

Managing contract manufacturers in the fashion industry to achieve adequate product quality

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<p>Tiivistelmä</p> <p>Opinnäytetyön tavoitteena oli tutkia, kuinka ostava yritys voi vaikuttaa tuotelaatuun johtamalla alihankkijoitaan, ja tuottaa kehitysehdotuksia toimeksiantajan alihankkijoihin suuntautuviin prosesseihin. Toimeksiantajayritys suunnittelee ja markkinoi asusteita ja muita nahkatuotteita maailmanlaajuisesti. Opinnäytetyön toimintaympäristönä oli muotiala, jossa on yleistä toimia niin, että tuotteet suunnitellaan talon sisällä ja tuotetaan alihankintana. Valmistavat yritykset sijaitsevat usein kaukana ostajayrityksestä, mikä hankaloittaa tuotelaadun hallintaa.</p> <p>Koska opinnäytetyön tavoitteena oli kehittää ratkaisuja ja ymmärtää kokonaisvaltaisesti, kuinka yritykset operoivat, kvalitatiivinen tutkimusote soveltui tarkoitukseen. Tutkimuskysymykset ratkaistiin käyttäen puolistrukturoidulla haastattelumenetelmällä kerättyä materiaalia muista alalla toimivista yrityksistä, sekä aiempia tutkimuksia ja muuta soveltuvaa kirjallisuutta. Tutkimusta varten haastateltiin kolmea muotialalla toimivan yrityksen edustajaa.</p> <p>Opinnäytetyön tuloksena esiteltiin kehitysehdotukset, joiden avulla yritys voi kehittää omaa toimintaansa sopivan tuotelaadun takaamiseksi. Merkittävimmät kehitysehdotukset olivat, että yritys kehittää alihankkijoiden valintaprosessia systemaattisempaan suuntaan, tunnistaa alihankkijat joiden on mahdollista tarjota merkittävää kilpailuetua, ja kehittää syvempää yhteistyötä näiden alihankkijoiden kanssa rakentaen luottamusta ja sitoutuvuutta. Systemaattisen ja kokonaisvaltaisen prosessin avulla voidaan parantaa tuotelaadun lisäksi alihankkijoiden motivaatiota ja joustavuutta, sekä tilaus-toimitusaikoja.</p> <p>Mahdolliset jatkotutkimusaiheet nähtiin liittyvän alihankkijoiden tarpeisiin ja odotuksiin, jotka kohdistuvat ostavaan yritykseen. Tutkimus täydentäisi tämän opinnäytetyön tuloksia.</p>		
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<p>Abstract</p> <p>The aim of the thesis was to investigate how a buying company can affect product quality through managing the contract manufacturers, and to generate recommendations for the commissioning company for their future processes towards the manufacturers. The commissioning company of the thesis is operates in the field of designing and worldwide sales of fashion accessories and other leather products. The context of study is the fashion industry, where it is common to design products in-house using global sourcing of contract manufacturers to produce the products. Manufacturers are often located far from the buying company, which generates difficulties in the managing of product quality.</p> <p>As the objective was to generate solutions, and to gain a thorough understanding of how companies operate, qualitative method was applicable. The answers to the research questions were sought by exploiting the data from the semi-structured interviews, and the previous research and other applicable literature. For the empirical part, representatives from three companies operating in the similar conditions were interviewed.</p> <p>The outcome of the thesis is a set of recommendations for the commissioning company to develop its operations to ensure adequate product quality. The most significant recommendations were for the company to develop a more systematic process for supplier selection, recognize the suppliers that offer competitive advantage, and to develop a more cooperative relationship with these suppliers by building trust and commitment. Through a systematic and holistic process, supplier motivation, flexibility and lead times can be improved in addition to product quality.</p> <p>Possible follow-up research could study the suppliers' needs and expectations regarding the purchasing company. The research would add to the results of this thesis.</p>		
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Contents

1	Introduction	3
2	Research design.....	5
	2.1 Objectives	5
	2.2 Methodology	7
	2.3 Reliability and validity of the study	12
3	Contract manufacturing in the fashion industry	14
	3.1 The fashion industry complex	14
	3.2 Purchasing and contract manufacturing	16
4	Quality management	22
	4.1 Adequate product quality	22
	4.2 Supplier relationship management.....	26
5	Conducting the study.....	31
6	Results	33
	6.1 Building relationships	33
	6.2 Managing and developing buyer-supplier relationships.....	36
	6.3 Managing product quality	40
7	Conclusion and recommendations	45
	7.1 Conclusions of the study	45
	7.2 Recommendations for the commissioning company.....	48
8	Discussion	50
	References.....	53
	Appendices	57
	Appendix 1. Interview template	57

Figures

Figure 1. The thesis procedure.....	6
Figure 2. Laine's linear analysis process.....	11
Figure 3. Circular analysis process.....	12
Figure 4. Tiers of supply	15
Figure 5. The textile industry complex.....	16
Figure 6. Purchasing process.....	19
Figure 7. Nine supplier interaction models.....	27

Tables

Table 1. Characteristics of the companies	32
Table 2. New suppliers	35
Table 3. Communication between buyer and supplier.....	38
Table 4. The ways companies manage product quality	44

1 Introduction

Fashion industry is widely known as a fiercely competitive industry, and one that is competitive on a global scale. The markets and consumers pressure companies to lower the prices of their offerings and to simultaneously improve the quality of their products. To stay competitive companies continuously search for suppliers who can deliver quality products with competitive prices. (Cho & Kang 2001.) Subcontracting the manufacture of goods enables companies to concentrate on their own core operations. Global sourcing has become attractive, even a norm, for companies due to the highly labor-intensive nature of the industry (Dana, Hamilton & Pauwels 2007), removal of trade barriers and relatively low transport costs (Waters 2009, 167).

Subcontracting challenges the controlling and monitoring of product quality. Often companies do not have any certainty beforehand of the quality they will receive. When the manufacturing site is located far from the buyer, dealing with problems becomes more complicated. However, this may be the only alternative. (Dana et al. 2007.) Organizations are now understanding that they need to actively manage their suppliers, who can deliver benefits to them (Emmet & Crocker 2009, 86).

The commissioning company of this study is engaged in the design, development and worldwide marketing and selling of high-end leather goods, and is especially known for leather bags. It introduces two lines of products per year in addition to the more basic products. The company's headquarters are located in Helsinki, Finland and the products are manufactured by the 17 contact manufacturers located in Portugal, Spain, Italy and India. The chairman of the company was interviewed for this study to gain an understanding on the current situation and the scope of the problem.

The high-end design products of the commissioning company are sold in a premium price, and the quality expectations of the customers are high. Even though the company puts resources in preventing un-acceptable products from being sold to customers, it has not been enough. In the past, the company has lost business with certain customers due to failing product quality. In addition, it is recognized within the company that issues in product quality cause gratuitous costs which are difficult

to calculate accurately and they vary from season to season. The presumption is that the more reliable quality of products yields lower total costs (Larson 1994).

The contract manufacturers produce the products according to the company's design specifications. The company influences product quality through selecting the materials and components to be used in the products leaving the quality of work to the manufacturers. The ideal situation would be that the company would be able to deliver the products to the customers straight after receiving them from the manufacturers. This would require the company to be able to trust the quality of products they receive. The aim of this thesis is to find ways in which the company could manage and ensure the quality of products before receiving them.

Previous research is concerned with the impact of product quality on business performance, supplier selection processes, and how quality may be designed into a product. Apart from these, there is a limited amount of knowledge available of how a buying company may influence the quality in practice. This study aims to fill some empty spaces and to offer valuable knowledge on the challenging subject. The research problem will be solved by studying other companies in similar conditions, and by exploiting previous research and other literature. As a result, this study will present recommendations for the company to improve product quality and to reduce the related costs.

The study focuses on companies working with contract manufacturers, which produce finished products for the buying company according to the buyer's design specifications. The terms *supplier* and *contract manufacturer* will be used synonymously unless defined otherwise.

2 Research design

In this chapter, first the research objectives are described to explain why the subject requires further studying. Also, the research questions are introduced. Second, the methods used in solving the research problem are described. The reliability and validity are discussed in the last part of this chapter.

2.1 Objectives

Issues in product quality (PQ) affect business performance in many ways, e.g. extending lead times in customer deliveries and adding operating costs. Product quality affects also customers' perception on product value and brand image. Quality of the products is an important subject for any company producing consumer goods. These subjects will be discussed in further chapter 4.1.

The subject for the study was pointed by the commissioning company as they have faced challenges with achieving adequate PQ in the past. The main objective of this study is to generate solutions for improving PQ in the commissioning company. The outcome of the research is recommendations for their future operations.

The research problem is converted into questions. Questions are seen to crystalize the problem and guide the process. (Hennink, Hutter & Bailey 2011, 33.) As the actual manufacturing of the goods is not the commissioning company's core area of business and the manufacturing is contracted, it is reasonable to focus on the manufacturers and how they ought to be managed by the buying company. Therefore, the research question is:

How should the buying company manage the contract manufacturers to ensure adequate PQ?

An understanding of supplier relationship management (SRM) and PQ are at the base of this study. Assisting sub-questions are included to achieve an answer to the main question:

AQ1. *What are product quality and supplier relationship management?*

AQ2. *What are the main factors affecting product quality?*

AQ3. *Is there a connection between relationship quality and product quality?*

AQ4. *How can the relationships be managed and developed?*

The research problem will be solved by answering all the above questions. The objective of the empirical part of this thesis is to define the influence of manufacturer relations on PQ through the interviewed three companies. Moreover, the ways companies manage PQ as a whole will be covered in the empirical part.

Figure 1 presents briefly the procedure of this thesis. Some of the assisting sub-questions will be answered through previous research and other literature, and others through the empirical part: interviewing individuals working in procurement and quality control.

