greater clarity and more detail in respect of the duties of the co-operation. To prepare a negotiation, the OEM company needs to identify the conditions, fundamentals and goals for the business co-operation. Important purchasing criteria to be considered are:

- Is it the price or the quality which is more important?

- Among items of delivery, security, time or information questions, which are most important in the purchasing agreement?

- In purchasing standard products, which are uniform and which are set by the company purchaser?

- Other factors which should be considered are delivery time, price, financing forms, service access, service costs, terms of payment, quality, storage, access to spare parts, delivery quality, packaging, montage, guarantees, security, savings possibilities, product development and environmental and ethical questions.

Further items.
Negotiation is essentially a process which emphasizes communicating with suppliers, where a perfect communication strategy will support a successful communication. A good negotiator should take into account both internal and external communication.

<table>
<thead>
<tr>
<th><strong>Internal communication</strong></th>
<th><strong>External communication</strong></th>
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<tr>
<td>Determine communication strategy</td>
<td>Determine communication strategy</td>
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<tr>
<td>- Objectives</td>
<td>- Objectives</td>
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<td>- Key Message</td>
<td>- Key Message</td>
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<tr>
<td>- Timing</td>
<td>- Timing</td>
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<tr>
<td>Develop communication plan</td>
<td>Develop communication plan</td>
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<tr>
<td>- The internal organization</td>
<td>- The internal organization</td>
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<tr>
<td>- Buyers</td>
<td>- Buyers</td>
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<tr>
<td>- Other stakeholders</td>
<td>- Other stakeholders</td>
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<tr>
<td>Establish communication infrastructure</td>
<td>Establish communication infrastructure</td>
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<tr>
<td>- Schedule</td>
<td>- Schedule</td>
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<tr>
<td>- Process</td>
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*Table 2.4: Communication structure*  
*Source: Enarsson, 2006*

There are many skills which should be provided for in the negotiation stage. For example, sometimes partners may be in full agreement with the negotiation, but even so one or other party may hesitate before signing the contract. There are many tactical reasons for this. It can be just to get another party to come to their senses.

### 2.4.3 Contracting issues

The importance of setting clear objectives for outsourcing has already been emphasized. These outsourcing objectives can also be used as a basis for drawing up a contract for the outsourcing process. DiRomualdo and Gurbaxiani (1998) pointed out that the result of outsourcing may be impacted on by the following items:

- Define clearly specific objectives for outsourcing;
- Align the contract and relationship with the strategic objectives set;
- Make contracts flexible enough to adjust to changes in the business or technology;
- Ensure that the supplier has the capabilities required to meet the strategic objectives for outsourcing.

Establishing a clear and specific contract can compensate for many potential pitfalls. A well-designed contract can allow for most future contingencies and may specify how these contingencies should be dealt with. It is better to have a clear idea of what is required in order to avoid any potential gaps in the contract. In other words, clearly established objectives and a well-designed contract may reduce the conflicts and risks during the co-operation.

### 2.4.4 Interaction

The different conditions can be illustrated as follow:

**Table 2.5: Interaction patterns in adversarial and collaborative relationships**

*Source: McIvor, 2005*
According to Figure 2.5, the first chart shows an adversarial relationship between buyer and supplier, where the interface is confined to the two of them with limited involvement from the strategic level of each business. This interface structure can be established with a limited commitment of resources and can be dissolved relatively easily. However, the second chart describes a collaborative relationship. Direct interactions between a range of business functions reinforce the philosophy of collaboration that has to occur in the relationship.

Anyway, the success of the relationship will be very much determined by how it is managed at the operational level. Therefore, it is critical that both the buyer and supplier have the necessary skills and resources to manage the interaction process at the operational level. The interaction process will differ considerably depending upon the type of relationship adopted. For example, managing a close collaborative relationship requires substantial investments from both the buyer and supplier.

2.4.5 Maintaining relationship

The direction and management of the buyer-supplier relationship will be influenced by the objectives of the outsourcing strategy (McIvor, 2005). Enarsson stated that handling and maintaining a successful relationship is important for both the buying company and its suppliers (2006).

