

THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

On Aligning Returns Management with the E-commerce Strategy to Increase Effectiveness

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Abstract

The returns management (RM) process has traditionally been seen as a value recovery process, which has resulted in an efficiency focus in the returns flow. This thesis present, the effects on a fashion e-commerce organisation, which is underprioritising or neglecting RM in general and consumer returns specifically. In the reported and described single-case study and through a real-life experiment, performed with the case organisation nelly.com, it is shown that the consumer returns rates are not only influenced by the product itself. They represent a complex problem that has its reasons and causes, whereby the product (size, fit, quality, et cetera) together with consumer buying and returning behaviour ultimately have a combined effect on the organisation. The results from the thesis are based on previous research and rest heavily on the research performed since the start of the research journey. Consumer returns form part of the value creation in e-commerce and therefore returns management is a strategic part of the business as such.

Handling consumer returns in a traditional or efficient returns system without knowing the reason for return and the state of the returned item is nothing other than gambling with resources. The proposed returns information system (RIS) framework in the thesis addresses this issue and facilitates the downstream application of the gatekeeping activity, near or at the end-user location; managerial attention is required at the strategic process level to build a proper returns system that is partly, and quite likely, decentralised.

Products, suppliers, customers and internal processes cause consumer returns and therefore a returns manager needs to address these with other functions and SC partners. This result is partly new and the proposed alignment of RM as a strategic process is new in the sense that RM is part of value creation. This thesis empirically supports the conclusion that “one size fits all” is outdated and does not fit with e-commerce business. The results imply that managers need to gain a profound understanding of consumers’ buying behaviour and also to create differentiated delivery and returns processes to be able to grow within the existing customer segments and possibly to attract new or non-customers who are out of reach at present. Seeing the RM process as strategic in e-commerce, as proposed in the thesis, facilitates the development of the process to become both effective and efficient. Returns management has the potential for revenue creation and cost reduction.

Keywords: Returns management, supply chain management, alignment, case study, experimental research, gatekeeping, avoidance, reverse logistics, strategy, e-commerce

The supply chain is perfectly designed to execute its current output – so do not complain about its current output – if you want another output you need another supply chain design.

Lee Hochberg¹
Singapore 2012 Supply Chain
“Thought Leadership”

¹ Director, GM, Global Integrated Planning & Optimisation Systems

Preface

The results presented in this thesis would not have been achieved without the support of the case organisation nelly.com, assisting the applied research performed with important empirical data and professional knowledge. I would like to take this opportunity to thank you all, especially the former operations manager Peter Eriksson, for your support!

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Before I become more personal, I would like to thank those I have forgotten to mention who have helped me in different ways!

Last but not least, I will thank you, Malin, my wife: thank you for all the support you have given me throughout our years together, and for listening to my unnatural interest in returns. Malin, Karl and Hedda I love you with all my heart!

I thank you all for your support!

Skånör, February 2013

Klas Hjort

List of appended papers

This thesis rests on the five appended papers that are listed below and referred to in the thesis with capital letters A to E. Paper A is self-authored and the other four were written together with colleagues. Paper B was written jointly with two consultants from the information systems community, and three of the papers (C–E) were written collectively with research colleagues at the University of Borås. A description of each author’s contribution is presented in section 0 on page 61.

Paper A:

Hjort, K., “Aligning returns management with supply chain strategy: A fashion e-commerce case”, submitted to the *International Journal of Logistics Management (IJLM)* in January 2013.

Paper B:

Hjort, K., Hietala, P. & Ericsson, T (2011), “Improved returns information system to facilitate the implementation of gatekeeping and returns avoidance”, *Proceedings of the 23rd Annual Conference for Nordic Researchers in Logistics, 2011*, Harstad, Norway.

Paper C:

Lantz, B. & Hjort, K. “Real e-customer behavioural responses to free delivery and free returns”, resubmitted to *Electronic Commerce Research* in December 2012.

Paper D:

Hjort, K. & Lantz, B. (2012), “(R)e-tail borrowing of party dresses: An experimental study”, *International Journal of Retail & Distribution Management*, Vol. 40 No. 12, pp. 997–1012.

Paper E:

Hjort, K., Lantz, B. & Ericsson, D. (2012), “Customer segmentation based on buying and returning behaviour: Supporting differentiated service delivery in fashion e-commerce”, *Proceedings of the 17th International Symposium on Logistics*, 8–11 July 2012, Cape Town, South Africa. The paper was pre-selected by the Organising Committee of the International Symposium on Logistics (ISL) as one of the top three papers on strategy, and sent to IJPDLM for consideration as the best SC strategy paper and possibly publication. The editors of the International Journal of Physical Distribution and Logistics Management chose the paper as the best of the three pre-selected supply chain strategy papers from ISL 2012. Submitted to IJPDLM for the review process on 13 August.

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1 Introduction

This chapter presents a theoretical and practical background to the research field that demarcates the research area and justifies the purpose and the research questions addressed. After the background follows a detailed presentation of the purpose and research questions and this first section ends with a short outline of the thesis.

1.1 Background

Sustainability and sustainable development are closely linked to the reverse flow of goods as well as the forward flow of goods. Traditionally, the reverse flow aims to reduce the environmental impact or the effects from the forward flow through recycling activities and value recovery has historically been the focus in the research area of the returns flow. However, there is possibly an interaction effect between the two oppositely directed goods flows and therefore organisations need to analyse whether, how and why there is and what this effect is. That is, the two flows should, depending on the problem, be researched simultaneously. Here, the author does not refer to the interaction effect following the statistical meaning, merely that one flow is related to the other. The forward flow of products is part of the overall value creation process and the reverse flow aims to recapture or recover value from returns (Rogers and Tibben-Lembke, 1999). In industries such as e-commerce, especially apparel and fashion, the returns flow is normally not included in the value creation per se, only in the recovery, i.e. the two goods flow are not connected and the possible interactions are not yet known (author's note).

The development of the research field of returns management (RM) can be traced back in time to its beginnings in the field of reverse logistics (RL). Since the oil crises at the beginning of the 1970s, and subsequently the relationship established between economic development and environmental degradation, first placed on the international agenda at the United Nations (UN) *Conference on the Human Environment* held in Stockholm in 1972, the awareness of global environmental issues has risen (UN, 1992). After the conference, governments set up the United Nations Environment Programme (UNEP), which today continues to act as a global catalyst for action to protect the environment. Producing companies became increasingly involved in new regulations regarding what they produce and the waste they generate, both from the production and from the products. By 1983, when the UN set up the World Commission on Environment and Development, environmental degradation, which had been seen as a side effect of industrial wealth with only a limited impact, was understood to be a matter of survival for developing nations (UN, 1992). The Commission put forward the concept of sustainable development as an alternative approach to one simply based on economic growth:

One which meets the needs of the present without compromising the ability of future generations to meet their own needs.

New regulations, such as extended producer responsibility (EPR) or “polluter pays”, together with tougher rules for the disposal of waste and regulations for landfills, have influenced both producers and consumers to separate recyclable resources from waste in Sweden, the EU and other developed and now underdeveloped countries. In Sweden, most (perhaps all) EPR programmes operate in separate systems, i.e. the

producer or initial source does not operate the returns system itself. The organisations that are obliged to conform to the regulations normally pay a “producer’s fee”, i.e. packaging material, tyres and automobiles, et cetera, instead of operating the returns flow themselves. This, of course, is in line with the general trend towards focusing on the core business and outsourcing.

Research in the field of reverse flows started in the 1960s (Pokharel and Mutha, 2009) and there is a growing interest in the reverse logistics area due to the value recovery of used products (Pokharel and Mutha, 2009). The research on the returns flow has evolved over time (Rubio *et al.*, 2008) from reverse logistics to returns management (see Rogers and Tibben-Lembke, 1999; Rogers *et al.*, 2002). Historically, research has focused on reverse logistics, with the emphasis on cost-efficient (Guide Jr *et al.*, 2006) collection, redistribution and recovery of end-of-life (EOL) or end-of-use (EOU) products. Further, the recovery of EOL and EOU products also considers the interaction with traditional production planning, as material, components and product are recovered and inserted into the forward flow. Thus, the focus has been on resource reduction, reuse and recycling. Reverse logistics has several definitions and one often-cited definition is the following by Rogers and Tibben-Lembke (1999):

The process of planning, implementing, and controlling the efficient, cost effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal.

Later in time, the research focus on the returns flow opened up to cover areas such as returns management, in which an extended approach involving returns avoidance and gatekeeping lets one work proactively to avoid returns and to gatekeep the returns system from “unwanted” returns (Rogers *et al.*, 2002). Avoiding (preventing) returns is the most cost-efficient way of reducing returns (author’s note); previous research has focused on ease of use and improved quality issues. Stock *et al.* (2006) categorise returns into two groups: controllable and uncontrollable. In essence, the controllable can be eliminated before they occur and the cause or causes can be minimised or avoided through actions taken in the supply chain (Stock *et al.*, 2006). Conversely, the uncontrollable returns are unavoidable in the short term according to Stock *et al.* (2006). Returns management as a business process was introduced in 2001 (Croxton *et al.*) and is defined by Rogers *et al.* (2002) as follows:

Returns management is that part of supply chain management that includes returns, reverse logistics, gatekeeping and avoidance.

There are different reasons why producers, distributors and customers, or end-users, send or transport materials in reverse, or upstream (a better description). However, the returns flow can be divided into two separate flows, namely packaging and products (Rogers and Tibben-Lembke, 1999, p. 6.). According to Rogers *et al.* (2002, p. 3.), returns are grouped into five categories: asset returns, consumer returns, environmental returns, marketing returns and product recalls. For products, consumer returns account for a large share of the returns flow and are an increasing problem, due to the growing interest in e-commerce. The returns percentages vary by industry (Rogers and Tibben-Lembke, 1999) (see Table 1) and product category (Guide Jr *et al.*, 2006). Research reports returns levels reaching 50% of the total shipments (Norek,

2002) and returns levels are typically higher in catalogue sales and e-commerce (Guide Jr *et al.*, 2006) and the average returns rate for online apparel sales is as high as 35% to 40% (Norek, 2002).

Table 1 Returns rates for different industries in the US (Rogers and Tibben-Lembke, 1999)

Industry	Return level
Magazine Publishers	50%
Book Publishers	20-30%
Book Distributors	10-20%
Greetings Cards	20-30%
Catalogue Retailers	18-35%
Electronic Distributors	10-12%
Computer Manufacturers	10-20%
CD-ROMs	18-25%
Printers	4-8%
Mail Order Computer Manufacturers	2-5%
Mass Merchandisers	4-15%
Auto Industry (Parts)	4-6%
Consumer Electronics	4-5%
Household Chemicals	2-3%

Rogers and Tibben-Lembke (2001) summarise the most common reasons why products or packaging are sent backwards (see Table 2). Among end-users, defective, warranty and recalls are characteristics that might fit into Stock *et al.*'s (2006) controllable group, thus they are avoidable; however, the unwanted product returns from end-users would fit into the group of unavoidable returns. There is likely to be an increase in the returns rates from end-users towards retailers (Guide Jr and Van Wassenhove, 2006). Cost-efficient processes might be desirable; however, they are an approach that can limit a firm's profitability in today's business environment (Guide Jr and Van Wassenhove, 2006), which Autry (2005) describes as hypercompetitive, with firms competing vigorously on the basis of customer service. In e-commerce in the EU, especially in fashion and apparel, product returns are often non-defective albeit unwanted (the last line in the upper-right box in Table 2) in relation to size and fit issues and could be sold again.

Table 2 Characterisation of items in the returns flow by type and origin (adapted from Rogers and Tibben-Lembke, 2001)

	Supply Chain Partners	End-Users
Products	Stock balancing returns Marketing returns End of life/season	Defective/unwanted products Warranty returns Recalls Environmental disposal issues Consumer returns (non-defective/unwanted)
Packaging	Reusable totes Multi-trip packaging Disposal requirements	Reuse Recycling Disposal restrictions

Commercial product returns have often been viewed by companies as a nuisance (Blackburn *et al.*, 2004; Guide and Van Wassenhove, 2006) and as a necessary evil, a painful process, a cost centre and an area of potential customer dissatisfaction (Stock *et al.*, 2006), therefore focusing on an efficient returns system. However, organisations have realised that effective returns management can provide a number of benefits (Norek, 2002; Rogers *et al.*, 2002; Stock *et al.*, 2006; Mollenkopf *et al.*, 2007a; Mollenkopf *et al.*, 2007b; Frankel *et al.*, 2010; Mollenkopf, 2010), such as improved customer service, effective inventory management and product dispositioning.

Thierry *et al.* (1995) introduced product recovery management (PRM) and different product recovery options, such as repair, refurbishment and remanufacture cannibalisation and recycling. PRM is company-orientated, dealing with responsibilities for manufacturers and aiming to recover as much of the economic and ecological value as is reasonably possible. Thierry *et al.* mention the importance for companies to become more adaptable to rapid changes in both regulations and customer demand for “green products”, i.e. products that can be resold, recovered or recycled. Stock and Mulki (2009) report that firms utilise a fairly consistent returns handling process and the three most frequent disposal methods are return directly to stock, sell the returned items as scrap and finally return to stock after repackaging. Research into the reverse flow conducted at earlier times focused merely on planning and controlling the vertically integrated chain of events, with the main focus on efficiency. The focus shift from logistics to supply chain management (SCM) is central to this thesis, as Stock’s prior research regarding the returns flow focused on reverse logistics as opposed to forward logistics.

Certain industries, such as the e-commerce business, have boomed along with the development of the Internet; e-commerce is one example that would not exist without it. Besides the upsides of online sales, such as availability 24/7, an increased product range, lower price and convenience, there are some downsides to online shopping as well. The Internet as an intermediary in itself creates a distance between the buyer (in this case the consumer) and the seller’s (in this case the e-tailer’s) products. This physical distance is evident in certain businesses in which consumers struggle to evaluate products and services before ordering, thus certain consumers might hesitate to use the e-commerce distribution channel. In a recent study, 68% of Swedish

consumers who do not purchase clothes online report that they always want to see/try clothes on first before they shop online. Another 33% express that it is complicated to return clothes if they do not fit (e-barometern, 2012). However, around half of the online consumers report having used the returns opportunity and 77% of them are quite pleased with the returns process (e-barometern, 2012). Returns management gives organisations an opportunity both to differentiate themselves from competitors and to attract hesitant non-adopters. Liberal returns policies are often used for this purpose and have become a marketing practice in both business-to-business (B2B) and business-to-consumer (B2C) markets (Autry, 2005). Wood (2001) performed an experiment and found that lenient policies in catalogue retailing increased product returns and sales, with a positive net sales effect. Researchers from different disciplines, including marketing (Kang and Johnson, 2009; Harris, 2010; Rosenbaum *et al.*, 2011) and management (Piron and Young, 2000; King and Dennis, 2003), have found that nearly 20% of consumers engage in some sort of “illegitimate product returns”. This shows that returns are interrelated with consumer behaviour and as such organisations’ strategies affect the returns levels.

A number of EU directives are linked to different areas of e-commerce in the internal market (Mattsson, 2012). Therefore, the returns policies in e-commerce in Europe are affected by different legislation, such as the directive on electronic commerce (EUR-lex, 2000) and the directive on consumer rights (EUR-lex, 2011). In the EU, these directives are transposed into national law to protect consumers buying from a distance, i.e. by phone, mail order, e-commerce, et cetera. Therefore, consumers are entitled by law to return what they have purchased within a certain time frame and under certain conditions.

Distance sales are increasing in both Sweden and Europe and the online sales in Europe have doubled since 2005 (EMOTA, 2011). In 2008, the total European distance sales amounted to €123.8 billion, an increase of 13.1%. In 2011, the growth rate exceeded 20% in most European e-retail markets (EMOTA, 2011). Nearly 40% of all Internet users in the EU (27 countries) have bought or ordered goods or services for private use over the Internet (eurostat, 2009). In 2010, the percentage rose to nearly 60%, with users from the UK leading with 79% (eurostat, 2010). One in four consumers who did not order over the Internet in 2009 raised trust concerns about receiving and returning goods, complaint or redress concerns (eurostat, 2009). The harmonisation of consumer rights and the creation of an online single market will probably affect e-commerce and the possibility for cross-border trade with greater transportation distances, et cetera. In the EU and other neighbouring countries, the sales per capita vary; in Russia and Spain, the sales are rather modest in comparison with those in Germany and the UK (Table 3).

Table 3 Statistics for distance sales 2006 (EMOTA, 2006)

Country	Population in millions	Total distance sales in million EUR	Distance sales per capita EUR
Denmark	5.4	1,180	218.5
Finland	5.2	620	119.3
France	63.0	18,000	285.7
Germany	82.4	26,296	318.0
Netherlands	16.3	3,690	226.4
Norway	4.6	1,032	224.3
Russia	142	1,297	9.1
Spain	43.8	1,094	25.0
Sweden	9.0	1,804	200.4
Switzerland	7.5	1,644	219.2
UK	60.4	26,843	444.4

However, both markets, underdeveloped and developed, are interesting for distance sales organisations, and therefore act as driving forces for cross-border distance sales. The European Commission's Digital Agenda lists 16 legislative actions that aim to prevent consumers from enjoying a digital single market; their targets are ambitious and include among others (EMOTA, 2010):

- 50% of the population should be buying online by 2015.
- 20% of the population should be buying cross-border online by 2015.

Distance sales, i.e. Internet, mail or phone order trade, represent an increasing share of the retail trade in Sweden. In 2005, the turnover amounted to SEK 13.4 billion, and in 2009, it doubled, reaching SEK 28.1 billion. Its share of the retail trade increased by over 50% over the same time period, and represented 4.6%.

The trend is quite clear – distance selling is increasing, and the e-commerce side represents the greatest area. In Sweden alone, the e-commerce turnover reached SEK 27.7 billion in 2011, with a 10.6% increase since 2010, and currently it represents 5% of the total retail trade (e-barometern, 2011). The prognosis for 2012 (see * in Figure 1) is SEK 31.3 billion based on a 13% increase from the first quarter of 2012 (e-barometern, 2012). The increase in turnover in the Swedish retail sector as a whole was 4.5% in the first quarter of 2012 (e-barometern, 2012). E-barometern is a quarterly report that covers the Swedish retail development within e-commerce and it is produced in cooperation between Posten, Svensk Distanshandel and Handelns utvecklingsinstitut (HUI).

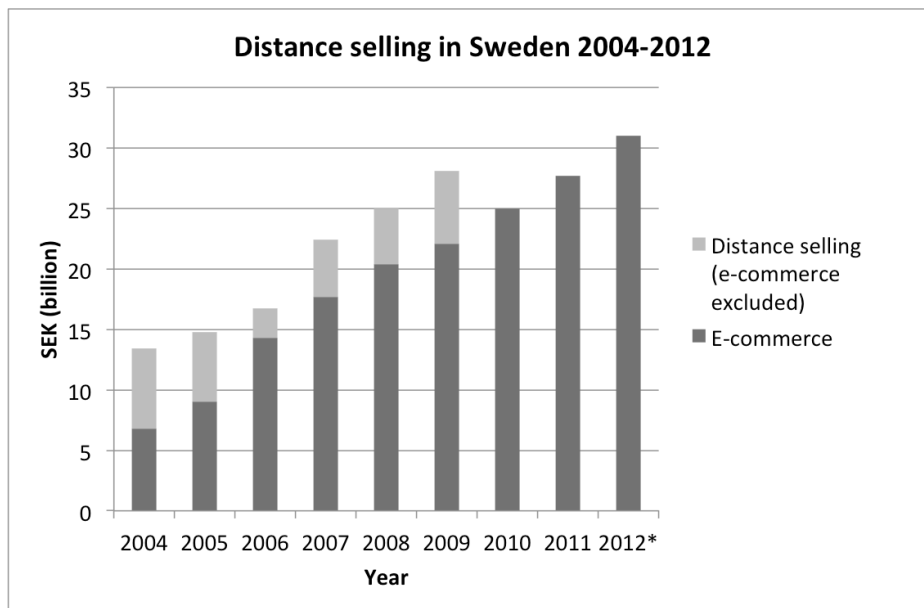


Figure 1 The turnover trend in distance selling in Sweden²

Logistics and specifically distribution are critical success factors in e-commerce, and e-commerce organisations in Sweden also foresee these factors as major future challenges. Increased competition, both domestic and from abroad, is present and constitutes another foreseen future challenge. Regarding the domestic competition, the number of Swedish organisations that are involved in distance sales has increased by approximately 5 times in 10 years; at the same time, the turnover has only doubled and that might be an explanation for the perceived increased domestic competition. So, in a sense, the competition seems to increase over time (see Figure 2).

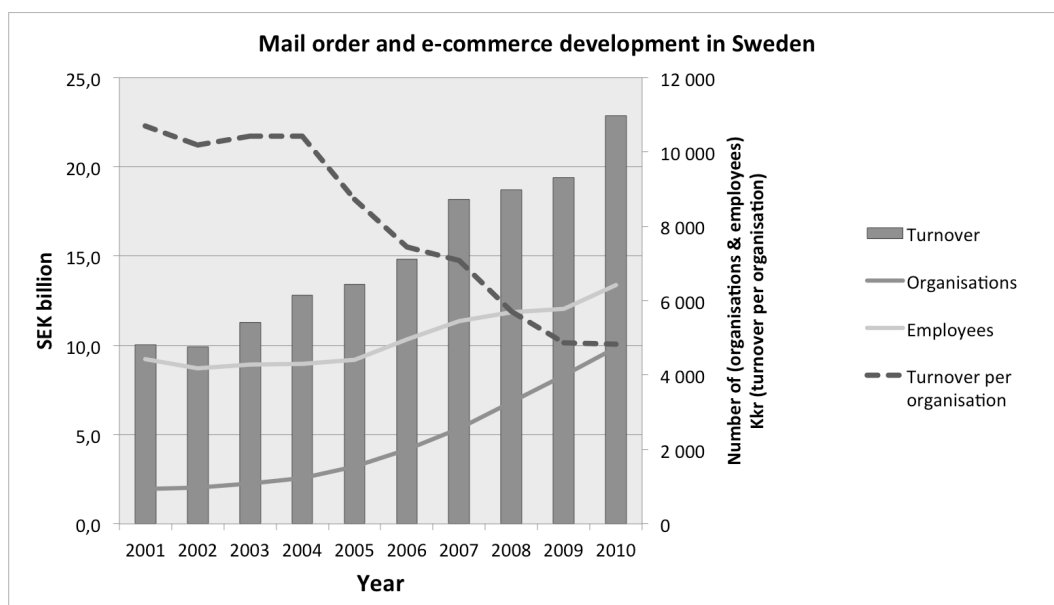


Figure 2 The development of distance selling in Sweden between 2001 and 2010 (SCB, 2010)

² Source: quarterly reports from e-barometern.

The data presented in Figure 2 cover a certain (selected) area of the Swedish distance sales and therefore the sales figures do not match the overall sales figures presented in Figure 1. Further, approximately one-third of the organisations have experienced increased competition from abroad, with 12% reporting drastically increased competition; however, one-third have not noticed any change in the competition from abroad (e-barometern, 2011). Two out of three Swedish organisations report selling abroad, with Norway as their major export market followed by Finland and Denmark. Six out of ten organisations foresee an increase in the exports, and 15% believe there will be a drastic increase.

1.2 Problem area

Supply chains (SC) are omnipresent (Gattorna, 2010); therefore, the same applies to returns management (the supply chain process). The reader might not think of it or know it, but the author is convinced that every reader of this thesis has entered something into a returns system. This thesis itself will probably enter a recycling returns flow sooner or later the author hopes the latter. It is quite clear that we would like to increase certain returns rates and decrease others or even avoid them. It is beyond the scope of this thesis to try to reduce consumption as such, but any returns flow that could reduce the amount of virgin raw material we consume represents returns that are wanted. However, we need to balance and control the resources consumed when we operate the returns system, thus creating an effective and efficient returns system or rather supply chain. Previously, reverse logistics was considered, as mentioned earlier, as a necessarily evil and a cost centre. However, it has started to acquire a strategic role in organisations (see Table 4). It is time to position returns management in its proper place in the supply chain strategy. Mollenkopf *et al.* (2007a) investigated the marketing/logistics relationship relative to returns management. They found that the effectiveness of returns management was enhanced when firms coordinated their strategic and operational activities. Clearly, returns management needs to be efficient; in some cases, however, it seems that it is also part of the value creation and not only the value recovery. Therefore, there is possibly a need to align the returns management with the overall supply chain strategy.

Stock and Mulki (2009) emphasise that product returns will continue to be part of business operations and the literature indicates that competition is increasing and consumer demands are surely following that development. Rogers and Tibben-Lembke (1999), see Table 4, present the strategic role of reverse logistics in different business areas. All the different reasons or roles indicate the essence of returns management and its cross-functional nature. Clearly, returns relate to other functional areas, such as marketing, sourcing, manufacturing, et cetera, as returns policies are part of marketing practice (Autry, 2005) and a lenient returns policy increases returns (Wood, 2001); therefore, returns management is surely part of the value creation process. The increasing e-commerce in Sweden, Europe, the European Union (EU) and globally will increase the flow of consumer returns and therefore returns management and particularly avoidance and gatekeeping need to be examined in a supply chain context, cross-functionally and interdisciplinarily.

Table 4 The strategic role of reverse logistics (Rogers and Tibben-Lembke, 1999) indicating both value creation and value recovery

Role	Percentage
Competitive Reasons	65.2%
Clean Channel	33.4%
Legal Disposal Issues	28.9%
Recapture Value	27.5%
Recover Assets	26.5%
Protect Margin	18.4%

Increased competition has forced organisations to initiate reverse logistics as a strategic variable with which retailers and manufacturers have liberalised their returns policies (Rogers and Tibben-Lembke, 1999). Part of the customer satisfaction involves the company accepting returns, as certain products do not live up to consumers' expectations or needs. Christopher (2005, p. 28) suggests that we have entered the era of supply chain competition. Globalisation and the increasing competition between organisations to attract the end-user or consumer have resulted in shorter product life cycles; products are almost obsolete by the time they reach the marketplace. Thus, internal integration is no longer sufficient by itself; to become the market leader the supply chain must be integrated. Christopher (2005, p. 137) argues that the main focus should be on effectiveness rather than efficiency and the development of an agile supply chain by increased responsiveness. Increased responsiveness is logical in the highly competitive contemporary market. The increased competition and the downward pressure on price (Christopher, 2005, p. 33) have forced organisations to focus on their core business instead of vertical integration. This shift follows the globalisation trend of outsourcing non-core business. This, however, increases the complexity of the supply chain, which requires supply chain integration and management. The logic of supply chain management states that independent entities can no longer compete by themselves in global customer value. The objective of supply chain management is to create the greatest value for the entire supply chain network, including the end-customer (Croxtton *et al.*, 2001). Porter (2008) argues that it is the industry structure that drives competition and profitability. Porter's five forces that shape the competition are applied to the industry as such and therefore are not suitable for the analysis in this thesis as the main focus will be on selling and delivering finished goods from the shelf. However, Porter notes that an understanding of the forces that shape the competition is the starting point for developing strategy and the strongest force or forces determine the profitability and become the most important in the formulation of a strategy.

The e-commerce business and its consumers are both directly affected by regulation: within the EU, the consumer directive (EUR-lex, 1997) stipulates conditions for both parties regarding returns allowances. These are minimum requirements and they are reflected in the returns policy document. Globalisation has changed the competitive arena and both increased the competition and opened or widened the market opportunities. In the Nordic countries, foreign purchases are an important part of the Norse e-commerce. Four out of ten consumers have shopped online from another country in the past year (PostNord, 2012). The most common countries to make

foreign purchases online are the UK (57%), the US (44%), Germany (29%) and China (13%) (PostNord, 2012). The Nordic e-commerce market is approaching 100 billion and Nordic consumers purchased goods to a value corresponding to SEK 95 billion in 2011.

Returns management as a supply chain management process includes several features that can increase individual organisations' effectiveness and efficiency. However, the process will provide the most benefits when implemented across the members of the supply chain. The returns management process can reduce costs, increase revenues and increase customer satisfaction (Rogers *et al.*, 2002). However, the conceptual RM framework (Rogers *et al.*, 2002) was not defined for the e-commerce business and therefore there is a need to test and verify the applicability of the process and activities to the B2C e-commerce business. The process interfaces and the activities mentioned were clearly developed and defined before the great e-commerce boom and therefore the relatively new phenomenon of e-commerce consumer returns might not fit the framework.

The RM framework is defined for the SC; however, it is clearly developed with a manufacturer as the focal point. The gatekeeping activity is quite labour-intensive and therefore its applicability to B2C e-commerce is probably quite poor. The framework and activities as described in the literature (Rogers and Tibben-Lembke, 1999; Rogers *et al.*, 2002) are probably meant to support rather infrequent and valuable returns flows between the organisations in the SC, which are quite distant from the e-commerce consumer returns, especially in fashion and apparel.

Porter argues that in essence the work of a strategist is to understand and cope with competition (Porter, 2008, p. 79) in an industry. Performing an industry analysis, Porter lists common pitfalls and one of them fits the analysis performed in this thesis, namely not to pay equal attention to all of the five forces, but rather to dig deeper into the most important. The literature highlights that organisations are starting to apply and implement returns management strategically internally and in supply chains. There is, however, little evidence regarding why and how this started and further where in the chain it started. In e-commerce and especially in fashion and apparel, consumer returns are omnipresent and therefore one might think that returns management is a strategic issue. If not, how does one start to address returns management in an organisation and what is needed to increase the awareness of the importance of returns management?

1.3 Purpose

Derived from the discussion in the introduction, the purpose of this thesis is to:

Increase the understanding regarding how and why to apply and improve returns management in e-commerce.

Further, the aim of this thesis is to improve the RM framework and to assist the development of returns management research. The intention is to develop a conceptual/theoretical model of an e-commerce returns system that incorporates the application of avoidance (to improve effectiveness) and gatekeeping (to improve efficiency) in an e-commerce context with the aim of improving the system's performance (effectiveness). To be able to apply RM, there is a need to understand better and identify the factors that cause returns.

Previous research has highlighted the following areas for further research (Rogers *et al.*, 2002); see also Rogers & Tibben-Lembke, (2001, p. 146):

- Determining the costs and benefits to the supply chains derived from improved returns management.
- Determining which method of gatekeeping is most effective in managing the trade-offs between costs and customer service.
- Identifying the information technology and types of systems that are needed to support returns management fully.

These research areas are partly addressed in the thesis and will be examined in the following sub-chapter, which presents the research questions.

1.4 Research questions

In the preceding chapters, the background to the research was outlined, indicating a natural increase in returns depending on environmental concerns and legislative issues. Further, considering the increasing distance sales and returns levels presented in Table 1, together with the awareness of increasing consumer expectations and the relatively new e-commerce business, we need to focus on understanding which factors create or cause consumer returns. A thorough understanding of the factors that cause returns and how these affect organisations and the system should open up new systems opportunities. Below the three main research questions are presented and all three research questions result from a mixture of prior theoretical knowledge and insights from the author's licentiate thesis (see Hjort, 2010).

RQ 1: What causes consumer returns and what are the potential benefits of improving returns management in an organisation without a clear returns management strategy?

The question addresses two issues: firstly, the apparent mismatch between the conceptual framework of RM in the context of B2C e-commerce; and secondly, how forces such as competition, legislation and globalisation change the arena and how these external forces are handled internally. Further, what are the effects from the increasing competition, changing legislation and globalisation on the organisation and how are the effects treated to manage consumer returns?

RQ 2: How can contemporary information technology enhance returns system performance and contribute to efficient and effective returns management?

In the research literature, returns management is defined and described in a supply chain context with a focal point on the manufacturer, extending the network further down- and upstream with the focus on efficiency. Research regarding the returns information system is almost absent from the literature and the second research question addresses how to apply gatekeeping and avoidance to increase efficiency and effectiveness in the supply chain returns system. Hjort and Ericsson (2010) conclude that a returns system that facilitates the separation of goods and information flows together with a possibility for customers to register returns online could contribute to

improved returns management. However, how this could be achieved and how it could enhance the system need to be researched.

RQ 3: Based on the achieved understanding and results, what are the potential benefits of aligning returns management with the business/supply chain strategy?

The last question aims to apply the findings from the previous two research questions and to incorporate them into the answer to the third question. In the literature, returns management is closely related solely to value recovery. However, in certain areas, such as e-commerce, RM is undoubtedly part of value creation and therefore it is potentially important to align it with the overall business strategy. The third question addresses this issue.

1.5 Definitions

The term “distance sales” is used to describe the combination of mail order and e-commerce; in the licentiate thesis, distance sales include phone orders as a third-order entry. “Customer” and “consumer” are used interchangeably in the thesis as terms for the end-user, i.e. the one who purchases; however, this individual does not have to be the one who finally consumes the resources.

Efficiency is defined here as doing activities/things right and, as Porter (1996) expresses, greater efficiency results in lower average unit costs. Effectiveness is defined here as doing the right things or performing the right activity.