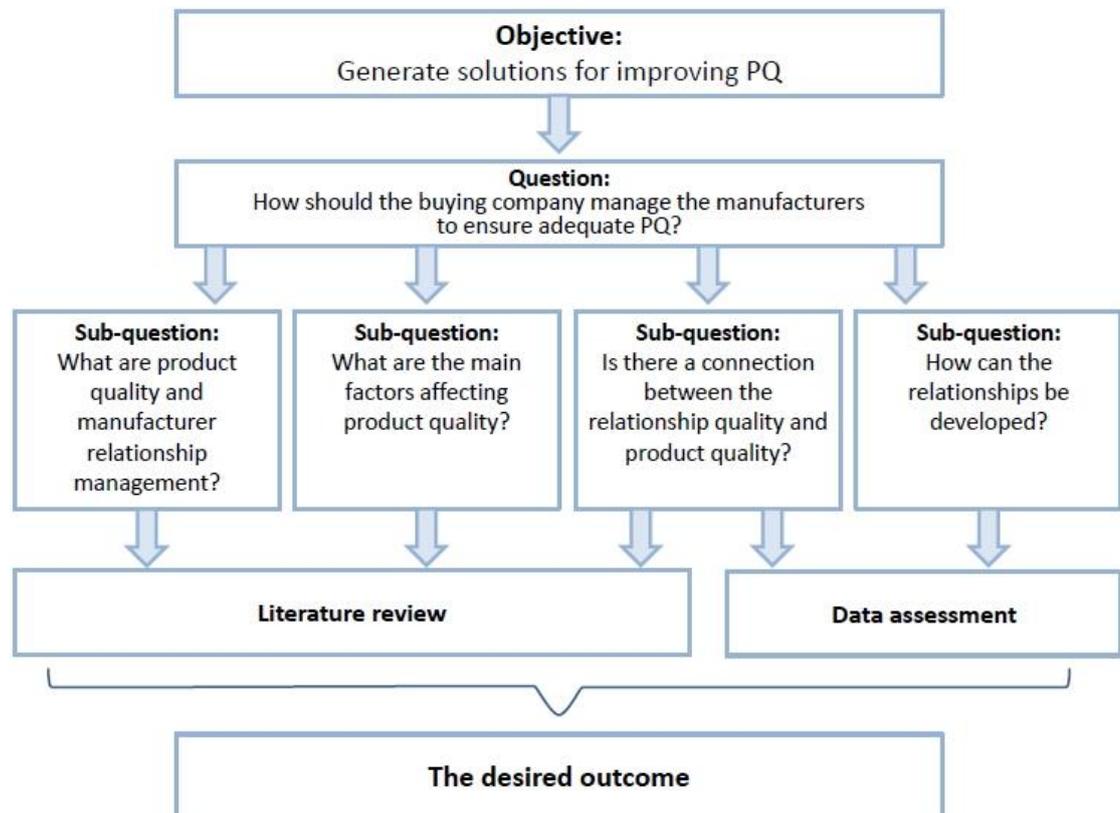


Figure 1. The thesis procedure

In the following chapter the material collection and analysis methods are described. These are carefully described to enable the reader to assess the research and credibility of the results (Tuomi & Sarajärvi 2009, 21).

2.2 Methodology

The objective of this study is to understand the ways in which the commissioning company should manage suppliers to achieve adequate PQ. Qualitative method is applicable as solving the problem requires an in-depth understanding of processes, how people manage business functions, negotiate and make decisions (Hennink et al. 2011, 10).

Qualitative research method enables the phenomenon to be described without numerical measurement, whereas quantitative method manages numerical data. In quantitative research method the method of reasoning is often deductive as it is used to test an existing theory. Using quantitative method therefore requires strong knowledge and an existing theory explaining the phenomenon under study. (Kananen 2015, 66.) Qualitative method is applicable when the aim is to find something new rather than trying out an existing theory (Richards 2015, 2). The method of reasoning is usually inductive, generating a new theory emerging from the data. There is a limited amount of knowledge found of the research problem, and no previous research covering the effect of buyer-supplier relationship on product quality. According to Kananen (2014, 17), the less there is knowledge available on the phenomenon, the more probable it is that qualitative methods are applicable in finding a solution for the research problem.

Unlike in quantitative research, generalization is not an objective in qualitative research, but to understand and describe a specific phenomenon or behavior (Tuomi & Sarajärvi 2009, 85). However, further research could exploit quantitative methods to test whether the results could be generalized and utilized by other companies in the industry.

Data collection

The most common methods for collecting data in qualitative research are interviews, inquiries, observation and information from various documents. These can be used as alternatives, side by side or combined in different ways depending on the research problem and available resources. In this study, interviews were seen as an applicable method for collecting data as the goal was to understand how people think and why they act the way they do, it was reasonable to ask directly from them. Interview was chosen for this study also because it is a flexible tool where it is possible for the interviewer to repeat and clarify questions and discuss with the interviewee (Tuomi & Sarajärvi 2009, 71, 73–75). This was seen as major advantage as understanding the phenomenon often required discussion and further clarifying from both the interviewer and the interviewee.

Observation was also considered to be able to generate applicable data as the researcher would have been able to monitor how the people function in authentic circumstances (Kananen 2015, 135). However, the interviews were estimated to bring enough valid data to generate solutions for the research problem, and in the end the available resources limited the use of observation.

Saunders, Lewis and Thornhill (2012, 374) present three different types of interviews: structured interviews, semi-structured interviews and unstructured interviews. The difference of the types lies in the formality and structure of the interviews, structured interview being the most formal and structured of the three not leaving any space for improvisation. Semi-structured interview was chosen as an applicable method for this study as it is, according to Denscombe (2005, 189), a good method for gathering information on the informants' priorities, opinions and ideas. Furthermore, the validity of gathered data can be good due to the possibility to check for accuracy in direct contact. Semi-structured interview is an advantageous method for obtaining data when there are a large number of questions to be answered, when the questions are open-ended or complex, or when the order or logic of questions needs to be varied. In semi-structured interviews the researcher is able to alter, omit or add questions according to the organizational context to

explore the research objectives. Hence, it is a very flexible method for collecting data. (Saunders et al. 2012, 374–379.) It was seen from early on that for the research problem of this study to be solved, a large number of questions were to be asked from the interviewees. Also, the ability to add or omit questions was seen to bring flexibility which was seen as a major advantage because the companies operate in various ways.

In semi-structured interviews themes and a list of some key questions have been planned in advance based on theoretical frame (Saunders et al. 2012, 374; Tuomi & Sarajärvi 2009, 73–75). It is not possible to prepare accurate questions in advance as the phenomenon is unknown. Structured and focused questions may also lead to results which do not represent the phenomenon. (Kananen 2015, 144.) Phrasing of questions defines what the answers are like. There are always expected answers to questions and expectations affect to the phrasing of the questions. (Kananen 2014, 36, 73.) The risk of bias is managed by using themes which enable the interviewee to talk more widely of the topics raised by the interviewer. (Kananen 2015, 144.) The themes and assisting sub-questions for this study were conducted from the research problem as well as the studied literature. During the interviews some questions were also added. The interview template can be seen in Appendix 1.

Another benefit to interview is that when permit is agreed, it is rare that the informant declines participation or the use of the interview as research data. (Tuomi & Sarajärvi 2009, 73–75.) Downside of interview as a data collecting tool is that it is very time-consuming (Hirsjärvi & Hurme 2015, 35; Tuomi & Sarajärvi 2009, 74). According to Tuomi and Sarajärvi (2009, 72), Alasuutari (2001) reminds that while it is important to interview people and use them as sources, one must be critical over the information gained. As he writes, no tool exists to finding the ‘absolute truth’. The informants bring out subjects that are meaningful and important to them and the answers are therefore reflections of their subjective experiences of reality (Kananen 2014, 86).

Furthermore, the interviewees have to have enough knowledge and hands-on experience on the subject of investigation (Tuomi & Sarajärvi 2009, 85). For this

study, the interviewees were chosen to represent companies that design products and use contract manufacturers for producing the goods. All of the interviewees were working with the suppliers and had hands-on experience of managing PQ.

One way to ensure sufficient research data is to collect it until saturation appears and the material starts to repeat itself. However, referring to saturation does not suit to all qualitative studies. Before starting the data collection it should be considered in regard to the research problem whether it is desirable or not to have homogeneous material. (Tuomi & Sarajärvi 2009, 87.) As this study aims to find solutions to manage contract manufacturers to ensure adequate product quality, and all of the studied companies have unique ways to manage suppliers, reaching saturation is not vital for generating solutions for the problem.

Analysis

The gathered data describe the phenomenon under investigation and the function of the analysis is to create a clear, written description of it. In qualitative research, the data is often in various forms and need to be translated into an equal form, e.g. interview recordings are to be written out into transcripts (Kananen 2015, 160). Dividing the data into themes enables comparing the occurrence of specific topics in the material. The aim is to search for conceptions representing the chosen themes. (Tuomi & Sarajärvi 2009, 93.)

Content analysis is a basic analysis method which can be used in all qualitative research. The aim in content analysis is to organize the material into a compact and clear form for further conclusions without losing the information. It is a text analysis method where nearly all kinds of written documents can be analyzed; books, articles, diaries, transcribed interviews etc. Content analysis aims to describe the contents of these documents in writing. (Tuomi & Sarajärvi 2009, 91, 103, 106, 108.)

Content analysis may be executed using inductive or deductive techniques, or a hybrid of these two. The inductive approach aims to find new theories and generalizations, which makes it inherently uncertain. Deductive approach tests an existing theory e.g. in a new context. The hybrid of these two uses abductive

reasoning where data and theories alternate and the researcher aims to combine these two in an appropriate manner. (Tuomi & Sarajärvi 2009, 95–97.) Inductive reasoning is often associated with qualitative research, deductive with quantitative research and abductive reasoning with grounded theory (Roulston 2010, 150).

According to Tuomi and Sarajärvi (2009, 91–92) Laine describes the analysis process in four steps. First, a decision has to be made on what is important in the data, and then hold on to it. Second, one needs to go through the material and separate the themes which should be included and leave everything else out of the analysis. Third, the material is to be categorized or themed. The fourth step is to write a conclusion. Here, Laine describes the analysis process as linear (Figure 2) whereas Hennink et al. (2011, 201) describe it as a cycle of four tasks; developing codes, describing and comparing, categorizing and conceptualizing, and developing a theory (Figure 3). Whichever way is adopted, the analytic process has important links to both research design and data collection stages. For example, developing codes begins when conducting a literature review and continues during data collection. (Hennink et al. 2011, 202.)

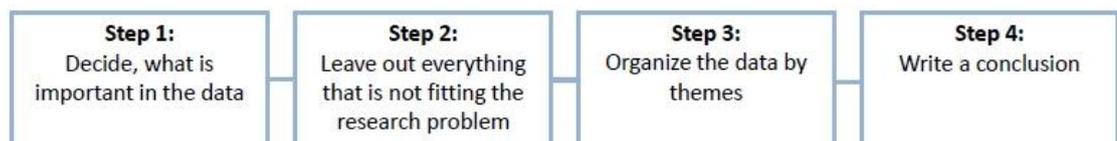


Figure 2. Laine's linear analysis process (Tuomi & Sarajärvi 2009, 91–92.)

These methods ease the access to valid information in the analytic process. However, plain reading and reasoning may be enough to achieve answers to the research problem in which case refining the data is not required. (Kananen 2015, 160, 163.) The analysis stage usually generates new questions and is almost always followed by another round of data collection (Kananen 2014, 100).