Managing a sourcing activity is a complicated task (Enarsson, 2006). Usually, even though the OEM company has prepared all the preventive measures to eliminate possible future frictions, it is inevitable that they will occur anyway (Lynch, 2000). Key points to remember in managing relationships through outsourcing are preventive measures, keeping flexible, being confident in the partner’s ability to deliver the correct product or service, open communication and not keeping everything strictly secret. There are two main reasons for poor relationship management as indicated in Lynch’s report (2000). Firstly, the people who negotiated the initial contracts are not involved after the contracts are signed, and are replaced by new people that don't understand the intentions of the contract. Secondly, employees that understood the environment prior to the outsourcing have been transferred to the suppliers team.

The key factor to staying competitive in the market today is to integrate suppliers into the product—value—or supply chain in an effective way (Enarsson, 2006). A close
relationship with the supplier should be developed, because it is a vital issue in the integration process. It is becoming more and more common to place engineers in suppliers’ plants, so that they can learn the systems, procedures, and processes of suppliers in order to improve communication, reduce errors and understand capabilities.
3. METHODOLOGY

In this chapter, the research methodology of the dissertation will be presented. The problem is assessed from the qualitative analysis method.

3.1 Methodology approach

Qualitative studies

A qualitative study relies on academic information such as words, sentences and narratives (Blumberg 2005, pp124). This research study is based on the theory, using questionnaires and interviews. Electrolux is the market leader in the segment for vacuum cleaners, and all Electrolux vacuum cleaners are already made in low-cost countries. In this research study, the focal point of our study is on the Ergorapido, a cordless vacuum cleaner. There has been communication with some home appliances suppliers who have provided useful material for this study. Through interviewing the relevant department with the Electrolux group, lots of primary and surprise information was obtained. So the research is a typical qualitative research study which is based on useful material obtained through questionnaires, conversations and interviews.

3.2 Data collection

3.2.1 Research design

A questionnaire with 15 interview questions (see Appendix), was designed for this study, and through interviewing and questionnaire investigation, it is intended to study how to run cost-quality strategies through outsourcing and what Electrolux’s strategies are in respect of cost-quality issues when outsourcing. The research is defined in the following table:

<table>
<thead>
<tr>
<th>Category</th>
<th>Option in this study</th>
</tr>
</thead>
<tbody>
<tr>
<td>The method of data collection</td>
<td>Questionnaire, Interview</td>
</tr>
<tr>
<td>The topical scope of this study</td>
<td>Case study</td>
</tr>
<tr>
<td>The purpose of the study</td>
<td>Descriptive</td>
</tr>
</tbody>
</table>

*Table 3.1 Description of Research Design*
3.2.2 Principles of design in the questionnaire

This study mainly discusses how to make low-cost decisions while and keeping high quality during the outsourcing process, and the focal point is on the Ergorapido (one product of Electrolux). It is intended to take Ergorapido’s positive outsourcing experience as an example for small-and-medium-sized enterprises in the appliance industry in Sweden which have the same requirements in outsourcing.

The questionnaire is designed according to the theory, and it is intended to effectively obtain information through the questionnaire, which is divided into the following parts:

- Motivations and risks of outsourcing
- Decision context and outsourcing arrangement
- Relationships with suppliers
- Further questions

This questionnaire was referred to the relevant department of Electrolux Group. The research obtained the relevant basis of information and the company's decision for of this product through the questionnaire. The questionnaire is one of the more effective ways of obtaining information, albeit that a lot of primary materials are obtained through interviewing.

3.2.3 Reasonableness of questionnaire

The questionnaire is mainly designed according to the theory. Cost reduction is the most important motivations for outsourcing, and in a keenly competitive environment, outsourcing will significantly reduce cost for enterprises, while simultaneously having possible negative influences on the quality of products. The research was done on a product from Electrolux known as Ergorapido. The questionnaire was designed around how Electrolux chose the outsourced supplier, how they controlled the cost, how they ensured the quality of products.

3.2.4 Interview

In order to obtain the primary information, Ola Carlsson, the Chief Operations Officer of the Floor-Care Products department in Electrolux Group was interviewed together
with a small supplier’s manager which produces the products for Media, a main supplier to the Electrolux Group. The questionnaire valid information through we then studied the answers to the questions and drew the materials that we needed. Then we obtained further information through telephone interviews and face-to-face interview.