The returns management process and other processes are discussed in the thesis and therefore there is a need to define a process. A process is defined as:

... a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer. (Hammer and Champy, 1993)

The following definitions are used throughout the thesis to describe the amount of returns in relation to what was delivered. “Return percentages” are described in two ways, namely for shipments and units. One shipment can contain one or more units and the shipment’s return percentage for one shipment can only be 0% or 100%. However, for units it can be in the full range of 0% to 100%. The greater the number of units delivered, the smaller the return percentage can be, if we do not consider 0% as a return percentage. The opposite occurs for fewer delivered units — two delivered units can be returned in the range of 50% or 100%, if we exclude 0% as a return percentage.

Return percentages for shipments are calculated as described below:

$$\text{Return percentage shipment} = \frac{\text{Returned number of shipments}}{\text{Delivered number of shipments}}$$

Return percentages for units are calculated as described below:

$$\text{Return percentage units} = \frac{\text{Returned number of units}}{\text{Delivered number of units}}$$

1.6 Delimitations

The application of returns management to the e-commerce market is limited to focusing on two of four activities – returns avoidance and gatekeeping – and does not focus on returns or reverse logistics. The analysis of the present systems using the developed framework will likely support the development of RM, strategically, thus influencing the other two activities, i.e. returns and reverse logistics. The main reason for limiting the research to these two areas is that historically the focus has been on RL.

The mail order/e-commerce system is characterised by delivery from stock, meaning that the final distribution of finished goods will take place after a consumer has placed an order. Thus, the system analysis will concentrate on the e-commerce business and further downstream in the SC. Information regarding other parts of the SC will be taken into account when opportunities arise and when it fits the overall research purpose.

1.7 Thesis outline

This section presents a brief outline of the thesis as an introductory guide for the reader.

Chapter 1 – Introduction. In the introduction, a background to the problem area of consumer returns together with returns management is presented. The purpose of the research is presented, and three research questions are proposed and discussed in relation to the purpose and problem background. Based on the purpose and the research questions, the scope of the research is presented, and limitations are also addressed at the end of the section.

Chapter 2 – Previous research and conclusions – licentiate thesis. In the second section, the research performed in the licentiate thesis is summarised and the main conclusions are presented. The licentiate thesis served as a starting point for the doctoral degree thesis and it influenced both the final purpose and the questions addressed.

Chapter 3 – Frame of reference. In this section, the theoretical frame of reference (FoR) is presented. The FoR is developed from the purpose and the questions addressed, to support the analysis performed from synthesising different theories and perspectives. The section is quite comprehensive and was expanded successively during the research.

Chapter 4 – Research design. This section provides a description of the research approach undertaken. The author attempts to delineate his pre-research presumptions and how they may have influenced the research process and results, ending with a discussion on research quality.

Chapter 5 – Summary of appended papers. The results from the appended papers are presented, together with the relations between the research questions and the appended papers. The relationship between the appended papers is described and each paper is summarised, presenting each introduction, purpose and overview and methodology and ending with the main findings and conclusions. The section closes with an overview of the appended papers and a presentation of the results in brief.

Chapter 6 – Analysis – results. This section presents and discusses the answers to the three research questions addressed.

Chapter 7 – Conclusions. The main conclusions in the thesis are presented in Chapter 7, in which the returns management in e-commerce is concluded together with the practical and theoretical contributions.

Chapter 8 – Discussion. This section discusses the results of the thesis in terms of the purpose and research questions as well as the research performed and the outcome.

Chapter 9 – Future research. The thesis ends with suggestions on future research, presenting topics that are relevant to the findings in this thesis.

2 Previous research and conclusions – licentiate thesis

The licentiate thesis serves as a starting point for the doctoral degree thesis; therefore, a brief summary of the licentiate thesis with the title, Returns Avoidance and Gatekeeping to Enhance E-commerce Performance, is presented.

2.1 Introduction and purpose

The mail order business was once a traditional method of selling and distributing clothes, and other commodities, to customers. Now, the e-commerce trend, with more sophisticated techniques for marketing, selling and distributing goods, has challenged not only the traditional mail order system, but also seemingly the traditional retail chain and even fashion chains. This change not only affects how sellers compete (be they long distance or not), but it also probably affects us as consumers – our requirements and how we purchase. This work contributes to this development through extensive empirical investigations into how and why customers return what they have previously ordered.

Returns management as a supply chain management process includes several features that can make an individual organisation more effective and efficient. However, the process will provide the most benefits when implemented across members of the supply chain. The returns management process can reduce costs, increase revenues and increase customer satisfaction (Rogers *et al.*, 2002).

The purpose of this thesis is to identify and characterise the important factors causing returns. Further, to assist the development of returns management research, the intention is to develop a theoretical model of a supply/demand chain returns system that incorporates the application of avoidance and gatekeeping in a distance sales context with the aim of improving the overall system's performance. The research design used in the thesis is a case study performed at one of the largest mail order organisations in Sweden, with a long tradition in the business. The main data used in the thesis were collected from interviews and a questionnaire and secondary data were exported from the case organisation. Sales and returns data covering approximately one year of sales and returns in the Swedish market were analysed quantitatively, and the results were regularly discussed and presented to key informants in the case organisation to substantiate authenticity and trustworthiness.

2.2 Research questions and design

A thorough understanding of what causes returns and how they affect organisations and the system should open up new systems opportunities. Below, the three main research questions (RQ) are presented.

RQ 1: What characterises efficient returns systems? In particular, what are the causes and sources of returns, which factors and processes influence returns systems' performance and what are the key elements and requirements to consider when designing a returns system?

RQ 2: How can contemporary information systems enhance returns system performance and contribute to efficient returns management?

RQ 3: Based on the achieved understanding and results, how should a supply/demand chain be organised to avoid future returns?

This research followed a systems approach to logistics research, as Ekwall (2009) indicates as an established tradition. The author, however, acknowledges the actors' approach as being equally interesting, but given the research questions, purpose and scope, the systems approach was found to be the most suitable.

Given the characteristics of logistics research, complex systems, including organisational boundaries, the presented research questions and the possibilities of accessing empirical data, from both transactions and consumers, the case study design was decided upon, using a mixed-method approach combining both quantitative and qualitative data. According to Ellram (1996), research methodologies can be described according to the data used and the type of analysis performed.

Case studies are suitable for holistic situations in real-life settings (Ellram, 1996, p. 99; Dubois and Gadde, 2002; Yin, 2009) and to formulate theories that later could be tested using surveys. A case study is not a linear process; it requires an integrated approach to handle the interrelatedness of the various elements in the research work, and therefore the abductive procedures should support the case study method. Any preliminary analytical framework consists of the researcher's ultimate presumptions, and the framework is developed as the empirical observations emerge. A holistic approach often determines a systems approach, in which the world is understood in terms of its mutually dependent components, whereas the more positivistic approach favours a reductionist approach, in which the reality could be deconstructed into its parts (Gammelgaard, 2004). Following a systems approach, deconstructing the reality into its parts is ultimately meaningless; the researcher should work very closely to, and influence, the research object, and the main objective is to improve the system.

The aim of the first study was to increase the understanding of the possible causes of returns and how returns management, especially avoidance and gatekeeping, applies to the problems of consumer returns. The first study is presented in two papers (I and II). To explore a little-known phenomenon, an exploratory case study design is desirable, according to Ellram (1996). The case study design suits both exploratory and descriptive studies, and the combination of both in-depth understanding and broad descriptions – i.e. combining qualitative and quantitative techniques (Eisenhardt, 1989; Ellram, 1996) – facilitates the quest to determine the causes of consumer returns.

The second case study relates to the outcome of the first, and tries to describe the differences in consumer requirements regarding service delivery. The study uses the survey technique to gather empirical data from the customers to the case organisation in the first and second studies. According to Yin (2009, p. 63), mixed methods, in this case combining a survey with a case study, could be more difficult to perform but could enable the researcher to address broader questions.

The overall research process can be described as abductive (see Figure 3), which fits both the research questions and the purpose of the research.

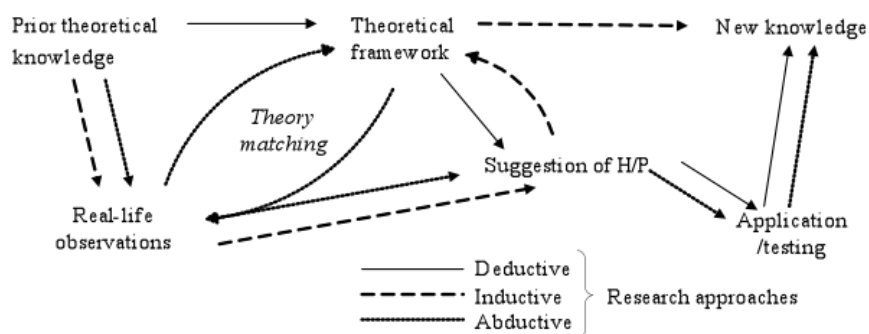


Figure 3 The abductive research approach (Kovács and Spens, 2006)

In the first study, the initial exploratory search for causes of returns helped to develop the research questions further and to be more descriptive in the understanding of causes. This resulted in a developed framework that expanded towards logistics and customer service. In order to apply avoidance later, we had to learn more about the “root cause” of returns. Following the abductive approach, out of the exploratory results we developed hypotheses that were tested against the empirical data. The results of these hypotheses generated suggestions regarding what causes returns, or at least regarding the parts of factors that cause returns. Later, the propositions were tested in Study 2 and presented in Paper III, and this should be seen as the second test of the results.

2.3 Results from the appended papers

The individual results from the appended papers are combined and presented in relation to the research questions and main findings in Table 5. Research question 1 (RQ-1) is divided into four parts, as Paper I does not answer the whole question. RQ-2 was addressed in both Paper I and Paper II, whereas RQ-3 was addressed in all three papers with a focus in Paper III.

As presented in Table 5, Paper I answers parts of RQ-1, in which customer age, lead time and order entry were found to affect returns levels and hence cause returns. This leads to an increased need for more information about demands or requirements from the customer side, pre-delivery, and a follow-up, i.e. post-delivery, to assure that the correct service was executed (RQ-2). If not, how could customers be segmented and offered a differentiated service, or better, how could the pre-delivery information regarding customer requirements result in more accurate service delivery in tune with the demands, causing loyal customers and reducing returns?

Paper II researched and answered part of all three research questions; a returns system that does not separate information and returned goods cannot gatekeep, and therefore the efficiency of the system is affected negatively. Without gatekeeping, all returns are let into the system and the overall aim of the returns system, namely to recover value, cannot be guaranteed. The returns information system (RQ-2) does not support the returns management process as such. A web-based returns system could help to facilitate both the gatekeeping function, through the separation of information and goods, and the avoidance function, in which a faster information flow can help to reduce unnecessary returns. Paper II also addressed RQ-3, though with modest results; the indication that returns levels vary with customer age and the notion that customers

have different requirements further highlight the need for segmentation and differentiated service delivery.

Paper III followed the results from the previous papers addressing the questions of customer requirements and their dispersion by possible segments. In line with the results from Paper I and Paper II, it was concluded that today's mail order/e-commerce business would probably benefit from investigating the customers' needs and requirements and offering the customer segments differentiated services.

Table 5 The relation between the appended papers in the licentiate thesis, the research questions and the main findings

Research questions		Appended papers		
		Paper I – Avoiding returns in distance selling through differentiating customers and their service delivery	Paper II – An application of avoidance and gatekeeping to manage returns in a distance selling setting	Paper III – Service delivery requirements of mail-order/e-commerce customers
RQ-1	What characterises efficient returns systems?		Gatekeeping the entry point of the returns flow to facilitate value recovery	
	What are the causes and sources of returns?	<i>Customer age, lead time and order entry, i.e. varying customer demands</i>	<i>Product size and fit, other reasons leading to regretting order and not collected parcels. Product not consistent with text or picture</i>	
	What factors and processes influence returns systems performance?		<i>The ability to gatekeep and guard the returns flow from unwanted returns</i>	
	What are the key elements and requirements to consider when designing a returns system?		<i>Separation of returns information and goods flow to facilitate gatekeeping</i>	
RQ - 2	How can contemporary information systems enhance returns system performance and contribute to efficient returns management?	<i>Retrieve information other than product specifics (size & fit) to increase consumer insight in order to offer and deliver the right service</i>	<i>Gatekeep unwanted returns and avoid unnecessary returns. Retrieve returns information, process information to avoid returns i.e. short term (outgoing), and long term (product dev. & suppl. dev.)</i>	
RQ - 3	Based on the achieved understanding and results, how should a supply/demand chain (S/DC) be organised to avoid future returns?	<i>Customer segmentation, differentiated service delivery</i>	<i>Separation of goods and information, customer segmentation</i>	<i>Better understanding of customer demands. Customer segmentation, differentiated service delivery</i>

2.4 Main conclusions

The overall conclusion is that the distance sales trade is affected by the trends that are seen in other areas, namely increased competition – not only from within the distance trade but also from the traditional retail trade. This is probably due to the ease of shopping via e-commerce and the vast supply of products that even exceeds that of the retail chains. This attracts new customer groups with new demands and requirements. This, in many ways, constitutes an archetypal difference between today's e-commerce business and yesterday's mail order business, and could explain why customers from the different channels behave and return items differently. The use of the Internet affects how we purchase, and therefore the result of the purchase. It is quite likely that we are far more spontaneous when purchasing over the Internet in comparison with placing telephone and mail orders.

The primary conclusions are that consumer requirements tend to vary, and therefore the standard solution of delivering goods to a vast variety of consumers without engaging in discussion about the individual customer service requirements (et cetera) is most likely to be the central cause of the increasing returns trend seen in the business.

2.5 Contributions

The contributions of the licentiate thesis are characterised as industrial/practical and theoretical, with the main contribution in the former category, as this is applied research in close cooperation with organisations. The main share of the practical contribution comes from the detailed descriptions of the relations between logistics processes and returns and, further, the relations between customer groups and returns and finally the relations between different order entries and returns. It indicates the importance of understanding customer requirements and gaining consumer insights, through both closer cooperation with customers and the development of new information systems to communicate better and faster and to follow customers and their purchasing and returns behaviour dynamically.

The theoretical contributions from the research are modest; however, the model (see Figure 4) was adapted from Carter and Ellram (1998).

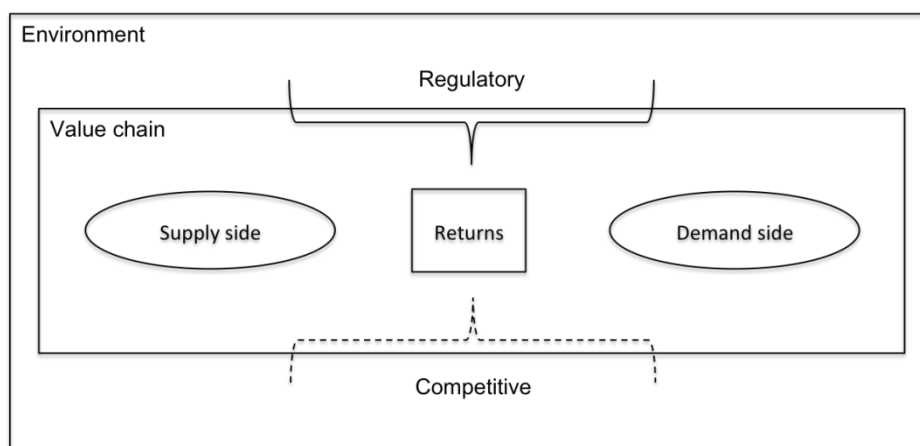


Figure 4 The forces affecting consumer returns (Hjort, 2010)

The model presents four forces causing returns. It builds on previous research in the field of reverse logistics and somewhat opens up the perspective, shifting from a product perspective regarding returns to customer service. This leads to combining the frameworks of avoidance and demand chain management, resulting in a quite detailed discussion of over- and underdelivery (see Figure 3.7 and Section 5.2 in Hjort (2010)) and the potential benefits from the segmentation of customers and differentiated service delivery.

2.6 Future research

Finally, in this concluding part, the author wishes to summarise the work carried out and how it has influenced the author and future research. First, the complexity of the world of logistics research has become quite apparent. Studying the last mile problem, distributing products normally kept in stock to customers ordering via mail order/e-commerce is only a minor part of the field of logistics, yet has proved to be a complex area of investigation. Previous research in the field of returns has focused on handling efficiency as returns levels increase. The work performed by the author has introduced the importance of understanding the customers' requirements, especially regarding service delivery. Therefore, future research will continue to build on the idea that we all have different, individual requirements and demands.

Following the trends, including the EU action plan for creating an online single market, further drives the need for a better understanding of these customer requirements, and forgetting the focus on an average customer supported with a uniform delivery system. Regarding the answers presented to the research questions, it should be of the utmost importance and interest, for practitioners and academia, to understand customers' requirements and ultimately how customers perceive the service delivery offered or executed, and how organisations are affected by competitive pressure, regulatory issues and their own delivery performance, in order to avoid the returns that can be avoided, i.e. unnecessary returns.

This thesis attempts to establish a deeper understanding of the causes of returns and how returns management, particularly avoidance and gatekeeping, can be applied to distance sales. The scope of the thesis is narrow and explores returns and related problems in one organisation. Future research should expand the size of the case study and explore how returns vary by market and whether this variance is influenced by geography, legal and cultural factors, and so on. Furthermore, it should also explore how returns in distance sales affect an organisation's revenue (see Figure 5).

Research should also consider how customers could be encouraged to pay for all the returns by increasing the product price. Consumer insight was mentioned in section 3.6, together with demand chain management in section 3.5. Heikkilä (2002) proposes that supply chain improvement should start from the customer end, and the concept of SCM should be changed to demand chain management. In this instance, the distance sales consumers' requirements regarding service delivery and the availability of products, and how these can be transformed into value offerings and differentiated capabilities, should be considered.

Suggestions for future papers

I: How do returns vary within different markets and what are the main reasons for this variation? We proposed that the outer environment (see Figure 4) consisting of regulatory and competitive forces influences returns. Paper I should investigate how these forces affect returns levels.

II: How do returns affect the revenue in a distance sales organisation and what could be done to maximise revenue by minimising returns without affecting sales (see Figure 5)?

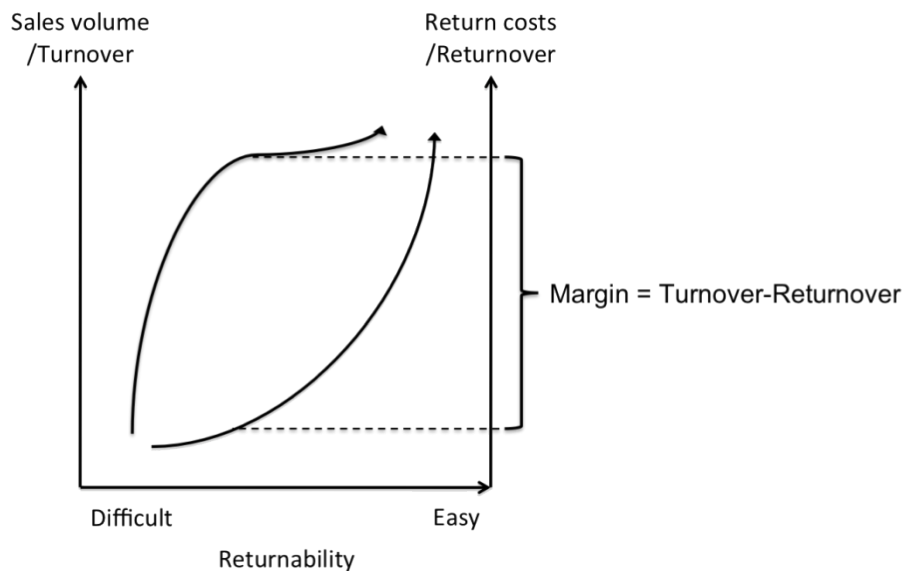


Figure 5 Returns' effect as a function of ease of returning (returnability) against sales and returns

III: Test propositions from Paper II as a quasi-experiment and measure how sales and revenue are affected in relation to returns. Returns policies could be seen as a bridge that decreases the consumer risk regarding distance sales. It allows new customers to test the business as such; further, liberal returns policies that expand to include reduced freight and returns costs might attract new customers as well as stimulating repurchase and more impulsive behaviour when ordering, thus creating more returns.

IV: How can consumer insights be created and transformed into differentiated value propositions and supported by supply/demand chain capabilities in order to avoid under- and overdelivery of products and services?

3 Frame of reference

This chapter presents and discusses the theories that have been used in the development of the theoretical frame of reference for the research performed in this thesis. The framework focuses on RM that allows a proactive return approach via avoidance, identifying factors that might influence returns, and therefore further expands the thesis's framework to fit the theory matching process used (see Figure 3). The avoidance activity is central to this thesis and therefore the framework, though focusing on RM, expands into explaining the forces and factors that drive consumer returns, such as theories on consumer behaviour. Without the expansion of the framework and suitable theoretical connections, the credibility of the results and suggested improvements based on new understanding would have been questionable. The expansion of the frame of reference had direct implications for the systems model; the returns system that was the assumed initial system in the end included the distribution system.

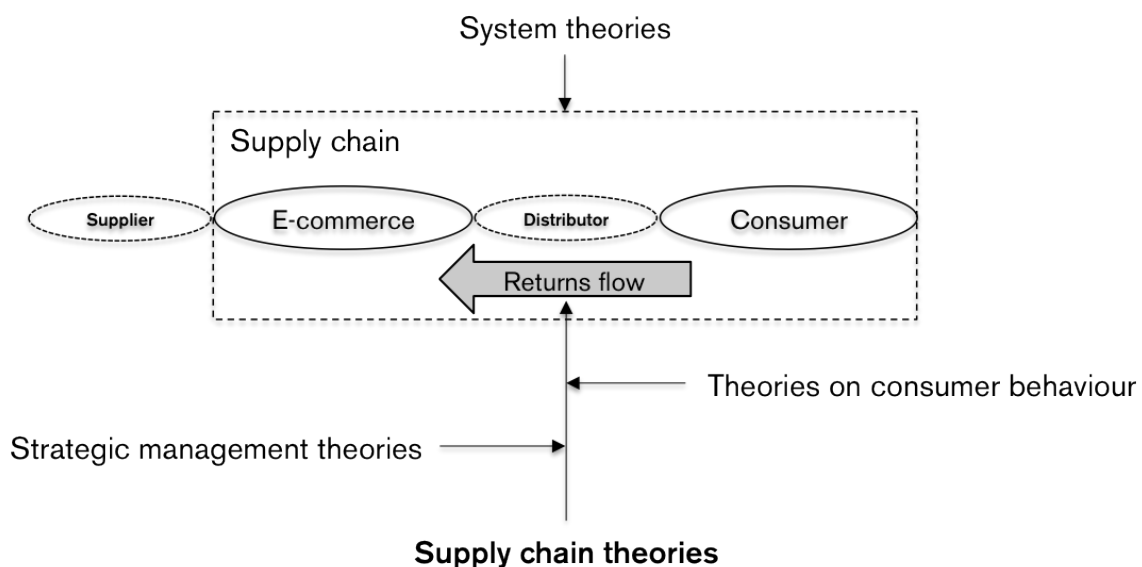


Figure 6 A presentation of the SC and the theories used in the framework developed for this thesis

3.1 Returns management in B2C contexts

The change from early product recalls and reverse logistics to today's returns management has evolved from merely a company activity within a logistics network to an important supply chain management process as introduced above. A number of terms, definitions and pieces of literature describe the reverse flow of products: closed-loop supply chain management (Blumberg, 2005; Guide Jr and Van Wassenhove, 2006; Guide and Van Wassenhove, 2006; Yang *et al.*, 2009), reverse logistics (Rogers and Tibben-Lembke, 1999; Rogers and Tibben-Lembke, 2001; Autry, 2005) or simply returns (Anderson *et al.*, 2009), to mention a few.

If organisations still view returns as a cost driver and not as a competitive edge, they miss the potential value it could add to them and their customers (Mollenkopf *et al.*, 2007a). Wood (1979) had already concluded in 1979 that customer satisfaction and company image are factors to consider when recalling products. In the conceptual definition of (Rogers *et al.*, 2002), returns management consists of strategic and

operational levels. The strategic part of RM develops the road map for the execution on the operational level. RM is often underprioritised in comparison with other business processes. In distance sales with return levels reaching 20—50% or even higher, it is difficult to understand that RM could still be underprioritised, especially when a large share (if not all) of the costs of returns are paid by all customers, returning or not. However, returns management is increasingly being recognised for just the purpose of affecting the competitive positioning, i.e. affecting sales, and it is nowadays seen as an important link between marketing and logistics (Mollenkopf *et al.*, 2007a). In e-commerce, especially fashion with its obvious problems in finding the right fit and size online, it is crucial to see the company as a whole. Porter (1996) explains that “fit is important because discrete activities often affect one another”; fit here is meant in relation to organisations and not products. From a consumer’s perspective, online purchase represents a certain level of risk (Mollenkopf *et al.*, 2007b) and returns policies can therefore help to improve customer loyalty by reducing the risk (Rogers *et al.*, 2002). However, the risk does not only relate to products, i.e. quality, size and fit issues; the consumer also has to await the delivery and the execution of the service delivery as well. Mollenkopf *et al.* (2007b) argue that well-executed returns handling could act as a service recovery opportunity, in which the customer evaluates the ongoing service delivery during a particular purchase experience. According to Andreassen (2000), service recovery affects customer loyalty, which follows the arguments by Harrison and van Hoek (2008) that service performance is important, as customers’ perception of delivered products and services is what creates loyal customers. Thus, the importance of returns management should not be underestimated in distance sales as a competitive advantage is created through the system of activities (Porter, 1996), returns included.

Returns management is defined as (Rogers *et al.*, 2002, p. 5):

The part of supply chain management that includes returns, reverse logistics, gatekeeping and avoidance.

The above definition is used in this thesis and the broader integrative approach of returns management as it allows the discussion of the problem of returns and work proactively with avoidance and thereby hopefully avoids future returns. The gatekeeping and avoidance activities are important in the creation of an efficient and effective returns flow. However, it is equally important from the perspective of an efficient and effective supply chain. As noted in the introduction to this thesis, independent entities can no longer compete by themselves in creating global customer value and therefore the objective of SCM is to create the greatest value for the entire supply chain network, including the end-customer (Croxtton *et al.*, 2001). This is achieved, according to SC theories, through the integration of processes within and between organisations (Croxtton *et al.*, 2001; Mentzer *et al.*, 2001; Lummus *et al.*, 2008) (see Figure 7).

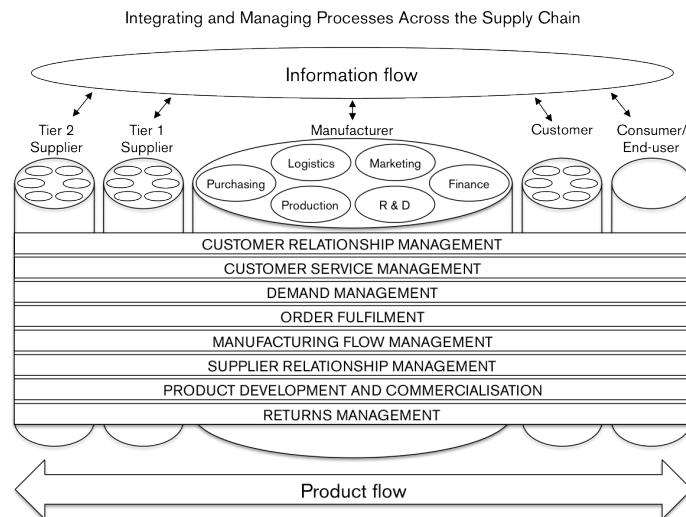


Figure 7 The supply chain management key business processes (adapted from Croxton *et al.*, 2001)

The definition of logistics has evolved over time and more recent definitions emphasise the strategic, coordinative (Harrison and van Hoek, 2008, p. 7), future profitability, cost-effective fulfilment (Christopher, 2005, p. 4) and supply chain elements (Harrison and van Hoek, 2008). This shift of emphasis is probably a result of increased competition due to globalisation, shorter product life cycles and more demanding customers. Traditionally, the literature describes logistics from a focal firm perspective whereby sourcing and production are managed (planned, executed) in line with sales forecasts and demand.

A returns flow is much more reactive and less visible (Tibben-Lembke and Rogers, 2002, p. 272). A returns flow with poor visibility, in a B2B or a B2C context, will likely support neither an efficient nor an effective returns or supply chain flow. Thus, a returns flow with poor visibility, and therefore disconnected from the forward flow, and where the returns flow could contain non-defective (just unwanted) items, then the supply chain “systems” available-to-promise are not updated and the overall effectiveness is likely to be affected. Thus, we cannot be sure that we are performing *things right* or the *right things* in the returns flow or in the supply chain. The four returns management activities as defined (Rogers *et al.*, 2002) are presented in the subsequent subsections.

3.1.1 Returns

Returns are caused by a plurality of factors depending on the position in the supply chain and the nature of the product. Organisations need to assess all the possible returns and determine the best possible returns procedures and returns flow network. The flow of goods to and from consumers could be depicted as a double-arrowed goods flow, as shown in Figure 7. However, the returns flow as such differs from the traditional goods flow (Tibben-Lembke and Rogers, 2002) and is therefore indicated with a separate returns flow arrow pointing in the opposite direction. The traditional, *forward* or downstream goods flow that travels from left to right in Figure 8 is traditionally supported with more information and planning based on sales forecasts and advanced shipping notices (ASNs) (Tibben-Lembke and Rogers, 2002, p. 272) or point of sales (POS) data that drive replenishments. The returns flow as such differs

depending on its origin, i.e. consumer, e-commerce or supplier, and it is normally more reactive than proactive (Daugherty *et al.*, 2002), due to less information and visibility and less focus on economic gain. The closer to the consumer, the greater the size and scope of the returns issues are (Tibben-Lembke and Rogers, 2002). The visibility and value of the returns flow are likely to increase as products move upstream as returns are registered, handled, sorted and buffered; thus, the shipment frequency decreases as returns move towards the supplier and the value per shipment should increase as products are consolidated from individual consignments (returns) to larger units (pallets, cages, containers).

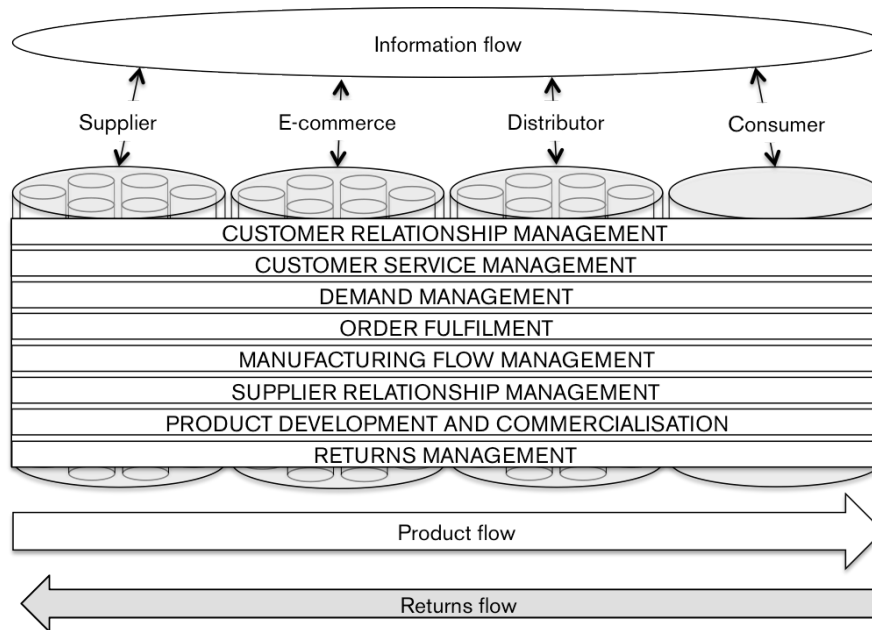


Figure 8 The e-commerce supply chain including the returns flow (adapted from Croxton *et al.*, 2001)

The Global Supply Chain Forum and the authors of “The returns management process” (Rogers *et al.*, 2002, pp. 3-4) define five types of returns. The main bulk of the e-commerce returns flow consists of consumer returns and some product recalls due to quality issues.

Consumer returns are perhaps the most difficult as they are unpredictable and therefore difficult to anticipate, which affects the handling and execution of the return. From a B2C perspective, consumer returns are naturally the main returns flow and should be differentiated by the cause of return. If the cause of return is not a consumer error, the best procedure might be to target reconciliation with the consumer and thereby reduce the harm caused. Returns that are associated with quality issues require procedures that incorporate product development, production and suppliers. As stated by Cooper *et al.* (1997) regarding logistics and supply chain management, “there is definitely a need for the integration of business processes in the supply chain that goes beyond logistics”; this applies equally well to returns management. Reasons for returning are often defective products or buyers’ dissatisfaction or remorse. Other possible reasons (non-defective products) are fit, size, missed collection or difficulty of operation (Rogers and Tibben-Lembke, 1999). Thus, the returns management process will (should) not own the process of understanding what causes returns and how to

reduce the number of returns in the future. The reasons for returning of course vary with the products at hand, and therefore there is no simple route to integrate returns management and other processes to reduce consumer returns. However, Ferguson *et al.* (2006) argue that consumer product returns are driven by a “consumer is king” attitude supported by liberal product returns policies.