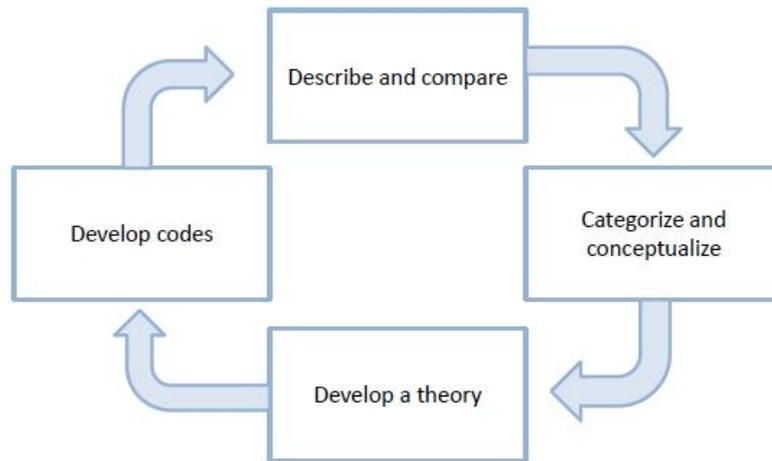


Figure 3. Circular analysis process (Hennink et al. 2011, 202.)

2.3 Reliability and validity of the study

Repeatability is thought to be the measure for *reliability* in research; whether other researchers could repeat the project and come up with the same results (Silverman 2006, 282). However, Saunders et al. (2012, 382) and Hirsjärvi and Hurme (2015, 186) criticize repeatability as an objective especially when the aim is to study characteristics which change over time. According to Silverman (2006, 282) Moisaner and Valtonen suggest two ways to build reliability in research: “making the research process transparent through describing the research strategy and data analysis methods in a sufficiently detailed manner in the research report” and “by paying attention to ‘theoretical transparency’ through making explicit the theoretical stance from which the interpretation takes place and showing how this produces particular interpretations and excludes others”.

Interview as method for data collection is said to have many potential errors on the interviewer’s as well as interviewee’s side. Also the analysis, interpretation and reporting can include problems as there are no ready-made solutions for these. Therefore interviewing requires skills and expertise of the interviewer. (Hirsjärvi & Hurme 2015, 35.) In a reliable research interview it is important that every informant understands each of the questions in the same way so that the answers can be coded without the possibility of uncertainty. To ensure this, interview should be pre-tested and the interviewer should be trained. (Silverman 2006, 286.) One of the basic

demands for a reliable research is that the researcher has enough time to carry out the process (Tuomi & Sarajärvi 2009, 142).

Validity deals with whether the right subjects are under study (Kananen 2015, 356). Here, the aims of the research must be taken into consideration (Denscombe 2005, 274). Discretionary sample can be misleading in many ways. The risk is that the sample does not represent the research agenda and the researcher must aim to prove that the selection of informants does not include systematic delusion. (Hirsjärvi & Hurme 2015, 60.)

Triangulation is a way to validate data, where the researcher studies the subject from different viewpoints through combining different kinds of data and/or using different methods to produce an accurate and objective result. The assumption is that if all the methods used bring the same or similar conclusions, validity is established. (Silverman 2005, 290–291.) Another way to validate data is to let the informants read and comment on the results; *face-validation* (Tuomi & Sarajärvi 2009, 142), or *respondent validation* (Silverman 2005, 291). Saunders et al. (2012, 384) point out that high levels of validity may be achieved by using carefully conducted semi-structured interviews due to the possibility to clarify questions.

Tuomi and Sarajärvi (2009, 127) claim that one major criterion for *ethicality* is research logic. Also, research plan must be high quality, research design well defined and suitable, and report itself must be impeccable. Informants must know why the research is conducted. The objectives, methods and possible risks of the research need to be informed to them. Confidential information should not be given to third parties and the information is not to be used for other purposes outside the research. Anonymity of every informant must be guaranteed, and no names should be possible to identify. (ibid., 131.)

3 Contract manufacturing in the fashion industry

This chapter describes the general context of the study. First, the characteristics of fashion industry relative to the study are introduced. Second, contract manufacturing and the process of purchasing are discussed to give the reader a thorough view on the operational environment of the studied companies.

3.1 The fashion industry complex

Christopher, Lawson and Peck (2004, 367) have defined the fashion markets to typically possess the following characteristics: short product life-cycles, high volatility of demand, low predictability of sales, and high impulse purchasing behavior of consumers. In these circumstances forecasting the demand of fashion products is seen as an impossible task, which challenges the management of supply chains.

Bowon (2013, 216-217) defines a supply chain to consist of “all the activities that must be performed to create value, from producing raw materials, transforming them into finished products, and delivering those products to the customers”. Buyer-driven supply chains are characterized by tiered production networks (Tyler, Heeley & Bhamra 2006, 317). Figure 4 illustrates the supply chain from the buying company’s point of view in a simplistic manner. Here, the subcontractors are 1st tier suppliers, firms supplying processed materials are 2nd tier suppliers and firms supplying raw materials are 3rd tier suppliers. Materials flow from left to right as information, orders etc. flow from right to left.

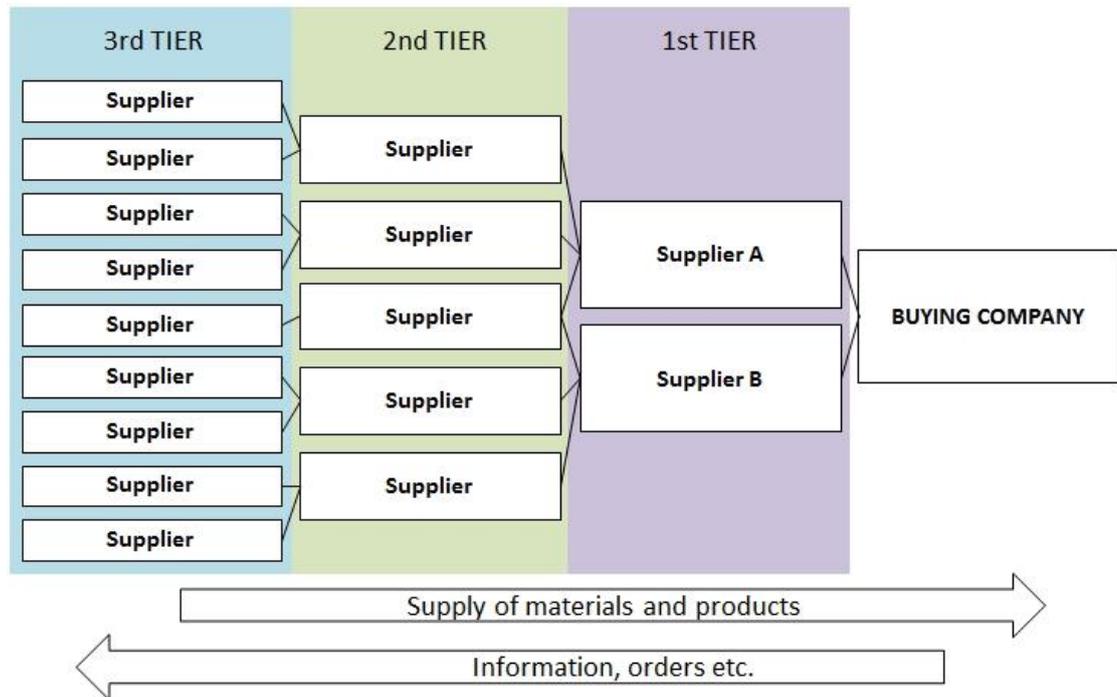


Figure 4. Tiers of supply

Suppliers can add value to the supply chain through delivery performance, reliability in lead time and product quality (Emmet & Crocker 2009, 39). It is important to acknowledge that decisions and processes through the whole supply chain have an effect on the quality of the final product. This will be discussed further in chapter 4.1.

The fashion and textile industry complex (Figure 5) consists of companies that produce raw materials, manufacture products, distribute, and sell their products to customers. Here, *raw materials* include all unprocessed materials such as leather, dyes, finishing chemicals, metals etc. *Processed materials* include all components that do not require additional processing before manufacturing the final product such as zippers, yarn, finished leather and buckles. Manufacturers produce products out of the processed materials, and may also include other activities into the production process e.g. dyeing. Manufacturers either sell the products to wholesalers or directly to retailers. (Kadolph 2007, 5.)

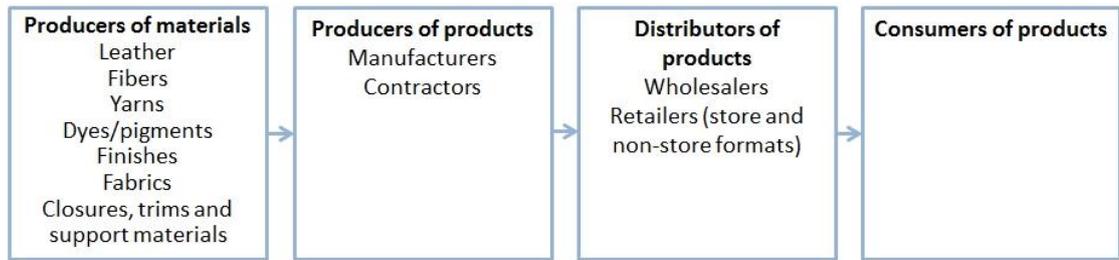


Figure 5. The textile industry complex (Kadolph 2007, 4.)

In the fashion industry there are vast quantities of players from raw material suppliers to retail channels. This makes the global supply chain complex, and the buying companies “owning” the supply chains deal with numerous supplying companies in the upstream and often also quite a few retailing partners and other clients in the downstream. Furthermore, the rapidly changing customer requirements shorten the product life cycles, which makes it more difficult to achieve an appropriate level of responsiveness in the supply chain. One of the top priorities for fashion companies is to effectively coordinate diverse activities and functions, and they need to develop a well-oiled supply chain strategy to be able to respond to the market effectively. (Bowon 2013, 215, 223.)

To develop such a strategy, the potential bottlenecks need to be analyzed. According to Tyler et al. (2006, 325), the blockages in the supply chains of new fashion products most typically are: timing of fabric trade shows, lack of control of availability of fabric, forecasting, late state product changes, geographical proximity to the market, decision making decoupled from fashion trends, stock-outs, and slow selling products. The risks can be managed through managing and developing the whole purchasing process.

3.2 Purchasing and contract manufacturing

Many companies are nowadays designing products in-house having outsourced the production to subcontractors (Handfield, Monczka, Giunipero & Patterson 2009, 70). *Subcontracting* is productional cooperation between companies. The company may choose to subcontract parts of manufacturing process or the whole process to a

subcontractor. (Kiiha 2002, 2–3.) Some of the companies that have succeeded in operating this way are Nike, Hewlett-Packard and Cisco (Handfield et al. 2009, 70).

Subcontracting requires openness and perseverance from both parties involved. Companies must be capable of managing total costs together through the supply chain from the material producers to the end customer so that the product is finished in the right time, at the required level of quality, and within the competitive price range. (Haverila, Uusi-Rauva, Kouri & Miettinen 2009, 25, 449.) Subcontracting requires a detailed contract to obligate both the buying company and the subcontractor. The contract should include, at the very least, the price of the product/service ordered, quality and availability, and responsibilities and obligations concerning both parties. (Kiiskinen, Linkoaho & Santala 2002, 123).