<table>
<thead>
<tr>
<th>Category</th>
<th>Option in this study</th>
</tr>
</thead>
<tbody>
<tr>
<td>First cycle</td>
<td>Questionnaires to Electrolux and supplier</td>
</tr>
<tr>
<td>Second cycle</td>
<td>Telephone interview and face-to-face interview</td>
</tr>
</tbody>
</table>

*Table 3.2 Description of questionnaire and interview*

### 3.3 Data analysis (case study)

In our research, the case study approach was used. A case study research is suitable for explanatory, descriptive and exploratory research (Blumberg 2005, pp190). Due to the lack of suppliers which cooperate with the Electrolux Group in China, a small supplier in China was interviewed, and the interview target is the relevant department of Electrolux Group.

The research analysis began after the data was obtained from the questionnaires and interviews. The data analysis was done in accordance to the theory; as shown in the following structure:

- Motivations and risks for outsourcing
- Outsourcing arrangement and decision context
- Relationships with suppliers
3.4 The structure of the study process

- Identifying the interesting topic
- Literature review
- Questionnaire and interview
  - Interview
    - The material from interviews and questionnaires
  - Collecting the theory
    - Identifying the research
      - Defining the thesis structure
        - Choose the suitable theory
          - Summarizing the material from the interview
  - Choose the suitable theory
    - Summarizing the material from the interview
  - Analysis and discussion
    - Conclusion

Table 3.2 Structure of the study
4. Empirical Study

In this chapter, the empirical study of the research study is presented, and the findings from Electrolux AB are presented separately.

Initially the focus on the supply chain combined with the case study of Electrolux Group. Subsequently, it was decided that to explain the whole operation process in Electrolux was too large a task. The topic was narrowed down to the first stages of supply which consists of design, raw material purchasing, manufacture and logistics. Unfortunately, it was found to be difficult to explain to others why we chose these stages only. After communicating with the supervisor we finally decided to narrow our topic to “How to keep balance between low-cost and high-quality through outsourcing”.

4.1 Combine the case of Electrolux

4.1.1 Electrolux Group

As the second largest appliance manufacturer in the world, the Electrolux Group sells more than 40 million home and professional appliances to customers in 150 countries annually (Source from Wikipedia website). Electrolux was founded in 1910, and its products include washing mashing machines, refrigerators, dishwashers, cookers and more (Source from Electrolux website). Over the past 100 years, relying on remarkable designs and a customer-oriented management theory, Electrolux has a large number of loyal customers throughout the world.

After the financial crisis, the demand for home appliances dropped, and so in order to obtain profits, most appliance manufacturers including Electrolux, began to implement various cost control strategies. In fact, as far back as 2004, Electrolux began a restructuring program, and most factories were moved to low-cost countries and more than half of Electrolux’s appliances are now produced in low-cost countries. This restructuring program which was completed in 2010, will save about SEK 3 billion for Electrolux annually (Source from Electrolux website).

4.1.2 Electrolux Floor-Care Products

Electrolux is the market leader in the floor care products segment (Source from Electrolux website). In 1921, Electrolux launched the vacuum cleaner that was
designed to lie on the floor on two thin metal wheels. During the following decades, this great invention became a standard feature for future vacuum cleaners (Source from Electrolux website).

As shipping cost of vacuum cleaners are lower than that of kitchen and laundry appliances, this product is suitable for long-distance shipping. As a result of the Electrolux restructuring program completed in 2010, all Electrolux vacuum cleaners are already made in low-cost countries now, and more than two of every three vacuum cleaners are made in China by suppliers which Electrolux has co-operated with for many years. (Source from Electrolux website)

4.1.3 Electrolux Ergorapido

Electrolux is a company with a of strong innovation ability, and all product development are all from the customer angle, with lead to the development of the Ergorapido cordless vacuum cleaner. Ergorapido is favored by consumers. This product is very suitable for daily cleaning, and its sales volumes have been rising since 2005 as indicated in Figure 4.1 below.

![Ergorapido](image)

**Figure 4.1 Accumulated sales volumes of cleaner Electrolux Ergorapido**

Source: Electrolux Annual Report, 2007

In the empirical study, the focus is entirely on this product in an attempt to understand how Electrolux combines sustainable quality with cost reduction through outsourcing
4.2 Data collection

Interview about core business

Q: Compared with other low-cost countries (such as India, Vietnam and Brazil), what are the advantages of China?

A: Those countries (such as India, Vietnam and Brazil) have a lower salary, but China has large-scale production abilities and advanced facilities.