Not all consumer returns are a token of a bad sale or a dissatisfied consumer; some organisations are even managing product returns policies to maximise their future profits (Rosenbaum and Kuntze, 2003; Petersen and Kumar, 2010). From a company perspective, despite the cost of returns, i.e. handling and refunding, the customers’ ability to return may have a positive impact on future purchases and long-term profits (Petersen and Kumar, 2010). This ability to return and the level of leniency in returns policies decrease the risk that a customer might perceive prior to ordering or at the time of placing an order, especially in e-commerce. In e-commerce, consumer returns are an inherent element of shopping online due to the customer’s inability to experience a particular product and/or service prior to ordering. However, the returns policy and its leniency might also result in consumer abuse (Kang and Johnson, 2009) and research has found that that nearly 20% of consumers engage in some type of “illegitimate product returns” (Piron and Young, 2000; King and Dennis, 2003). In the high-tech industry, a large share of consumer returns have no functional or cosmetic defects, and these are called *false failure returns* (FFRs). Ferguson *et al.* (2006) report that in HP’s inkjet printer group, FFRs account for 80% of their returns. At Bosch Power Tools North America, FFRs account for 2% of sales (Ferguson *et al.*, 2006). Some retailers are trying to identify customers with excessive returns and refusing to allow them to return items (Cha, 2004). It is controversial to practise this aggressive consumer behaviour (Ferguson *et al.*, 2006). Within the EU (EUR-lex, 1997), organisations are not allowed to decline e-commerce consumers’ returns if they are legitimate returns; thus, in e-commerce, there is no such thing as *excessive* returns.

By analysing consumer returns and achieving a better understanding of drivers such as consumer behaviour, product characteristics and consequences of product returns, managers from different functions in e-commerce can determine the relationship between the costs and the benefits to the company and their supply chain. Understanding the actual returns rate and determining an acceptable returns level form a good starting point (Blanchard, 2007).

Marketing returns are products returned from a position downstream in the supply chain. They often occur due to slow sales, quality issues or a manufacturer’s purchase of a competitor’s retail stock. Another possible reason for a marketing return is producers and retailers who promote a brand or mark down their products if the consumer returns a similar used product. The enterprise Bröderna Nyman in Länghem in Sweden used this system in 2006 and 2008 and the products that were collected from consumers were then donated to charity. Using marketing returns then becomes a way of both increasing sales and positioning the brand in favour of competitors. Marketing returns as such are a returns flow that appears between a retailer and a wholesaler or producer. They are not in the main focus of this thesis as it focuses on consumer returns; however, marketing returns and the returns policy between e-tailers and their suppliers might be a solution to cope with slow movers or products that are unsuitable for the local market and wanted elsewhere. Thus, from an SC perspective, instead of selling products and handling excessive returns rates or even using clearance sales in

one channel of the SC, products are sent upstream to another retailer with a better demand and returns pattern.

Asset returns are products (assets) that a company wants to be returned. Assets can be expensive assets, such as oil drilling equipment, or less expensive reusable assets, such as containers or pallets (Rogers *et al.*, 2002). Autoliv in Vårgårda in Sweden uses collapsible boxes to deliver airbags and other safety equipment to their customers in a closed-loop system and collects the collapsed containers and then delivers new products in a back-haul system. These containers are relatively expensive and used only when the closed loop functions properly. When delivering to areas such as the Russian automotive industry, other options are evaluated due to the high risk of losing expensive containers.

Product recalls are returns that are normally initiated because of safety or quality issues. Industries that are susceptible to these types of returns, such as the automotive or food industries, have to develop a system to inform customers and an efficient handling system. An example is Biltema, of Sweden, which found that a wooden toy it sold could break if dropped from a height of 1.5 metres. No customer had reported breaking the toy; the problem was discovered when an employee dropped the toy. The company conducted a voluntary recall of the product, informed the customers via the Internet and gave them the option to bring the product back to the nearest store for a full refund.

Environmental returns are returns caused by environmental regulations. These can be due to a product containing hazardous material or waste, or non-hazardous material or waste such as used packaging material. In the EU, the responsibility for disposing of this material lies with the producer. In Sweden, producer responsibility exists in eight areas: batteries, cars, drugs, electronic appliances, paper, packaging material and tyres (Naturvårdsverket, 2013). This means that the importer or producer of these products must pay for collecting and recycling the products sold on the market.

3.1.2 Reverse logistics

Reverse logistics often seems synonymous with returns management (Mihi Ramírez, 2012); the author of this thesis and others (Rogers *et al.*, 2002; Diane and David, 2005, p. 34) refer to reverse logistics as the part of returns management that deals with the physical flow of materials upstream or at least from customers or consumers. Its main purpose is to recapture value from the product or, as a last resort, its proper disposal. It is the planning, implementing and controlling of the physical flow of returns (cf. Thierry *et al.*, 1995; Rogers and Tibben-Lembke, 1999). As such, reverse logistics as an activity normally focuses on efficiency; as part of a returns management process, the overall SC effectiveness must overrule the efficiency focus. Increased competition requires companies to focus on delivering and providing value and this includes reverse logistics (Mihi Ramírez, 2012). Therefore, from an SC, company and consumer perspective, we need to maximise the value creation or effectiveness, even if it means that we have to sacrifice or decrease the efficiency in a given situation in the reverse logistics flow. However, the focus on effectiveness rather than efficiency is not possible in a returns flow with poor visibility (see section 3.1) that is disconnected (system-wise) from the forward flow. The focus on efficiency might also be hindered, as the poor visibility cannot guarantee any value recovery either. In the e-commerce consumer returns reverse logistics flow, products are either delivered back to a drop of point (DOP) or delivered via a postal mail system. In the transportation network, the

returned shipment is retrieved from the DOP or the mail system; thereafter, it is collected, sorted and finally delivered to the receiver, i.e. the e-tailer. The pick up point (PUP), where the goods are delivered, could be the same location as the DOP.

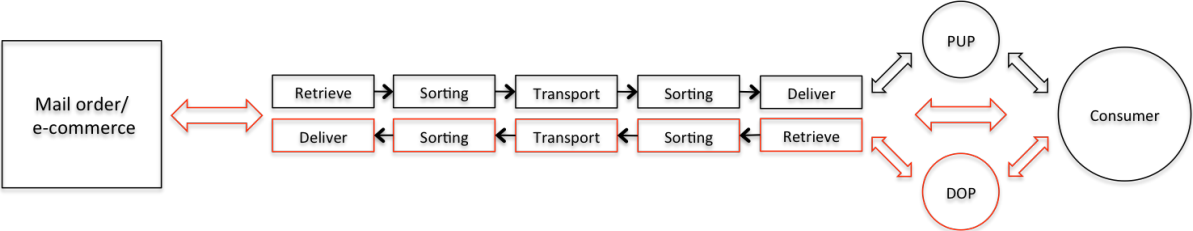


Figure 9 A typical e-commerce delivery and reverse logistics system, adapted from Hjort (2010)

The returns system (red in colour) depicted in Figure 9 is reactive due to the fact that in a paper-based returns flow the receiver can only react as returns are delivered upwards in the system, including the mail order/e-commerce organisation. Even though information and goods have entered the returns system, the information is disconnected from the information system as it is travelling with the goods returned.

3.1.3 Gatekeeping

Gatekeeping is the screening of return requests and the returned item (Rogers *et al.*, 2002, p. 10). Gatekeeping ensures that only returns that are allowed are accepted and then guided to the correct point in the SC. The gate (X) could be exemplified as a valve (in Figure 10 marked as X) opening for “wanted” returns and closing for “unwanted” returns, i.e. those for which value recovery cannot be accomplished or unwarranted returns that are outside the 14 days’ returns window (EU regulation). Return requests can be prevented (avoidance) by providing better information on or training for product operation, i.e. user friendliness and better sizing guidelines to mention a couple, as well as a returns information system based on real-time access to information regarding the causes of returns.

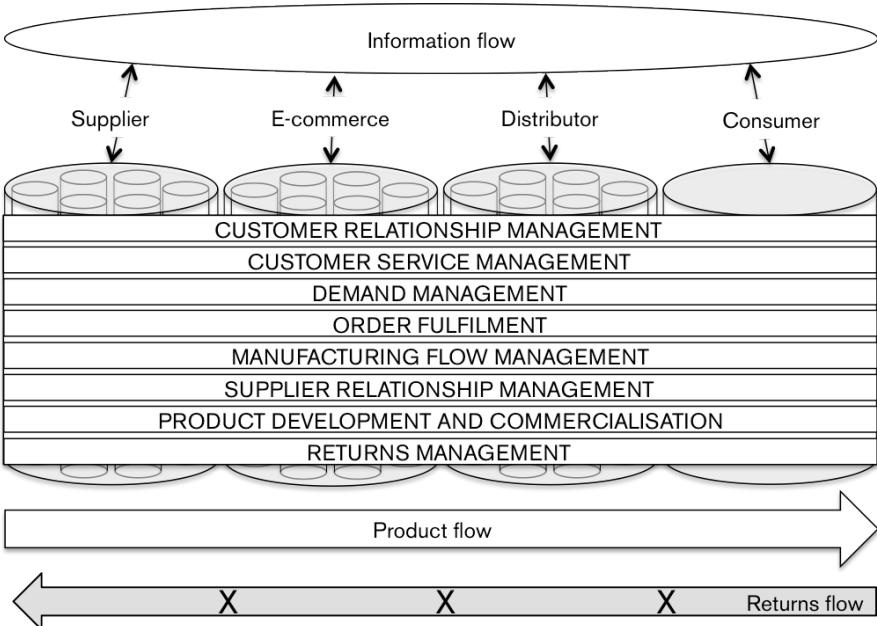


Figure 10 The e-commerce supply chain including the returns flow and gatekeeping (X)

In Figure 10, returns enter the returns system downstream (from the right) and the gatekeeping (see Figure 11) activity is meant to guide the individual returns to the best individual disposition, given the returns cost and possible value recovery (see Thierry *et al.*, 1995).

The gatekeeping activity X

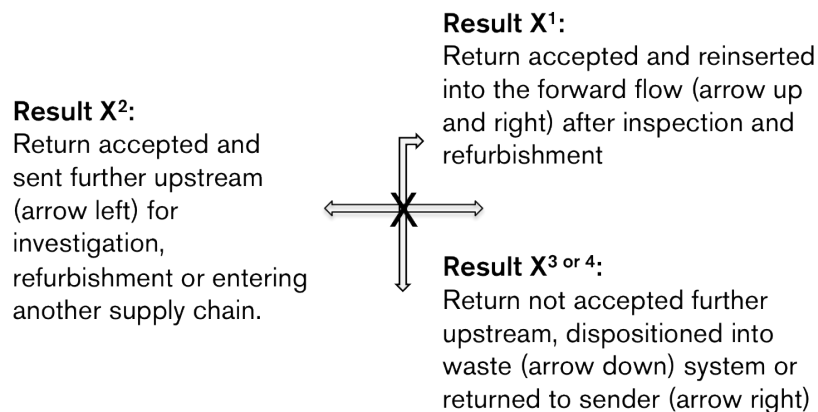


Figure 11 The gatekeeping activity and four possible gatekeeping results

Properly executed, gatekeeping improves the disposition of returns as returns are evaluated regarding the reason and their shape/conditions, and it determines how to route them. It reduces costs and increases customer satisfaction and this trade off is maximised only if the activity is performed at the entry point into the returns flow. The result is increased effectiveness and efficiency; however, depending on where in the returns flow it is performed, the level of efficiency and effectiveness is affected. Normally, it is applied at the entry point, but can be applied to more than one place in the returns flow (Rogers *et al.*, 2002); see the three **Xs** in Figure 10. The screening of return requests, such as the return material authorisation (RMA) together with guidelines and returns policies, determines the routing. In the US, this is often performed by a third party (Rogers *et al.*, 2002); however, this is rarely (if at all) the case in the e-commerce consumer returns flow in Sweden (Hjort, 2010) or northern Europe. The conceptual framework including the gatekeeping activity is clearly developed for B2B (see Rogers *et al.*, 2002, p. 14) handling consolidated shipments and not for each individual consumer return in e-commerce. In Sweden and other countries in Europe, the e-commerce returns flow is assisted by a prepaid and pre-printed return slip that follows the outgoing delivery towards the consumer and the resulting incoming returns flow (Hjort, 2010). This means that the gatekeeping activity as such cannot (at present) be performed until the returned goods reach the returns desk, often located in the warehouse from which they were once delivered. So, this results in all returns being accepted into the returns system and routed the same way, irrespective of their condition and what caused the return (Hjort, 2010). The disposition is performed after the gatekeeping; however, the ways of dealing with an individual return are somewhat limited, as the decision is not taken at the entry point.

The arrows pointing downwards guide the returns to recycling and the bent arrow pointing upwards right channels the returns into the normal product flow after being inspected and handled, which could include finishing, repair or other activities. Moving

towards the left in the returns flow normally implies more work carried out on the returns (Thierry *et al.*, 1995). The gatekeeping activity is crucial in distance sales; the longer it takes to make the disposition decision of a returned product, the lower the expected market value of the returns when reinserted into the normal product flow (Mollenkopf *et al.*, 2007a), meaning that late returners (outside the stipulated return window) affect the possible value creation. The implementation of gatekeeping in e-commerce requires the use of decentralised returns handling and/or a web-based returns information system. Solely decentralised (outsourced) returns handling would, however, disconnect the owner (e-tailer) of the problem from the execution of individual returns processing. There is room for improvement in returns information systems (Rogers and Tibben-Lembke, 2001, p. 146), especially from an integrative perspective (Näslund and Hulthen, 2012). Bernon and Cullen (2007) express that the development of ICT offers significant opportunities for economic and environmental benefits in the reverse logistics process.

3.1.4 Avoidance

Avoidance aims to find ways to minimise returns requests (Rogers *et al.*, 2002; Lambert, 2004) or returns by developing and selling products in such a manner. It is this activity that differentiates returns management from the earlier reverse logistics, because by successfully applying avoidance, the returns are not sent backwards and could by definition not be reverse logistics (Rogers *et al.*, 2002). The ways of executing avoidance may differ; improved quality, better (more accurate) information or user instructions and better service are some common applications. Also, if the results from the previous experiences of a customer would classify a new order or order row as a “likely future return”, then the return can be avoided if the order (row) is not delivered at all. Hjort (2010) finds that the consumer returns level in distance sales can be related to the delivery lead time, customer age and type of order entry (phone, mail or online order). It implies that consumers’ return behaviours are not uniform and further that there might be different demands on the business as such. Alternatively, the customer could be guided to a more suitable product with respect to size, fit and colour. This results in increased effectiveness in the SC and increased efficiency in the returns flow as a return is avoided. Thus, the resources could be used elsewhere; from a consumer perspective, the activities and resources normally used to make returns are likely to be reduced and the value should increase.

Improved quality can be considered as a reduced number of defective products and better instructions or information. This can be in combination with better service, for example home installation and education by the retailer. This is a service that was offered to ONOFF’s customers: both to visitors to the shop and to Internet buyers. Extra Film is trying to avoid certain returns; new customers who place an extraordinarily large order are contacted before the order is executed to ensure that there has been no error by the customer. Black & Decker integrates returns and product development to learn from previous returns in order to avoid future returns (Rogers *et al.*, 2002). For online or catalogue retailers, product consistency is a critical issue as traditionally many returns result from sizing and fit issues. Victoria’s Secrets returns management team works with suppliers to apply sizing guidelines across all products in a uniform manner. This reduces costs and improves customer satisfaction (Rogers *et al.*, 2002).

Avoiding returns is not always the issue; a hesitant consumer who struggles to find the right product might be lost if the return opportunity was not available. From both a business and a sustainability perspective, a consumer who orders two sizes or two different products to increase the *hit rate*, so to speak, might be more profitable and sustainable than the same consumer ordering one size/product at a time, returning the first one, exchanging the product and keeping the last one. In the first scenario, ordering two sizes/products, the resulting number of deliveries and returns is two, with a return rate of 50% on the item level. In the second scenario, the resulting number of deliveries and returns is three (one outgoing and one return and a second outgoing) and the return rate is 50%. Thus, avoidance should aim to prevent the unnecessary returns. Unnecessary returns therefore relate to other functional areas, such as marketing, logistics, production and purchasing, to mention a few. In a dyadic relationship like this, between the e-tailer and the consumer, if the returns flow was not disconnected with poor visibility, the system could utilise information regarding buying behaviour and *likely returns* (more than one size/product) and increase the overall effectiveness. Thus, an earlier update of available-to-promise and better information regarding size, fit, colour and fabrics to present to buyers are necessary. Consumers in the fashion e-commerce business are likely to be the largest supplier (up to 50% in returns) of goods back into the distribution system. However, the information is not accessible in real time due to a paper-based returns system in which the information travels with the returned goods (Hjort, 2010).

Consumer returns are, as described, dependent on both product characteristics and consumers' buying behaviour; thus, the avoidance activity needs interaction both with suppliers and with consumers. This necessitates internal integration whereby a cross-functional returns management team analyses returns information and provides feedback to the SC design team.

3.2 The e-commerce SC and consumers

The literature often describes supply chain design from a manufacturer's perspective, trying to link the supply side with the demand side, often with a product focus (see Croxton *et al.*, 2001; Christopher *et al.*, 2006; Stavroulaki and Davis, 2010). In shifting market conditions, as in the global economy, the choice of supply chain strategies is critical when competing to serve customers (Gattorna, 2010). It is accepted in theory that the "one-size-fits-all" approach to supply chain design is no longer valid (Christopher *et al.*, 2006; Gattorna, 2010; Ericsson, 2011; Godsell *et al.*, 2011). In designing supply chains, Godsell *et al.* (2006) express a need to transfer the focus from the product to the end-customer and specifically to the end-customer's buying behaviour. Traditionally, there are two different schools of thought in supply chain design (Godsell *et al.*, 2011). The first school is the lean-agile supply chain design, which is product-driven. The second school of thought is that customer buying behaviour drives strategic alignment. Gattorna (2010, p. 3) describes SC alignment as aligning SC strategies to customer segments, for an review on alignment literature see Stavroulaki and Davis (2010).

Fisher explains in his early (1997) work that before organisations devise their SC they need to consider the nature of the demand for the products; functional products have more stable and predictable demand but the stability invites competition and often reduces the profit margin. Whilst innovative products, such as fashion and apparel, give customers additional reasons to buy these products and can enable greater profit

margins, they also create unpredictable demand. Christopher *et al.* (2011) build upon Fisher's (1997) earlier work and explain the need for combining product characteristics and market considerations when designing supply chain capabilities and selecting supply chain pipelines. In the selection of pipeline types, there are eight theoretical types to choose from depending on whether the products are standard or special, the demand is stable or volatile and lastly whether the replenishment lead time is short or long (Christopher *et al.*, 2006). According to Christopher *et al.* (2006), standard products tend to be more stable in demand with longer life cycles, whilst special products tend to be the opposite, i.e. with erratic demand and shorter life cycles. Therefore, there is a connection between demand predictability and product characteristics, which reduces the amount of theoretical pipeline types to four (Christopher *et al.*, 2006, p. 282). Depending on the product demand and supply characteristics, Christopher addresses a lean or an agile approach, or a combination of the two, i.e. a *leagile* approach (see Christopher *et al.*, 2006, p. 283). In e-commerce, the focus would naturally shift to the e-commerce organisation, which changes the focus from manufacturing towards the sourcing of and delivery of finished goods. However, as e-commerce organisations grow, they are likely to try to design and produce their own products and brands in search of greater margins, shifting the focus back towards manufacturing or at least a combination of sourcing and manufacturing. This exemplifies the need for at least two supply chains, and probably even more. In e-commerce, the critical focal point is to match the demand from consumers with an appropriate set-up of sourcing, final distribution and returns-handling activities. If demand variations for different products exist, it is probably useful to apply diverse sourcing strategies in order to match demand uncertainties with responsive supply strategies.

Two main approaches may be used to meet customers' requirements: a standardised or "one-size-fits-all" approach, which includes opportunities for economies of scale, and logistics services customised to each individual customer. The latter increases customer satisfaction but is also more expensive. Differentiating logistics services for different customers requires a balance of customer satisfaction and related costs but is an important service in a competitive market (Rutten and van der Veeken, 1998). Customising logistics programmes to different customer segments improves both effectiveness and efficiency (Mentzer *et al.*, 2001). The increased competition in the e-commerce business has accentuated the increased focus on speedy delivery and extended service offerings. Still, organisations, even in the highly competitive e-commerce market, utilise a "one-size-fits-all" strategy to create and deliver value to their consumers, thereby implicitly assuming that consumers' demands and buying behaviour are homogeneous, and therefore that there is no profitable reason to differentiate delivery in terms of service.

Supply chains are omnipresent and complex (Gattorna, 2010), and e-commerce organisations exist in many supply chains or supply networks. As noted earlier, it is accepted that the "one-size-fits-all" approach to supply chain design is no longer valid, and the suggested number of parallel supply chains varies and is naturally context-dependent. It depends upon diverse variables such as demand uncertainties, product characteristics and replenishment lead times to mention a few. The complexity of the contemporary SC is either missed or attacked in the wrong way: missed due to managers being blind to their presence or because the complexity makes the SC invisible (Gattorna, 2010, p. 4). In the manufacturing and the retail business, the

complexity is often addressed with an operational sledgehammer to reduce the internal operational complexity (Gattorna, 2010). The results are standardising and reengineering processes designed to reduce complexity in the way organisations serve their customers. From a customer perspective, these enterprises do not become any easier to deal with (Gattorna, 2010). This is likely to be true in B2C online sales; Hjort (2010) found that in a case study performed with an organisation utilising a “one-size-fits-all” approach, consumers responded with a heterogeneous returns pattern, showing that younger customers returned, on average, a greater percentage (see Hjort and Larsson, 2009). Gattorna (2010) argues that in a typical supply chain three to four dominating customer buying behaviours exist that need to be understood in detail. Further, these dominating behaviours cover approximately 80% of the customers, and the same dominating patterns fit other markets as well. This understanding will come from first accepting that the time has come to rethink how we design and operate SCs and link organisations with their suppliers and customers (Gattorna, 2010). Gattorna (2010) expresses that we need to embrace a far more liberal view of SC configurations. Gattorna (2010) argues that the concept of *dynamic alignment* (DA) is living and not static and therefore aligns enterprises with the changing conditions that prevail today. The DA framework links the marketplace, strategy, internal culture and leadership styles (see Figure 12).

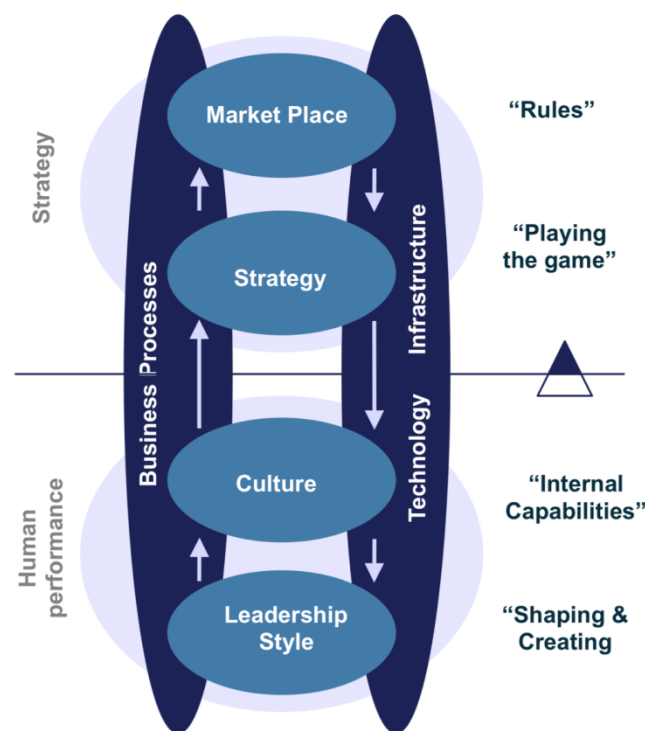


Figure 12³ The elements of the dynamic alignment framework (Gattorna, 2010, p. 19)

³ Figure 12 downloaded from <http://johngattorna.com/gattorna-alignment.html> with permission to use from the author.

Gattorna (2010, p. 17) states that the DA framework presents an opportunity to design and operate supply chains that “stay abreast of customers and consumers as they too evolve over time”. Level one in the DA framework consist of the *marketplace* (see Figure 12). The key driver in the marketplace is the customers’ dominant buying behaviour for a typical product or service category in a specific marketplace. The essential starting point for the DA framework is a comprehensive understanding of customers’ fundamental needs and matching dominant buying behaviours.

Level two is the strategy element that links the internal cultural capabilities with the external marketplace, and level three is a set of aligned subcultures on top of enterprise-wide shared values or corporate cultures. These are crucial for the successful implementation of an operating strategy. Level four is the leadership style; successful organisations generally have a leadership style that is closely in touch with, and empathetic to, their customers and the prevailing market conditions (Gattorna, 2010, p. 26). Further, these leaders tend to formulate relevant strategies and shape cultural capabilities to underpin and drive the implementation of these strategies in their target marketplace.

Ericsson (2011) describes demand chain management (DCM) as a concept that is designed to fit the new global and competitive environment by explicitly focusing on the customer and aligning interorganisational processes accordingly. The purpose is to create a unique competence aimed at identifying and satisfying customer needs and wishes. One of the main ideas of DCM is to integrate key customers and suppliers into the process in order to improve and to reduce the lead time in product development and commercialisation. When product life times are reduced, products have to be developed and launched in a much shorter time in order to maintain and improve competitive power. This means that the necessity for cross-functional and interorganisational integration and cooperation increases.

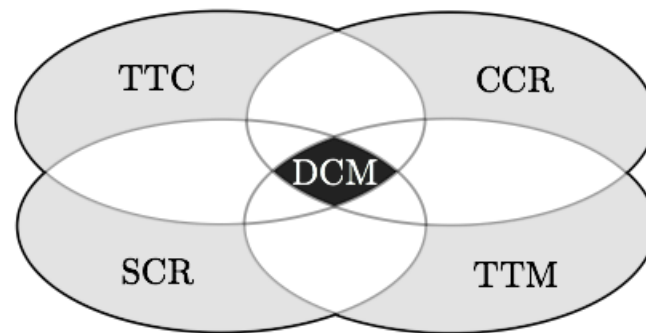


Figure 13 The four interorganisational processes and demand chain management (Ericsson, 2011)

Ericsson (2011) defines the fifth process, the DCM process, which aligns key parts of the other four processes in order to create an interdependent, partnership-based chain, i.e. the demand chain. The integration of these five processes is shown in Figure 13.

The operational sledgehammer Gattorna (2010) mentions is likely to be present in the e-commerce business as well. Even if some e-tailers are offering more than one delivery alternative, very few (if any) offer a more personalised delivery and/or returns solution or process. In a recent study, 68% of Swedish consumers who do not purchase

clothes online report that they always want to see/try on the clothes first before they shop online. Another 33% express that it is complicated to return the clothes if they do not fit (e-barometern, 2012). However, around half of the online consumers report having used the returns opportunity and 77% of them are quite pleased with the returns process (e-barometern, 2012).

Globalisation is one driver of the integration whereby increased competition drives shorter product life cycles and a broader variety of products. We have entered an era of supply chain competition (Christopher, 2005; Näslund and Hulthen, 2012) in which customers are more demanding and sophisticated than ever before. Autry (2005) describes the modern marketplace as hypercompetitive and firms as competing vigorously on the basis of customer service, allowing almost anything to be returned if it will benefit the customer relationship. Hypercompetition is described either as an intense form of rivalry and rapidly changing market or industry conditions or as a conceptual model for the strategic behaviour of firms and interorganisational relationships from a management point of view (Kotzab *et al.*, 2009).

To become responsive and competitive in a hypercompetitive environment, such as the e-commerce business (author's note), organisations can use differentiation strategies for their existing products and logistics services or markets (Kotzab *et al.*, 2009). Alternatively, introducing new products/logistics services into existing or new markets will require deeper and more meaningful relationships within the firms' SC according to Kotzab *et al.* (2009). According to Porter (1996), hypercompetition is a self-inflicted wound. When dealing with increased competition, one needs to understand the forces that drive the competition and how to use them strategically in favour of the own company (Porter, 2008). According to Porter (2008), the five forces that shape industry competition are the bargaining power of suppliers, threat of new entrants, threat of substitute products or services, bargaining power of buyers and rivalry among existing competitors. The low entry barriers in e-commerce business (Porter, 2001) lead to intense competition and, as presented in the introduction, the number of (new entrant) companies has increased faster than the increase in sales in the same period.

Christopher (2005, p. 45) argues that customers are more willing to accept substitutes nowadays and that it is harder to maintain a competitive edge through the product itself. Customer service can provide a distinction between a company and its competitors and returns management and the liberalisation of returns policies is one way of responding to competition. New entrants to an industry, such as the e-commerce business, bring new capacity and aim to gain market share and this puts pressure on prices and costs (Porter, 2008). Further, Porter argues that if there is a threat of entry, this holds down profitability, not whether the entry occurs. Existing rivalry can take different forms, price discounts, etcetera, and this rivalry puts further strain on profitability (Porter, 2008). The strength of rivalry in a business reflects both the intensity and the basis of competition; in e-commerce, service and specifically delivery and returns policies are central to attracting and to keeping customers. Porter argues that competition on dimensions other than price, such as on product features and support services, are less likely to erode profitability as they improve customer value and can support higher prices. Therefore, rivalry, according to Porter, can be a positive force and increase profitability in an industry if competitors aim to serve the different needs of different customer segments. This can also expand the business as such, as the needs of more customer groups are met. Porter (2008) argues that the

overall value can expand when firms collaborate with suppliers, whereby better coordination limits the unnecessary costs incurred in the supply chain.

Cooper *et al.* (1997) argue that “there is definitely a need for the integration of business processes in the supply chain that goes beyond logistics”. One argument is that there is a need to include external organisations and other functions in product development in order to reduce the time to market for new product introductions. Further, customer and consumer involvement is necessary and it should be apparent that logistics is never going to own the product development process or the customer. The same reasoning applies to returns and returns management. To become efficient and effective in the supply chain (see above, Christopher, 2005), we need to discuss returns management in a supply chain context, in which returns management is discussed as one of eight supply chain core business processes (see, Croxton *et al.*, 2001; Rogers *et al.*, 2002) see Figure 7 on page 25.

3.3 Strategic aspects of RM

In essence, strategy is choosing to perform activities differently and competitive strategy means choosing to perform a different set of activities to deliver a unique mix of value (Porter, 1996). Thus, a competitive strategy in e-commerce should focus on value creation rather than imitating competitors through benchmarking and by adopting a best practice philosophy. Value creation can be achieved by reducing the buyers' cost or by raising the buyers' performance (Amit and Zott, 2001). This applies to both products and services and value here is the difference between the perceived benefits (customers' willingness to pay) and the economic costs (Peteraf and Barney, 2003). Creating value is the critical endeavour for all organisations (Peteraf and Barney, 2003). Porter (1996) argues that the competitive value of individual activities cannot be separated from the whole, thus the RM process and its four activities add costs and therefore affect the value created. Operational effectiveness (OE) includes (but is not limited to) efficiency and it refers to better utilisation of inputs, whereas strategic positioning refers to performing activities (ways) that are similar to or different from those of rivals (Porter, 1996).