Contract manufacturer is, in the simplest terms, a company that manufactures goods under the label or brand of another company according to the design owned by the buying company (Jones 2007, 41). In the fashion industry, it is common for brand owning companies to have manufacturing operations purchased from contract manufacturers. These companies focus on their core competences, e.g. design and marketing, and subcontract the non-core activities. (van Weele 2014, 175; Dana et al. 2007) It is therefore important to know the company's strengths and weaknesses, to know what is done right and what is done wrong, and why the customer is or is not buying the product. Otherwise, there is a risk that resources are being consumed on operations that are not relevant for the company's future success. (Booth 2010, 47.)

Contract manufacturing often leads to activities such as product design, development, manufacturing, and management being separated. Furthermore, it may lead to challenges due to possible cultural differences, inaccurate product specifications, inaccurate communication of changes made, geographical location, and time zones. (Kadolph 2007, 5.) A successful, long lasting and mutually beneficial relationship between the buying company and the contract manufacturer requires cultural compatibility (Jones 2007, 41). The buyer-supplier relationship management will be discussed further in chapter 4.2.

Coordinating the operation of subcontracting is the buyer's responsibility. This way of managing requires buyer's knowledge of various parts of the production, as well as capacity to communicate to the manufacturers, and coordinate them. If the buyer does not have these competences it might lead to failure in the process. Major challenges are usually related to the demarcation of responsibilities between the two companies of the final performance, in this case the final product. (van Weele 2014, 176.) In a case of e.g. quality failure, the customer of the purchasing company does not care if the factory made the mistake, as the responsibility is the seller's. The risk is that the customer will charge it back to the company and will not give them another chance. (Gehlhar 2005, 78-79.)

In this study, the relationship between the buying companies and contract manufacturers are looked into. The term *supplier* is used in this report when referring to the contract manufacturers that produce products according to the buying company's design specifications.

Purchasing process

As a company makes the decision to produce products by subcontracting, it is taking the road of purchasing. Quality of purchasing process has become increasingly important to companies and the purchasing staff is expected to know how to manage multiple suppliers (Hoyle 2007, 8). Booth (2010, 47) stresses that purchasing is a business competence with a focus should be on the customers' interests, not plain order-placing.

The purchasing process begins with determining the purchasing specifications of the goods or services that need to be bought in terms of quality and quantity. After defining the product, a supplier will be selected and negotiations conducted with them. If an agreement is accomplished, legal contracts will be prepared. An order will be placed, monitored and expedited and after the delivery of the products, the whole process will be evaluated. (van Weele 2014, 8.) These steps are illustrated in Figure 6.



Figure 6. Purchasing process (van Weele 2014, 8.)

Major bottlenecks and problems in an organizational purchasing process can rise from the inadequate selecting of suppliers, personal relationships between buyer and supplier that may lead to adverse preferring of the supplier, poor administrative processes, and problems in delivery. Selecting the right supplier is an important part of the purchasing process as it is possible to prevent future mishaps through careful investigation and consideration. Personal relationships are one reason for long relationships between buyer and subcontractor. Poor administrative processes refer to mishaps in purchase orders, invoicing and money transfers which could be solved by putting a sound administrative system in place. Problems in deliveries are manifold as there could turn up problems such as deliveries being too late, not complete, products can be damaged or do not meet the quality standards and packaging can be unsolid. The reasons for these can be tracked down to unclear specifications or an unsuccessful selection of suppliers. (van Weele 2014, 47.)

Selecting the right suppliers

Selecting the right suppliers is a critical phase. One reason for this is that products from the well performing suppliers do not need as thorough quality control done by the purchasing company as do the products from the worse performing suppliers. Therefore, successful purchasing process, and especially selecting the right suppliers, can yield lower quality costs. (van Weele 2014, 3.) The cost of quality will be discussed further in chapter 4.1.

The supplier selection is preceded by determining the purchased products, and the logic and the conditions in the supply markets. From this review, it is already possible to draw a rough conclusion on what are the characteristics of the potential suppliers and where are they located. Other aspects to be considered are whether the labor

costs, fast logistical connections, or the availability of raw materials affect the choice of location. Also, the question on whether it is desirable to work together with e.g. a smaller, more specialized supplier, or a larger, multinational corporation, need to be answered. (Iloranta & Pajunen-Muhonen 2015, 227.)

After conducting a long list of theoretically potential suppliers, a short list need to be prepared by using some simple criteria to screen out suppliers. Furthermore, it is advisable to gather some additional information of the suppliers, e.g. is the supplier widely known and do they have references, how advanced is the technology they are using, and what the market strategy of the company is: are they specialized in manufacturing e.g. cheap products or is the way or working more artisanal. (ibid., 237-238.) According to Gehlhar (2005, 70) finding the right suppliers can be a frustrating and time-consuming process, where it would be valuable to receive recommendations of suppliers from e.g. other design companies in the industry.

Langley, Coyle, Gibson, Novak and Bardi (2008, 518) state that quality is the most important criterion when choosing a supplier. Ho et al. (2009, in Park, Shin, Chang and Park 2010) agree to this and add that the second most important criterion is the ability to deliver impeccably, and the third most important criterion is price or cost of the purchased product or service.

When searching a supplier for cooperation, visiting the potential suppliers' offices and factories is an important part of the process. This is because it is possible to assess the suppliers' abilities to collaborate and to reveal the working culture, and motivation to work, while visiting. (Iloranta & Pajunen-Muhonen 2015, 241; Gehlhar 2005, 74.) The factory workers' attitude and individual pride in the product contribute to good quality (Chuter 2002, 15). According to Gehlhar (2005, 74), during the visit the buying company's representative needs to make the assessment whether they are able to trust the supplier to deliver: "in reality, some factory owners care about the quality of their work and the success of the line, while others only care about getting the job done and getting paid. When meeting the owner or manager of each factory, try to get a sense of the person, his priorities, and whether he takes pride in his work".

A Stanford University research showed that around 75 % of the purchasing companies were willing to source locally whenever it was possible and beneficial to the company. The advantages of local sourcing are the possibility to a collaborative relationship, more reliable deliveries and lower transportation costs. (Young 2010, 256.) For starting companies Gehlhar (2005, 71) recommends using domestic factories if possible because it enables the overseeing of all processes, makes it easier to keep the production on schedule and meet the quality standards.

Gehlhar (2005, 72) stresses that “—there are challenges with communication, cost, timing and quality when producing anywhere abroad”. Ruamsook, Russell and Thomchick (2009) found in their study that when sourcing from low cost countries the top issues rise from supplier’s low information system capabilities and communication infrastructure, differing business cultures and practices, and deliveries not being on-time receipt at buyers’ location. When a company strives for a more agile, quick response manufacturing, according to Warburton and Stratton (2002), the solution might be an onshore supplier provided that the supplier is modern and invests in new technology and overall development. In this model, the purpose is that the onshore supplier to quickly respond to the changing demand, which reduces costs through having to keep fewer inventories at hand.

4 Quality management

This chapter focuses on quality management. The emphasis is on product quality, and the buyer-supplier relationships, and how the relationships affect product quality (PQ). The concept of PQ will be defined, and matters affecting it are studied. Also, PQ's effect on business performance is briefly discussed. The second part of this chapter focuses on the managing of buyer-supplier relationships and its effect on PQ.

4.1 Adequate product quality

Satisfied customers are the core to companies' success. Thus, the companies' interest should be to offer products that respond to customer needs and expectations as well as requirements. The three fundamental requirements are quality, delivery and price; customers require products of adequate quality to be available by a given time for a price that reflects value for money. (Hoyle 2007, 9–10.) According to Chuter (2002, 28), achieving a satisfactory level of PQ can be attained only through co-operation of everyone in the organization. It needs to be fully understood by everyone, what is meant by "quality", how it is defined in the company.

The level of PQ is evaluated by the company's customer (Hoyle 2007, 10; Dilworth 2010, 49). Therefore, a quality product is one that possesses features that satisfy customer needs (Hoyle 2007, 5). Quality stands for different things to different customers. Generally, the customer's perception relates to a long-term use of goods and evaluation is made based on the customer's experience of the competing offerings. (Dilworth 2010, 49.) Factors which affect this evaluation are e.g. a product's ability to meet the customer's design and safety requirements, fitness for purpose (Emmet & Crocker 2009, 22; van Weele 2014, 8), durability, disposability (Hoyle 2007, 16), easiness to repair if it breaks, dependability, and the overall user experience (Langley et al. 2008, 518). In multiple studies, the country-of-origin has also been seen to affect consumers' perception of PQ. Consumers are seen to associate certain countries with good quality of certain products segments; e.g. Switzerland with watches and Italy with leather products. (Kalicharan 2014.)

Achieving zero level of defects is seen as impossible due to human error, but it is possible to come very close (Chuter 2002, 20). According to Gehlhar (2005, 43), “quality is a combination of the craftsmanship, materials, and finishing the product”. She reminds that most successful brands in the industry, such as Luis Vuitton and Gap, maintain the same quality standard season after season. Hoyle (2007, 5) stresses that an inadequate quality level may result in direct feedback from customers, loss of sales, and/or reduction in market share. Having PQ that satisfies customers is essential especially in very competitive market surroundings since it is easy for the customer to replace the existing product with a product of better quality (Dilworth 2010, 52). Therefore, for a company producing and marketing consumer products it is imperative to understand the guidelines consumers use to assess PQ (Kalicharan 2014).

If customers have a bad quality image of a company’s offerings, it can lead to decreasing sales revenues. Simultaneously, if the impression of PQ is high it can enable higher margins and/or higher sales volumes. (Dilworth 2000, 89.) Agus and Hajinoor (2012) substantiate in their research PQ’s positive and direct effect on business performance. Especially product conformance, performance, reliability and durability were seen to have impact. Chuter (2002, 4) stresses that the customer’s requirements must be fully investigated before product specifications are designed.

Managing product quality

After knowing the customers’ needs and expectations regarding the product, the next step is to translate them into quality specifications. Specifications include everything from the exact dimensions of the product to the material features and other measurable attributes. (Chuter 2002, 4.) Quality specifications define the desired quality and performance of the product. These specifications usually describe all the components and the assembly of the product. (Kunz & Garner 2011, 150.)

Quality needs to be designed into the product from early on (Cooklin 2006, 185). In product development stage, it is important that the design team is convinced of the manufacturer’s ability to produce the product in the required level of quality and within the desired price range. If there is doubt, any possible errors should be

cleared out from the design. (Chuter 2002, 4.) The design of the product should not include structural weak points which can lead to product failure during reasonable usage, or critical areas which can lead to difficulties during production. Also, it is important to ensure that the technology in the factory is capable to produce products in required quality level. This can be attained by sampling, and consultation between machinist and designer. (Cooklin 2006, 185.) Samples complement the specifications but it is essential that the samples exemplify the required level of quality. (Chuter 2002, 4.)