Q: With regard to OEM Ergorapido, what was the main motivation for choosing China?

A: We are in a market where most of these products come from low-cost countries, so the cost is important to us. That is the reason for two of three of the Ergorapido being produced in China.

Q: According to your answers mentioned in our questionnaire, there is only one supplier in China. Is that Media?

A: For the Ergorapido, there is only one supplier in China. Actually, there are 50 other suppliers in China, but we have only 30 suppliers in our geographic areas.

Q: In your answer for question 2.1 in the questionnaire you said that you outsource the complete manufacturing of Ergorapido. Based on this condition, what is the core value (or know-how) involved in this vacuum cleaner?

A: Design. We hold the copyright of Ergorapido and many other products of Electrolux.

Questionnaire factors

Q: As a traditional Swedish company, what are the outsourcing drivers for Electrolux?

A: Lower assets and lower cost.
Q: With regard to OEM Ergorapido, the main reason for choosing China is:
A: Low-cost.

Q: As one of the most famous products of Electrolux, what are the current risks faced by Electrolux when outsourcing Ergorapido to China?
A: Fluctuating raw material prices and RMB depreciation

Q: How does Electrolux control these risks?
A: Fixed prices during a calendar year

Q: What is the principle in deciding which part or parts of Ergorapido should be outsourced?
A: We outsource the complete manufacturing of the Ergorapido

Q: What are Electrolux’s principles in selecting suppliers in China (during the bidding process)?
A: Price, Quality, manufacturing & R&D capabilities

Q: What is the main conflict between the OEM company and suppliers in China in negotiation?
A: Price and terms of payment

Q: Is it possible to control quality through setting up a strict quality standard?
A: Yes, it is.

Q: To what extent can we say it is the common destiny of small appliance?
A: Valid for battery operated products

Q: As one of the largest companies in the world, what is the success secret or positive experience of Electrolux in keeping balance between low-cost and high-quality through outsourcing?
A: Keeping a strong presence in China with own personal.
Q: Compared with other low-cost countries (such as India Vietnam and Brazil), what are the advantages of China?

A: In those countries (such as India Vietnam and Brazil) they have lower salay costs, but China has large-scale production abilities and advanced facilities. Compared with China, Vietnam has a lower labor-cost, but there aren’t many suppliers in that country.
5. Analysis

5.1 Market background

*Demand and supply conditions between China and Sweden*

China has a long history of being the world’s factory in manufacturing. Demand for information technology outsourcing (ITO) and business process outsourcing (BPO) has increased in recent years, as more companies consider China a viable outsourcing destination (Jones, 2009,p1). There is evidence to support this idea. Krugman (15 May, 2009) winner of the Nobel Prize for Economic Sciences in 2008 and a professor of economics and international affairs at Princeton University stated that said in China: the Chinese industrial workers’ wage level is equivalent to 4% of USA (2009). Well then, what is the main benefit for China during outsourcing?

Apart from purely economic factors, there are also other important gains for developing countries (Enarsson, 2006). These benefits may consist of economie of scale, increasing employment, higher tax incomes, and improvements in infrastructure. In a word, China is such a country which needs outsourcing too.

On the other hand, Sweden as a developed country, has a relatively perfect business system in many aspects. At the same time, we cannot ignore the defects in the manufacturing industry in Sweden. With a population of only 9,219,637 million, Swedish companies have to accept paying high wages to employees.

![Figure 5.1: Population of Sweden](Image)

*Figure 5.1, population of Sweden*

*Source: World Bank, World Development Indicators - Last updated May 7, 2010*
According to the principle of market development, an unbalanced relationship between supply and demand will impact on market price. In other words, compare with China, there are far less workers in demand in Sweden, this situation may lead to a high-level-salary to hire employees in the production sector. Regardless of the higher salary level for workers in Sweden, the growth rate in real wages is also higher than in most other countries in Europe.

![Figure 5.2: Real wages for Swedish industrial workers](source)

According to a report named *Outsourcing and industrial relations in motor manufacturing* which was published by the European Industrial Relations Observatory (EIRO) (2000), the main reasons for Swedish companies to outsource are:

- With stronger competition in the business world, more and more companies are concerned that their core business is only different in extent.
- High-cost during production.
- High-cost of firing employees.
- Outsourcing may share available resources around, and reinforce advantages for a firm.
Depending on the above issues, China and Sweden are the supply market and demand market. According to Adam Smith’s theory which he wrote in The Wealth of Nations, the market force will drive consumption to meet requirement. Anyway, both of these two countries get the expected benefits from each other. It is also the pre-condition for outsourcing. Analysis relating the case to the outsourcing framework is as follows.