Näslund and Hulthen (2012) define SCM integration and argue that academics state that organisations should embrace integration as it leads to increased efficiency and effectiveness. There is, however, little empirical evidence to support these claims and there is limited empirical research studying the integration beyond a dyadic level (Näslund and Hulthen, 2012, p. 497). Information technology is one important aspect and it works as both a driver of and a barrier to integration. There are different views on what to integrate (Näslund and Hulthen, 2012, p. 493), and Näslund and Hulthen summarise the most common recommendations, such as information sharing, integration of technologies/systems, processes and performance measures. New technologies increase the quality and speed of information sharing, and work as an enabler of inter-firm cooperation as well as supply chain design and external integration. There are many, rather general, recommendations on how to integrate the SC (Näslund and Hulthen, 2012) and they found no research that provides concrete empirical evidence of achieving the proposed benefits. So, it is not surprising to find very few articles regarding the integration of returns management (B2B) or the integration of consumer returns systems (B2C). Daugherty *et al.* (2002) discuss, in relation to B2B, the information support in reverse logistics and conclude that firms need to develop reverse logistics systems that rival traditional outbound channels in

terms of efficiency, cost effectiveness and competitiveness. Näslund and Hulthen (2012) present a framework of SCM integration from a focal firm perspective. The internal integration aspects are technical integration, information sharing, reward system process-oriented performance measures and standards. These are relevant to other areas of integration as well; they describe backward and forward integration in two formats, dyadic and triadic. The forward dyadic integration deals with SCM strategies, cooperative relationships and the external integration of logistics, marketing and operations-oriented processes. The triadic integration integrates the first-tier supplier, the focal company and the first-tier customer and has an SC-wide perspective, aligned incentives systems, supplier relationship management (SRM) and customer relationship management (CRM). Further, (Näslund and Hulthen, 2012) describe an extended integration of the entire SC, in which SCM culture, mapping and regular evaluation of SCs are crucial. The network integration deals with:

- Outsourcing
- Specialisation (logistical and technological differentiation)
- Analyse scope and intensity of information sharing and process integration among firms

The integrative mechanisms presented are integrated IS and inter-organisational processes, aligned strategic goals and consistent performance measures, to mention a few. The process orientation perspective was highlighted as a prerequisite for SC integration and organisations still battle to become process-oriented. Reducing the barriers to integration together with increasing the facilitators of integration can improve performance through increased service effectiveness and cost-efficiency (Richey *et al.*, 2010). The respondents in the study (Näslund and Hulthen, 2012) comment that the systems (e.g. SAP and Oracle) in use are too functional and modular in nature and not process- or SC-oriented.

The new breed of ICT systems focuses more on supporting the processes than on the technology. The new systems are based on an architecture that allows the focal company to be flexible and agile. The shift from a traditional focus on functions to processes in SCM integration is supported by service-oriented architecture (SOA), as it is designed to mimic the flow of business processes and to integrate new applications (Bergh and Viaene, 2012). It aims to structure IT in a more flexible manner and it is an architectural style that attempts to bridge the gap between IT and business (Reldin and Sundling, 2007).

Coordinating processes and activities within SCM in e-commerce (especially RM, CRM and SRM) maximises the value recovery of returns, while still delivering value to the customer. This shifts the focus from today's paper-intensive returns information flow to the use of advanced information and communication technology, such as SOA and event-driven architecture (EDA). SOA is an architecture that is platform agnostic and allows a process set-up that integrates, for instance, the order system, warehouse system, SRM and CRM systems (legacy or proprietary systems). EDA handles events and message streams in the processes. This is the logical placement for the business logic needed in the RM process to automate avoidance and gatekeeping activities. The possibility to combine streams and create new services that will add value to the process is of importance in returns management. The resource-based view (RBV) theory postulates that value creation can be achieved by the firm's unique bundle of

resources and capabilities and by adding a complementary aspect such as SC integration (Amit and Zott, 2001). Peteraf and Barney (2003) define competitive advantage by stating that “an enterprise has a Competitive Advantage if it is able to create more *economic value* than the marginal (breakeven) competitor in its product market”. They describe the *economic value* as the difference between the perceived benefits gained by the purchasers of a good or service and the economic cost to the enterprise (see Figure 14).

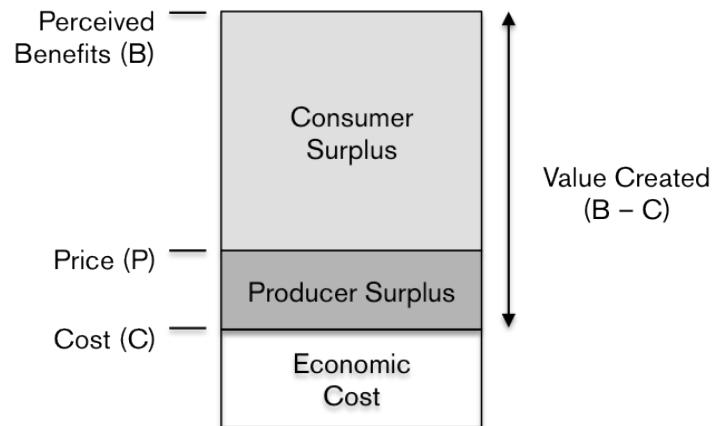


Figure 14 The prices allocated and the value (Peteraf and Barney, 2003, p. 314)

Peteraf and Barney (2003) conclude the discussion regarding their definition of competitive advantage and economic value. Taken together, the two definitions are expressed in terms of the ability to create relatively more economic value. To create more value than its rivals, an enterprise must produce greater net benefits, through superior differentiation and/or lower costs. Thus, in a disconnected returns flow, activities are performed without any guarantee that any value is recovered per se, or where the perceived benefits (B) are, as seen from the consumer’s perspective, smaller than the economic cost (C), the net value created might be negative.

The ICT integration of the returns system assists the implementation of the RM activities both to reduce costs and to improve performance, thus increasing both efficiency and effectiveness. Adding other or newly developed applications, such as web registration of returns (Hjort, 2010), can be formulated as a set of services and business processes can call on these when needed (Bergh and Viaene, 2012). Paperless electronic counterparts are increasingly replacing manually hand-completed forms and this has given rise to business process management (BPM) (Ko, 2009). Bergh and Viaene (2012) argue that BPM and SOA offer an approach to unify business and IT. Zairi (1997) describes BPM as “a structured way to analyse and continually improve fundamental activities ...”. However, Zairi (1997) also states that BPM has to be governed by a set of seven rules. One rule states that BPM has to be inspired by best practice to ensure that superior competitiveness is achieved. To be competitive, Porter (1996), on the other hand, argues that best practice is not sufficient because of its rapid diffusion.

From an SCM perspective, Gattorna (2010) argues for a more liberal and dynamic view of operating SCs. Ericsson (2011) defines four SC processes that are interconnected with a fifth process, the DCM process, and argues that too many SC processes hinder the SC integration. Godsell *et al.* (2006) argues that the focus in the design of SCs ought to be on end-customer buying behaviour. Jüttner *et al.* (2006)

define a new emerging business model, DCM, which builds on a close alignment between marketing and supply chain competencies. In this thesis, focusing on B2C e-commerce, the closeness to the consumer and the dyadic relation between the e-tailer and the consumer, the author acknowledges the focus on understanding the requirements and demands the e-commerce business needs to fulfil and what creates consumer returns. From a strategic management perspective, Porter's (2008) five forces shed light on the competitive forces acting on an industry level. The RBV's value creation perspective combines resources, capabilities and complementarities, whereby the emergence of virtual markets opens new sources of innovation (Amit and Zott, 2001). The business model innovation proposed by Amit and Zott (2001) somewhat summarises the SCM/DCM proposals by Gattorna, Ericsson, Godsell and Jüttner *et al.* and the strategic management proposals in value creation. Amit and Zott (2001) propose that a business model is an important locus of innovation and a crucial source of value creation for the firm and its stakeholders. This may require a shift in strategic thinking towards more integrative, dynamic and entrepreneurial strategies (Amit and Zott, 2001, p. 516). This shift in strategic thinking is addressed in SC theories as well and this thesis complements the suggestions by adding RM as a strategic issue, especially in e-commerce. A business model describes the rationale behind how an organisation creates, delivers and captures customer value (Osterwalder and Pigneur, 2010). The business model, as defined by Osterwalder and Pigneur, contains nine building blocks, the seventh of which, key activities, describes what an organisation must do in order for the business model to work. For Dell (a PC manufacturer), SCM is one key activity (Osterwalder and Pigneur, 2010) and Dell is famous for the design of its business model. For designing a business model, Osterwalder and Pigneur (2010) describe six different techniques; one technique, based on consumer insight, is similar to proposals from Florin *et al.*, Gattorna and Ericsson (Florin *et al.*, 2007; Gattorna, 2010; Ericsson, 2011). When gaining consumer insights, the main challenge is to create a deep and useful picture of the consumers that can be used in designing the business model (Osterwalder and Pigneur, 2010).

3.4 How to gain consumer insights and understanding

To understand the target e-commerce consumers fully, it is necessary to understand their pre- and post-purchase behaviour. Post-purchase behaviour could be influenced by a variety of factors: some a result of the actual transaction, others product-related and others related to the consumer's personal characteristics (Kang and Johnson, 2009). Gaining insights into why the purchase is conducted and how and when the product will be used is difficult but it can be asserted that mail order/e-commerce have closer relationships with their customers than traditional retail chains. Today's consumer marketing requires different techniques and a deeper understanding of consumers' implicit needs (Ericsson, 2011). However, identifying and meeting implicit and hidden needs raises the perceived value of the transaction.

Consumer expectations, requirements and demands and consequently their returns behaviour are likely to vary, between individuals, groups and over time. As seen in Figure 15, customers entering the mail order/e-commerce business are likely to respond differently when evaluating products, prices and services while screening catalogues/websites before ordering, or when evaluating the different steps or outcomes after ordering, i.e. information requirements, lead time (Hjort, 2010).

Therefore, today, consumer marketing requires a deeper understanding of the “whys”, “hows” and “whens” of buying behaviour and decision making regarding both buying and returning decisions.

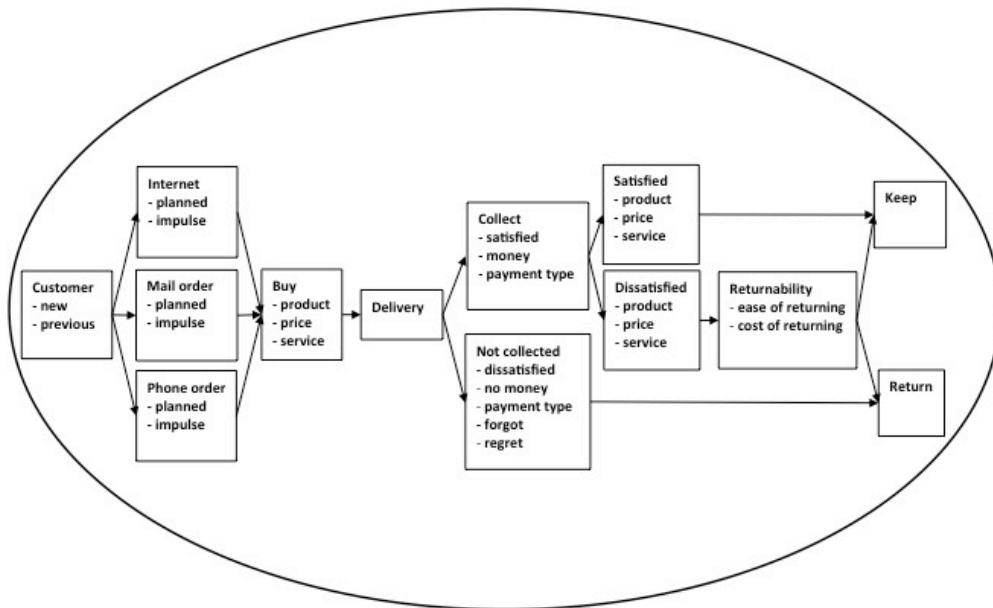


Figure 15 Consumer behaviour characteristics (Hjort, 2010)

Consumer behaviour is much more erratic and unpredictable today than ever before and this limits traditional consumer research techniques. Traditional methods may uncover the “when” and “how” a consumer buys, but the “whys” of behaviour have been lacking in traditional consumer understanding (Florin *et al.*, 2007).

The reasons for non-buying and non-usage are also important (Osterwalder and Pigneur, 2010). Communication with the consumer should lead to a comprehensive understanding of the consumer’s situation and consideration set (Florin *et al.*, 2007) and the context in which decisions are made. Ulwick and Bettencourt (2008, p. 65) argue that “companies must shift their attention from the product and focus their requirement-gathering efforts on the execution of the job that the product or service is intended to perform”. Supporting the e-commerce business with a standardised return process focusing on value recovery will likely not support “getting the job done” for all consumers. In the contemporary market, the focus ought to be on understanding the motivations behind decisions. It requires an understanding of individual consumers rather than an overly simplistic image of the “average consumer”; there are no average consumers. Gattorna (2010, pp. 62–63) presents five different ways to perform the customer behavioural segmentation. These methods would be likely to fit the e-commerce business, although they are quite time-consuming. Often the literature presents business techniques developed for customers. In the rapidly evolving business-to-consumer (B2C) e-commerce, the fifth method, with which Gattorna (2010) creates consumer insights using point of sales (POS) data and uses sophisticated data mining techniques, could be used in e-commerce. The use of POS data or transactional data presents a possibility to follow consumers’ buying and returning behaviour but it offers no understanding regarding the “why” question. Ericsson (2011) reports that “consumer insight is best created by close relations with the consumer where not only quantitative, hard data but also qualitative, soft data are used

as launching pads”. Once companies understand the task that customers are trying to accomplish or how they judge the successful execution of a specific job, Ulwick and Bettencourt (2008) state that different methods can be used to uncover consumer needs. It is the understanding of which inputs are needed, i.e. requirement statements and how they are structured and formatted, that matters and that are the key to innovation success.

In online sales, especially in fashion and apparel, the consumer returns flow travels between the consumer and the e-commerce organisation (see Figure 8 (customer, see Figure 7)) through a distribution system and this (dyad) is the focus area of both the research and the framework (see Figure 6). The next subsection goes on to describe the factors driving consumer returns in B2C.

3.5 Driving forces of consumer returns

Porter’s (2008) article on “the five forces that shape industry competition” explains what drives competition and profitability in an industry. It is vital to understand the driving forces that shape the e-commerce industry and as mentioned in section 3.2 there are several forces that affect the e-commerce industry. In this subsection of the frame of reference, the competition as such is seen as one force that influences the amount of consumer returns that are sent upstream. The other forces that are addressed and presented in a systems model are regulations and globalisation.

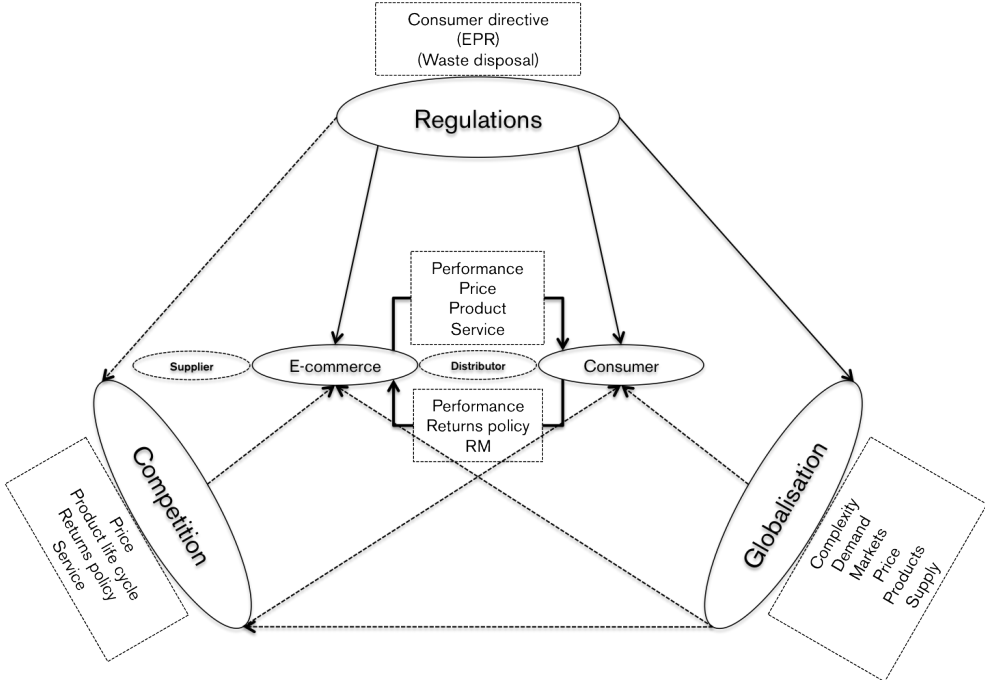


Figure 16 Forces affecting the returns in a dyad, here e-commerce–consumers (adapted from Figure 4)

Even though legislation is not a strong driving force for a strategic perspective of returns (Rogers and Tibben-Lembke, 1999), the legislation within the EU regarding consumer protection online is a strong driver of returns policies. However, the interpretation of the directives and the implementation of the legislation within the EU differ. In Germany and Finland, the interpretation allows customers to return what

they ordered free of cost,⁴ i.e. distance sellers are not allowed to charge any return freight cost. Until recently, there were other differences in the interpretation as well; some EU countries allowed a 7-day return period, while others stipulated that the customer had 14 days after delivery during which they could return what they found unsuitable in some way. The barriers to a digital single market in the EU are well known (see EMOTA, 2009). EMOTA is the European trade organisation representing all aspects of distance selling, both online and offline. With its 21 member associations, EMOTA represents nearly 2,500 companies all across Europe (EMOTA, 2010). The main barriers to cross-border distance selling are of a regulatory and logistical nature. European differences, such as languages, currencies and consumer preference, also play a role. An EU action plan (EMOTA, 2009) aimed to create an online single market while strengthening and harmonising the consumers' rights across Europe. The current EU rules on consumer rights are a result of four EU directives that set out certain minimum requirements. The member states have added rules over the years, making the EU consumer contract law a patchwork of 27 sets of differing rules (EU, 2011e). In February 2011, the Members of the European Parliament (MEP) approved changes to the draft law but decided to postpone their final position with a view to reaching an agreement with the Council. The new rules will stipulate a 14-day EU-wide withdrawal period for distance and off-premises sales (when the consumer cannot see the good before buying it), during which consumers may change their minds. If they regret the purchase, for whatever reason, they can send it back. When the price of the good is more than €40, the trader must pay the return postage. All expenses must be refunded to the consumer within 14 days after withdrawal (EU, 2011a).

In June 2011, MEPs and the Council provisionally agreed on an EU-wide right for consumers (EU, 2011b). This is a major step forward for consumer rights. MEPs sought to insert a rule that would have required traders to pay the return costs of any goods priced above €40, but this proved unacceptable to the Council.

Recently, the European Parliament accepted (EU, 2011d) a strengthening of consumers' rights that will stipulate a 14-day EU-wide withdrawal period for distance and off-premises sales; the new directive will have to be implemented by the member states within two years (EU, 2011c).

Globalisation and the increasing competition between organisations or rather SCs to attract the end-user or consumer have resulted in shorter product life cycles; products are almost obsolete by the time they reach the marketplace. Thus, internal integration is no longer sufficient itself; to become the market leader, the supply chain must be integrated, RM included. As discussed in section 3.3, value creation can be achieved in numerous ways. RM and supply chain management can contribute through increased efficiency and effectiveness. Integrating the supply chain by information sharing and process alignment facilitates the synchronisation of supply chain parties. Synchronising could mean a shorter lead time, inventory reduction and lower cost, and thus increased value.

⁴ In Germany, organisations are allowed to charge for the return freight if the returned item is valued below €40.

The intensified globalisation involves more external organisations for the delivery of goods; these collaborative business processes (cBPs) are important because of the following (Ko, 2009):

1. The rise in the frequency of goods ordered
2. The need for fast information transfer
3. The need for quick decision making
4. The need to adapt to changing demand
5. A larger pool of international competitors
6. A shorter cycle time

Christopher (2005) states that there are multiple facets of customer service, ranging from on-time delivery to after-sales support. To achieve service excellence, a carefully thought-out service strategy is needed together with an appropriate delivery system and committed personnel. Customer service is a broad concept and varies between companies but can be divided into three elements:

- Pre-transaction elements
- Transaction elements
- Post-transaction elements

Pre-transaction elements are the written company statements or policies that are considered by potential customers. Transaction elements relate to service delivery reliability. Post-transaction elements relate to supporting activities of the purchased items and procedures for consumer return issues. In e-commerce, the pre-transaction elements include information (returns policy) regarding the returns process, which is a post-transaction element. Understanding what makes non-adopters hesitate to order online and test the returns process could assist the business to grow as quite a large portion of the adopters seem pleased with the process, as mentioned above. It appears that online businesses are counting clicks and improving the selling and delivery process but the returns process is far from fast or convenient. It seems that businesses have adopted agile thinking in the delivery process and lean thinking in the returns process. However, without separating the goods from the information and without the application of gatekeeping it is far from lean. It is quite clear that some groups of customers have different requirements and demands (Porter, 1996; Christopher, 2005; Gattorna, 2010). Porter (1996) describes what happened when Continental Lite tried to combine low cost and full service. The author believes that this is what has happened in online sales today. Organisations understand that online sales, especially fashion and apparel, need the ability to return to be able to sell; however, the focus on sales and growth and not profitability (Porter, 2001) has left the returns process behind. Online shopping is likely to result in more returned goods than store shopping; offering liberal returns policies with the possibility to return goods for any reason can be costly in terms of time and effort (Alreck *et al.*, 2009).

3.6 Theoretical validity of the research questions

As mentioned in section 1.3, the purpose of the thesis is to:

Increase the understanding regarding how and why to apply and improve returns management in e-commerce.

The purpose led to three research questions presented in section 1.4, of which the first question addressed:

RQ 1: What causes consumer returns and what are the potential benefits from improving returns management in an organisation without a clear returns management strategy?

The lack of a returns management strategy in an e-commerce organisation would lead to missed opportunities to avoid and reduce the amount of consumer returns and therefore increased effects on the organisation and its customers. SC theories and theories on consumer behaviour are used in the theoretical frame of reference to describe consumer returns and how organisations benefit from SC integration and from further development of the conceptual framework of RM to achieve a better fit with the B2C context.

The second research question asked:

RQ 2: How can contemporary information technology enhance returns system performance and contribute to efficient and effective returns management?

The returns system performance in B2C rests heavily on SC integration, ICT, gatekeeping and avoidance. SC theories are used to describe the effects on the SC, organisations and the customer from a returns system that is disconnected (not integrated) and connected when applying new ICT system architecture. When connected, the application of SC theories, such as internal and external integration, globalisation and competition, assists the development of efficient and effective returns management.

The third research question addressed:

RQ 3: Based on the achieved understanding and results, what are the potential benefits of aligning returns management in the business/supply chain strategy?

SC theories and the RM framework often describe the effects on the SC from a focal firm (B2B) perspective. In e-commerce (B2C), the focal point will shift downwards toward the e-commerce organisation or even better the consumer. Understanding the effects on the SC and its stakeholders without an RM strategy, the potential benefits are described using SC theories shifting the foci toward the e-commerce organisation. The potential from strategically aligning RM regarding the three main forces driving returns is described theoretically in this frame of reference and presented in the system model together with the system model in Figure 17.

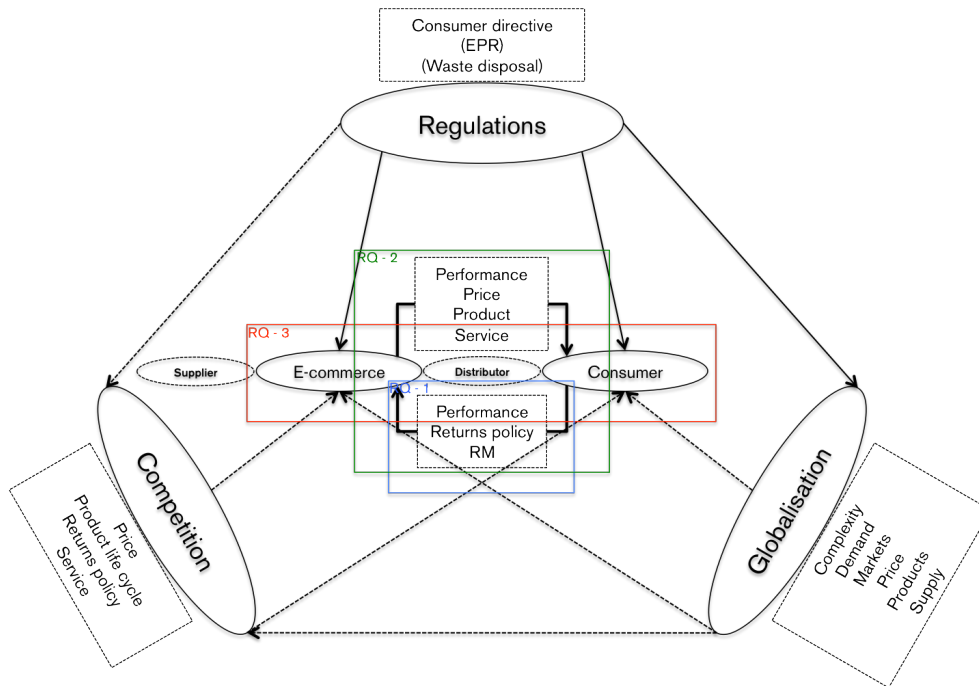


Figure 17 The relation between the research questions and the system model

The theoretical validation of the research questions posed, addressing problems concerning consumer returns in e-commerce and improvements of RM that can be seen as part of an ever-changing reality, used different perspectives and theories for the development of RM research, i.e. part of SCM and logistics research as proposed by Nilsson and Gammelgaard (2012, p. 777).

4 Research design

This chapter describes the research design and the methodological framework used in the thesis followed by a discussion on the empirical data sources used and how the results were verified and validated.

The way in which this research was designed was affected by the three research questions addressed:

RQ 1: What causes consumer returns and what are the potential benefits from improving returns management in an organisation without a clear returns management strategy?

RQ 2: How can contemporary information technology enhance returns system performance and contribute to efficient and effective returns management?

RQ 3: Based on the achieved understanding and results, what are the potential benefits of aligning returns management in the business/supply chain strategy?

The three research questions addressed are clearly of an explorative and descriptive nature; however, altogether the combined answers and the results of the research conducted are used to explain the likely benefits and enhancement, i.e. stating answers to the question of “why” to proceed with returns management. Quite a few studies report rather anecdotal and aggregated data regarding average returns levels in different industries and reasons for returning different products or groups of products. These are not very useful as a basis for understanding why to pursue or improve returns management in an organisation or SC.

The effects on an organisation, in relation to RM and consumer returns, from globalisation, increased competition, changing legislation and the increase in consumer demands need to be researched over time when attempting to describe the effects and benefits from improving and developing RM. Therefore, a longitudinal case study would seem to be a natural research design for investigating contemporary behaviour and effects over time.

The research conducted followed the model of Kovács and Spens (2006), presented in Figure 18 below. The first group of “abductive” researchers saw abduction as a combination of systematised creativity in research to develop new knowledge (Kovács and Spens, 2005).

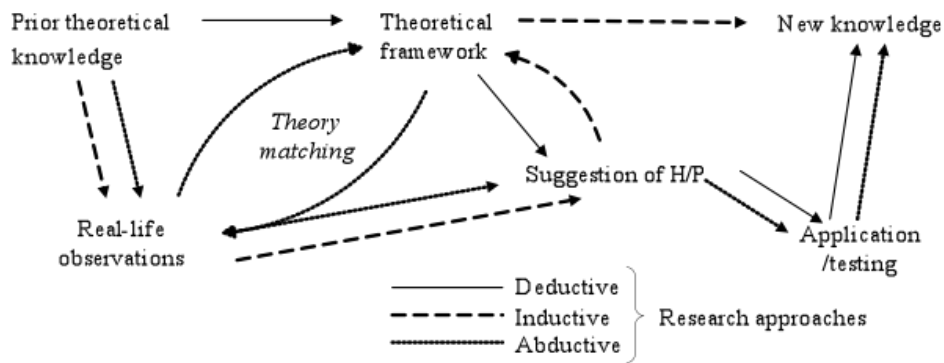


Figure 18 Three different research approaches (Kovács and Spens, 2006)

The initial step in the abductive approach is similar to that of the inductive approach, but differs in that the inductive approach ends with new knowledge without testing the results, whereas the author’s ambition here was to develop and test the hypotheses/propositions (H/P in Figure 18) ending in new knowledge.

The research performed prior to the licentiate thesis fits the more inductive part of the abductive approach, whereas the research performed post-licentiate might be described as the testing of propositions, thus creating new knowledge. However, the licentiate thesis is better seen as a broadening of the “prior theoretical knowledge” that guided the research into further real-life observations, i.e. empirical investigations performed using a case study and a real-life experiment. The longitudinal single-case study was complemented with an experiment to test and verify both the results from the study itself and the proposed EU regulation on the harmonisation of the consumer directive discussed in section 1.1 and section 3.5.

4.1 Research approach

History shows that observations are based on beliefs (Arbnor and Bjerke, 1997) – if we believe that the earth is round or flat, this belief will be likely to affect our statements concerning observations of the earth. Every researcher observes or studies phenomena with certain presumptions. Consciously or subconsciously, this affects our depiction of the phenomenon or problem; ultimately, our presumptions or background hypotheses (Arbnor and Bjerke, 1997) affect our choice of research design, as well as the methods and techniques used. It took quite a while for my research journey to progress to its current situation as regards my personal presumptions, and this is not due to a lack of understanding that people see things differently, including myself. It is interesting to think about what creates these personal lenses. When two people’s study of the same thing results in two different descriptions, objectivity becomes somewhat difficult to believe in. Paradigm is most certainly one of these lenses that affect what people (you and I) see, or how we explain or interpret what we see or discover. Positivists argue that there is an objective reality out there; the alternative or anti-positivistic side argues that there is no such thing as an objective reality. It is all created in people’s minds. The ontological assumptions based on the philosophy of science separate scientists into two sides: objectivist or subjectivist. This thesis belongs somewhere in between; the goal has never been an objective explanation of reality, or a subjective interpretation of it. The author has, to some extent, been creative when combining a

longitudinal single-case design and a real-life experiment. The author believes that data can be objective, but at the same time acknowledges that the analysis and the use of the same data can require an interpretation of its meaning and its usefulness. This was the case in the licentiate thesis, in which the author found that the returns level decreased if the delivery exceeded 9–12 delivery days. However, discussing the (“objective”) results with key informants presented me with a plausible explanation for this phenomenon. Thus, the research reported in the thesis has been thoroughly presented and discussed with representatives from the case organisation, representatives from other organisations and representatives from academia.

Ultimately, this research is likely to be affected by the author’s presumptions; however, to some extent, the knowledge of these presumptions has resulted in the constant revision of the research method during the research process. It has also made me more understanding of the necessity of describing the research conducted, so that people, scientists or not, who read, review, listen and finally judge, understand what the ultimate presumptions were (are). Scientists belonging to the social science group tend to fall somewhere in between the positivistic and the anti-positivistic paradigms (Hellström, 2007). The aim of the positivists is to explain, whereas that of the anti-positivists is to search for understanding. Either way, the author believe that both sides are struggling – the ultimate explanation and the perfect understanding of phenomena such as consumer returns are likely to be hard to find, depending especially on the phenomenon of interest. The greater the scope, the harder it is to explain, and perhaps even to understand. Studying social phenomena and social interaction, the quest for increased understanding is likely to be the more fruitful path. The author presume that a better understanding will help to explain how to work with and solve problems.

To carry out research in areas that could be characterised as “novel” – in which there is no or little previous knowledge to refer to – calls for an exploratory approach. The research carried out started as exploratory, to gain valuable insights into the area of consumer returns in distance sales, and it was reported in the licentiate thesis (see Hjort, 2010). After the licentiate thesis, the research questions were developed and the focus of the research turned more towards exploring, describing and understanding the effects from the external “forces” on an organisation in the highly competitive e-commerce business both described in the literature and addressed in the licentiate thesis. The author’s theoretical knowledge and understanding of both the phenomena and how to conduct research was developed during the licentiate thesis and affected the starting point of the research reported in this doctoral thesis.

Altogether the problem described in this thesis and the research questions addressed to explore and describe the phenomenon of returns management and e-commerce and its relation to the outer “forces” presented in Figure 16 depict a holistic approach, i.e. a systems approach. According to Arbnor and Bjerke (1997), there are three methodological approaches to use in business research: the analytical, systems and actors approaches. The analytical approach is closely related to positivistic research traditions in which an objective reality is accessible and causal relations are sought after, in order to explain and generalise the results and to predict future incidents (Gammelgaard, 2004). The researcher stays outside the research object in order not to affect the depicted reality.

A holistic approach often determines a systems approach, in which the world is understood in terms of its mutually dependent components, whereas the more

positivistic approach favours a reductionist approach, in which the reality could be deconstructed into its parts (Gammelgaard, 2004). Following the systems approach, deconstructing the reality into its parts is ultimately meaningless; the researcher should work very closely to, and influence, the research object, and the main objective is to improve the system. This research followed a systems approach to logistics research, as Ekwall (2009) indicates to be an established tradition. The author, however, acknowledges the actors approach as being equally interesting, but given the research questions, purpose and scope, the systems approach was found to be the most suitable. The actors approach disregards the fact that there is an objective reality, and the reality is seen as a social construction. The idea is to understand and construct the reality from within, where the researcher is part of the reality.

Theory and research, or the link between them, denote the research approach undertaken as inductive or deductive. The inductive approach aims at developing theory out of empirical observations/findings. Deduction, however, aims at testing theories, and therefore theory is present prior to empirical observation.. According to Bryman (2008, pp. 9), deductive theory represents the most common view of the nature of the relationship between theory and social research. The deductive researcher should develop or deduce hypotheses from what is known from previous research or theories. The hypothesis must then be tested or scrutinised in relation to empirical evidence that either supports or rejects the hypothesis.