Controlling the quality of production is the more difficult the longer the geographical distance between the buyer and supplier. In regard to factory management, Gehlhar (2005, 85) stresses the importance of being present at the factory to oversee the quality of work. Over the phone it can be easy for the manufacturer to mislead the buyer. She recommends a check on the work at the beginning, middle and end of the production run. Large companies have full-time employees travelling or living in the production country to oversee the factories daily. However, for smaller companies this is often not possible. Therefore, the contract manufacturers need to be trained to understand how the product should look and fit. Quality inspections need to be conducted carefully and the comparison is always done against the production sample and product specifications (Gehlhar 2005, 72, 83).

In the factory PQ improvement happens on multiple levels. Individual machine operatives are in key role as they create value and wealth by making the product. The central factors affecting PQ in manufacturing stage are the workers' knowledge of the machinery used, methods of manufacturing, and knowledge of materials. (Cooklin 2006, 178–180.)

Managing communication is essential to quality management. Problems in communication often cumulate to problems in production, PQ and relationships between the two parties. Companies must plan on who needs to have which information and when. Some information will be shared online and some through samples exchanged through couriers. (Kadolph 2007, 5.) Communication between buyer and supplier is discussed further in chapter 4.2.

Kadolph (2007, 6) states that if a company approaches quality from a wider perspective than only assessing the final product, the outcome is more successful. According to her, the key to consistent quality is incorporating quality into the product during product development, production and marketing. By collaborating among departments appropriate quality for the market can be achieved. Of course, ensuring that the suppliers use suitable materials in their offerings is important, but to achieve adequate PQ, marketing department should know what the customers are expecting. (ibid., 6.)

Quality and cost

Managing quality brings costs of two sorts: preventive and failure costs. Preventive costs arise from planning the quality, preparing specifications and other documents, quality inspections, and monitoring. Failure costs are caused by quality system failure, and are derived by repairs, remakes, seconds sold for a discount, and delays: penalties paid to customers, storing the goods and possible interest charges on the value. (Chuter 2002, 13; Dilworth 2000, 51) Quality manager's task is to keep the two cost groups in balance and both in minimum. However, it cannot be forgotten that the outgoing PQ needs to be at the customer's agreed level. (Chuter 2002, 13–14.)

According to Larson's (1994) study, higher PQ yields lower total costs. Checking PQ by hand does not add value to the product; hence, it wastes resources (Emmet & Crocker 2009, 26). Manufacturing defective goods wastes working time, and material. There is time put into shifting the defective products from the good ones, and the defective ones must be then reworked or remade. When PQ improvement is managed wisely, it can reduce cost in rework and scrap. (Dilworth 2000, 50–52.)

If the customer finds the product defective, there has to be resources used to appease the unsatisfied customer. Also, it is difficult to measure the cost of lost future business caused by external failures. (Dilworth 2000, 50–52.) Simply, it is less expensive to make the products right the first time round (Kunz & Garner 2011, 150).

4.2 Supplier relationship management

According to Booth (2010, 49–50) there is a need to build a strong bedrock for the buyer-manufacturer relationship to prevent building the company's strategic alliances on "shifting sand". To achieve this, the buyer's organization has to be managing the manufacturers holistically and everyone dealing with the manufacturers need to have the same knowledge available. This gives the manufacturers an impression that the buying organization is credible. Shuh et al. (2014, 5) also address this as an important matter as the suppliers prefer working with customers who are aligned internally.

The purchasing companies can influence suppliers' responsiveness and performance by understanding how their own behavior affects the suppliers. By understanding the mechanism, they are able to improve the results of the purchasing process "without the need to increase spend or possibly engage in a continual process of changing suppliers." (Ramsay, Wagner & Kelly 2013.) One significant factor affecting relationships are attitudes and feelings. Attitudes are affected by beliefs and values. Therefore building and maintaining a good supplier relationship requires that both parties believe the other is valuable and the relationship is important. (Emmet & Crocker 2009, 34–35.)

The key themes for buyer-supplier relationships are power and dependence, trust and commitment, and cooperation and co-opetition. Relationships are always partly about competing over power (Fernie 2014), which makes the managing of it challenging. The relationship between the buyer and supplier is a critical one, as they are going to be in contact often and need to trust each other (Gehlhar 2005, 74). Close business relationships can be beneficial for both parties in the long run. The outcome may be e.g. innovations or new design solutions for a product or service the companies are producing together. (van Weele 2014, 3-5.)

Purchasing process in companies is often very product category focused rather than supplier focused. For example, purchasing performance management concentrates on savings by product or category but hardly ever focuses on the savings or value contributed by suppliers. (Schuh, Strohmer, Easton, Hales & Triplat 2014, 3.) Focusing

on categories is certainly important, but for the whole process to be efficient, supplier relationship management (SRM) plays a major part.

The TrueSRM Framework

Schuh et al. (2014, 27) define SRM being “ultimately about motivating suppliers to behave in ways that will meet the (purchasing) company’s needs”. Hence, merely suggesting partnerships or managing processes is not enough to qualify as SRM. They present the TrueSRM framework for guiding companies to find ways to manage their suppliers in a fit-for-purpose manner. The key mission of TrueSRM is to recognize and focus on the few suppliers that really matter to the company in the long run. (Shuh et al. 2014, 159).

To begin with, suppliers are to be evaluated by their abilities to meet the company’s needs and expectations. These supplier-performance variables include delivery (on-time, in-full), cost (vs. previous period), and quality. The second question relates to the company’s strategy. An assessment has to be made on what makes each supplier important for the company. The suppliers with a strategic potential should hold the key to the company’s competitive advantage. (Shuh et al. 2014, 30, 32.) Figure 7 illustrates the nine interaction models on two axes.

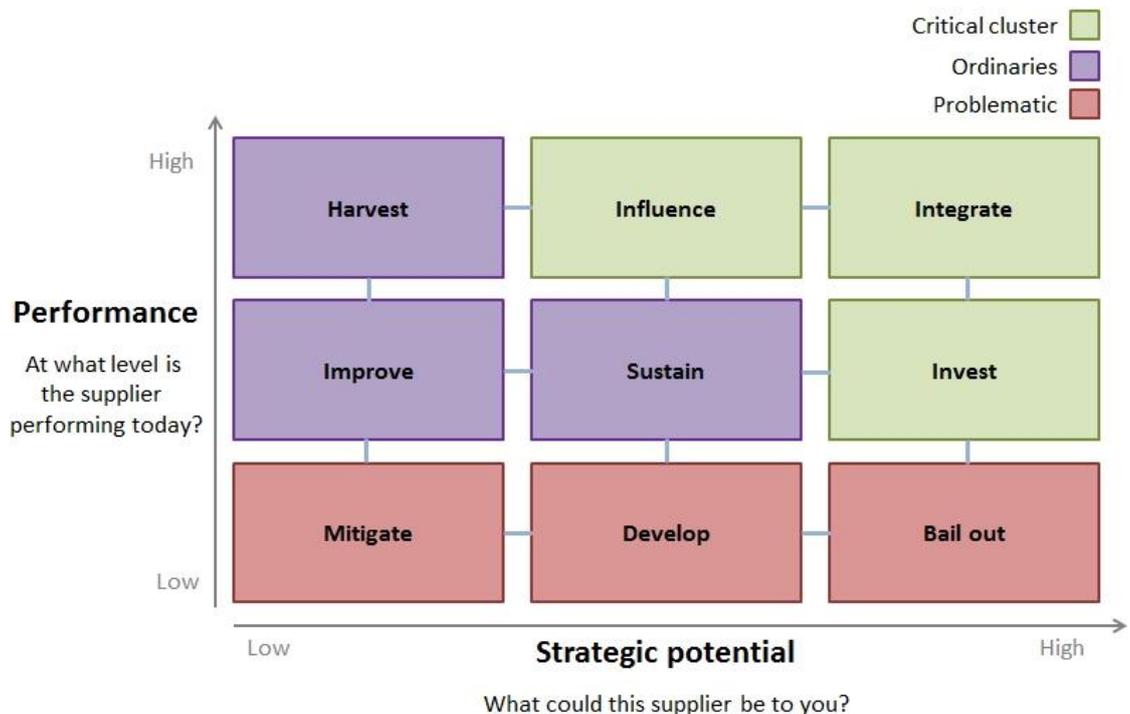


Figure 7. Nine supplier interaction models (Schuh et al. 2014, 30.)

Suppliers that fall into the *Critical cluster* are the relationships to be nurtured. These suppliers may offer a significant competitive advantage. The key to success is to focus on a few suppliers, that fall into this category. (Schuh et al. 2014, 112.) Relationships with suppliers that fall into the *Ordinaries* are often the vast majority of a company's suppliers. They are often forgotten by the purchasing company, but they often have potential. Developing the existing suppliers that perform in a mediocre manner may become less expensive than hiring a new one that may not be at the same level to start with. (ibid., 47, 62.) The cluster of *Problematics* contains suppliers that are low performing and require care and risk management. The performance of these suppliers is poor, and if the strategic importance of the supplier is low, it should be replaced. (ibid., 87.)

The success of SRM cannot be measured directly in terms of cost savings, but rather competitive advantage attributed by the suppliers. Competitive advantage means different things to different companies, e.g. successful product innovations that help the company to gain market share, higher profits, or better quality of products and happier customers. (Schuh et al. 2014, 124.)

Cooperation

The more competitive markets, the more limits there are to how one company is able to do to influence its performance alone. Developing buyer-supplier relationships towards cooperation can improve business performance. (Kannan & Tan 2006) Buyer and supplier could both benefit from a strong relationship. Developing trust and commitment, improving communication and cooperation, creates closer bonds and dependency. (Fynes & Voss 2002.)

Emmet and Crocker (2009, 32) propose for buying companies to think of their suppliers similar way to their customers. In practice this would appear as accepting the supplier as an important part of the business, and as someone who can give the company a competitive advantage. Ramsay et al. (2013) agree with this approach and suggest the following way to look at the relationship: supplier is a customer of the buyer and the purchase offering is service they are 'buying'. Purchase offering

includes money, payment method and timing (product), but also regular interaction with buyer's staff and the complete attitude from the buyer's side (service).

Bendixen and Abratt's (2007) research suggests that suppliers value ethical behavior in relationships with buyers which means that the relationships were candid, fair and professional. Other supplier satisfying factors are accessibility, responsiveness and accuracy (Emmet & Crocker 2009, 33). Bendixen and Abratt (2007) also found that suppliers believe trust to be an important factor. Trust and commitment in a relationship are thought to be leading to cooperation (Fernie 2014), and Lees and Khatri (2010) go even further claiming that it is impossible to have successful cooperation without trust. According to them, cultural differences in how business is conducted can undermine cooperation if it is allowed to. Therefore, the cultural differences need to be examined ahead of time.

According to Booth (2010, 140), SMEs are better at building strong and sustainable relationships with the suppliers than large ones. Hence, small entrepreneurial companies have better premises for collaborating with the suppliers.

Communication

High levels of information exchange can result in considerable performance improvements (Vereecke & Muylle 2006). Furthermore, manufacturers' value open communication and this is seen as an important part of the buying company's identity management. In this way corporate values, image and reputation can be formed and maintained. Through maintaining good ethical values the buyer is building trust which is seen to lead to greater commitment in relationships. (Bendixen & Abratt 2007.)