5.2 Motivations and risks

5.2.1 The motivations for Electrolux to outsource in China

Outsourcing can reduce the cost of products for the Electrolux Group, as compared with Electrolux Group doing everything itself. Outsourcing activities help Electrolux save money from infrastructure and invest more in core competences in the short-term to ensure effective use of funds. In addition, industries have been segmented more minutely than before, most external resources can be integrated effectively and cheaper (Fedex, 2010).

The wage level of Chinese workers is one of the lowest in the world, and as what Ola Carlsson said, this can save on the cost of labor. Secondly, there are a lot of different suppliers in China, the machinery in these factories is advanced, the scale is relatively large, these can meet the Electrolux Group demands, Electrolux can also save cost in investing. In the other countries, Electrolux has a lot of suppliers too, such as Vietnam, India and Brazil, but it is very difficult for them to compete with the Chinese suppliers, the Vietnamese supplier’s scale is relatively small and the wage level of the workers in Brazil is much higher than in China, so Electrolux has a large number of suppliers in China.

5.2.2 The main risks of outsourcing in China

Obviously, delivered quality is the main danger for OEM brand reputation in outsourcing, but the supplier’s inability to adapt to new technologies is another danger, while if the supplier cannot adapt to the advanced technologies, it may not deliver satisfactory goods to Electrolux Group. Earl stated that if organizations chose the wrong directions to outsource they may widen the gaps between their business and market opportunities in future.

The quality risk is the main risk factor in outsourcing to China, Electrolux has complete quality management systems, for the Ergorapido product. Electrolux has
only one supplier in China, and this supplier has advanced machinery. The products undergo strict testing in order to ensure the quality of Ergorapido, Electrolux has will sent someone to supervise the quality of the products too, and these measures have all improved the product quality.

5.2.3 Balance opportunities and risks through this process

Electrolux, as the home and business appliance giant, began a restructuring program in 2004, and most factories moved to low-cost countries and more than half of Electrolux’s appliances are produced in low-cost countries today. Ola Carlsson said that these restructuring programs and measures have saved a huge amount in production costs for the Electrolux Group, Electrolux obtains a higher profit while offering high-quality products for customers, yet on the other hand, lower assets and lower cost are also the outsourcing drivers for Electrolux in China and other countries. But Electrolux faces many risks too, such as the fluctuating raw material prices and RMB depreciation, these risks are difficult to foresee.

Within each calendar year Electrolux will fix prices with suppliers, it is in this wisdom that they can reduce risks to a minimum in outsourcing.

5.3 Outsourcing arrangements

5.3.1 Principles for the decision of outsourcing issue

In the outsourcing decision process, we discussed the motivations and risks in the above section.

Together with the theoretical context of outsourcing, the process of negotiation will be discussed in this part. As we said above, cost is the main reason why Ergorapido has been outsourced. In the question of what part of Ergorapido does Electrolux outsource, Ola Carlsson answered that manufacturing has been completely outsourced. In the theory we mentioned in chapter 2, market forces may lead companies to outsource everything but their core business (Gupta and Gupta, 1992). The conjectural result is that production does not belong to the core business of Electrolux. This raises the question as to what the key question is. Well then, what is the core competence of Ergorapido? Ola Carlsson answered this question in the teleconference—it’s design.
In this sense, during the Ergorapido outsourcing, Electrolux did not need to integrate resources to determine which part or which function should be outsourced. Based on the data from the questionnaire, Electrolux used traditional outsourcing which means the company co-operates with the suppliers to do something that it cannot do or does not want to do. So which part of a product should be outsourced and which part should not, what is the support force behind these decisions?

5.3.2 Reasons for those decisions

May be the smile curve can provide us with an appropriate answer.