The inductive method starts with observation and ends with new theory (Bryman, 2008, pp. 11), i.e. concluding general laws from individual cases and constructing theories using factual knowledge (Arbnor and Bjerke, 1997, pp. 92). The inductive and deductive approaches encountered massive criticism from opposing sides during the scientific development (Popper, 1959). The two sides, by using different research procedures, often represent two different research strategies, the quantitative and the qualitative. The quantitative side predominantly follows the deductive procedures, and emphasises quantification in both the collection and the analysis of data, following the natural scientific model in general and the positivistic approach in particular (Bryman, 2008, pp. 22). The qualitative side follows the inductive procedures, and has rejected the natural scientific norms, emphasising the way that individuals interpret their socially constructed, ever-shifting world. The author does not favour any particular strategy, instead emphasising that the problem and the research questions guided the research design and the data collection and analysis. The author acknowledges Jick' (1979) suggestion, that the use of complementary methods, i.e. triangulation, is generally thought to lead to more valid results.

Logistics research is interdisciplinary, stems from many different scientific traditions and has been influenced by both economics and behaviour approaches (Kovács and Spens, 2005, p. 132), borrowing ideas from the disciplines of marketing, management and engineering. Logistics has been criticised for not having a history of theory development, and, being a relatively recent discipline, it is somewhat surprising that it follows the positivistic path in testing theories. Further, logistics research has historically followed the path of deduction and induction. The deductive reasoning with predominantly quantitative positivistic methods is most often represented in major logistics journals (Ellram, 1996), especially in the US (Näslund, 2002). The deductive research approach is more suitable for testing existing theories (Stentoft Arlbjørn and Halldorsson, 2002), not for creating new science, and therefore its usage and dominance in the relatively new field of logistics research is somewhat surprising.

Kovács and Spens (2005) argue that the development of new theories in logistics research calls for a discussion on abduction. Abductive reasoning combines the inductive and the deductive research procedures and emphasises the search for suitable theories for an empirical observation (Kovács and Spens, 2005, pp. 138). Dubois and Gadde (2002) present a similar approach called “systematic combining”. Systematic combining focuses more on the refinement of existing theories than on the development of new theories. A major difference between, on the one hand, traditional inductive and deductive research and, on the other hand, abductive and systematic combining is their focus on the framework. The latter’s framework is successively modified during the course of the research, which allows the borrowing of theories from other disciplines (Stock, 1997), also reducing the focus on reviewing all the necessary literature beforehand. This makes sense in a relatively new field of research such as logistics and SCM, especially the novel phenomenon of consumer returns in e-commerce.

4.1.1 Systems approach

The systems approach is the common approach in logistics research (Ekwall, 2009), but the theoretical system can be explained or defined in different ways. Arbnor and Bjerke (1997) distinguish between three possible areas when adopting the systems approach to a study:

- Systems analysis
- Systems construction
- Systems theory

Systems analysis is meant to create a model of the real system without changing it, and to describe the internal and external forces influencing it. In doing so, it has both a descriptive and an explanatory purpose (Arbnor and Bjerke, 1997). Systems construction includes the (potential) construction of a new system model; the new system can be the real system depicted using the systems analysis. The systems analysis and systems construction are parts of the development of new systems theory.

Within the systems approach, the model of a system is a reproduction of reality (Arbnor and Bjerke, 1997). A system can be either closed or open, the open system connecting with its surrounding environment. Studying the mail order/e-commerce system, and its returns system, it seems rational to follow the acknowledged path of using the systems approach. The main reasoning behind this decision is:

- Social systems are complex
- It is an open system
- Relations between systems components

By using the systems approach in logistics research, we assume that reality is arranged in such a way that the whole differs from the sum of its parts – synergies or relations between parts in the system are important and therefore should not be reduced to simplified models searching for causal relations only thus acknowledging the soft systems thinking (Checkland, 1995), in which the presence of human beings is seen as part of the system examined. Checkland defines the difference between the hard and the soft systems approaches; the approach that assumes the world to be systemic is *hard*; the approach that assumes that the process of enquiry can be systemic is *soft*.

The holistic systems perspective used in the conducted research uses the SC perspective when analysing the returns system. The depicted systems model in Figure 16 on page 42 incorporates three external “forces” affecting each other and the SC, indicating that the suppliers, e-commerce organisation, distributor (including pick-up point) and consumer are components within the system. Other system components are found within the different functions in the organisations. The returns system thus, as indicated in the introduction, is affected by external and internal entities, whereby liberal returns policies affect consumer behaviour (Wood, 2001).

4.2 Research process

All research starts with some knowledge about the problem; however, that knowledge might be more or less theoretical and/or empirical. The research presented in this thesis started with a thorough theoretical understanding resulting from the two first studies performed (see Figure 20) and the theory matching process performed and presented in Figure 3. However, the new observations and empirical investigations performed extended the theory matching process and the FoR presented in section 3.

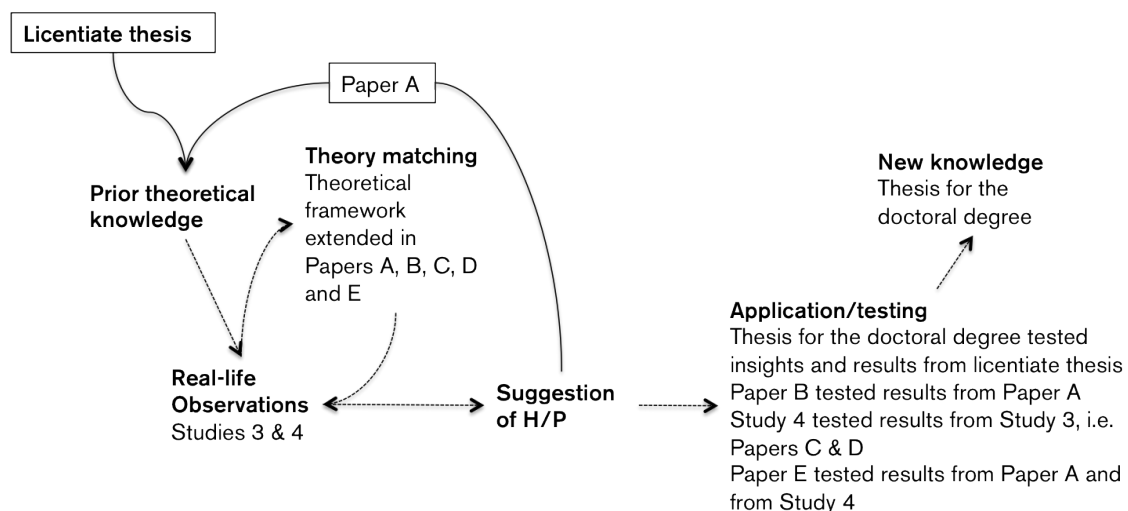


Figure 19 The relation between the licentiate thesis, Studies 3 and 4, the papers and the thesis for the doctoral degree presented in relation to the research process described

The research design consists of two phases: a single-case study (Study 3) and a real-life experiment (Study 4). The single-case study contained three phases that were intertwined. The first explorative phase aimed at identifying the priority, awareness and understanding of returns in general and RM in particular. This was achieved through a series of on-site visits, interviews and phone and e-mail conversations with the operations manager (OM) and the customer services manager.

The overall research process has been described as abductive, which fits both the research questions and the purpose of the research. In the first study, the initial exploratory search for causes of returns helped to develop the research questions further and to be more descriptive in the understanding of what creates or causes consumer returns.

This resulted in an expansion of the research framework to incorporate other SC theories, strategic management theories and theories on consumer behaviour. In order to apply avoidance later, we had to learn more about the “root causes” of returns. Following the abductive approach, from the exploratory results from the case study the author understood that returns are caused by a multitude of reasons. Which later were tested against the empirical data in the real-life experiment and through testing new hypotheses using the exported transactional data.

4.3 Research chronology

The research reported in this thesis started in 2010 and the research is strongly guided by the results from the licentiate thesis that started in 2007 and that were reported in December 2010. In the licentiate thesis, two studies were performed and they were reported in three individual conference papers presented at the yearly NOFOMA conferences in 2009 and 2010; for further guidance regarding these see section 2 and/or Hjort (2010).

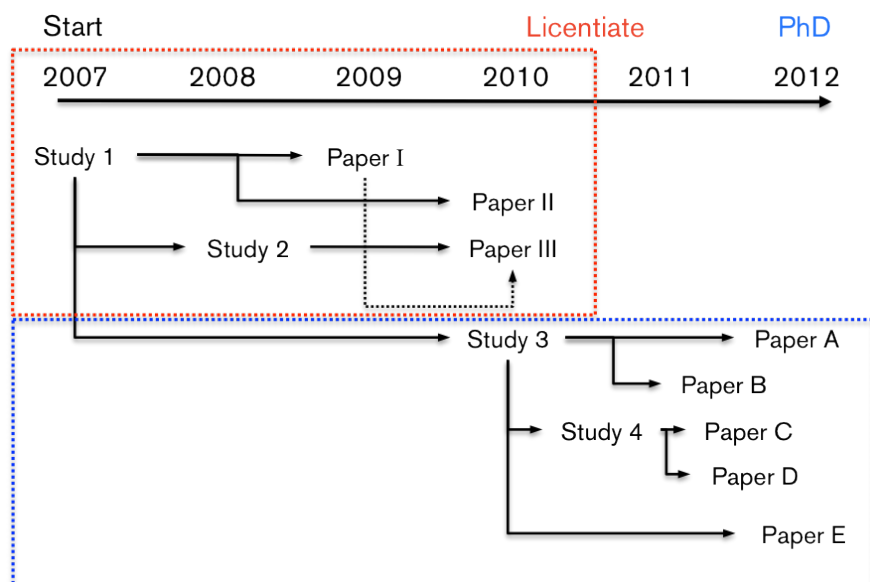


Figure 20 Research chronology

The third study was strongly influenced by both the empirical findings from Studies 1 and 2 and the theory matching process described in Figure 18 and extended in Figure 19. Paper A reports the longitudinal case study (Study 3) and Paper B is a result of the same study; however, the framework was developed further and the study uses complementary data and theory. The fourth study is a direct result of insights from the third study and the proposed EU legislation, and thus was published in two different papers, Papers C and D, with slightly different purposes. In the concluding part of the third study, the theory matching process and insights from both Study 3 and Study 4 resulted in Paper E, again with an extended framework and complementary data.

4.4 Case design and selection

Case studies are suitable for holistic situations in real-life settings (Ellram, 1996, p. 99; Dubois and Gadde, 2002; Yin, 2009) and to formulate theories. A case study is not a linear process; it requires an integrated approach to handle the interrelatedness of the various elements in the research work, and therefore the abductive procedures support the case study design. Any preliminary analytical framework consists of the researcher's ultimate presumptions, and the framework is developed as the empirical observations emerge. The performed case study was followed by a real-life experiment in which propositions regarding the effects from neglecting RM within the case organisation were theorised, hypothesised and scrutinised in relation to the empirical results, thus performing an application testing ending with new knowledge.

A single-case study is appropriate when the case, in itself, is extreme or unique (Eisenhardt, 1989; Ellram, 1996). The RM literature expresses the need to prioritise returns or RM and that organisations have started to perform this; it also expresses what the effects are in organisations or supply chains when organisations do prioritise RM (Norek, 2002; Rogers *et al.*, 2002; Stock *et al.*, 2006; Mollenkopf *et al.*, 2007a; Mollenkopf *et al.*, 2007b; Frankel *et al.*, 2010; Mollenkopf, 2010). However, the literature lacks clear suggestions regarding the why question, especially why organisations became aware of RM's role/importance and what triggered the awareness. The definition of RM (Rogers *et al.*, 2002) is conceptual and therefore somewhat difficult to apply directly in an e-commerce context starting from consumers and continuing upstream. The conceptual definition addresses RM in an SCM context linking organisations through key business processes starting from a manufacturer downstream (towards customers (B2B)) and upstream (towards suppliers). In order to investigate and analyse the understanding or awareness of what returns and RM mean to e-commerce organisations, an in-depth case study research design was chosen to start the research. As the literature lacks detailed information regarding why organisations pursue and start to implement RM and what triggers a *change*, a longitudinal case study design was chosen to extend the existent knowledge and theories and to complement the RM framework and therefore the single-case design is valid (Eisenhardt and Graebner, 2007; Yin, 2009).

The case selection was influenced by the research performed and the knowledge created and reported in the licentiate thesis. Problems resulting from performing research in a large organisation that was functionally oriented with clear boundaries (silos) prevented the author from creating an overarching understanding and discussions of the effects caused by consumer returns. Further, the case organisation was not experiencing the returns problems and returns levels reported in the literature (see Table 1). The results reported in the licentiate thesis indicate that returns levels were higher in e-commerce than in both mail order and phone order. Also, younger customers returned a greater share of what they ordered and the results indicate that returns levels were not independent of delivery time.

Before the research started, the author attended a meeting with the OM to discuss the organisation's view of returns and RM in relation to my research ambitions and purpose. Further, discussions were held regarding the organisation's interest in a joint research project and its willingness to support a joint research project with transactional data and by participating in interviews. The selection of the case organisation, nelly.com, was therefore a theoretical sampling based on its fit with the

purpose of the research and the research questions addressed. The first discussions revealed that the problems experienced in the research performed and reported in the licentiate thesis could be avoided. The OM had both a deep and a broad understanding of the organisation and its problems regarding RM on both a strategic and an operational level.

4.4.1 Unit of analysis

The case organisation, nelly.com, was the unit analysed via holistic case design. Even though we studied consumer behaviour, the analysis was from the organisation's perspective, measuring the effects, consequences and results in the case organisation.

4.4.2 Data sources

The data used in the two studies can be categorised as qualitative and quantitative. The quantitative data used were exported data from the case organisation's ERP system.

Interviews can range from completely structured to completely unstructured (Lee, 1999). The case was selected in line with the results and problems that were encountered in the two studies performed and reported in the licentiate thesis (see section 4.4). Thus, the author's insights influenced the research performed and the design of the case study and the data collection. The initial design of the third study was based on two phases, of which the first phase intended to be exploratory and theory generating with interviews as the primary data collection method. This was learning from the licentiate thesis; as a result of the lack of theory generating in the initial part of the study, the research ended with merely explorative and descriptive results. The learning included a better understanding of the value of a more reflexive study design. The second phase intended to be confirmatory regarding the results and emerging theory from phase one. The main data to collect were secondary data (transactional) from the case organisation's ERP system.

The main interviews performed during both studies were informal conversational interviews, i.e. semi-structured, with the company's operations manager, about the results, probing additional meaning (Lee, 1999). The interviews were digitally recorded and held in Swedish, the interviews were transcribed verbatim and after the analysis, the results were translated into English. An emerging theory was presented in phase one based on the story told and quotations from key informants (Eisenhardt and Graebner, 2007). The emerging theory here is seen as a plausible explanation for the observed regularities or patterns (Bryman, 2008). The emerging theory was developed and analysed with the use of the extended framework presented in section 0. The second phase aimed at describing and quantitatively measuring the returns flow and comparing the quantitative results with the results from phase one, thus continuing the emerging theory based on more empirical evidence. The second phase resulted in a company presentation in which the results from phase two were highlighted and contrasted with the theories developed in phase one. During the presentation, conversations started around concrete actions to take (trigger) based on the view of the OM regarding the results from phases one and two. After the second phase, we decided together to extend the research project over time and planned a third phase. This shows that the three phases were intertwined. The analysis performed on the qualitative data is best described as following *ad hoc methods* (Lee, 1999), using tactics such as noting patterns and themes, seeing plausibility, counting, comparing and

contrasting and theory building. The use of multiple techniques and data is highly advised in organisational research (Jick, 1979; Lee, 1999; Flick, 2009).

These conversational interviews continued throughout the studies, and the author visited the company on numerous occasions during the research. Some visits were short and sometimes even unannounced and others were planned well in advance and lasted for several hours. During the study, conversational interviews were also held with key informants from different functional areas from the case organisation, i.e. assortment, customer service and logistics. Informants can be utilised during quantitative research (Jick, 1979). The interviews held were also conducted to steer both studies and to discuss the findings during the studies. The data sources used in the two studies are presented in Table 6.

Table 6 The data sources used in the thesis

Data sources	Paper				
	A	B	C	D	E
Interviews	X	X	X	X	X
Documentation	X		X	X	X
Observation	X				
Transactional data	X	X	X	X	X

The transactional data contained all the order and returns data covering two years: 2008 and 2009. The data sets accounted for all the orders (deliveries and returns) for the organisation's Danish, Finish, Norwegian and Swedish customers, i.e. no sampling (see Table 7).

Table 7 Description of transactional data used in Study 3 and Papers A, B and E

	2008–2009
Number of customers	256,236
Number of orders	502,429
Delivered units	1,272,982
Returned units	225,566

This fourth study was designed as a randomised controlled experiment with a random sample strategy. Among the 192,482 Swedish customers who had placed an order at nelly.com during the last 12 months and who would receive the quarterly nelly.com e-newsletter in November 2010, 4,000 customers were randomly selected and allocated to 4 groups (A, B, C and D), with 1,000 customers in each group. The required sample size for a one-way ANOVA was found to be 1,096 orders for a small (26) effect size of $f = 0.1$, an alpha value of 0.05, a beta value of 0.20 (power = 0.80) and 4 groups of equal size; these data indicate that 274 orders were placed per group. Based on past experience, the ratio between the number of orders and the number of sent newsletters was assumed to range from 25% to 30%. Thus, 1,000 newsletters were sent to each group.

The respondents were informed in the newsletter that they had been randomly selected to participate in a study concerning the company's delivery and returns conditions and that the study was being performed in cooperation with researchers at the regional university. The letter explicitly noted that the study participants only needed to use the website as usual for shopping during the experiment. Because this study was a field experiment in which the subjects were not asked to deviate from their normal behaviour, consent was implied (Zikmund and Babin, 2007). The case organisation anonymised all the data before providing them to us. Because all customers are required to identify themselves with log-in information at the nelly.com website during the check-out process, we were able to ensure that each participant was exposed to the correct delivery and returns policies. In Table 8, the four experimental groups (A to D) and their respective returns and delivery conditions together with customer and order statistics are presented.

Table 8 The four experimental groups (A–D) and statistics regarding customers and orders

	Group			
	A	B	C	D
Free returns	X	X		
Free delivery	X		X	
Number of unique customers	278	240	263	249
Total number of orders	520	447	489	453

Holland (1986) identifies several criteria for making causal inferences, which taken together essentially rule out any other study design but the experimental one. The key criterion in this matter is the researcher's ability to rule out any alternative explanation for an observed relationship between a possible cause and an effect. This is generally outside the control of a researcher who passively observes a process or investigates customers' past experience, perceptions and opinions, in contrast to a randomised controlled experiment.

During the studies, the author performed direct observations on-site, visiting different departments such as logistics, marketing and purchasing. To gain a better understanding of the e-commerce business and the case organisation, we studied both the warehouse and the returns handling. Further, to understand the mail order/e-commerce better, the author purchased and returned goods (participant observation) from several organisations. This continued throughout the research in order to learn more about the business as such, follow the development and compare performances and processes.

The exported data from the case organisation contained returns codes, given by the returners when returning. The data are questionable since it is possible that the codes do not represent the actual reasons for returning. It is possible that some returners even try to defraud the case organisation – blaming it in order to avoid return freight cost. However, the data represent all the returning customers for a long time period and, therefore, the dependability should be fairly high. The third study resulted in three papers, using the same exported data viewed from more than one angle. Even using different frameworks, and reaching the same conclusion regarding consumer behaviour causing returns, it further strengthens the data and their credibility. The

results derived from the data in the conducted research are context-dependent, and are not to be generalised directly to other settings. Parts of the findings and the conclusions, however, should be able to fit into similar settings within the e-commerce context, and this will be discussed in later chapters.

4.5 Research quality

Four tests are commonly used to establish the quality of empirical social research, according to Yin (2009). Case studies are one form of empirical social research, and therefore the tests are applicable to test the research quality of the case studies. According to Yin, it is important to utilise the different tests, using different tactics in different phases, when performing case study research.

Table 9 Four tests for evaluating the quality of case study research (Yin, 2009)

TESTS	Case study tactic	Phase of research in which tactic occurs
Construct validity	<ul style="list-style-type: none"> ◆ use multiple sources of evidence ◆ establish chain of evidence ◆ have key informants review draft case study report 	<ul style="list-style-type: none"> data collection data collection composition
Internal validity	<ul style="list-style-type: none"> ◆ do pattern matching ◆ do explanation building ◆ address rival explanations ◆ use logic models 	<ul style="list-style-type: none"> data analysis data analysis data analysis data analysis
External validity	<ul style="list-style-type: none"> ◆ use theory in single-case studies ◆ use replication logic in multiple case-studies 	<ul style="list-style-type: none"> research design research design
Reliability	<ul style="list-style-type: none"> ◆ use case study protocol ◆ develop case study database 	<ul style="list-style-type: none"> data collection data collection

The first test is *construct validity*, which is used to test whether the data used are free from bias. To achieve construct validity, we used exported transactional data and consumer response data (returns codes) collected when returning. The transactional data as such represent the “behaviour” analysed, i.e. returning behaviour, time and levels. Both to validate the findings and to understand the exported data correctly, key informants were used. The findings and results were reported orally, in writing and through presentations at the case organisation.

The second test, *internal validity*, is not relevant to the performed research as it is used to find causal relationships in explanatory studies, not in exploratory or descriptive ones (Yin, 2009). The authors consider the experiment performed and the inferred causality as exploratory and descriptive and rival explanations are discussed.

The third test, *external reliability*, judges whether the results from the performed research can be generalised beyond the immediate case study. Case studies are not performed using a sampling technique and statistical generalisation; Yin, however, argues that analytical generalisation can be used, with which the researcher tries to generalise a particular set of results to a broader theory.

The fourth test is reliability, which tests whether the research results can be repeated by another researcher/investigator and whether the findings and conclusions match. All the data, material and results are described in a case database and therefore it is possible to analyse and replicate them. However, even though the data would appear the same using the same database, the findings and conclusion might vary, as social science does not rely on a static world in which predictable natural laws prevail. How one performs and judges research results depends on one's presumptions (Arbnor and Bjerke, 1997) and the possibility to repeat social science investigations using multiple data sources including key informants does not make much sense. The world is constantly changing and so are we, and as such the research partly analyses the effects of these changes regarding consumer returns and RM on an organisation. Therefore, repeating the same research would be very interesting but not to verify the results – more to measure the speed of change.

The OM and author participated in a logistics conference and a RL conference, where the first two phases of the longitudinal research were presented and discussed. The feedback to the case organisation during and after the research and discussions held throughout the research project should be seen as both a validating and a reliability check. Another way of validation is the actual use and implementation of the research results within the case organisation.

5 Summary of appended papers

This chapter presents the relation between the three research questions addressed in the thesis and the papers produced. The authors of the papers are presented together with each author's contribution to the papers written, followed by an explanation of the relations between Papers A to E. Thereafter, each paper is summarised, expressing its purpose, overview and main findings.

Table 10 The relation between the papers and the research questions

Paper	Research question		
	1	2	3
A	X	x	X
B	x	X	x
C	X		x
D	X	x	x
E	X	x	X

The authors' contribution is presented in Table 11. The author of this thesis was responsible for the ideas behind each study and was the first (marked with a capital X) or main author for four of the five papers appended. The co-authors' contributions are mainly within their respective area of expertise, i.e. outside RM. The co-author and Associate Professor Björn Lantz contributed with performing the quantitative analysis in Papers C, D and E as this is within his area of expertise as a statistician, he was also the main author for paper C.

Table 11 The relations between the papers and the authors

Paper	First author	Co-authors	Design of study	Theoretical framework	Data collection	Analysis
A	Klas Hjort		X	X	X	X
B	Klas Hjort		X	RM	X	X
		Tobias Eriksson		ICT		x
C		Peter Hietala		ICT		x
	Björn Lantz		X	X		X
D		Klas Hjort	X	x	X	x
	Klas Hjort		X	X	X	X
E		Björn Lantz	X	x		x
		Dag Ericsson	x	X		x

5.1 Relationships between the appended papers

This thesis enlightens the issue of RM in e-commerce, specifically exploring the effects of not managing returns and the potential benefits when applying RM. The links or relationships between the five appended papers are presented in Figure 21.

Paper A is therefore the explorer and describer of the effects on the case organisation when partly neglecting RM. It highlights certain aspects caused by the increased competition and suggestions from the EU to harmonise the consumer directive and to force businesses to accept returns without any returns postage.

Paper B follows up on the effect of the uncontrolled returns flow raised in Paper A, in which gatekeeping and avoidance were found to be non-existent. The purpose is directly related to the findings in Paper A; however, it addresses certain gaps in the literature regarding returns information systems and propositions for future research raised by Rogers *et al.* (2002).

The results from the fourth study are presented in Papers C and D and their purpose is to link a behaviour from the case organisation’s side, whereby it adjusts its service policies to align with both their competitors and the proposed changes to the regulations regarding the consumer protection and the creation of cross-border trade in the EU.

The fifth and final paper addresses the issues arising in Paper A regarding the proper SC design in the e-commerce business. The purpose is also relevant to the outcome and the results of the fourth study reported in Papers C and D.

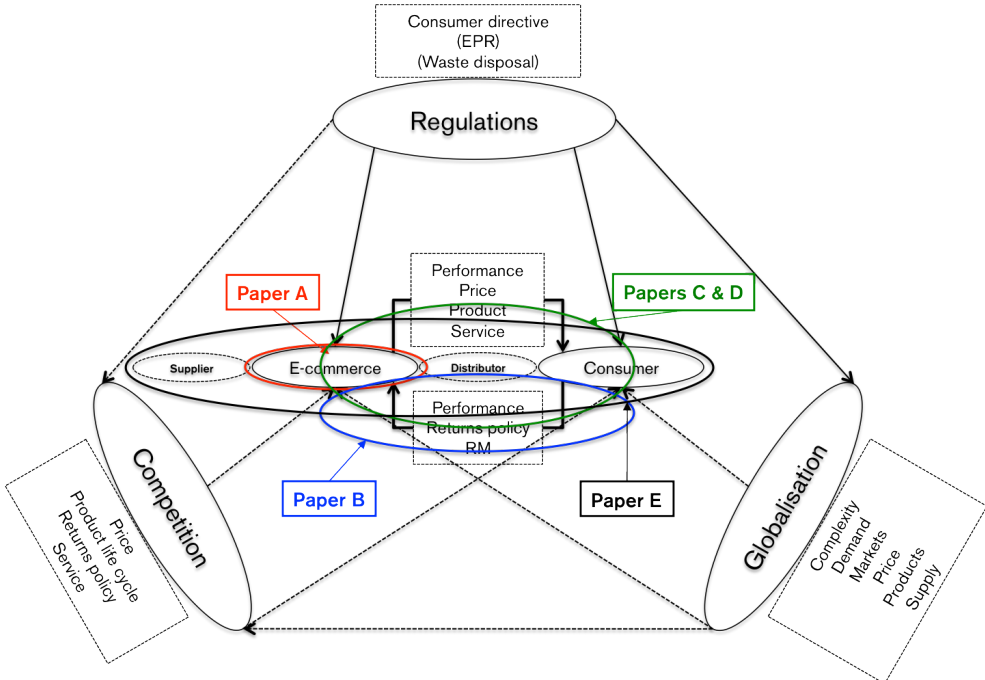


Figure 21 Linking the appended Papers A to E and the research model used in the thesis

The placement of the coloured oval for the appended papers indicates the foci within the model. Paper A focuses on the e-commerce organisation and the effects created from the direct (solid line) regulatory force and the two indirect (dashed line) forces from competition and globalisation. Paper B focuses on the e-commerce, the consumer

and the distributor in between them and the related returns flow and characteristics in the dashed box in the return arrow. Papers C and D use a broader focus and relate consumers' buying and returning behaviour to characteristics in both dashed boxes, i.e. downstream and upstream. Lastly, Paper E focuses on RM and SC design regarding how, if and why to align RM with the SC strategy and whether customers behave in a uniform manner when delivering a "one-size-fits-all strategy" regarding the delivery and returns service.

5.2 Paper A – Aligning returns management with supply chain strategy: a fashion e-commerce case

Introduction

Returns management (RM) has been defined as one of eight supply chain management (SCM) processes (cf. Croxton *et al.*, 2001; Rogers *et al.*, 2002). RM focuses on the returns process in the supply chain and effective RM can be quite complex due to its boundary spanning nature. Mollenkopf *et al.* (2007a) argue that effective management is important because returns can erode profitability. What does management in this respect mean and how do we perform effective management of returns within a supply chain (SC) context? Most of the RM literature addresses RM within the business-to-business (B2B) context (cf. Rogers *et al.*, 2002) and the suggestions of the RM processes and sub-processes or even other process interfaces within SCM seem to address quite infrequent and relatively high-value returns flows between intermediaries, balancing the acceptance of returns against the possible loss of customer loyalty. The management of B2B returns is quite far from the unpredictable, frequent, low-value consumer returns flow, especially in the fast-growing e-commerce business. How should these returns be managed cross-functionally or even across the supply chain both to create end-customer value and to hinder the erosion of profitability?

Purpose and overview

The main purpose of this paper is to increase understanding and contribute to theory development regarding RM in general, and its alignment in the supply chain strategy specifically. How do we create a better understanding of returns management and how do we raise the priority to a strategic position in the organisations and the SC? The decision to/not to incorporate RM might be based on vague or evidential ideas about returns and their contribution to revenue and profitability. Therefore, this paper investigates how a fast-growing e-commerce organisation operating in northern Europe prioritised RM through analysing its awareness/understanding of consumer returns and RM and analysing what, when and why returns were arriving. The awareness/understanding was discussed in relation to its strategic positioning of RM. Further, to understand what triggers a more strategic positioning of the RM process, we studied the case organisation during its journey from being quite unaware of the impact of its returns to a position where it started to align RM strategically and plan for the implementation of a new RM process with a more proactive perspective. This research addresses the gap in the literature regarding the use of empirical data to create an understanding of how to manage fashion e-commerce returns flows. The next section of the paper presents the theoretical framework that supports the analysis performed and the development of the proposed framework for creating an understanding

Research design

The research design consists of three intertwined phases. The first explorative phase aimed at identifying the priority, through analysing the case organisation's awareness and understanding of consumer returns in general and RM in particular. This was achieved through on-site visits, conversational interviews and phone and e-mail conversations, mostly with the operations manager (OM) and the customer service manager. Three interviews (one in each phase) were digitally recorded and held in Swedish; the interviews were transcribed verbatim, and after the analysis the results were translated into English, and the *story* developed from phase 1 guided phase 2. Qualitative research has its place in guiding more evidence-based research, suggesting hypotheses and augmenting other, often quantitative, studies (Pfeffer and Sutton, 2006, p. 67). The results from the interviews in phase 1 are presented as narratives together with five clear statements that were analysed ad hoc (Lee, 1998). The five statements were contrasted with and analysed against the transactional data in phase 2. An emerging theory is presented in each phase, based on the story told and statements from key informants (Eisenhardt and Graebner, 2007). Transactional sales and returns data covering a two-year period were exported from the case organisation's ERP system. The data contained all customers' transactional data (orders and returns) from all four markets, i.e. no sampling. The second phase aimed at describing and measuring the returns flow and comparing the quantitative results with the results from phase one, thus continuing the emerging theory based on more empirical evidence. The second phase ended in a company presentation, in which the results from phase 2 were highlighted and described with the framework of SCM and RM. During the presentation, conversations started around concrete actions to take (trigger) based on the view of the OM regarding the results from phases one and two, and this shows that the three phases were intertwined (see Figure 22).

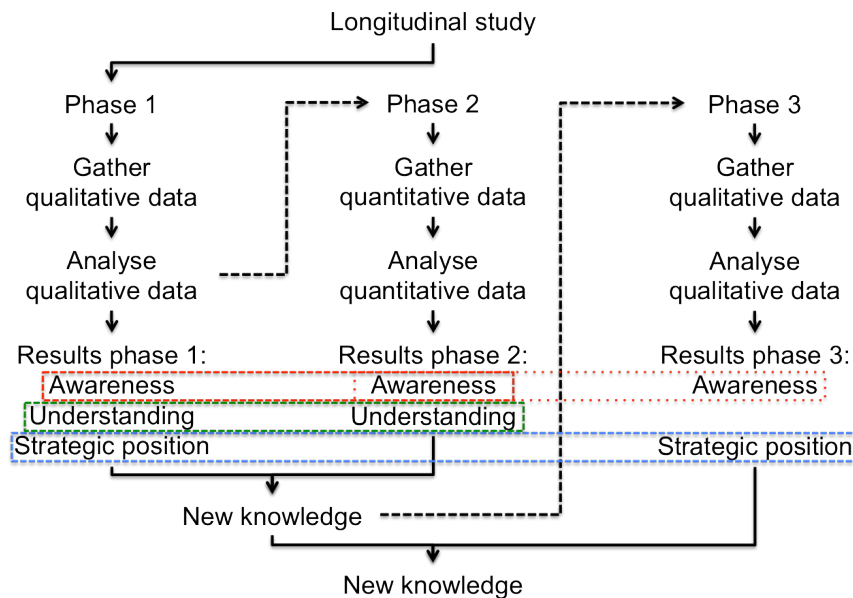


Figure 22 The study and the three phases

The operationalisation of phase 2 from phase 1 was performed through connecting measurable statements regarding the case organisation’s understanding, taken from the interviews carried out with the OM. Statements (subjective) could be transferred to measurable (objective) results from the quantitative data used in phase 2. These are described as awareness in Figure 22, marked with a red-coloured square. The awareness is analysed in two steps, between phase 1 and phase 2 and between phase 2 and phase 3.