Regular meetings with the buying company are seen to be a valid way to maintain good working relationship (ibid.). Also Emmet and Crocker (2009, 79) propose a meeting at least once a year where both parties should present their intentions and priorities, problems could be solved and mutual understanding reinforced. Regular communication during the production runs, but also between them, is important. Gehlhar (2005, 83) stresses the importance of being available to the manufacturers

when they contact the purchasing company. Even if the issue seems small and the manufacturer might interrupt other tasks, the issue might have interrupted the whole production process. Not responding might lead to the manufacturer moving the company's project aside to prepare another one, which costs the company's time.

The company's direction-setting strategies should be explicit to the company's employees, stakeholders and suppliers. It is important for these groups to know what is defined as "good practice" in the company and therefore gives the employees and suppliers an opportunity to contribute. In some cases when employees and suppliers are criticized over not being proactive enough in their work, the solution can be as simple as to draw a clear picture of the company's priorities and values to them. Without the ability to plan and communicate how the company should perform in the forthcoming five years, there is no reason to presuppose that the employees let alone the suppliers either know or care. (Booth 2010, 62, 64)

Buyer-supplier relationship and product quality

Larson's (1994) study showed a close and positive relation between the buyer-supplier co-operation and PQ. Also Dilworth (2000, 52) brings out the importance of the cooperation between buyer and manufacturer at an early stage to prevent errors in production.

From a supplier's point of view, the quality of the design plays a central role in the overall quality performance (Fynes & Voss 2002). Purchasing managers assure that quality is designed, manufactured and delivered according to contract, and they have a leading role in developing co-operative relationships with suppliers (Larson 1994).

To be efficient, the buying company needs to have a set of rules for interacting with the suppliers which offer a baseline for the consistency in product offerings.

According to Kunz and Garner (2011, 150) these rules include manufacturing control and vendor compliance.

5 Conducting the study

The empirical part of this study is concerned with how companies operating in the fashion industry manage their contract manufacturers and affect the quality of products. The goal was to study design companies that work with contract manufacturers for producing the products. A long list of companies in the industry was conducted and the companies were filtered. The manufacturing strategies were scanned from the companies' web sites and the characteristics of the products were looked into. The websites were also scanned for marketing messages promising e.g. high PQ.

Eleven companies were contacted first via e-mail and second by telephone. Three of the contacted companies accepted the invitation. The most common reason for declining participation was lack of resources as the companies had a limited amount of personnel working with suppliers and PQ. All three interviewees work in administrative positions and have hands-on experience of managing suppliers and the quality of products.

The studied companies

The studied companies operate in the fashion industry producing products in a medium to high price range. All of these companies endorse their products to be of premium quality. These companies concentrate on product design and development, marketing and sales. Contract manufacturers produce the products according to the unique design specifications.

All three companies have their headquarters located in Helsinki and work with manufacturers located in Europe. One of the companies designed leather bags and two designed mainly clothing and some accessories according to the season. Table 1 summarizes the characteristics of the studied companies as well as the length of the longest relationship they have with a current supplier.

Table 1. Characteristics of the companies

	Company1	Company2	Company3
Product type	Clothing, accessories	Leather bags	Clothing, accessories
Quantity of the subcontractors	4-5	1	6
Length of the longest relationship	2 years	1 year	4 years
Locations of the subcontractors	Estonia	Finland	Estonia, Portugal, Spain

Data collection and analysis

The semi-structured interviews were conducted in the interviewees' premises in November of 2015 and January of 2016. The themes and questions were formed based on previous research and other literature relative to the research problem, which will be discussed in chapters 4 and 5. The interviews covered companies' perspectives on PQ, how they manage it, how they choose suppliers and maintain relationships with them. The interview template with themes and questions can be seen in Appendix 1.

The interview template was used as a guideline, but it was seen at an early stage that the interview had to be flexible due to the various *modi operandi* in different companies. Also, as the interviews were intended to be conversational, the questions were slightly altered and omitted, and some questions were added during the interviews according to the organizational context.

Each of the three interviews took 60-75 minutes and were recorded by the interviewees' consent. The recordings were transcribed soon after the interviews. Of these transcripts, summaries were drawn and these were given to the interviewees to read and validate. Some alterations were made according to the feedback. The analysis process then followed Laine's framework; the data was divided into themes, which were relevant in terms of the original research questions, and everything else was left out of the analysis. After this the process of comparing and managing the data and writing of the conclusion was straightforward. The results of the study are discussed in the next chapters.

6 Results

The data for this study was collected and analyzed as described in chapter 2.2. The themes for the semi-structured interviews (Appendix 1) were derived from the previous research and other literature described in chapters 3 and 4. Moreover, the interviewees had the possibility to talk about subjects relevant to their business within the scope of the research problem. The data was analyzed using inductive approach, searching for operating models and processes the companies have for managing the supplier relations and the quality of their products.

The results of the interviews are described in this chapter by themes derived from the data. As the main objective of this thesis is to generate solutions for improving PQ, the three themes are discussed from this perspective. Furthermore, the third theme is specifically concerned with managing PQ. The themes are: building the relationships, managing and developing the relationships, and managing PQ. The themes were outlined to generate solutions for the assisting research questions AQ3 and AQ4 concerning how the relationships can be managed and developed, and whether there is a connection between the quality of the buyer-supplier relationship and the quality of products.

6.1 Building relationships

The first theme is concerned with the early steps of starting a relationship with a contract manufacturer. As the companies in fashion industry often use global sourcing there is plethora of potential contract manufacturers available. However, as stated earlier, the search of the most suitable one is a demanding task. In this chapter, the modes of operating of the three companies are reviewed.

All of the companies used word-of-mouth (WOM) information to find new suppliers. Two out of three used their networks of other design companies as a main source of information and one used mainly manufacturers' knowledge of other players in the industry. Another way in finding new potential suppliers was via online phonebooks. Websites were not common to be used as source of information as the contract manufacturers rarely had very informative sites, if any, according to the

interviewees' experience. Finding potential suppliers was seen as a time-consuming and difficult task, particularly by the company aiming for local Finnish manufacturing.

For the studied companies the most important criteria for new manufacturers were PQ, motivation to co-operate, and lead time, time from ordering to receiving products. Motivation was seen to affect the quality of the working relationship as well as PQ. Therefore, it was seen to be important when producing premium products. According to Company2 *"producing our products requires a manufacturer who takes professional pride in their work because it's pretty difficult to make them and it's going to be expensive, sold as a premium product, it needs to be proper and the leather needs to be fine"*. Lead times were important for companies at least for two reasons; cash flow and the ability to react to changing customer demand. However, in these three companies, PQ was not seen to affect lead times of the products.

Furthermore, all three companies favored contract manufacturers of a smaller size. The reasons for this were the smaller suppliers' ability and willingness to work in a flexible manner regarding production schedules, and they did not require as much paperwork as the larger companies. Company1 emphasized that *"if we come up with something fun we want to execute it immediately. Like with the golden print, it took two months to have it in stock. We wish to stand out for our ability to react fast, and these smaller factories are ideal for their ability to respond to our needs"*.

Another advantage was seen to be the possibility to have personal relationships between the two companies which were seen as a way to build trust. Company1 stated that *"we think it's lovely that we can have personal relationships with the suppliers and we can have real conversation of the issues we might have e.g. with the patterns"*. Additionally, Company1 stressed the corporate social responsibility (CSR) aspect as they wanted to support the small factories, and Company2 searched for the local contract manufacturers for the same reason. Table 2 summarizes the ways companies find the suppliers and the criterion concerning the supplier selection.

Table 2. New suppliers

	Company1	Company2	Company3
Finding new suppliers	WOM: recommendations of other design companies	Online phone directories, WOM: asking from other suppliers	WOM: recommendations of other design companies, rarely also suppliers
Criteria for suppliers	Flexibility and product quality, small suppliers are regarded to be able to work in a more flexible manner	Will and ability to co-operate in product development, ability to work with thick leather, local	Quality of work, products as well as deliveries on-time and in-full, good communication

All of the companies had their contract manufacturers located in Europe as was described in chapter 2.3. Company3 explained their choice of manufacturing countries (Estonia, Portugal and Spain) with the know-how of the factory and the quality of work they deliver: *“We have worked hard to find the suitable factories to produce our products and we have finally found a few we can work with. In Southern Europe they have the right equipment and workers. Also, the materials are produced and bought locally which is seen to be convenient. We have had some trouble due to cultural differences but we need to work around them”*. Company1 and Company2 explained their choices of nearby manufacturing countries (Estonia and Finland) in the following ways:

- good control over production
- short lead-times
- small culture gaps
- easiness to visit the factory
- easiness in problem solving
- satisfying productivity and product quality

Company1 had moved their business from a manufacturer in Portugal to one in Estonia as they *“wanted to have better control over the production in a way, and not so that we just send something somewhere faraway and so on”*. The interviewees

told it was a big advantage to be able to visit the factories often, and they visited their factories located in Finland and Estonia every one or two months on average. Company3 visited their factories located in Portugal and Spain every six months. When visiting, the buying companies e.g. brought materials to the factory, build relationships and developed products together with the manufacturers.

Other advantages to close location also came up in the interviews. Company2 noted that their customers value the country of origin (COO) being Finland. They told that this was the case with Finnish customers but also with their German ones. Hence, the country of manufacture added value to the brand for which reason they strived to keep the production close.

Meeting with the new potential suppliers was seen to be a critical phase by all three companies. By visiting the factory the buying company's representatives could gain vital information and see the working culture and conditions in the factory.

Company1 told that *"when we visit the first time, we go around and investigate what the atmosphere is like, ask around how the things are going, and what the quality is like"*. Two out of three of the companies noted that the good working co-operation was the result of their successful recruitment process.

6.2 Managing and developing buyer-supplier relationships

The second theme concerns the managing and developing of buyer-supplier relationships. Here, communication, trust and handling conflicts were found as the main sub-themes.

Communication

All three companies highlighted meetings as the most efficient way to communicate at least the most critical subjects that required negotiation or conversation in any form. The continuous communication between buyers and manufacturers was done via e-mail in general, using a lot of pictures of products to clarify the message. Company2 communicated with the supplier mainly through the phone as the manufacturer was not equipped or able to operate a computer. However, the supplier had recently taken effort to acquire a computer, and the way of

communicating was to be changed in the near future. In many of the companies the mode of communicating seemed to be related to the manufacturers' preferences and abilities rather than the buyers'.

Communicating new products to the contract manufacturers varied between the companies. Company1 one sent patterns of the products, and used drawings only when the design was more complicated. The manufacturer made samples and sent them to Company1 who made alterations or approved the products to be manufactured. The changes were communicated through pictures via e-mail.

Company2 had a different approach. Their product development was done largely together with the manufacturer. The designer had an idea with some drawings of a product and then went to the manufacturer's premises to explore the possibilities and options for the details of the design. Company2 strived for a functional and durable design, and the intensive product development was regarded to give a competitive advantage for the company.