![Smile Curve Image]

Table 5.1 Smile Curve

According to the chart, it is easy to see that the process of manufacturing is the least profitable stage, and design and brand are situated on the smile curve to add the most profitable stage. As Zhenrong Shi (author of the smile curve, 2002) said, in the value chain, more value is added in design and selling, the least value added is during manufacturing. Actually, with economic development, companies take more and more pressure from global competitiveness; at the same time, with the trend of a shorter product life cycle, outsourcing a product can effectively improve the flexibility of a company. In the tele-conference, Ola Carlsson also mentioned another principle used in selecting suppliers in China, he said: you can find many OEM suppliers that you can doing in vacuum cleaner with those supplies who have not own brand so they are only suppliers and do not compete with you. In other words, although Electrolux has
given up the whole process in manufacturing Ergorapido, it still keeps an eye on the market competitive risks.

So far, we have figured out that design, not manufacturing is the profitable stage. In other words, a company should determine which areas generate only low-profits and minimize the costs here as low as they possibly can through outsourcing.

5.4 Relationship with suppliers

Currently there are approximately 50 current suppliers for vacuum cleaner production in China (Ola Carlsson, 26\textsuperscript{th} May, 2010), Electrolux have their own procedures when going through the bidding process focusing on price, quality, manufacturing and capabilities. During this process, the mission is to evaluate those bidding in respect of the aforementioned factors, compare them, and to then select the most suitable supplier co-operation. The second stage is to negotiate with the potential suppliers. Relevant aspects include delivery time, price and financing terms. In the example of the Ergorapid outsourcing, price and terms of payment are the vital issues. Thirdly, everything in the contract should be clearly defined including duties and responsibilities to mitigate risk for the company in case unexpected problems occur. Lack of awareness can range from the potential pitfalls that can arise, through to the level of resource involved in managing the outsourcing process (McIvor, 2005). Besides price and quality, Ola Carlsson highlighted manufacturing and R&D capabilities during bidding and terms of payment during negotiation as two further areas to monitor during the process.

Identify and control the key issues so that both the cost control and quality guarantee are actually achievable and usable over a defined time period. Electrolux believes it will reduce its costs through selecting suppliers in China in line with the three conditional items. If clearly duties and responsibilities are clearly set up in the contract, hidden costs and quality risks will also be reduced. There is no doubt that it is possible to control quality through the set up a strict quality standard.

5.5 Conclusion of analysis

The Electrolux case study has shown that outsourcing this type of activity was central to the company’s strategy of moving away from standard sub-assembly processes in order to establish a profitable performance position so as to retain global
competitiveness. Outsourcing to low-cost countries for low cost manufacturing is a common strategy used by multinational enterprises around the world. As we previously discussed, China is the best choice. Moreover, as evidenced in the communications with the COO at Electrolux, besides determining what functions or parts to outsource, selection, and communicate with suppliers are also important. This example also illustrates the evolution of outsourcing from Sweden to China.
6 Conclusion

*In this chapter, the conclusions of our research are presented.*

Through studying Electrolux and its product of Ergorapido, we are deeply inspired. Electrolux began a restructuring program in 2004, and most factories were moved to low-cost countries. This program has made large cost saving for the Electrolux Group, and at the same time, it also offered a very good opportunity for outsourcing. In the research study, the Ergorapido was completely produced in a low-cost country. Obviously, outsourcing has reduced the cost of production for Electrolux, while on the other hand, it retained the high-quality standard that Electrolux guarantee for their products.

China is known as the worlds factory, where the workers’ wage levels are relatively low. Sweden has only a population of 9.219 637, and therefore Swedish companies have to accept high wages when hiring employees in Sweden. Despite the higher wage level for workers in Sweden, the growth rate in real wages is also higher than most other countries in Europe (Figure 5.2). Market forces will force supply and demand to reach equilibrium. Both of these countries can get the expected benefits from each other, which is a pre-condition for outsourcing. The low-cost outsourcing options in China assist in giving competitive advantage to enterprises in Sweden.

Outsourcing may also bring a lot of risks, such as the products quality, but Electrolux has remained a symbol of high-quality. Low-cost outsourcing has not influenced the quality of their products. Electrolux is undoubtedly a very successful model for outsourcing, we carried out our research only on Ergorapido, the small home appliance of Electrolux Group. To many small and medium-sized enterprises, the cost of products is essential, and outsourcing can control the cost effectively. We hope our research is helpful for small and medium-sized enterprises in Sweden.
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Acknowledgement

We would like to express our sincere gratitude to Professor Ernst Hollander, the supervisor of our thesis, who have given us many directions from narrowing our topic to communicating in the interview process. We have gained many benefits, not only the skills of writing a thesis, but also the ability to collect data and use it for analysis. Thank you!
Appendix 1

Questionnaire

Dear Sirs,

I am Shelly from Gävle University. My student number is 871015-T245; my telephone number is 0762357856; and my e-mail address is: liru-anna@hotmail.com. My partner is Aaron.