In the third phase, the discussion and statements regarding the strategic position in phase 1 was evaluated with discussions and statements regarding the level of strategic positioning. This is presented in Figure 22 with the blue-coloured dotted square marking the strategic position. This evaluation is also discussed regarding the comparison of the awareness presented in phase 1, relative to the awareness in phase 3.

Main findings and conclusions

Anecdotal evidence presented in previous research, such as the average returns rates for different industries, discussions regarding the relative importance of RM, et cetera, are difficult to relate to and use as evidence for starting to implement or work with RM strategically. The results from the three intertwined phases in the longitudinal study are summarised and presented in Table 12.

Table 12 The priority, awareness and understanding of returns in the three phases

	Phase 1	Phase 2	Phase 3
Priority	The low priority level of RM is related to the rapid growth and it is a trade-off from focusing on selling and growing.	Not analysed in phase 2	The priority level has increased and there is a written returns strategy in place. The formation of a returns management group is initiated with both ongoing and future returns projects.
Awareness	The low priority level has resulted in a lack of systems and processes to follow up on and analyse consumer returns and RM. Therefore, the awareness is low.	The lack of awareness of the distribution of returns reasons, seen over products, product groups and markets, was described. The results described also constituted evidence of the organisation’s lack of awareness of the strategic importance of RM.	The overall awareness has increased and the organisation has started to work with returns projects and is trying out and experimenting with payment options, returns policies, et cetera, to learn what drives returns.
Understanding of: what, when and why	The lack of systems and processes to analyse consumer returns has led to a vague notion of why (return reasons)	The low understanding of the distribution of the returns reasons, i.e. why products were returned, led to	The case organisation has developed routines to gather returns information in order to have more evidence of what

	returns are arriving. However, what and when is not known until the returns arrive as the information travels with the returning goods.	missed opportunities to work proactively with and try to avoid (unnecessary) future returns. Further, the lack of a gatekeeping process (what, when and why) allowed unwanted returns to enter the system.	causes returns and how returns rates vary by product and market. The developed and launched web registration enables better control of what, when and why returns are incoming.
Emerging theory:	The overall low focus and priority level was a deliberate trade-off based on a vague notion of RM's relative unimportance to the organisation and the e-commerce business as such.	The strategic trade-off, focusing on sales and somewhat ignoring the potential of RM, was deliberate. However, empirical data from phase two reported the relatively low awareness and understanding of consumer returns and its non-uniform patterns. This initiated new awareness within the organisation.	Obtaining more and better evidence of returns using transactional data creates a better understanding of, and the organisation becomes aware of, the strategic importance of RM to the organisation and its customers.

The relatively low level of awareness of consumer returns and RM, as presented from phase 1, was a direct result of the focus on selling and growing and strategically down prioritising RM. There is likely to be a relation between the level of awareness, the understanding and the priority. The research design in the study performed, in which the level of awareness was increased through the analysis performed in phase 2, increased the understanding of the importance of consumer returns and RM to the case organisation, which in turn changed the priority of RM. The strategic work with RM, performed between phase 2 and phase 3, is definitely a sign of increased awareness and understanding. In a rapidly evolving business such as fashion e-commerce, it is understandable that what has previously been described as a nuisance and the negative side of doing business is down prioritised, especially when an organisation is growing at such a rate as the case organisation, nelly.com. However, it became obvious to the case organisation that its customers' buying behaviour is not uniform and that the returns process in itself probably means different things to the respective customer groups.

The research reported fits the ideas behind the dynamic alignment framework; it is quite clear that the two initial phases have increased the awareness of the importance of RM and the understanding of how customers behave regarding buying and returning. That also triggered a more proactive approach towards consumer returns and RM. We have presented results of varying kinds of buying behaviour that need more research in order to understand why customers behave differently, and how and if they need a more differentiated supply of services, due to varying customer values and demands as presented by Gattorna (2010). The reported research has initiated an

alignment process at nelly.com, with the use of transactional data encouraging and starting more evidence-based management of consumer returns. The process will need to continue to align, as customer behaviour is likely to continue to change due to increased competition, et cetera. The case organisation and the e-commerce business will likely try their best to be competitive, and change their policies and processes.

The reported research starts to fill the literature gap regarding *why* RM and consumer returns are strategically important to the fashion e-commerce business. We have presented empirical evidence in phase 2 that increased the awareness of this importance and triggered a more proactive and strategic approach towards RM. This new understanding has also started work to align strategies dynamically with customers' varying behaviour, which ultimately indicates heterogeneous demands and values. This awareness and understanding was quite far from the aggregated returns rates both reported by the literature and in use at the case company at the start of the research.

5.3 Paper B – Improved returns information system to facilitate gatekeeping and returns avoidance

Introduction

Returns are inherent in the business model of e-commerce due to the customer's inability to test and evaluate products, services or new suppliers prior to ordering. The main purpose of any returns system is to recapture value from whatever is sent backwards, be it products or packaging material, from any position in the supply/demand chain.

Most organisations still see returns as a nuisance (Stock *et al.*, 2002), especially commercial returns (Blackburn *et al.*, 2004). According to Autry (2005), firms often accept anything that a customer wants to return regardless of the reason for return or condition, if they perceive that it will benefit their relationship with the customer. Accepting any return into the system without knowing the reason or the condition of the individual item does not guarantee value recovery, as a high proportion of the returns system costs relate to transportation and handling.

Purpose and overview

Consumer returns within the e-commerce business are traditionally managed without any knowledge about the state of or the reasons behind incoming returns, due to the inability to separate the information flow from the goods flow. This paper aims to identify and describe the supply chain needs for a returns information system and to develop a framework that facilitates gatekeeping and returns avoidance.

This paper starts with a brief review of the literature on returns avoidance and gatekeeping within an RM framework, complemented by a brief summary of information communication technology (ICT) focusing on service-oriented architecture (SOA) and event-driven architecture (EDA). Thereafter, it continues with a presentation of the research methodology used. This is followed by findings from the single-case study in which the returns system is investigated and contrasted against the framework of RM, focusing on returns avoidance and gatekeeping. It concludes with a discussion in which the case findings are analysed and ends with conclusions and future research.

Methodology

A single-case study was performed using nelly.com as the case organisation. Case studies are suitable for in-depth studies of real-life phenomena (Yin, 2009) with clear boundaries, such as organisations (Ellram, 1996). A single-case study is appropriate when the case in itself is extreme or unique (Eisenhardt, 1989; Ellram, 1996). The case company was selected mainly due to its fit with the aim and the overall research ambition, together with its market position and innovative and flexible leadership, which altogether created a dynamic research environment. Further, no prior studies have been conducted in which the requirements of a contemporary returns information system are presented supporting returns avoidance and gatekeeping together with a quantitative analysis, making the case unique and justifying a single case.

Main findings and conclusions

The paper shows that the proposed returns information system (RIS) framework could increase both the efficiency and the effectiveness of the returns process through the ability to separate information and goods flows and ultimately steer the returns flow to maximise value recovery and to avoid unwanted and unnecessary returns. Separating the information flow and the goods flow facilitates a downstream gatekeeping activity governed by rules to safeguard the returns system from unwanted returns. Unwanted returns are those for which value cannot be recaptured, i.e. low-value items, defective products or late returns outside the stipulated returns allowance. The proposed RIS framework also facilitates the implementation of avoidance whereby the use of real-time information could be used to avoid returns. In the present paper-based returns the information system contains vital information about warehouse issues, such as “wrong item” is delivered, i.e. goods in the wrong place are delayed with the redistribution time. Altogether, approximately 7% of all returns were only adding cost, i.e. no value recovery, as they moved upstream towards the warehouse.

5.4 Paper C – Real e-customer behavioural responses to free delivery and free returns

Introduction

The behaviour of e-commerce consumers has been receiving increasing attention from researchers (López-Bonilla and López-Bonilla, 2008; Goel and Prokopec, 2009; Bae and Lee, 2011; Ulbrich *et al.*, 2011; Chen and Hu, 2012). This paper focuses on one particular behavioural aspect, namely how e-customers respond to lenient delivery and returns policies. The degree of leniency in e-commerce has increased during the last decade, primarily owing to increased competition (Autry, 2005) and new legislation (EU, 2011a). A lenient returns policy may include a longer period of time during which a product may be returned after purchase, a promise that a return will not be questioned, cash rather than store credit, or the option to return a sale item (Wood, 2001). For “e-tailers”, the degree of leniency can be viewed as a problem of optimisation (Davis *et al.*, 1998). A seller must balance the benefits of a more lenient policy against the costs (Padmanabhan and Png, 1995). The dilemma is that buyers clearly prefer sellers who offer more lenient policies (all things being equal), whereas lenient policies are costly to operate and vulnerable to consumer abuse. There is no simple and generalisable solution to this problem (Wood, 2001). Furthermore, such a solution would require valid information regarding how e-customers actually respond to different types of leniency.

Management can adjust fewer variables on the delivery side than on the return side. In e-commerce, one leniency variable that exists for both deliveries and returns is whether customers pay for shipping or the company subsidises it entirely. Basic price theory suggests that if a service is free, it will generally have a higher demand than if it were not free. If this theory holds, then free deliveries should correspond to higher sales, and free returns should correspond to both higher sales and increased returns.

Purpose and overview

The present study aimed to explore the influence of free delivery and free returns on the purchasing and returns behaviour of real e-customers in the marketplace instead of on the behaviour of students in laboratory settings. To accomplish this goal, we conducted the study as a fully randomised and controlled experiment in cooperation with nelly.com, a Nordic e-commerce site that specialises in fashion and beauty.

Methodology

This study was designed as a randomised controlled experiment with a random sample strategy. Among the 192,482 Swedish customers who had placed an order at nelly.com during the last 12 months and received the quarterly nelly.com e-newsletter in November 2010, we allocated via computer 4,000 customers, selected at random by a nelly.com manager (using a computerised process), to 4 groups (A, B, C and D) of 1,000 people each. The randomisation process was conducted in 2 stages to ensure that no systematic sampling bias occurred.

All the newsletters were identical (see Appendix in paper C) except for the delivery and returns conditions: Group A was offered free delivery and free returns, group B was offered free returns only, group C was offered free delivery only and group D was the experimental control group (Table 13).

Table 13 The assignment of the four groups

	Free returns	No free returns
Free delivery	A	C
No free delivery	B	D

Main findings and conclusions

Understanding consumer behaviour has become extremely important for retailers (Hardesty and Bearden, 2009). The continuous growth of and increased competition in B2C e-commerce has increased the relevance of lenient delivery and returns policies to customer acquisition and retention tools. Some researchers (e.g., Wood, 2001; Wang, 2009) have used students as subjects to explore the effects of lenient policies on consumer behaviour in laboratory settings; however, such studies have limited external validity. Other researchers (e.g., Lewis, 2006; Petersen and Kumar, 2010) have used real market data, although their studies may have validity issues related to the use of secondary data, a lack of control over the data collection process and/or cross-sectional analysis of data in which a time factor may be present. This study avoids these problems and contributes to the literature by using a fully randomised and controlled experiment with a sample of customers from the actual marketplace. We conducted a simultaneous analysis with high generalisability of the effects of free delivery and free returns policies.

To conclude this study, we verified the results of several previous studies that were based on laboratory experiments or analyses of secondary data in this field. However, several prior findings were not confirmed by our data, and we present new and previously unknown associations between consumer behaviour and leniency in delivery and/or returns policies. We found two different types of relationships. First, we observed an association between a free delivery policy and various types of return behaviours. The “mirrored” relationship (i.e., the association between free returns policies and purchasing behaviour) has previously been explored; however, the effects of delivery conditions on returns behaviours appear to be a new finding. We believe that the mechanisms behind this association must be explored further in future research.

Second, we observed a pattern of interaction between a free delivery policy and a free returns policy. The expected effects on consumer behaviour of one lenient policy appear to depend on whether the other policy is also lenient. This relationship has implications for the theoretical modelling of behaviour and the practical implementation of policies. Future theoretical research should consider delivery and returns conditions as well as possible interactions between these factors. It is also possible that the behavioural effects discovered here differ across different types of customers. Therefore, future research should include controls for RFM type variables and demographic variables such as age and gender. For now, the fact that the majority of customers at nelly.com are young females may be seen as a limitation of this study.

The main managerial implication of this study seems to be that free delivery and returns policies should not be offered at all, given that they are not mandatory from a legislation and/or competition point of view. From an economic perspective, such policies are not recommended since the downside (i.e. decreased coverage of costs) is not compensated for by a significant upside. Using the point estimates from our data set, we show that the expected value of a potential customer is lower when returns are free. Let us make the following assumptions:

- Free returns increase the probability of returns from 16% to 20%.
- The average value of returned items is not significantly affected by free returns.
- The returns fee for customers is 39 SEK.
- Free returns increase the probability of orders from 24% to 26%.
- The number of orders per unique customer is not significantly affected by free returns.
- Free returns decrease the average value of orders from 744 SEK to 712 SEK.
- The average contribution margin ratio is about 2/3.

Thus, the expected value of a potential customer when free returns are not offered can be calculated as $(1 - 0.16) * 0.24 * 744 * 2/3 = 100$ SEK. On the other hand, the expected value of a potential customer when free returns are offered can be calculated as $(1 - 0.20) * 0.26 * 712 * 2/3 - 39 = 60$ SEK. Further, companies often offer free delivery and/or free returns and are likely to continue this practice regardless of the results in this study because of legislation and the strategic risk of losing market share to competitors who do offer free delivery and/or free returns.

One limitation of this study is that it can be regarded as a case study since all of the participating subjects are customers of the same company. However, we believe that the external validity of our results should be considered high compared with those of

the previous studies in this area. This study is the first of its kind to explore the purchasing and returning behaviour of actual e-commerce customers in the marketplace with a mix of different delivery and returns policies within a fully randomised and controlled experimental setting. Lewis (2006) used secondary data from an Internet retailer that specialises in non-perishable grocery and drugstore items. Petersen and Kumar (2010) worked with a catalogue retailer that sells footwear, apparel and other accessories. Wood (2001) created laboratory experiments in which subjects could choose between goods that included radar detectors, candy bars and generic t-shirts. Highlighting markers and cups were used as goods in experiments by Wang (2009). We suggest that future research should examine consumer behaviour in other industries to verify our results.

The fact that all the subjects were informed about the study can also be seen as a limitation. Nelly.com agreed that informing subjects about the study was ethically necessary to avoid the risk of future bad publicity. However, since the subjects in this study were real e-customers who received their usual quarterly newsletter and were not asked to undertake anything out of the ordinary, we believe that the external validity of these results should be high compared with similar studies that were conducted with students in different types of laboratory settings.

Yet another limitation of this study is that the target population consists of only established customers of the company. Previous research (e.g., Hernández *et al.*, 2010) indicates that customer behaviour does not remain stable because the experience that customers acquire from past e-purchases influences their subsequent behaviour. Therefore, a methodological challenge in future research is to identify methods of performing randomised and controlled field experiments with new customers as subjects. We also believe that the financial consequences of free delivery and returns policies as well as the customer behaviour associated with other types of leniency need attention in future research. For example, the optimal return rate is rarely zero, as the opportunity cost in terms of lost sales to reach zero returns is typically excessively high. With more accurate information regarding customer behaviour, the optimal managerial trade-off between these factors can be analysed more thoroughly.

5.5 Paper D – (R)e-tail borrowing of party dresses: An experimental study

Introduction

Should retail borrowing in the fashion business be seen as consumer fraud? Or is it simply the logical consequence of offering lenient delivery and returns policies while marketing relatively expensive “special occasion” fashion garments?

Returns policies as such provide the customer with the opportunity to postpone their purchasing decision until they have gained some experience with the goods (King and Dennis, 2003). In e-commerce, that experience is created after the physical delivery. Consequently, in e-commerce, customer returns are something inherent due to customers’ inability to experience a particular product and/or service prior to ordering.

While it is clear that both new legislation and increased competition change the way firms have to work with delivery and returns policies, it is not clear how changes in these policies affect consumer behaviour, especially the magnitude of retail borrowing. The e-commerce environment itself also changes the shopping process in several ways.

Firstly, EU customers are entitled by law to return what they purchased without giving any reasons. Therefore, in this study, the unethical retail disposition (URD) definition does not fit due to the authentic quality defect or third condition, and the deshopping definition uses a similar condition and does not apply either. It is necessary to understand the impact of these policy changes on consumer behaviour (Kauffman and Walden, 2001). By promoting liberal freight and returns policies enforced by both legislation (EUR-lex, 1997) and increased competition and by being expensive and encouraging returns, the retailer is often perceived as playing a role in retail borrowing (Piron and Young, 2000) as consumers' knowledge of returns policies appears to be linked to fraudulent returning (Harris, 2010).

Purpose and overview

The main purpose of the study was to increase our understanding of consumer behaviour with respect to (r)e-tail borrowing, performed under different (more or less generous) delivery and returns policies. This study was designed as a randomised controlled experiment with a random sample strategy. Among the 192,482 Swedish customers who had placed an order at nelly.com during the last 12 months and were subscribed to the quarterly nelly.com email newsletter in November 2010, 4,000 were randomly selected and randomised into four groups with 1,000 in each group.

Methodology

This study was designed as a randomised controlled experiment with a random sample strategy. Among the 192,482 Swedish customers who had placed an order at nelly.com during the last 12 months and were to receive the quarterly nelly.com newsletter in November 2010 by e-mail, 4,000 were randomly selected and allocated to four groups (A, B, C and D) with 1,000 in each group. The required sample size for a one-way ANOVA was found to be 1,096 orders for a small (see (Cohen, 1992)) effect size of $f = 0.1$, an alpha value of 0.05, a beta value of 0.20 (power = 0.80) and 4 groups, which corresponds to 274 orders in each group. From experience, the relation between the number of orders and the number of sent newsletters was assumed to be at least 1/3. Thus, 822 newsletters would have to be sent in each group, given the conditions above. At the time of the data collection, this number was rounded up to an even 1,000 for safety and simplicity.

Main findings and conclusions

The experiment revealed certain purchase and return patterns that support the conclusion that (r)e-tail borrowing behaviour exists in fashion e-commerce. We also found evidence that lenient delivery and returns policies reinforce (r)e-tail borrowing behaviour, albeit not always in expected ways.

In summary, the significant statistical results in this study are:

- Party dresses have a higher rate of return than other items.
- Party dresses have a longer time to return than other items.
- Free returns shorten the time to order more for party dresses than for other items.
- The impact of free returns on the time to order for party dresses depends on the delivery conditions.
- The impact of free delivery on the time to return for party dresses depends on the return conditions.

- Free returns generally shorten the time to order. In particular, free returns generally shorten the time to order for customers who pay for the delivery, but free returns do not seem to shorten the time to order for customers who do not pay for the delivery.

It should be noted, however, that even though these results are statistically significant, small or medium effect sizes prevail in most cases. For example, the observed significant difference in the return rate between party dresses and other items is characterised by an effect size index $h = 0.33$ (Cohen, 1992). When large sample sizes are used, small differences can be found to be statistically significant. Hence, the large number of subjects can be seen as a strength as well as a limitation of this study.

Differences in delivery and returns policies seem to impact on consumer purchase and return behaviour differently depending on the type of item. Therefore, we suggest a more differentiated view of how to apply such policies from a managerial perspective. Offering the same delivery and returns conditions to all types of customers and products cannot generally be optimal with respect to profitability. One might for example consider shorter returns windows in order to discourage borrowing for items like party dresses that otherwise tend to be borrowed. Exploring the effect such measures would have would also requires further research, however.

Finally, we would like to emphasise that even though the consumer behaviour patterns revealed in this experiment fit the definition of retail borrowing, a deeper understanding of the borrowing behaviour and its relation to lenient policies requires a qualitative research approach.

5.6 Paper E – Customer segmentation based on buying and returning behaviour: supporting differentiated service delivery in fashion e-commerce

Introduction

In shifting market conditions, the choice of supply chain strategies is critical when competing to serve customers (Gattorna, 2010). It is accepted in theory that the “one-size-fits-all” approach to supply chain design is no longer valid (Christopher *et al.*, 2006; Gattorna, 2010; Ericsson, 2011; Godsell *et al.*, 2011). Still, organisations, even in the highly competitive e-commerce market, utilise a “one-size-fits-all” strategy to create and deliver value to their consumers, thereby implicitly assuming that consumers’ demands and buying behaviour are homogeneous, and therefore there is no profitable reason to differentiate delivery in terms of service.

However, e-commerce consumers’ buying behaviour is not homogenous, especially in the fast-moving consumer goods (FMCG) business. FMCG organisations compete not only on products and price, but also on a large variety of services. For example, accessibility and speedy delivery are critical determinants of success. Returns management (RM) is clearly part of the parcel, and, if handled properly, it can decrease costs, while simultaneously increasing revenue and serving as a means of competition. The total offer is called the “value package” and consists of the physical product plus the services surrounding it. Some of these services are the order qualifiers, and some are the order winners (Ericsson, 2011).

Purpose and overview

Designing supply chains and organisational strategies in the fast-moving consumer goods business, especially within fashion e-commerce, requires a profound understanding of customer behaviour and requirements. The purpose of this paper is twofold: firstly, to test empirically and support whether a “one-size-fits-all” strategy really fits all in the fashion e-commerce business; secondly, to evaluate whether consumer returns are a central part of the creation of profitability, and if so, the role of returns management in the overall supply chain strategy.

Research design, method and measurement

The development of supply chain strategies needs to be both context-specific and close to the competitive environment; therefore, it is relevant with a single-case design for testing the well-known “one-size-does-not-fit-all” theory.

For the quantitative analysis, nelly.com exported transactional data from its ERP system. The data contained all (502,429) orders for a period of two years (2008–2009) covering the four markets in Denmark, Finland, Norway and Sweden. As the analysis was performed on a customer level, the authors performed detailed calculations to reveal each customer’s order sales figures, return figures, contribution margin, etc. Thereafter, each customer was analysed in terms of total sales, average sales per order, total contribution margin, average contribution margin, total number of orders and total number of returns. The organisation’s operations manager was interviewed on-site during the research and supplied the researchers with vital information regarding freight costs, return freight costs and costs related to the handling of orders and returns.

Main findings and conclusions

In theory, segmentation based on the customer’s buying behaviour should be performed using point of sales data or a more qualitatively based understanding (Gattorna, 2010). In the fast-moving business of e-commerce, customer returns are a valuable service parameter. If returns management is not carried out effectively, returns often decrease profitability. The e-commerce business collects and stores vast amounts of data; yet, this wealth of information is seldom used in developing service differentiation. Organisations often offer the same level of service to all their customers irrespective of each customer’s net contribution. In this study, behaviour patterns were analysed, and it was determined that grouping customers based on both sales and returns patterns facilitates a differentiated service delivery approach. It enables the company to offer different delivery and returns conditions to specific customers in order to increase their net contribution. Interestingly, we found that the most profitable customer is the repeat customer who frequently returns goods.

To summarise the research findings and relate the results to the overarching hypotheses and research purpose, the authors conclude that there is conclusive support for both hypotheses. The behavioural model described in this pattern shows that customers behave in a heterogeneous way and this indicates that the “one-size-fits-all” theory is obsolete, as the literature indicates (Christopher *et al.*, 2006; Gattorna, 2010; Ericsson, 2011; Godsell *et al.*, 2011). The results also support the previous findings that RM is an important part of the supply chain (Norek, 2002; Rogers *et al.*, 2002; Stock *et al.*, 2006; Mollenkopf *et al.*, 2007a; Mollenkopf *et al.*, 2007b; Frankel *et al.*, 2010; Mollenkopf, 2010), as consumer returns are an important part of e-commerce customer

behaviour and therefore important both to the case organisation and to its partners, including the customers. Further, Mollenkopf (2007b) highlights the risks involved in e-commerce and the importance of RM in the service recovery process.

This research empirically supports the importance of RM in the service recovery in fashion e-commerce, as quite a large group of customers is systematically returning. However, companies using a “one-size-fits-all approach” are focusing solely on RM efficiency and therefore missing the opportunity to create a competitive edge. They are missing the potential value it could add to the organisation and its customers (Mollenkopf *et al.*, 2007a) as well as its supply chain partners. A differentiated returns service might attract new customers (non-adopters) and better support the customer groups with diverging patterns or returns identified in this paper as RM. Clearly, this is part of the value creation, at least for certain customers.

5.7 Overview of the appended papers

This section presents an overview of the five appended papers in Table 14.

Table 14 A short overview of the appended papers

Paper	Purpose	Design	Findings
A	Increase the understanding and contribute to theory development regarding RM and its incorporation into the supply chain strategy.	A longitudinal single-case study was performed following a three-stage research design.	The decision not to view RM as a strategy was deliberate though not based on a thorough investigation and analysis. The increased awareness and understanding triggered the case organisation to work more proactively with RM. It started to discuss how to align the returns strategy with the overall business strategy.
B	Identify and describe supply chain needs for a returns information system and framework that facilitate gatekeeping and returns avoidance.	The research uses a single-case design, combining qualitative and quantitative data.	The proposed system and framework could increase both the efficiency and the effectiveness of the returns process through the ability to separate information and goods.
C	This study explores the influence of free delivery and free returns on the purchasing and returning behaviour of real e-customers in the marketplace.	A fully randomised and controlled experiment in cooperation with nelly.com, a Nordic e-commerce site that specialises in fashion and beauty.	The results suggest that a lenient delivery policy is associated with increased order frequency, decreased average value of purchased items, increased probability of return, and increased average value of returned items. In addition, a lenient return policy was found to be associated with increased order frequency, a decrease in the average value of orders, a decrease in the average value of purchased items, and increased probability of return. However, the effect sizes are generally small, and we conclude that factors such as legislation and competition often force e-tailers to offer free delivery and free returns even though such offers probably would not have been profitable otherwise.

D	Increase our understanding of consumer behaviour with respect to (r)e-tail borrowing, performed under different (more or less generous) delivery and returns policies.	A randomised controlled experiment with a random sample strategy. 4,000 customers were randomly selected and allocated to 4 groups with 1,000 in each group.	The experiment revealed certain purchase and return patterns that support the conclusion that (r)e-tail borrowing behaviour exists in fashion e-commerce. We also found evidence that lenient delivery and returns policies reinforce (r)e-tail borrowing behaviour, albeit not always in the expected ways.
E	To test whether a “one-size-fits- all” strategy fits in the fashion e-commerce business. Also, to evaluate whether consumer returns are a central part of the creation of profitability, and if so, to discuss their role in the overall supply chain strategy.	A single-case design using transactional data to test the “one-size-fits-all theory” and to evaluate the importance of RM.	The described buying and returning pattern shows that customers behave in a heterogeneous way and this indicates that the “one-size-fits-all” theory is obsolete, as the literature indicates. This research empirically supports the importance of RM in both the value recovery and the value creation in fashion e-commerce, as quite a large group of customers are systematically returning items.

5.8 Results of the appended papers

This section summarises the results of the appended papers as regards the research questions addressed in the thesis.

RQ 1: What causes consumer returns and what are the potential benefits from improving returns management in an organisation without a clear returns management strategy?

RQ 2: How can contemporary information technology enhance returns system performance and contribute to efficient and effective returns management?

RQ 3: Based on the achieved understanding and results, what are the potential benefits of aligning returns management in the business/supply chain strategy?

Table 15 Respective papers' contribution to answering the research questions addressed

Paper	RQ 1	RQ 2	RQ 3
A	Product characteristics, i.e. quality, size and fit, not collected, are frequent return reasons. The reasons vary with product groups and markets. Increased understanding of the effects caused presents opportunities to change processes and systems to reduce returns.	Reduce the unwanted and unnecessary returns, i.e. late returners, etc.	Returns levels and behaviour vary with customers and markets, investigate further

B	<p>Inability to separate returns information and goods flow causes returns, i.e. avoidable and possible to gatekeep against</p> <p>Reduced costs and improved profitability</p> <p>Increased customer service</p> <p>Reduced environmental impact from unnecessary transportation and handling</p>	<p>Facilitates the separation of returns information from goods returning. Facilitates the gatekeeping activity to safeguard against unwanted returns.</p> <p>Combines avoidance and gatekeeping to avoid unnecessary returns.</p> <p>Facilitates the analysis of returns. Automated returns information sharing. Control of the returns flow. Support decentralised returns handling</p>	<p>Monitor the consumers' buying and returning behaviour in real time, i.e. not focusing solely on sales and buying behaviour</p>
C	<p>Both free delivery and free returns policies were found to be associated with increases in the probability of returns. Both free delivery and free returns policies were found to increase the proportion of returned items and we observed an interaction effect between the two.</p> <p>Offer differentiated returns policy. Cross-functional returns awareness and understanding is needed to offer and deliver suitable policies, thus RM is strategic.</p>		<p>Different buying and returning behaviour regarding policy changes implies varying consumer demand and values</p> <p>Segment consumers and differentiate service delivery</p> <p>Increase profitability through reducing under- and overservicing</p>
D	<p>Lenient delivery and returns policies reinforce the e-tail borrowing behaviour, thus increasing returns. Analyse consumers' returning behaviour regarding product groups, measure profitability and reduce abuse. Differentiated returns policy</p>	<p>Block unwanted returns, i.e. late returners (borrowers), etc.</p>	<p>Analyse consumer buying and returning behaviour to deliver a profitable service offering, not everything to everyone</p> <p>Create a suitable (profitable) value package</p>

E	Returns vary with buying behaviour and profitability varies too. The understanding that consumers behave differently when studying behaviour patterns relating to the “one-size-fits-all” service strategy indicates the necessity to integrate RM and become more SC alignment oriented	Facilitate real-time data analysis to group and follow consumer buying and returning behaviour DSS	Segment consumers and differentiate service delivery to minimise over- and underservicing. Aligning RM and SC strategy with consumers' buying behaviour facilitates geographical expansion as similar behaviour patterns were found in all markets
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6 Analysis – results

This chapter extends the short summary of the results in the preceding section 5.8, presenting how each research question is answered and explaining how the results were developed from the appended papers.

The RM framework (Rogers *et al.*, 2002) is the primary framework for the thesis as such; however, the avoidance activity extends the primary framework using the DA (Gattorna, 2010) framework as a secondary framework discussing alignment and SC design.

6.1 RQ 1: What causes consumer returns and what are the potential benefits from improving returns management in an organisation without a clear returns management strategy?

The question could be divided into two sections. The first part, “what causes consumer returns”, is naturally context-dependent and is described using empirical evidence from both transactional data and interview results. The second section, “what are the potential benefits from improving returns management in an organisation ...”, is answered using the frameworks developed in section 0.

From studying return reason codes that are given by the returning consumers, it is apparent that there are certain return reasons, such as size, fit and quality, that represent the main share of the consumer returns flow at the case organisation. These do not constitute new knowledge as they are described in the literature, including the author’s licentiate thesis (see section 2). Their distribution between products, product groups and consumers and their magnitude, were, however, new knowledge to the case organisation. The lack of understanding was a trade-off, i.e. “deliberate” in a sense, due to the case organisation being very sales-oriented and thinking, perhaps rightly so (initially), that steady growth was its main goal. However, the unawareness of the effects on the organisation of the returns resulted in a lengthy return time well above the 14 days during which consumers are entitled to return items. The case organisation was focusing on “taking orders” and accepted nearly all returns; it was spelled out to the customer service personnel never to question a return for whatever reason. This selling and “taking order” focus seemed to push the procurement department to an ever-increasing product range as it was convinced to grow through selling more (broader range) to current customers and to expand geographically. The lack of internal integration in the case organisation, without a system and a process for analysing the reasons for return and sharing information, also caused returns that could be avoided or controlled (Stock *et al.*, 2006). The returns information should be utilised in a backward *reward* system utilising process-oriented returns performance measures (see section 3.3 on p. 37) to avoid both near real-time and future returns.

The product-related return causes, mentioned above, seemed to be reinforced when growing with a three-digit rate since the start; it was further amplified when the organisation was exposed to increased competition whereby competitors applied ever more lenient or liberal returns and delivery policies and the case organisation felt forced to follow. The experiment performed and presented in the appended Papers C and D showed that customer buying and returning behaviour changed when offered lenient policies and this complicates not only the return problem. On the one hand, if not following its competitors, the case organisation was afraid to lose sales, and on the

other hand, following them, i.e. offering policy changes, increased the proportion of returned items (see Figure 23 a summary of the associations between policy changes and returns), decreasing the average value of orders and purchased items.