Company3 used accurate drawings of new products with all possible measurable information regarding the design and materials. The manufacturers made samples according to the specifications and designers made changes if necessary, which were the communicated to the manufacturer via e-mail using photos and drawings. Company3 was extremely careful that they saw a perfect sample before giving the consent to manufacture, and they required a new sample after every change made: *"we do have trust in the manufacturers – however, the materials we use are very expensive and we have high expectations regarding the quality of the design as well as the work of the manufacturer. This is the reason why we absolutely need to see a perfect sample done before we give the consent to produce the products"*. Table 3 summarizes the communication methods employed by the three companies.

Table 3. Communication between buyer and supplier

	Company1	Company2	Company3
Communication generally via	Meetings, e-mail	Meetings, phone, rarely e-mail	E-mail and phone
Communicating new products	Buyer sends patterns, manufacturer makes a sample and sends it to the buyer who checks it and asks for changes if needed	Workshop days: the designer and the manufacturer work closely together to find the best way to implement the design into the products	Specific drawings and material information sent via e-mail, manufacturer makes a sample and the designer makes changes if needed, require a perfect sample before manufacturing
Communicating small changes	E-mail	Via phone, rarely e-mail	E-mail

Company1 noted that they did not need to be in contact with their manufacturers too often as they had strong trust in their relationships: *“we do have communication any way, but we do not need to supervise the basic work as it is working quite well”*. They had good working relationships with their manufacturers and had learned from experience that deciding to trust in the suppliers enabled them to work on other tasks. Usually the deliveries were without notable issues. However, they visited the factories every now and then for maintaining the good working relationships.

Trust

All of the respondents had trust in their relationship with suppliers at least to some extent. Many of them noted that trust is vital in the relationship as their business was seen to be dependent on the manufacturers and they often used the term “partner” of their manufacturers.

Company3 acknowledged their dependency on the contract manufacturers and stressed the importance of being able to trust the suppliers. Furthermore, they noted that the trust needs to be mutual and they needed to work to be trustworthy as well: *“we negotiate openly about all subjects, aim to pay the invoices on time and inform*

them as soon as we know of any possible errors in payments. We try to show them that we genuinely appreciate their work”. They strived for low hierarchy internally as well as externally and built trust communicating openly and often and encouraging the suppliers to act in similar way. In the past, they had placed orders with delivery dates to and left the production entirely to the contract manufacturers with bad results, and their experience had taught them that close personal relationships and continuous communication ease the whole process.

Company1 told that they have trustful relationships with most of their suppliers but there were certain issues with deliveries not being on time with one of them from time to time. The interviewee told that they have had situations where it was required to go to the factory to pick up the late production so that it was available for a sales event. However, the quality of work and relationship was good so they continued working with the supplier regardless.

All of the companies aimed for giving feedback to the suppliers soon after they were delivered products from suppliers. Furthermore, Company1 had considered a reward system for well performing contract manufacturers. In this system, the supplier would have been rewarded by a certain per cent of invoice value for on-time or advance deliveries, and punished for late deliveries. However, this system was not put into place because the company wanted to keep a good working relationship with their suppliers and they saw that the small suppliers they worked with would not respond well to this kind of system in the end.

Handling conflicts

Here, *conflicts* stand for every differing sentiment and failures in processes that require further actions. According to the interviewees the most common reasons for conflicts to develop are late un-announced deliveries, un-acceptable product quality and late payments from their end to the manufacturers. The modes of handling conflicts seemed to be largely dependent on the situation in hand, but also the temperament of the person in charge of solving the situation.

Company1 and Company2 told to give feedback of PQ to the suppliers quickly after receiving the products via e-mail or phone. Company3 aimed for this also, but admitted to have had trouble with schedules every now and then. Company1 tended to give feedback in a neutral way to maintain the good working spirits, to ensure future co-operation, and to ensure their orders' primary position in the manufacturer's production schedule: *"Of course we want to keep the relationships good and so that our orders are in special place and we get our products fast"*. Tracking the cause of defects was seen difficult and they are careful not to blame the wrong quarter: *"it's problematic to blame the factory when the fault could be in the raw material and so forth"*. Company2 and Company3 approached the manufacturers about defective products more boldly. However, they told to have good, yet straightforward working relationships and were usually able to negotiate and reach a consensus.

Two out of three of the respondents identified suppliers' reluctance to admit their mistakes. Suppliers defended themselves and e.g. accused the customers for buying un-fitting clothes which led seams to open. In other words, the suppliers were not seen to serve their client with the same manner as the companies did their own customers. Only Company2's contract manufacturer was willing to admit their mistakes fairly. The interviewees saw that when the supplier admitted the mistakes in manufacturing, the whole process of handling the situation became shorter and less harm was done.

For companies that had good relationships with their suppliers seemed to have less trouble in solving conflicts. Also, the state of the relationship was seen to affect the suppliers' willingness to deliver on time.

6.3 Managing product quality

All of the interviewees valued PQ and stressed its relevance for their businesses. To explain why PQ is important the answers varied. Company3 told that offering good quality products is a part of the company's brand vision and they have raised the customer expectations by placing premium prices. Customers' perception over the brand was seen to be affected by their experience on PQ. Company1 told that "we

would definitely want to be known for reliable quality so that – customers would not have to think ‘thanks a lot, never going to buy from you again’”.

Company1 also brought up the impact social media has on brands today: bad news travels fast, and every time a customer writes about their dissatisfaction of a product’s quality, other customers seem to note similar issues with their products. This leads to loads of reclamations over certain products even though all of the products might not have noteworthy quality issues. The interviewee told that “everyone have been content with the products until a bunch of reclamations over a certain product emerge from no-where, and you know immediately that there has been a conversation going on somewhere again”.

The quantity of defects varied from company to company. The defects were most commonly found in the seams and top stitches. Manufacturing fashion products is highly labor intensive and most of the work is done by hand. The interviewees saw every defect as an issue but took into account that as people are making the products, achieving zero defects was seen as a rather impossible objective.

To assess the quality of products, the studied companies most often used their own perception on what it should be like. The assessment was done based on the design specifications. Company1 told that they are looking for ways to improve the products’ performance that seems to fail the most often. They had changed the fabric to a thicker one to have less quality issues: *“we are now waiting to see whether a slightly stronger fabric would do the trick. We are constantly looking for ways to prevent these problems”*. Company3 also used customer feedback to develop products: *“or course, if we hear and see that our products are e.g. pilling, we definitely search for better materials to prevent this from happening in the future. Now-a-days customers’ feedback is always in your face due to social media and we need to make good use of it to stay competitive”*.

Company2 worked closely with the manufacturer in the product development stage and told that they do not take PQ into consideration while designing and developing the product. They rather tried to find a sensible way to manufacture products and adequate PQ was a result of this process: *“– because if I design a really complex*

structure, the manufacturing process will also be difficult and will lead to mistakes and issues in quality". Other companies used drawings and samples to communicate product specifications, and one of the companies sent also the patterns of the products to the manufacturers.

In all of the studied companies the buyer decided all materials and components for the products according to their design specifications. Hence, the buying companies made decisions affecting PQ at component level leaving only the quality of manufacturing to the supplier. Two out of three bought all of the materials and components themselves and one leaved some of the more basic products for the supplier to buy according to the specifications. Company1 usually bought the fabric with their own print design from a printing house in Latvia, who bought the plain fabric according to the buyer's specifications. However, they told that *"a part of the fabric, e.g. for the golden print we have out now, we bought and had printed here in Finland because we wanted to make sure that the finishing is of high quality and we did not want to end up with piles of something we could not use"*. Hence, they wanted to be able to manage the quality more closely. Some of the interviewees saw that they were forced to tie down funds at a very early stage to buy the components and materials which effected their cash flow and increased risks. This was especially an issue for Company3 as the materials they used were expensive. However, this way they had full control over the quality of the materials put into products.

Company2 had developed a light but strong, and weatherproof vegetable tanned quality of leather together with the tannery they worked with. This enabled the product to be as light and durable in use as possible. However, as leather is an organic material, they told that it was challenging to maintain the exact quality of leather from season to season, e.g. humidity of air differs during winter or summer (tannery located in North of Sweden) which affects the quality of the finished material. The quality of leather affected directly the functions of the product and therefore the issue was taken seriously.

Company2 also tested the products for minimum of three months before producing larger quantities. This way they wanted to make sure that the functionality was achieved in the design and development. Furthermore, the products were designed for hard use and they had taken into consideration the possibility to repair products at the customer's local shoemaker as they told that the stitches would presumably need to be fixed in time.

All three companies have pushed the manufacturers to develop their quality inspections at the factory. Company2 have given the manufacturer checklists which they are able to use to really check everything before sending: "*He (the manufacturer) completely agrees that it's madness to send bags back and forth to repair them due to some carelessly finished stitching*". All three companies executed quality inspections on the products straight after delivery from the factory. This was seen to be a very time-consuming and un-efficient way to prevent defective products from being sold to the customers. Company1 and Company3 inspected a part of the products, usually around 20 %, as their volumes were fairly large. If they knew to expect problems, they might inspect a larger quantity, e.g. 50 %, but they told to never inspect all of the products. Table 4 summarizes the ways companies manage PQ.

According to the interviewees, if a defective product was detected by a customer the general custom was to repair the flaw whenever possible. Company1 mentioned that they had often replaced the defective products to brand new ones to keep the customers content. However, as the quantity of reclamations rose with the sales volumes, replacing products became impossible and they switched to repairing the products. It could be seen from the answers that the more expensive the product was to manufacture, the less willing the companies were to replace the whole product.

Table 4. The ways companies manage product quality

	Company1	Company2	Company3
Preventing defective products ending up to the customers	Quality inspections on part of the products here and there	Quality inspections on all products, a checklist for the supplier, testing before releasing for minimum of 3 months	Quality inspections on part of the products, quick quality checking when packing the orders from stock
When defects occur	The suppliers usually do not take the blame. The buyer gives feedback to the supplier but does not accuse the manufacturer. Some products are returned back to the supplier but there is variation in practices	The supplier usually admits his mistakes. The products are returned to the manufacturer for repairing	The suppliers usually do not take the blame. The process of managing defects depends on the scale of the damage, but is usually dealt with price reductions

7 Conclusion and recommendations

This chapter concludes the results and aims to answer the research question thoroughly and critically. Second, the concrete recommendations for the commissioning company are introduced in order to develop their relationships with the contract manufacturers and improve the quality of their products. The recommendations are drawn up exploiting the research data as well as the previous research and other literature.

7.1 Conclusions of the study

None of the three companies had a bullet proof system to assure adequate product quality. However, they did work actively to find new solutions and develop products and relationships with the contract manufacturers. First of all, achieving zero defects in manufacturing was seen as rather impossible objective to attain by the interviewees. Chuter (2002) supports this view because of human error. However, it seems to be an objective worth reaching. Furthermore, achieving a satisfactory level of PQ can be attained only through co-operation of everyone in the organization (Chuter 2002).