Thank you for you time to take this questionnaire. This questionnaire consists of some multiple choice and open-ended questions. We are so interest in how to keeping balance between low-cost and high-quality through outsourcing. We want to acquire some positive experience of outsourcing from Electrolux with the real product of Ergorapido—the “red dot” winner. These data will support our bachelor thesis, both of the benefits and risks will be analysis in our paper. Result from this, everything you provide is important for me.

Your name: ____________________________

Your title: ______________________________

E-mail address: __________________________
1. Motivations and risks

1.1 As a traditional Swedish company, what is the outsourcing market climate for Electrolux? (You can choose one or more)
   
   A. Focus on core business
   B. High cost in local labor market
   C. High cost on lay off
   D. Sharing the resources in global
   E. Other motivations: _______________________________

1.2 All production of Electrolux vacuum cleaners is located in low-cost countries. About two-thirds are supplied by producers in China, with whom Electrolux has been cooperating for many years to ensure quality products (Annual Report 2007 | Operations and strategy).

1.2.1 Regard to OEM Ergorapido, the main reason for chose China is: (You can choose one or more)
   
   A. Low-cost
   B. Strategy-driven (eg. to extension business in China, etc.)
   C. Political-driven (eg. favorable tax policy, etc.)
   D. High-quality guarantee
   E. Keeping flexible and fashion
   F. Other reasons: _______________________________

1.2.2 In the process of produce Ergorapido, how many suppliers does Electrolux co-operated with in China?

   _______________________________

1.2.3 Where are the suppliers’ factories located in China?

   _______________________________
1.2.4 Refer to the vacuum cleaners production, beside China, how many countries do you outsource to?

________________________________________________________________________

1.3 As one of the most famous product of Electrolux, what are the risks faced by Electrolux when outsource Ergorapido in China currently? (You can choose one or more)
A. Quality of products
B. Policy changing
C. Bad relationship with suppliers may impact other market share
D. Other risks: ________________________________

1.4 How does Electrolux control these risks?

________________________________________________________________________

2. Decision context and outsourcing arrangement

2.1 What is the principle to decide which part or parts of Ergorapido should be outsourced? Why? (You can choose one or more)
A. Content of technology
B. Transport of convenience
C. Labor costs
D. Other principles: ________________________________

Reasons: ________________________________
2.2 Where is the mainly selling market of Ergorapido?

2.3 Which ones of the outsourcing agreements below were involved in small appliances (e.g., Ergorapido) producing?

A. traditional outsourcing

B. business process outsourcing (BPO)

(Traditional outsourcing, which means company co-operate with suppliers do something that it cannot do or does not want to do;

business process outsourcing (BPO) involved in when a company outsource the whole process to someone else.)

2.4 Depend on the answer of 2.2, is Ergorapido product model a typically model while produce small appliance or not?

A. YES, it is.

B. No, it’s a special case (or product) in Electrolux’s outsourcing

3. Relationship with suppliers

Also with an example of Ergorapido

3.1 What are Electrolux’s principles to select suppliers in China?

3.2 What is the main benefit conflict between original company and suppliers in China in negotiation? (You can choose one or more)

A. Price

B. Quality
3.3 What is the tolerance level to negotiate conflict items?

________________________________________

3.4 Is that possible to control quality through set up a strict quality standard?

A. YES, it is.

B. NO, it’s impossible.

(What is the general idea to deal with quality problems in outsourcing?)

________________________________________
4. **Further questions**

4.1 What is the perspective of Ergorapido?
   
   (cost keeping reducing; profit keeping growing; secret of know-how; positive reputation for Electrolux, etc.)

4.2 In what extent we can say it is the common destiny of small appliance?

4.3 As one of the largest companies in the world, what is the success secret or positive experience of Electrolux in keeping balance between low-cost and high-quality through outsourcing?

*Thank you for your attention!*