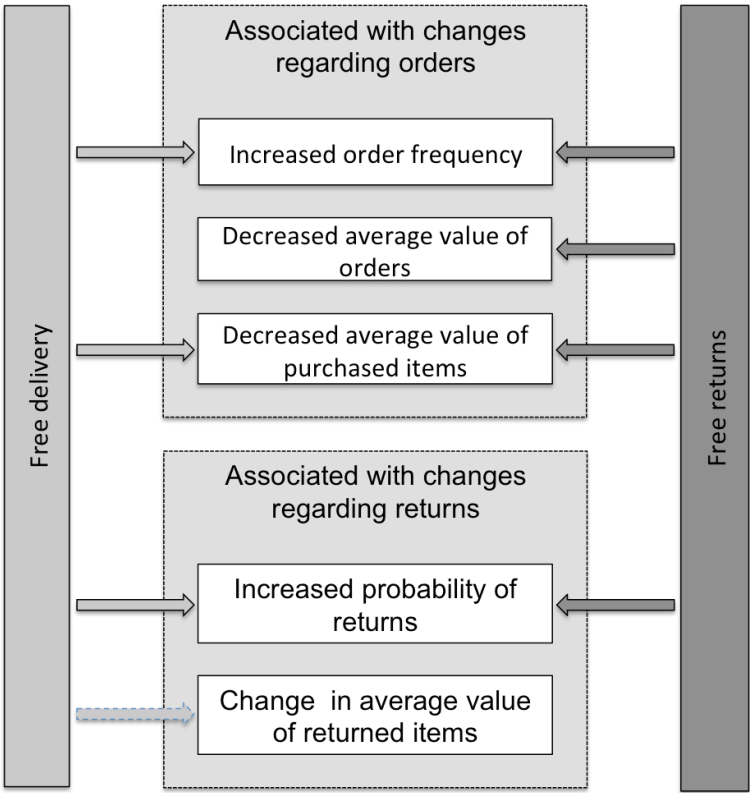


Figure 23 The associations between delivery and returns policies for customer orders and returns

Competing in fashion/apparel e-commerce without acknowledging consumer returns as a central part of the business was perhaps a little naive; however, it was a deliberate trade-off whereby the case organisation was always lagging behind organisationally and procedurally and focused, as stated, on selling and growing. However, this trade-off was not based on a thorough analysis of the empirical evidence and theory, as presented in Paper A. This is where the applied research comes into place; we as researchers with a solid theoretical ground can be helpful in analysing and suggesting changes to the organisations under study but can equally importantly adjust theories, models and frameworks. From a researchers' point of view, we need empirical data to test and develop our frameworks, models and theories. The case organisation would not have found any recipe to solve all its returns problems in the literature, as its problems were unique (context-dependent) and contemporary. However, the SCM framework would have suggested better management of its SC and especially highlighted the need for synchronising and developing processes such as the RM process. Extending the framework of SCM using theories on strategic management and specifically shifting the focus from efficiency to effectiveness and value creation (see sections 3.2 and 3.3) will assist organisations to manage the increased (hyper) competition better.

When focusing on value creation (as seen from a consumer perspective) rather than solely value recovery, organisations will likely acknowledge RM as part of their business strategy. The returns process and its activities (see section 3.1) are clearly part of the SC and should not be seen as individual activities as they both add costs and value (see section 3.3). Organisations will benefit through creating a “body of knowledge” concerning the causes of returns and the implications of not managing them. This knowledge will likely emphasise further development of analysis tools and synchronisation of activities and processes within and between organisations, to minimise the effects from the return flow as described in Paper A and in section 3.1.

The RM process (conceptual), as it is presented in the literature (Rogers *et al.*, 2002), presents ways to start developing e-commerce organisations’ RM process. However, the fit between the framework and the real world, i.e. the context of e-commerce, was all but convincing. It is clear that the focus in the literature is an RM process developed for B2B and not for B2C. The B2B returns flow is not as frequent as the B2C consumer returns flow and therefore the suggested use of manual processes to gatekeep the returns flow receiving a return request (see Figure 24) before accepting any return that does not fit the studied context. The fashion/apparel e-commerce returns flow is typically a low-value and highly frequent flow that therefore needs an automated gatekeeping system supported by a contemporary ICT solution (see section 3.3 or 5.3 or appended Paper B).

RM consists of strategic and operational levels. The strategic part of RM develops the road map for the execution at the operational level. The road map gives a structure for the implementation of RM within the organisation and across supply chain partners (Rogers *et al.*, 2002). Furthermore, the structure incorporates six strategic sub-processes that coordinate all six operational sub-processes (see Rogers *et al.*, 2002, pp. 6) via the process interfaces with the other seven supply chain processes (see Figure 24). This is performed to ensure that all returns are managed in accordance with the RM goals and strategies, and to ensure that the strategy is aligned with the other processes, such as customer relationship management and supplier relationship management.

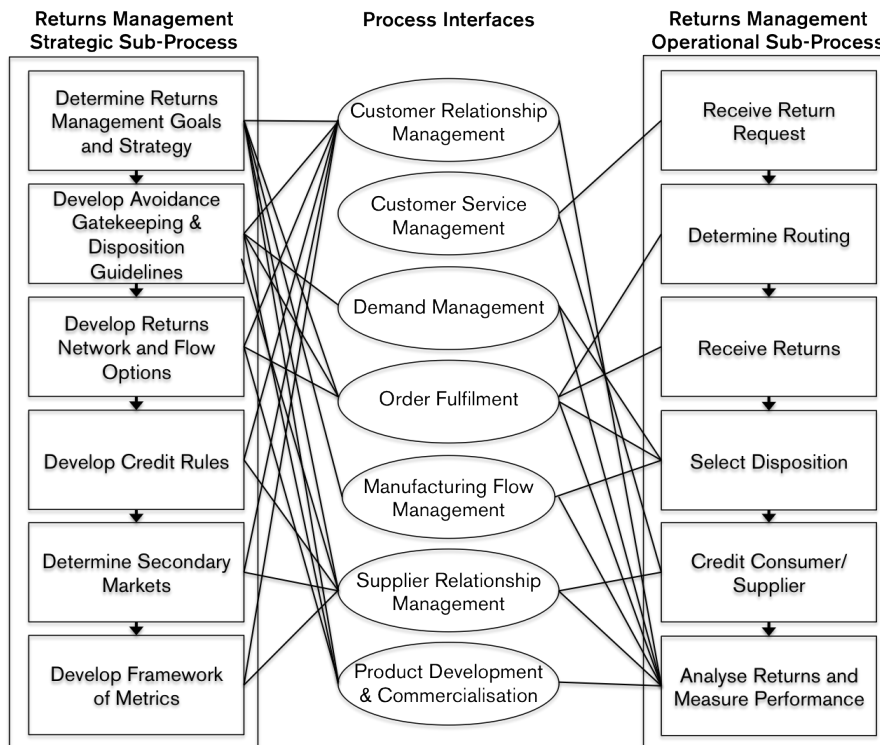


Figure 24 Returns management sub-processes and process interface (Rogers *et al.*, 2002, p. 6)

The proposed conceptual framework and its strategic and operational sub-processes are clearly not developed for the B2C e-commerce consumer returns flow, as mentioned above. They are too static and rigid and therefore do not fit the highly competitive fashion/apparel e-commerce business in which consumer returns are caused by a plethora of issues (as discussed above) but the product in itself need not be defect or unsellable. For instance, in relation to time-pressed consumers who are offered lenient delivery and returns policies and order two or three sizes to find the right fit, these returns are quite different from defective products and therefore require different routing and analysis. The potential of RM remains; however, it requires further development of both the strategic and the operational processes as returns are caused by products characteristics that need to be addressed through both design and procurement. Consumers' buying behaviour is affected by delivery and returns policies and therefore needs to be analysed together with the marketing and sales department. We also described the effect of not measuring and controlling when, what and why consumers make returns (see section 5.2 or appended Paper A) and late returning customers could cause leftovers as the season might be over; thus, the non-existent gatekeeping today and the manual gatekeeping proposed in the framework need to be developed further. The gatekeeping activity is further elaborated in section 6.2.

6.2 RQ 2: How can contemporary information technology enhance returns system performance and contribute to efficient and effective returns management?

The present returns system was both inefficient and ineffective. The manual and paper-based returns system could support neither the gatekeeping nor the avoidance activities, even though the system had vital information that could reduce the returns flow. Returns information about warehouse picking issues were delayed through the

paper-based returns information system. The present system allowed all returns to enter the returns flow regardless of the reason for the return and the possibility to recover any value in the returned item as the gatekeeping activity was performed at the warehouse location or decision point 1 in the present system (see Figure 25).

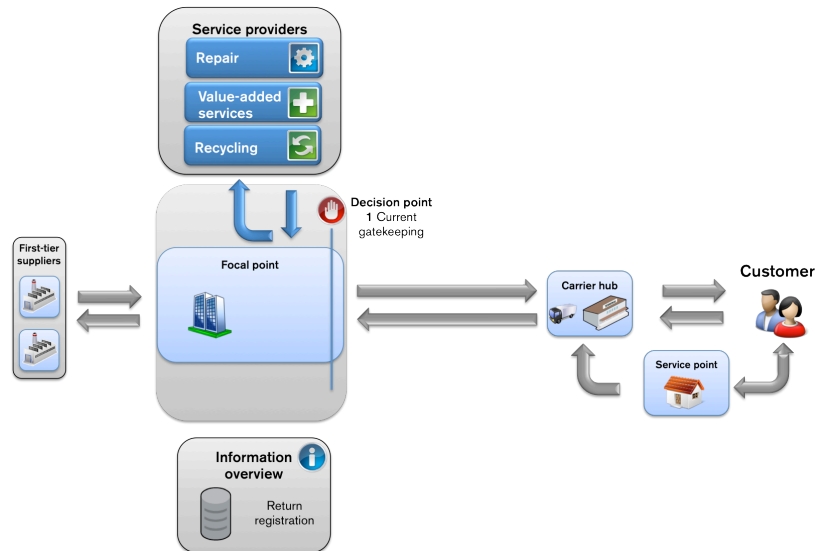


Figure 25 The present returns system

The gatekeeping activity should be performed at the entry point in the returns flow (Rogers *et al.*, 2002) to safeguard the returns system from unwanted and unnecessary returns. However, the conceptual framework does not discuss e-commerce consumer returns; the entry point refers to brick and mortar store personnel or warehouse personnel or other intermediaries who physically open and inspect the returned items. The reasoning above regarding delayed returns information that is travelling with the returned goods creates unnecessary returns, meaning returns that are “produced” after the first indication of a problem. This “time lag” is caused by the time between information being “entered”, paper-wise, and the time it takes for the return information to become accessible for the return-handling personnel and others. Wrongly delivered items at the case organisation caused 3.3% of all returns and the greater share of these could be avoided if information was separated from the returned goods. Defective products (2.8% of returns) and low-value (4% of returns) returns were allowed to enter the returns flow regardless of the non-existing value recovery, instead adding handling and transportation costs for different stakeholders in the system, including the consumer; for additional information, see appended Paper B and section 3.3 (specifically Figure 14).

The new breed of ICT systems focuses more on supporting the processes than on the technology (see section 3.3). Systems based on a service-oriented architecture allow the case organisation to be flexible and agile. The shift from a traditional focus on functions to processes in SCM is supported by SOA, as it is designed to mimic the flow of business processes. It aims to structure information technology (IT) in a more flexible manner and it is an architectural style that attempts to bridge the gap between IT and business (Reldin and Sundling, 2007).

The main components, from an ICT perspective, necessary to implement a business rules based and automated returns management solution with a focus on returns avoidance and gatekeeping are:

SOA – an architecture that is platform agnostic and allows a process set-up that integrates the order system, warehouse system, CRM system and logistics system (legacy or proprietary systems). This is crucial when handling avoidance and gatekeeping at the entry point (point of return) and validating on the customer and item level. Large volumes also demand a high level of automation at the entry point.

EDA – this handles events and message streams in the processes. This is the logical placement for the business logic needed to automate avoidance and gatekeeping. The possibility to combine streams and create new services that will add value to the process is of importance in RM. EDA- and SOA-based services are already used by the software industry today but in B2B solutions.

The RIS framework presented in appended Paper B uses the EDA and SOA architectures to apply the RM activities of gatekeeping and avoidance in the e-commerce consumer returns flow. The RIS will help to prevent the effects found in the performed experiment whereby lenient delivery and returns policies reinforced abusive behaviour, stimulating both e-tail borrowing and late returners (for further information see appended Papers C and D). Accepting returns only after web registration facilitates the possibility of blocking abusive customers trying to make returns. This an example of a situation in which the implementation of gatekeeping assists.

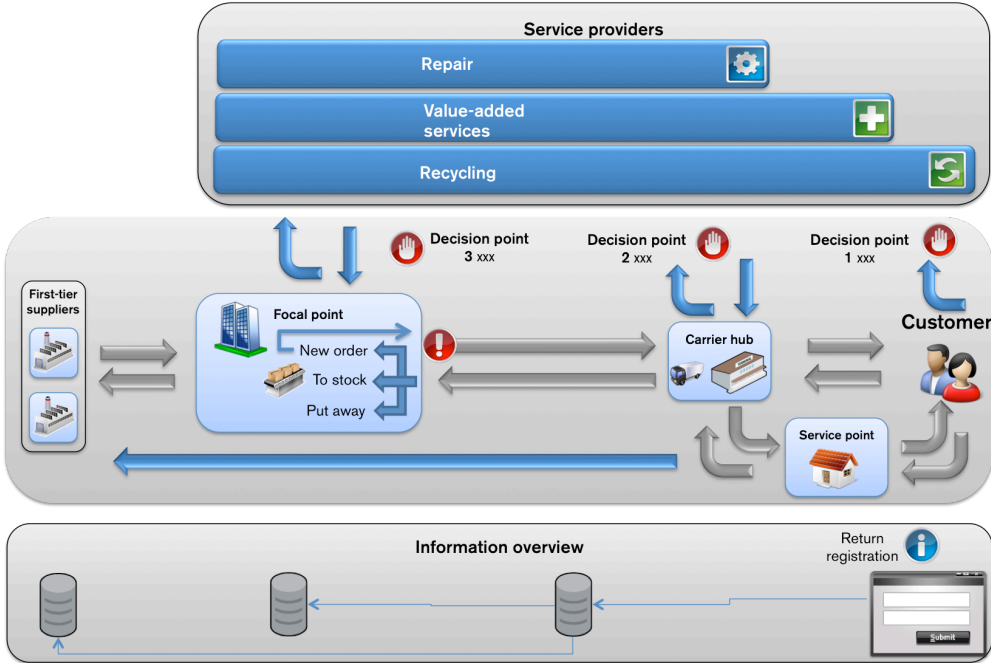


Figure 26 Future state returns systems

The implementation of the proposed RIS framework, presented in Figure 26, increases the visibility and therefore enables better control over the returns flow. It facilitates the implementation of the gatekeeping and avoidance activities as presented in Figure

27. The present RM sub-process as described in the framework (Rogers *et al.*, 2002) does not fit the e-commerce researched. The use of a return request (see Figure 27) is not appropriate for the low-value frequent returns flow and therefore the screening of return requests as a gatekeeping activity cannot be performed in the present e-commerce returns system. However, the use of web returns registration as shown in the future RM sub-process facilitates the screening of the returns information and facilitates the gatekeeping activity. The use of web registration (gatekeeping) together with the second activity, analysing returns information and performance, can be used to avoid the “production” of future returns (controllable, c.f. Stock *et al.*, 2006), i.e. wrong delivery or defective products, thus the SC becomes more effective and the returns system more efficient.

Analysing the returns information and performance, thus developing an interface with other processes such as demand management and order fulfilment, creates an opportunity to shift the focus from value recovery to include value creation. This is a way to address what Rogers *et al.* (2002) propose as future research areas and part of the purpose of this thesis (see section 1.3 on p. 10). Applying gatekeeping as proposed in Figure 26 is an effective way of creating value (customer service) and reducing costs. The returns flow can be redirected and combined with the forward flow at a suitable point in the SC. This enables decentralised returns handling that is still controlled and planned by the e-commerce organisation but executed downstream.

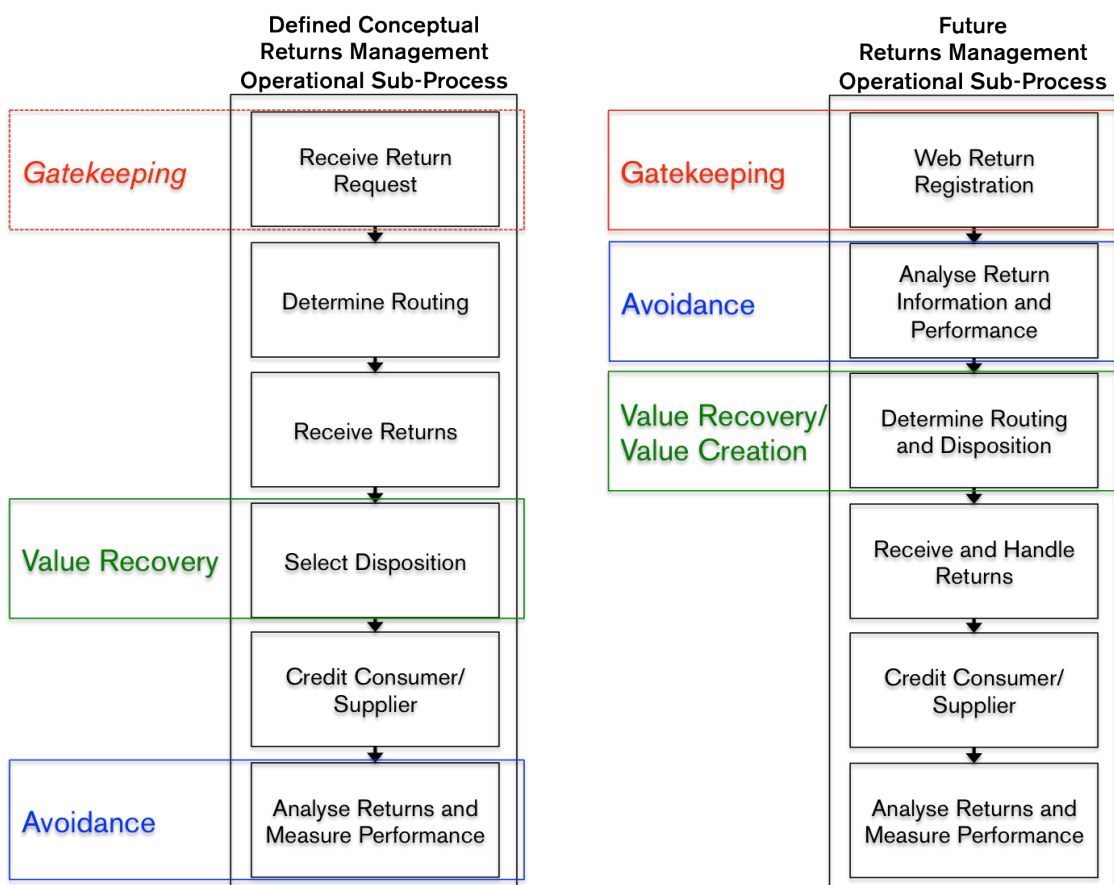


Figure 27 Defined conceptual (Rogers *et al.*, 2002) and future RM sub-processes (adapted from conceptual)

The use of the presented future state RIS (see Figure 26) facilitates the implementation of the gatekeeping activity before the physical entry point in the returns system. This in turn enables the early positioning of the avoidance activity, which otherwise is performed as the last stage. Lastly, it changes the focus on an efficient system built solely around value recovery to add possible value creation. Integrating the physical (downstream) network (see section 3.3) and improving RM and outsourcing parts of the RM process will benefit consumers and the e-commerce business in different ways. One definite method, from the consumers' perspective, is to coordinate the returning of goods with the delivery of exchange products, i.e. switching a defective product with a repaired or a new product, or simply delivering the "same" product in another size. Further, adding more or different value is a way of becoming more competitive (see sections 3.2 and 3.3), and thus a way of expanding the business.

6.3 RQ 3: Based on the achieved understanding and results, what are the potential benefits of aligning returns management in the business/supply chain strategy?

The RM process has traditionally been seen as a value recovery process, which has resulted in an efficiency focus in the returns flow. In this thesis, we have presented the effects on an organisation when underprioritising or neglecting RM in general and consumer returns specifically. Changing this focus and adding a more value creating perspective will enable organisations to find a more favourable and strategic position in the hypercompetitive e-commerce business (see section 3.3). Regarding consumer returns in fashion e-commerce in which returns levels reach 20–50% or even higher, it is difficult to understand that RM is still underprioritised, especially when the cost of returns is often met by customers, returning or not, as the cost of handling returns often exceeds the price paid by customers returning, especially when customers are offered free returns. Mollenkopf *et al.* (2007a) investigated RM and found it to be an important link between marketing and logistics and therefore affects sales and organisations' competitiveness. In this thesis, the author has presented empirical evidence describing varying customer buying and returning behaviour (see section 5.2 and section 5.6), which makes it quite clear that the "one-size-fits-all" strategy is outdated if the main goal is to be customer-oriented and still profitable. The way to treat customers in the e-commerce business, especially fashion and apparel, should be differentiated and support the customers, or better customer groups, demands and requirements. Delivering a service based on "one size fits all" resulted in a heterogeneous pattern when measuring the contribution margin, as described in appended Paper D.

Strategically neglecting (which was the case initially, see appended Paper A) RM and consumer returns resulted in a lack of system support to analyse the effects of the returns, i.e. the effects of accepting late returners and accepting all returns (low-value and defective) into the returns system, which of course comes naturally given the priority level. Missing the importance of analysing the causes of returns left the "problems" unresolved and they were likely to "happen" again as there were no processes in place to counteract or avoid them. Therefore, treating products, product groups, suppliers and personnel uniformly, thus supporting the "one-size-fits-all" strategy, was likely to be an effect of being very sales-oriented, i.e. focusing on revenue and growth, and hence focusing less on profitability. However, being overly sales-oriented and missing the point that returns, as described above, affect sales through

increased price, i.e. a greater margin to cover returns costs, surely backfires on the sales orientation. For the case organisation to be able to proceed this non-focus on returns and still grow from around \$US 2 million in 2007 to an approximate \$US 140 million in 2012 somewhat acknowledges that consumer returns are still a nuisance, as indicated by previous researchers (Blackburn *et al.*, 2004; Guide and Van Wassenhove, 2006) or a necessary evil (Genchev *et al.*, 2011).

However, to some customers and retailers, it is a painful process, a cost centre and an area of potential customer dissatisfaction (Stock *et al.*, 2006); therefore, focusing on an efficient (though missing the target becoming inefficient) returns system, and being ineffective, is likely to lose some opportunities and miss to attract new customers and lose some existing ones. The sales and returns patterns presented in appended Paper E and described in section 5.6 show groups of customers with different behaviour, indicating varying demands or requirements on the case organisation. Further, the e-commerce business in Sweden reaches a modest 5% of the retail business and it is quite likely that there are non-customers who are not supported by the current strategies and services and non-value created.

Organisations have realised that effective returns management can provide a number of benefits (Norek, 2002; Rogers *et al.*, 2002; Stock *et al.*, 2006; Mollenkopf *et al.*, 2007a; Mollenkopf *et al.*, 2007b; Frankel *et al.*, 2010; Mollenkopf, 2010), such as improved customer service, effective inventory management and product dispositioning, as described earlier (see section 3.1). The increased competition and globalisation have resulted in effects such as an increased focus on services as the product alone only stands for part of the value delivered. Globalisation as such has resulted in an increased movement of inbound and outbound transportation, affecting the environment, organisations and end-users. One way of controlling what can be controlled is the fact that organisations deliver what their customers and end-users require, no more and no less. Utilising a “one-size-fits-all approach” (see section 3.1) in the e-commerce business, as presented in this thesis, is likely to be inefficient (overproducing) and ineffective (underproducing). Gattorna’s (2010) DA and Ericsson’s (2011) DCM frameworks seem promising in bridging the gap between what customers expect and the specified or offered service, as they focus on the customer and their behaviour and requirements, i.e. consumer insight. Understanding the dominant buying behaviours in the market segment that organisations are servicing is fundamental. Otherwise, the over- and underservicing will be likely to occur, with a bearing on profitability and possibly lost sales. From an RM perspective, it is not a question of accepting returns or not, or trying to hinder customers from returning. It is to create an effective SC, understanding more about what causes consumer returns and controlling the present flow, i.e. avoiding the unnecessary/controllable and gatekeeping against the unwanted returns flow.

To create an effective e-commerce SC from a global perspective, organisations need an RIS that separates the information flow from the goods flow, as presented in appended Paper B and section 6.2. This allows organisations to follow real customer behaviour using stored data and real-time data (see appended Paper E and section 5.6) and to develop processes that are more in tune with the varying returns patterns caused by a mix of product characteristics and customer buying and returning behaviour. The RM process could be more visible for the SC and therefore better controlled if information about consumer returns was accessible in “near real time” when returns are caused. This thesis emphasises an integrated process perspective of RM as opposed to focusing

on separate activities (see sections 3.2 and 3.3). From an SCM perspective, RM as applied in this thesis advocates adding the focus on effectiveness (value creation) and not solely efficiency (value recovery). In doing so, organisations should focus on understanding the RM process as it assists consumers in the “job they are getting done” (see section 3.4) when ordering from the organisation.

7 Conclusions

This chapter presents the conclusions of this thesis followed by the practical and theoretical contributions.

7.1 Returns management in e-commerce

The overall purpose of this thesis was to increase the understanding of how and why to apply and improve returns management in e-commerce. The aim was to improve the RM framework and to assist the development of returns management research, with the intention of developing a conceptual/theoretical model of an e-commerce returns system that incorporates the application of avoidance (to improve effectiveness) and gatekeeping (to improve efficiency) in an e-commerce context in order to improve systems performance (effectiveness).

The main conclusions from this thesis fit with Nilsson and Gammelgaard's (2012, p. 765) description of the SCM discipline of today: *SCM encompasses collaboration and integration of interorganisational processes, creation of customer value and innovation.* RM is part of SCM and there is no doubt that returns will continue to be part of the business (Stock and Mulki, 2009), especially in the fashion/apparel e-commerce business in which products are produced or sourced globally, and in which size and fit issues play a significant role in causing consumer returns. However, as presented in this thesis, how we design, operate and analyse our organisations and the SC could make a difference when analysing and discussing the causes of consumer returns and how to apply returns management. RM is a cross-functional process and to work proactively to avoid the *avoidable*, organisations need internal collaboration and interorganisational integration. These have to be undertaken both to handle and to execute the RM process as well as the more proactive work using historical results from transactions to work better or even differently in the future.

In the reported and described single-case study, performed with the case organisation nelly.com, it was showed that the consumer returns rates are not only influenced by the product itself. Consumer returns constitute a complex problem that consists of the causes and reasons for return (size, fit, quality) in the product together with consumer buying and returning behaviour ultimately summing up to a total effect on the organisation. Leaving this problem unresolved, as the case organisation did for quite a long time, probably increased the returns rates and lengthened the return time as no questions were asked and nearly no returns were questioned. There is probably a learning curve whereby some customers might take the opportunity to use the "customer-friendly" approach of the case organisation. This behaviour seemed to increase when applying liberal returns policies, as the experiment showed, and this was in line with the literature (Wood, 2001; Wang, 2009; Petersen and Kumar, 2010). These effects from adjusting policies to adapt to the competitive side are an important aspect of why returns management should be improved as it clearly affects the customers' buying and returning behaviour (see Figure 23). Even though the proposed legislation to harmonise the consumer directive forcing organisations to accept free returns (see section 3.5) in the European Union was voted down during the writing of this thesis, the competition and globalisation seem to continue to affect the way in which organisations compete.

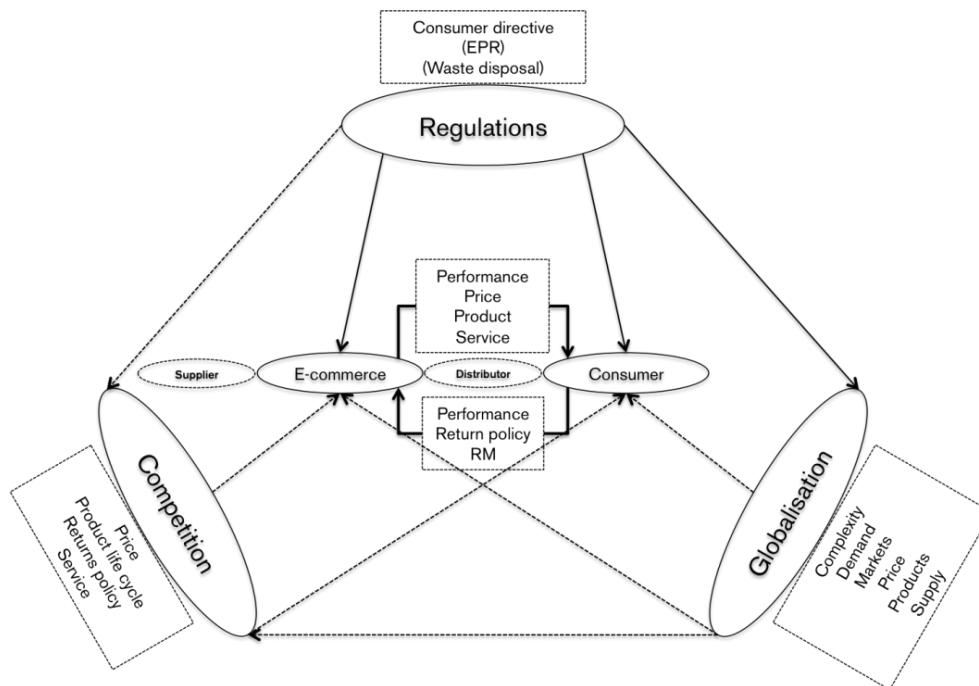


Figure 28 Theoretical model of the forces affecting returns in a dyad, here e-commerce–consumers

These three outer *forces* (Figure 28) and the gap in the literature regarding the applicability of RM to B2C (see section 1.2) together with propositions from previous research (see section 1.3) led to the purpose of this thesis, as presented above. This model has been developed during the course of this thesis.

The performance of two studies and the presentation of the study resulted in five appended papers answering the three research questions addressed, fulfilling this purpose. The combination of a longitudinal single-case study and a real-life experiment with real customers contributed to creating both a theoretical contribution and an important practical contribution. The reasons for applying RM depend on the understanding of the effects on the organisation and its stakeholders from the returns flow. In the first study performed, we presented empirical evidence that showed that the returns level is not as uniform as the organisation initially believed. Aggregated returns levels, often reported in the literature (Rogers and Tibben-Lembke, 1999; Norek, 2002; Stock and Mulki, 2009), do not present reasons for applying RM.

Analysing reasons for returns and returns rates for products, product groups and customers, we found quite varying returns patterns that are hidden when using aggregated returns data. These surely affect the organisation and its financial results. From the interviews conducted, we found that there was no process in place for the analysis of products, suppliers or the internal sourcing department regarding returns levels or reasons for returns. This indicates strongly that introducing and improving RM in an organisation without a returns strategy offer the potential to reduce the returns levels in several ways, such as through internal and external integration (see section 3.3). Firstly, cross-functional analysis of returns and feedback to purchasers, designers, suppliers and manufacturers will present them with the possibility for improvements. Secondly, choosing the correct supplier is critical, especially for certain products or product groups with high returns rates. Thirdly, how organisations decide what to sell in the coming season inevitably has a bearing on the future returns levels.

Choosing certain products, product groups and suppliers will, based on history, result in higher or lower risks of consumer returns. Likewise, entering new markets, the competitive *force* and the legislative *force* will also affect the returns levels. This further indicates the importance of RM and the proper returns system, including the RIS that facilitates the control over the returns flow yet introduces the possibility to decentralise parts of the returns handling in the network (see section 3.3 and Figure 29).