To be able to measure and manage PQ it is important to define the required level of it. According to multiple authors (Hoyle 2007; Dilworth 2010), the adequate quality of a products is defined by the company's customers. Although none of the studied companies claimed to use the information of customer expectations of PQ, they did work actively to develop the products according to customer feedback. When defects occurred through customer detection or in-house investigations, the companies searched for solutions in the manufacturing of the products and/or used other materials to improve PQ.

The assisting sub-question AQ3 concerned whether the state of a buyer-supplier relationship affects PQ. Larson's (1994) research indicated a strong positive relation between the two, but this could not be confirmed through the data of this study. However, the companies did aim for close and open cooperative relationships with the suppliers. For Company1 the reason for building relationships actively seemed to

be driven by the expectation that the suppliers would give priority to their orders, and motivate them to do their best to deliver goods on time and at the desired quality level.

AQ4 concerned with how the buyer-supplier relationships can be managed and developed. All three companies maintained personal relationships by continuous and open communication with the manufacturers. According to van Weele (2014), bonding personal relationships between buyer and supplier yields longer relationships. However, it may lead to adverse preferring of the supplier which can lead to making cost ineffectiveness. The buying company makes a decision of whether to continuously seek for the lowest price or to invest in a close relationship with the suppliers. This is a strategical decision and depends on e.g. how simple or complex the product is to manufacture. Finding new manufacturers and instructing them to produce the products might take a lot of resources could be a frustrating and time-consuming task (Gehlhar 2005).

Finding the right contract manufacturers was seen to be one of the most critical procedures by all three companies. By making sure that the manufacturers are motivated and skillful to make the products was seen as vital. This view is supported by Van Weele (2014) who regards the selecting of suppliers as a major bottleneck in an organizational purchasing process. The decisions on which supplier to work with, should not be made light hearted but in a systematic manner. The right supplier will be found through a thorough investigation, careful consideration, and a tightly systematic approach.

The most important criteria for new manufacturers were: supplier's motivation to cooperate, the ability to deliver products of acceptable quality, and short lead time from order to delivery. Ho et al. (2009, in Park et al. 2010) do not bring out motivation to cooperate as a top criterion, but do agree on impeccable delivering and adequate product quality being some of the most important matters to take into account.

Visiting the potential manufacturer's office and factory was brought up to be a critical phase in new supplier selection by both the interviewees and Gehlhar (2005)

and Iloranta and Pajunen-Muhonen (2015). Also, the importance of regular meetings and overseeing the work during the production run was stressed by Gehlhar (2005), Bendixen and Abratt (2007), and Emmet and Crocker (2009). The studied companies visited the factories every month to every six months.

The studied companies favored small suppliers located close for their ability to work in an agile manner. Although this thesis concentrates on PQ, as Emmet and Crocker (2009) brought up, the three ways a supplier is able to bring competitive advantage to the purchasing company are: delivery performance, reliability in lead time and PQ. The studied companies regarded the suppliers' ability to react to the changing demand as an important criterion when choosing new suppliers.

Company1 and Company2 had chosen to work with the manufacturers located close to their headquarters to have a better control over the production and to be able to co-operate more closely. They had also acknowledged the advantage of a similar business culture and practices as Ruamsook et al. (2009) have also noted.

Having trust in the relationship with the contract manufacturers was seen to be vital by all the interviewees. This is supported by several authors (Fynes & Voss 2002; Gehlhar 2005; Bendixen & Abratt 2007; Lees & Khatri 2010; Fernie 2014). Company3 worked actively to seem as a trustworthy partner to their suppliers by serving them in a fair way, e.g. paying the invoices on time and informing them about possible errors. Relationship is a two-way street, and by altering the purchasing company's own operations towards the contract manufacturer, achieving significant competitive advantage.

The companies managed conflicts in slightly different ways. However, they all saw that if the relationship was based on personal relationships, mutual understanding and goals, reaching a consensus was easier. The main issue with handling conflicts due to un-acceptable PQ was that the contract manufacturers were usually reluctant to admitting their mistakes. The only company not having this problem was Company2 who worked solely with one Finnish manufacturer.

To summarize, if the recruitment of suppliers is done successfully, the expectations are communicated clearly, product development is done in mutual understanding, conflicts are managed through negotiating, and regular meetings are held, co-operation and an adequate PQ could be achieved.

7.2 Recommendations for the commissioning company

Finding the right contract manufacturers is a demanding task, but done carelessly it can cause gratuitous challenges and gray hairs down the road. According to the empirical data and literature (Gehlhar 2005), *recommendations from other companies* that have worked with the manufacturers are important in the recruiting process. These may be drawn actively by calling the companies for references for certain suppliers, or passively through the network of other design companies.

The time taken to visiting the potential contract manufacturer should be used to *finding out about their priorities*. If they only care about getting the job done and getting paid, they probably are not the way to go. The desired characteristics depend on the purchasing company's choice of strategy, but generally the contract manufacturer should be eager to cooperate, seem concerned about the quality of products, and on-time deliveries. They should also be able to prove their abilities to deliver on their promises by e.g. showing products they have produced.

High levels of *motivation* and the *pride manufacturers take from the work they do* are seen to affect the overall quality of work they deliver. These could be developed by giving feedback from successful work and working ethically by being candid, fair and professional. Both of these are difficult to build, but could be assessed by learning about the manufacturers before starting to work with them.

Building the relationship is a two-way street, and *investing in mutual trust and commitment* has seen to be the base of a true cooperation. According to Lees and Khatri (2010) and all three of the interviewees, it is impossible to cooperate without mutual trust. Maintaining good ethical values has been seen to build greater commitment (Bendixen & Abratt 2007).

Manufacturers can give the company a competitive advantage through cooperation. However, it is not necessary, nor achievable, to have true cooperative partnerships with all the manufacturers. It would be advisable to *review and categorize* the current 17 manufacturers e.g. exploiting the TrueSRM framework by Schuh et al. (2014). Then, the critical relationships could be recognized and nurtured.

There are undeniable advantages to using contract manufacturers *located close* to the company's headquarters. According to the empirical data and Warburton & Stratton (2002) it enables quick response manufacturing, better control over production, close personal relationships, and intensive joint product development. However, as moving the production closer to Helsinki may not be an alternative for the commissioning company, they could *visit the factories* more frequently. The data of this study and literature review (Bendixen & Abratt 2007; Emmet & Crocker 2009) urge towards this. Overseeing the production on site enables the monitoring of the whole manufacturing process, and would therefore improve e.g. on-time deliveries and product quality (Gehlhar 2005).

Furthermore, it would be beneficial to *calculate the cost of quality* within the company. This might be demanding as there are multiple sources of cost, both in preventive and failure costs, listed in chapter 4.1. Another solution would be to develop a system for measuring total quality performance of the company.

8 Discussion

The objective of this study was to generate solutions for the commissioning company to improve their operations towards the contract manufacturers to ensure adequate quality of products. Understanding what affects the quality of products as well as how the companies in the fashion industry manage the contract manufacturers and product quality, was achieved through the empirical study, previous research, and other literature. The main recommendations for the commissioning company were to develop the selecting of suppliers towards a more systematic process, to move towards a more cooperative relationships with the suppliers that can truly offer competitive advantage, and to build mutual trust and commitment with them.

The most challenging part of the thesis project proved to be the recruitment of informants for the empirical study. Interviewees were chosen for their hands-on experience of managing suppliers and PQ, which narrowed down the potential people within companies. Only three out of eleven of the companies contacted agreed to be interviewed. Also, as the companies have such differences in the ways of operating, drawing a thorough conclusion was difficult.

The research methods proved to be applicable to gain an understanding on the research problem. The semi-structured interviews were natural, conversation-like situations where the interviewees could talk about subjects that were not on the interviewer's list of themes and questions. This was seen as advantageous as the topic was relatively un-known and modes of operating were different from company to company.

The collected data was exploited together with previous research and other literature to generate the desired outcome of the thesis: recommendations for the commissioning company. The study also reached the goal of filling some empty spaces found from the previous research on the challenging subject.

Significance of the results

The thesis contains extensive information of managing buyer-supplier relationships and product quality, and the significance of these to the company's business performance. The outcome of this thesis is the list of recommendations introduced in chapter 7.2, which answer to the research question. The recommendations emphasize the importance of a successful manufacturer recruitment in the purchasing process and the importance of mutual trust and cooperation in the critical relationships. By implementing the recommended solutions, the commissioning company could achieve improvement in the purchasing process, including PQ.

The recommendations are tailored to produce solutions for the commissioning company's problem. However, other companies struggling with similar problems could very well exploit the solutions as they are quite general.

The connection between the relationship quality and product quality could not be fully proved through the empirical study. However, the studied companies did work to have functioning working relationships with their manufacturers in order for them to deliver the products on-time and in proper quality.

Reliability and validity of the study

As the thesis studied a phenomenon that is constantly changing, the possibility of gaining the same results is low. However, the reliability was ensured through making the research process transparent describing the strategy and data analysis methods.

The major flaw of this study is the quantity of informants in the empirical study. Also, the studied companies worked with 1-6 suppliers, as the commissioning company works with 17, which can be seen as a significantly more complex structure. These matters taken into consideration lowers the validity of the empirical results.

However, as the previous research and other literature were exploited to support and complete the results, the final recommendations can be regarded as relatively reliable.

Using semi-structured interview enabled the interviewer to clarify questions, which advances the validity of the results. Also, respondent validation was used; the respondents had the possibility to read and comment on summaries conducted from the interviews. Ethical values were applied and all of the material was handled anonymously.

Further research

The suggestion for further research would be to study PQ from the contract manufacturers' point of view. This would add to the results of this study, as it would bring a more profound understanding of the topic. The research could well be conducted in cooperation with higher education institutes e.g. as a thesis project. Second, further research could study the financial side of the advantages of achieving an adequate level of PQ for the company to thoroughly understand the significance of it.

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Appendices

Appendix 1. Interview template

Name	
Date	
Subject	Assisting questions
Existing suppliers	<ul style="list-style-type: none"> - quantity, location, product type - describe your relationship - how long is the longest relationship - are you collaborating - do you have trust - do you share strategies - how do you keep in contact, how often - how do you handle conflicts - do you have a rewarding system - what are most common reasons for switching suppliers
New suppliers	<ul style="list-style-type: none"> - main criteria when choosing new - how much information beforehand (other companies they work with, financial situation etc.) - what kind of challenges you face with new suppliers
New products	<ul style="list-style-type: none"> - describe R&D process in your company - do you take PQ into consideration - do you take manufacturers skills and expertise into consideration - do you predict possible errors in the making of the product - do you collaborate with manufacturer during the design process - how do you introduce new product designs to suppliers - in average, how complex are your products to manufacture
Product quality management	<ul style="list-style-type: none"> - describe how you manage quality - which areas of business quality affects - does it have an effect on lead times - if you are delivered bad quality, how do you act - how about with good quality
	<ul style="list-style-type: none"> - do you have something you would like to add