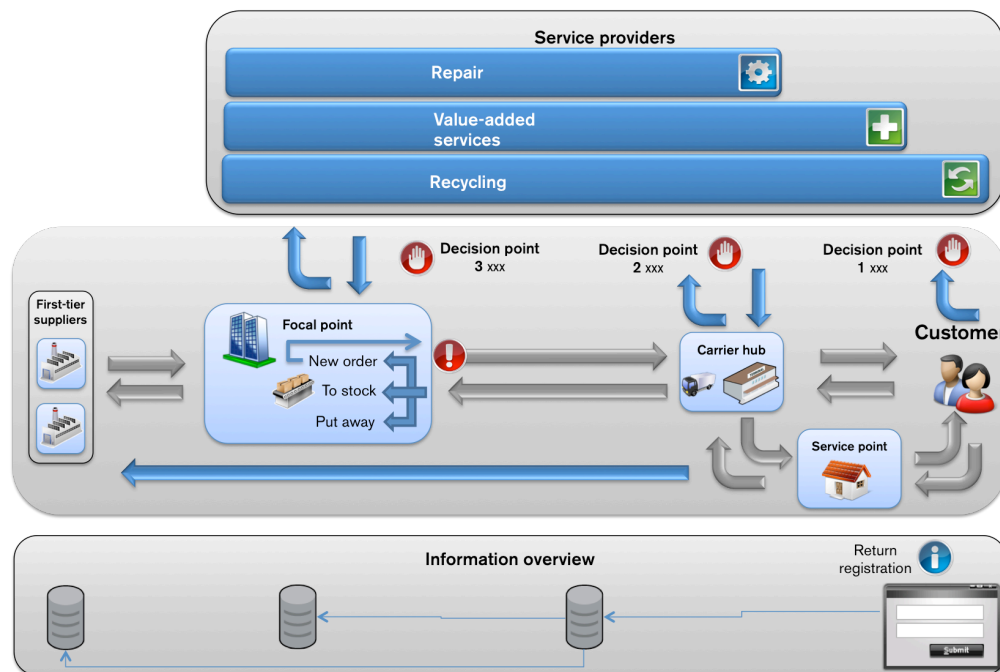


Figure 29 The developed conceptual model of an e-commerce returns system incorporating avoidance and gatekeeping

In order to achieve higher degrees of efficiency, it is vital to improve the RIS and how organisations use and share returns information, internally, cross-functionally and with their SC partners, but it is equally important to use information in near real time and make it accessible for customers online. The use of web registration of returns information creates tremendous opportunities for efficiency improvements in the returns flow but perhaps more importantly opportunities for increased effectiveness in the e-commerce SC.

Not using the vast amount of transactional data that are stored regarding returns is quite surprising, as described in the thesis; there are clear groupings in customers' buying and returning behaviour, indicating heterogeneous demands and requirements. We also presented evidence suggesting that the "one-size-fits-all" approach did not fit the customers when analysing and measuring the contribution margin. It was quite clear that certain customers were not ordering frequently from the case organisation and others were both frequent buyers and frequent returners and quite surprisingly the most profitable group (see section 5.6 or appended Paper E). The reported research has initiated an alignment process at nelly.com, with the use of transactional data encouraging and starting more evidence-based management of consumer returns.

Previous research indicates (with a few exceptions) that returns handling and returns systems are quite similar, focusing on value recovery and therefore on efficiency. The

buying and returning pattern found and described in this thesis indicates that this is not enough for all customers/end-users. The current returns processes, systems and activities seem to attract some but not all customers. This is where the DA framework fits, and it might not only reduce the returns levels as such; it is plausible that it could enhance the business and make organisations more competitive and the e-commerce business increase its share of the retail trade. This could be achieved through becoming more effective and efficient in supplying a differentiated service based on segmented customers' dominating buying behaviour. As the author concluded in the licentiate thesis, there are no average customers.

In the eyes of the author using the results from the thesis based both on previous research and on the research performed since the start of the research journey, consumer returns are part of the value creation in e-commerce and therefore returns management is a strategic part of the business as such.

In the introduction, the author wrote that sustainability and sustainable development are closely linked to the reverse flow of goods as well as the forward flow of goods. Extending the focus towards value creation will likely lead to the use of differentiated service delivery, as we have seen that customers behave differently in the present system (see appended Papers A and E) as well as when offered different delivery and returns policies (see appended Papers C and D). Separating the information flow from the goods flow in the returns flow increases the visibility and therefore facilitates a better focus on conserving the resources used in the returns system as well as in the SC, becoming more sustainable. This will, however need future research in order to gain and create consumer insights and to create an understanding of the demand and requirements customers and non-customers have for the e-commerce business, as presented in section 3.4.

7.2 Practical contributions

The reported research starts to fill the literature gap regarding *why* RM and consumer returns are strategically important to the fashion e-commerce business. We have presented empirical evidence in Study 1 (see appended Paper A) that increased the awareness of this importance and triggered a more proactive and strategic approach to RM. This new understanding has also started work to align strategies dynamically with customers' varying behaviour, which ultimately indicates heterogeneous demands and values. This awareness and understanding were quite far from the aggregated returns rates both reported by the literature and in use at the case company at the start of the research.

This thesis opens up the scope for managers, as the main task for many logistics managers, SC managers and returns managers is to reduce the effects from returns by becoming more efficient. This was probably acceptable a while ago and perhaps correctly so in the flow of waste and defective products early in the reverse logistics era. However, the returns problem nowadays, especially in e-commerce and specifically in fashion/apparel, is far from the traditional waste flow problems. The waste returns flow is a "natural" returns flow and the flow options are limited. Today, we see a returns flow that originates from all the possible connections in the SC and therefore we need a more flexible approach when it comes to building the flow options and executing the returns at the operational level. Handling consumer returns in a traditional or *efficient* returns system without knowing the reason for returns and

therefore the resultant value recovery is nothing more than gambling with resources. The proposed RIS framework addresses this issue and the downstream application of the gatekeeping activity, near or at the end-user location, needs managerial attention at the strategic process level to build a proper returns system that is partly, and quite likely, decentralised. This fits the growth tendency whereby new market entries are common. The effect of introducing the RIS framework into e-commerce, in which new market entries are common, is that applying downstream gatekeeping facilitates the outsourcing of the part of the returns flow that is inefficient today. Third-party service providers (3PSPs) or third-party logistics providers (3PLs) can assist in the decentralised value recovery and value creation while still keeping the planning and control at the e-commerce organisation.

Returns are caused by products, suppliers, customers and internal processes and therefore a returns manager needs to address this with other functions and SC partners. This result is partly new and the proposed alignment of RM as a strategic process is new in the sense that RM is part of the value creation; this thesis empirically supports the old theory that “one size fits all” is outdated and does not fit all in the e-commerce business. This implies that managers need to create a profound understanding of consumers’ dominant buying behaviour and to create suitable delivery and returns processes to be able to grow within existing customer records and to attract new or non-customers who are out of reach at present. Focusing on creating value for customers instead of benchmarking and using best practice approaches will decrease the competitive burden on organisations, as the competitive edge is not copied. The value creation part of RM seems to be heterogeneous as certain customers frequently utilise the returns process and others do not (see sections 5.2 and 5.6). This indicates that for some the returns process is part of the fulfilment process and for others it is not. Thus, the fulfilment process needs better integration with and further developed of the returns process. The present process merely suits the recovery of value and does not focus on the creation of value.

The main managerial implication of the real-time experiment seems to be that free delivery and returns policies should not be offered at all, given that they are not mandatory from a legislation and/or competition point of view. From an economic perspective, such policies are not recommended since the downside (i.e., decreased coverage of costs) is not compensated for by a significant upside. It was apparent from the experiment that offering lenient delivery and returns policies increases the probability of returns and seems to reinforce (r)e-tail borrowing behaviour and therefore a more differentiated view of how to apply such policies from a managerial perspective is suggested. Offering the same delivery and returns conditions to all types of customers and products cannot be generally considered optimal with respect to profitability.

7.3 Theoretical contributions

The longitudinal single-case study performed in this research has contributed to the body of knowledge regarding why and how organisations start their journey from neglecting and not prioritising RM to becoming aware of effects from a low priority level and becoming more proactive and implementing an RM process. Following this, the research contributes to and develops the RM framework to achieve a better fit with the conditions in the e-commerce returns flow. It contributes new applications of the avoidance activity that are based on the RIS framework involving the real-time use

of data from customers, using their returns information to avoid unnecessary consumer returns. Further, the gatekeeping activity was not developed and defined for the B2C e-commerce business and this research has contributed to the development in the studied context and in combination with the avoidance activity (see Figure 29 and Figure 30).

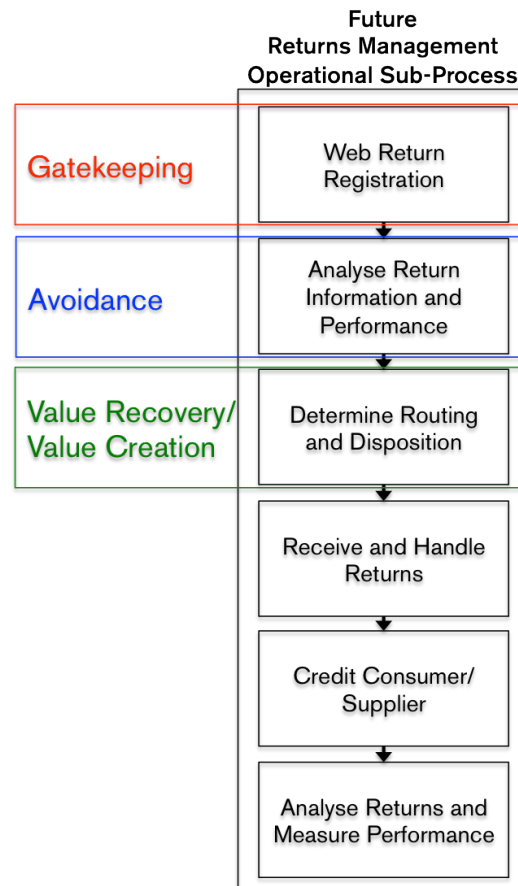


Figure 30 The developed future RM process

As a result of performing a real-life experiment with real customers who were ordering and returning, this thesis contributes to the understanding of the effects caused by changes to delivery and returns policies. Further, it extends the body of knowledge regarding the performance of real-life experiments with real customers. The research has verified the results of several previous studies based on experiments in laboratory settings or analyses of secondary data in this field; however, this research also challenges some previous results using the experimental design. Several prior findings were not confirmed by our data, and we present new and previously unknown associations between consumer behaviour and leniency in delivery and/or returns policies. We found two different types of relationships. First, we observed an association between a free delivery policy and various types of returning behaviours. First, we observed an association between a free delivery policy and various types of returning behaviours. The “mirrored” relationship (i.e., the association between free returns policies and purchasing behaviour) has previously been explored; however, the effects of delivery conditions on returns behaviour appear to be a new finding. We believe that the mechanisms behind this association must be explored further in future research.

Second, we observed a pattern of interaction between a free delivery policy and a free returns policy. The expected effects on consumer behaviour of one lenient policy appear to depend on whether the other policy is also lenient. This relationship has implications for the theoretical modelling of behaviour and the practical implementation of policies. Future theoretical research should consider delivery and returns conditions as well as possible interactions between these factors. It is also possible that the behavioural effects discovered here differ across different types of customers. Therefore, future research should include controls for RFM type variables and demographic variables such as age and gender. Following both the case study and the experiment, we have been able to support the theory that the “one-size-fits-all” strategy is obsolete in the studied context.

7.4 Research limitations

The limitations of this thesis include my personal presumptions and the way the research was performed. The research design can be regarded as somewhat innovative, in combining a longitudinal single-case study and a real-life experiment. However, focusing on the purpose of the study and the research questions addressed, and the fact that the author acknowledges that research should be driven by the problem at hand. The author see the design more as a strength than as a limitation when combining methods within a study as well in the overall research design. Considering the purpose of generating/extending theory, studying a single case over time presented me with a clearer view of what might cause or influence consumer returns. Therefore, the experiment was performed as part of the reflexive research design. This should be seen as a strength as both designs have their weaknesses and strengths and combining them strengthens the end result.

The developed returns system and the suggested use of SOA and EDA were not tested in practice, though applied in theory to the data generated and the problem presented in the appended Paper B. This can be viewed as a limitation; however, using a web return registration system does not necessarily need the SOA and EDA and therefore the results from the study, applying avoidance and gatekeeping, are valid. The actual use of SOA and EDA are therefore to be placed in the future research part and discussed later in the thesis.

My personal presumptions are based on the view that we live in a world that is difficult to describe in an objective way and therefore your understanding of the results in this thesis are dependent on my subjective view of what I have seen and the way in which I describe and write about what I have performed.

8 Discussion

This section will discuss the result of the thesis in terms of the purpose and research questions, the research performed and the outcome.

On page v, the author wrote a quote from Lee Hochberg,⁵ who participated in the Singapore 2012 Supply Chain Conference on “thought leadership”. Instead of asking readers to go back, the quote is repeated, as it is quite generic and fits the findings and results presented in the thesis:

The supply chain is perfectly designed to execute its output – so do not complain about its current output – if you want another output you need another supply chain design.

How does this quote fit into the thesis results? The author is not sure if he understands the quote as Lee Hochberg meant it. Or, better, the author is quite convinced that we do not read it with the same pre-understanding or lenses and therefore it needs a little explanation from the author’s point of view.

When the research journey started way back in time, there was not much interest in the research area of consumer returns or returns management. It all started by studying the returns handling at three large mail order/e-commerce organisations situated in the vicinity of Borås. The organisations were Ellos, Halens and H&M mail order. These three “giants” in mail order have been present since the beginning of mail order, or at least almost since the beginning. If one compares them with the case organisation nelly.com, the three are prehistoric in good and bad ways. After the initial research with the “three”, the author understood that he would never come close to the centre of consumer returns in an organisation if he stayed with the previous organisations. The author wanted to find the nerve and become close to an organisation to understand as much as possible about returns in general and consumer returns specifically. The author understood that to achieve this it was needed either to reduce in corporate size or to find a “specialist” or key informant within an organisation who understands and knows what is going on and who has the *whole* picture. Reducing in size would somewhat redirect my interest and delimit my scope and quest, but the author was willing to make that trade-off.

In this thesis, the author has tried to present the problems to the readers as he has seen them both from the literature and from the practitioners’ perspective, albeit through his lenses. The results presented show three different viewpoints on the problems regarding consumer returns in e-commerce. First is the problem that relates to globalisation, which has a bearing on production, sourcing and markets. Then, we have the problem regarding the consumer, who all too often is seen as the king or queen, and who is sometimes allowed to float freely doing whatever he or she wants. Lastly, returns are related to the organisation and how we conduct our business regarding both the global context and how we handle the organisation and our relations with suppliers and customers. If we attack these aspects, as Gattorna (2010) mentions, with an operational sledgehammer to reduce the complexity (see section 3.2), such organisations obtain the output they “deserve” both from existing customers and from

⁵ Director, GM, Global Integrated Planning & Optimisation Systems

non-adopters. If we accept that there are no average customers and that there is no room for the “one-size-fits-all” strategy in the e-commerce business, then perhaps we need to accept and embrace a far more liberal view of SC configurations. In section 7.1, the author referred to Nilsson and Gammelgaard (2012) and their description of the SCM discipline of today:

SCM encompasses collaboration and integration of interorganizational processes, creation of customer value and innovation.

In this thesis, we have described heterogeneous buying and returning behaviour as a response to the “one-size-fits-all” approach utilised by the case organisation. Porter (2008) argues that when dealing with increased competition one needs to understand the forces that drive the competition and how to use them strategically in favour of the own company (see section 3.2). Understanding the value the returns process actually delivers or creates can place organisations in a more favourable competitive position, thus reducing the effects of the existing rivalry in the business and perhaps even keeping new entrants out. Further, to become responsive and competitive in a hypercompetitive environment, such as the e-commerce business, an organisation can use differentiation strategies for existing products and logistics services or markets (Kotzab *et al.*, 2009). Alternatively, introducing new products/logistics services into existing or new markets will require deeper and more meaningful relationships within the firms’ SC according to Kotzab *et al.* According to Porter (1996), hypercompetition is a self-inflicted wound.

The e-commerce business is growing rapidly; however, it represents a fraction of the retail trade, in Sweden around 5%. Therefore, the reasons for non-buying and non-usage are also important (Osterwalder and Pigneur, 2010), and supporting the e-commerce business with a standardised returns process focusing on value recovery will likely not support “getting the job done” for all consumers. In the contemporary market, the focus ought to be on understanding the motivations behind purchase decisions. This requires an understanding of individual consumers rather than an overly simplistic image of the “average consumer”. A business model describes the rationale of how an organisation creates, delivers and captures customer value (Osterwalder and Pigneur, 2010). For some customers, as presented in this thesis, the returns process is part of the overall value creation and therefore the fulfilment process needs to be developed to become more dynamic and flexible. Therefore the e-commerce business model of the future needs to be much more adaptive to heterogeneous requirements and demands.

Innovation and adaption of the e-commerce business model towards creating and delivering customer value in a global context will need collaboration and integration of interorganisational processes, as described by Nilsson and Gammelgaard (2012). The intensified globalisation involves more external organisations for the delivery of goods (Ko, 2009), and the returns process in e-commerce accentuates this and increases the transportation needed. The presented model (see Figure 29) facilitates the information sharing needed. However, development of the business processes and services is necessary, as discussed in section 3.3.

9 Future research

This section presents future research areas.

9.1 The returns management process

The separation of the information and the returned goods was discussed in the licentiate thesis (Hjort, 2010) and presented in the appended Paper B in this thesis. In appended Paper A, we reported that the case organisation developed a web returns system during 2012. The effect from the separation is therefore not included in the thesis as it is newly implemented. However, it requires future research both to utilise the real-time information and to verify its functionality. The RIS and the use of return reason codes is another area for future research as the old paper system used a number of static return codes. Further, when gatekeeping the returns flow, using the returns information one could argue that customers could start to misuse this opportunity and defraud the system. Therefore, we need to research and verify both the accuracy of the information and the ways to develop the returns process as seen from the customer perspective.

As presented in appended Paper B, a percentage of the returns flow is valued below the cost of the actual returns handling and transportation, thus there is no value recovery. This is another area for future research: how should the system handle these and what is the best way of disposing of them?

9.2 Experimental research

Regarding the experiment performed, we believe that the mechanisms behind the association between delivery conditions and returns behaviours and the effects of delivery conditions on returns behaviours appear to be a new finding and must be further explored in future research, as this finding has important managerial implications.

The experiment was performed using previous customers of the company. Previous research indicates that customer behaviour does not remain stable because the experience that customers acquire from past e-purchases influences their subsequent behaviour. Therefore, a methodological challenge in future research is to identify methods for performing randomised and controlled field experiments with new customers as subjects. We also believe that the financial consequences of free delivery and returns policies as well as the customer behaviour that is associated with other types of leniency merit attention in future research. For example, the optimal returns rate is rarely zero, as the opportunity cost in terms of lost sales to reach zero returns is typically excessively high. Given more accurate information regarding customer behaviour, the optimal managerial trade-off between these factors can be analysed more thoroughly.

9.3 Innovation and business model generation

The value creation perspective in general and the business model generation perspective in particular are another area for more qualitative research. The business model perspective could assist the development of the delivery and returns processes that are in tune with the job customers are trying to complete when ordering online. It is quite unlikely that customers' demands are satisfied with the present delivery and

returns system. In the thesis, we reported heterogeneous buying and returning patterns whereby in the appended Paper B the most profitable customer group is the frequent buying and frequent returning customer group. The web registration of returns is forcing customers to use the website to be able to return items; this is perhaps not the best option for all customers. From a business perspective, however, it offers another possibility to connect with the customer once again, thus selling more, or a possibility for reconciliation and offering a solution to the “problem” causing the return.

At present, the returns flow is very rigid and inflexible and the price model does not offer any way of separating the returning activities performed in the returns process. Thus, the organisation pays a fee for the collection of returns at the DoP (see Figure 9), the sorting and transportation and finally the sorting for delivery back to the e-commerce business warehouse. Utilising the separation of information and goods using web registration returns could plan for decentralised handling of certain consumer returns. However, this would need research regarding both the delivery and the returns system including a developed packaging system.

References

- Alreck, P.L., Dibartolo, G.R., Diriker, M., Dover, H.F., Passyn, K.A. & Settle, R.B. (2009), "Time pressure, time saving and online shopping: Exploring a contradiction", *Journal of Applied Business Research*, Vol. 25 No. 5, pp. 85-91.
- Amit, R. & Zott, C. (2001), "Value creation in e-business", *Strategic Management Journal*, Vol. 22 No. 6-7, pp. 493-520.
- Anderson, E.T., Hansen, K. & Simester, D. (2009), "The option value of returns: Theory and empirical evidence", *Marketing Science*, Vol. 28 No. 3, pp. 405-423.
- Andreassen, T., Wallin (2000), "Antecedents to satisfaction with service recovery", *European Journal of Marketing*, Vol. 34 No. 1/2, pp. 156-175.
- Arbnor, I. & Bjerke, B. (1997), *Methodology for creating business knowledge*, Sage Publications,
- Autry, C.W. (2005), "Formalization of reverse logistics programs: A strategy for managing liberalized returns", *Industrial Marketing Management*, Vol. 34 No. 7, pp. 749– 757.
- Bae, S. & Lee, T. (2011), "Gender differences in consumers' perception of online consumer reviews", *Electronic Commerce Research*, Vol. 11 No. 2, pp. 201-214.
- Bergh, J.V.D. & Viaene, S. (2012), "Promises from soa: Reengineering a procurement process at belgacom mobile – a case study approach", *Business Process Management Journal*, Vol. 18 No. 5, pp. 815-828.
- Bernon, M. & Cullen, J. (2007), "An integrated approach to managing reverse logistics", *International Journal of Logistics: Research & Applications*, Vol. 10 No. 1, pp. 41-56.
- Blackburn, J.D., Guide Jr, V.D.R., Souza, G.C. & Van Wassenhove, L.N. (2004), "Reverse supply chains for commercial returns", *California Management Review*, Vol. 46 No. 2, pp. 6-22.
- Blanchard, D., 2007. At a glance: Reverse logistics. *Industry Week/IW*. Penton Publishing, 48.
- Blumberg, D.F. (2005), *Introduction to management of reverse logistics and closed loop supply chains processes*, CRC, Taylor & Francis Group, Boca Raton, Florida
- Bryman, A. (2008), *Social research methods*, Oxford University Press, New York
- Carter, C.R. & Ellram, L.M. (1998), "Reverse logistics: A review of the literature and framework for future investigation", *Journal of Business Logistics*, Vol. 19 No. 1, pp. 85-102.
- Cha, A.E. 2004. Some shoppers find fewer happy returns databases limit 'excessive' exchanges *Washington Post Staff Writer*, November 7.
- Checkland, P. (1995), "Model validation in soft systems practice", *Systems Research*, Vol. 12 No. 1, pp. 47-54.
- Chen, I.C. & Hu, S.-C. (2012), "Gender differences in shoppers' behavioural reactions to ultra-low price tags at online merchants", *Electronic Commerce Research*, Vol. 12 No. 4, pp. 485-504.

- Christopher, M. (2005), *Logistics and supply chain management*, Prentice Hall, London
- Christopher, M., Mena, C., Khan, O. & Yurt, O. (2011), "Approaches to managing global sourcing risk", *Supply Chain Management: An International Journal*, Vol. 16 No. 2, pp. 67-81.
- Christopher, M., Peck, H. & Towill, D. (2006), "A taxonomy for selecting global supply chain strategies", *The International Journal of Logistics Management*, Vol. 17 No. 2, pp. 277-287.
- Cohen, J. (1992), "A power primer", *Psychological Bulletin*, Vol. 112 No. pp. 155-159.
- Cooper, M.C., Lambert, D.M. & Pagh, J.D. (1997), "Supply chain management: More than a new name for logistics", *International Journal of Logistics Management*, Vol. 8 No. 1, pp. 1-14.
- Croxton, K.L., Garcia-Dastugue, S.J., Lambert, D.M. & Rogers, D.S. (2001), "The supply chain management processes", *International Journal of Logistics Management*, Vol. 12 No. 2, pp. 13-36.
- Daugherty, P.J., Myers, M.B. & Richey, R.G. (2002), "Information support for reverse logistics: The influence of relationship commitment", *Journal of Business Logistics*, Vol. 23 No. 1, pp. 85-106.
- Davis, S., Hagerty, M. & Gerstner, E. (1998), "Return policies and the optimal level of "hassle"", *Journal of Economics and Business*, Vol. 50 No. 5, pp. 445-460.
- Diane, A.M. & David, J.C. (2005), "The hidden value in reverse logistics", *Supply Chain Management Review*, Vol. 9 No. 5, pp. 34-36,38-40,42-43.
- Dubois, A. & Gadde, L.-E. (2002), "Systematic combining: An abductive approach to case research", *Journal of Business Research*, Vol. 55 No. 7, pp. 553-560.
- E-Barometern (2011), "E-barometern q4 2011", Available at: <http://www.hui.se/statistik-rapporter/index-och-barometrar/e-barometern> (accessed 10 January 2013).
- E-Barometern (2012), "E-barometern q4 2012", Available at: <http://www.hui.se/statistik-rapporter/index-och-barometrar/e-barometern> (accessed 10 January 2013).
- Eisenhardt, K.M. (1989), "Building theories from case study research", *Academy of Management Review*, Vol. 14 No. 4, pp. 532-550.
- Eisenhardt, K.M. & Graebner, M.E. (2007), "Theory building from cases: Opportunities and challenges", *Academy of Management Journal*, Vol. 50 No. 1, pp. 25-32.
- Ekwall, D., 2009. *Managing the risk for antagonistic threats against the transportation network*. Chalmers University of Technology.
- Ellram, L.M. (1996), "The use of the case study method in logistics research", *Journal of Business Logistics*, Vol. 17 No. 2, pp. 93-138.
- Emota (2006), "Emota key figures 2006", Available at: <http://www.emota.eu/publications/facts-a-figures/132-key-figures-2006.html> (accessed 10 January 2013).

- Emota (2009), "Emota report 2009", Available at:
http://www.emota.eu/files/EMOTA_Report_2009.pdf (accessed 10 January 2013).
- Emota (2010), "Emota report 2010", Available at:
<http://www.emota.eu/images/stories/anrep2010.pdf> (accessed 10 January 2013).
- Emota (2011), "Emota report 2011", Available at:
http://www.emota.eu/files/emota_report_2011.pdf (accessed 10 January 2013).
- Ericsson, D. (2011), "Demand chain management — the evolution", *ORiON: The Journal of ORSSA*, Vol. 27 No. 1, pp. 45-81.
- Eu (2011a), "Better protection for online shoppers", Available at:
<http://www.europarl.europa.eu/en/pressroom/content/20110323IPR16151/html/Better-protection-for-online-shoppers> (accessed 10 January 2013).
- Eu (2011b), "Breakthrough in consumer rights negotiations", Available at:
http://www.europarl.europa.eu/pdfs/news/expert/infopress/20110607IPR20822/20110607IPR20822_en.pdf (accessed 10 January 2013).
- Eu (2011c), "Consumer rights deal overwhelmingly endorsed by internal market committee", Available at:
<http://www.europarl.europa.eu/news/en/pressroom/content/20110614IPR21334/html/Consumer-rights-deal-overwhelmingly-endorsed-by-Internal-Market-Committee> (accessed 10 January 2013).
- Eu (2011d), "Proposal for a directive on consumer rights", Available at:
<http://www.europarl.europa.eu/document/activities/cont/201106/20110616ATT21551/20110616ATT21551EN.pdf> (accessed 10 January 2013).
- Eu (2011e), "Strengthening consumer rights across europe", Available at:
<http://www.europarl.europa.eu/news/en/pressroom/content/20110131IPR12811/html/Strengthening-consumer-rights-across-Europe> (accessed 10 January 2013).
- Eur-Lex (1997), "Directive 97/7/ec of the european parliament and of the council", Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997L0007:EN:NOT> (accessed 10 January 2013).
- Eur-Lex (2000), "Directive 2000/31/ec of the european parliament and of the council", Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32000L0031:en:NOT> (accessed 10 January 2013).
- Eur-Lex (2011), "Directive 2011/83/eu of the european parliament and of the council", Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:304:0064:0088:EN:PDF> (accessed 10 January 2013).
- Eurostat (2009), "Data in focus 46/2009", Available at:
http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-QA-09-046/EN/KS-QA-09-046-EN.PDF (accessed 10 January 2013).
- Eurostat (2010), "Data in focus 50/2010", Available at:
http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-QA-10-050/EN/KS-QA-10-050-EN.PDF (accessed 10 January 2013).

- Ferguson, M., Guide Jr, V.D.R. & Souza, G.C. (2006), "Supply chain coordination for false failure returns", *Manufacturing & Service Operations Management*, Vol. 8 No. 4, pp. 376-393.
- Fisher, M.L. (1997), "What is the right supply chain for your product?", *Harvard Business Review*, Vol. 75 No. 2, pp. 105-116.
- Flick, U. (2009), *An introduction to qualitative research*, Sage Publications Inc, Thousand Oaks, California
- Florin, D., Callen, B., Pratzel, M. & Kropp, J. (2007), "Harnessing the power of consumer insight", *Journal of Product & Brand Management*, Vol. 16 No. 2, pp. 76-81.
- Frankel, R., Mollenkopf, D. & Russo, I., 2010. Effective returns management: Enhancing retailer - supplier relationship. *Australian and New Zealand Marketing Academy (ANZMAC)*. Christchurch, New Zealand.
- Gammelgaard, B. (2004), "Schools in logistics research? A methodological framework for analysis of the discipline", *International Journal of Physical Distribution & Logistics Management*, Vol. 34 No. 6, pp. 479-491.
- Gattorna, J. (2010), *Dynamic supply chains: Delivering value through people*, Pearson Education Limited,
- Genchev, S.E., Richey, R.G. & Gabler, C.B. (2011), "Evaluating reverse logistics programs: A suggested process formalization", *International Journal of Logistics Management*, Vol. 22 No. 2, pp. 242-263.
- Godsell, J., Diefenbach, T., Clemmow, C., Towill, D. & Christopher, M. (2011), "Enabling supply chain segmentation through demand profiling", *International Journal of Physical Distribution & Logistics Management*, Vol. 41 No. 3, pp. 296-314.
- Godsell, J., Harrison, A., Emberson, C. & Storey, J. (2006), "Customer responsive supply chain strategy: An unnatural act?", *International Journal of Logistics Research and Applications*, Vol. 9 No. 1, pp. 47-56.
- Goel, L. & Prokopec, S. (2009), "If you build it will they come?—an empirical investigation of consumer perceptions and strategy in virtual worlds", *Electronic Commerce Research*, Vol. 9 No. 1-2, pp. 115-134.
- Guide Jr, V.D.R., Souza, G.C., Van Wassenhove, L.N. & Blackburn, J.D. (2006), "Time value of commercial product returns", *Management Science*, Vol. 52 No. 8, pp. 1200-1214.
- Guide Jr, V.D.R. & Van Wassenhove, L.N. (2006), "Closed-loop supply chains: An introduction to the feature issue (part 2)", *Production & Operations Management*, Vol. 15 No. 4, pp. 471-472.
- Guide, V.D.R. & Van Wassenhove, L.N. (2006), "Closed-loop supply chains: An introduction to the feature issue (part 1)", *Production and Operations Management*, Vol. 15 No. 3, pp. 345-350.
- Hammer, M. & Champy, J. (1993), *Reengineering the corporation: A manifesto for business revolution*, Harper Business, New York

- Hardesty, D.M. & Bearden, W.O. (2009), "Consumer behavior and retailing", *Journal of Retailing*, Vol. 85 No. 3, pp. 239-244.
- Harris, L.C. (2010), "Fraudulent consumer returns: Exploiting retailers' return policies", *European Journal of Marketing*, Vol. 44 No. 6, pp. 730-747.
- Harrison, A. & Van Hoek, R. (2008), *Logistics management and strategy*, Prentice Hall, London
- Heikkilä, J. (2002), "From supply to demand chain management: Efficiency and customer satisfaction.", *Journal of Operations Management*, Vol. 20 No. 6, pp. 747-767.
- Hellström, D., 2007. *On interactions between packaging and logistics*. Lund University.
- Hernández, B., Jiménez, J. & Martín, M.J. (2010), "Customer behavior in electronic commerce: The moderating effect of e-purchasing experience", *Journal of Business Research*, Vol. 63 No. 9/10, pp. 964-971.
- Hjort, K., 2010. *Returns avoidance and gatekeeping to enhance e-commerce performance*. Chalmers University of Technology.
- Hjort, K. & Ericsson, D., 2010. An application of avoidance and gatekeeping to manage returns in a distance selling setting. *Proceedings of the 22nd Annual Conference for Nordic Researchers in Logistics, 2010*, Kolding, Denmark.
- Hjort, K. & Larsson, J., 2009. Avoiding returns in distant selling through differentiating customers and their service delivery. *Proceedings of the 21st Annual Conference for Nordic Researchers in Logistics, 2009*, Jönköping, Sweden, 349-364.
- Holland, P.W. (1986), "Statistics and causal inference", *Journal of the American Statistics Association*, Vol. 81 No. 396, pp. 945-960.
- Jick, T.D. (1979), "Mixing qualitative and quantitative methods: Triangulation in action", *Administrative Science Quarterly*, Vol. 24 No. 4, pp. 602-611.
- Jüttner, U., Godsell, J. & Christopher, M.G. (2006), "Demand chain alignment competence -- delivering value through product life cycle management", *Industrial Marketing Management*, Vol. 35 No. 8, pp. 989-1001.
- Kang, M. & Johnson, K. (2009), "Identifying characteristics of consumers who frequently return apparel", *Journal of Fashion Marketing and Management*, Vol. 13 No. 1, pp. 37-48.
- Kauffman, R.J. & Walden, E.A. (2001), "Economics and electronic commerce: Survey and directions for research.", *International Journal of Electronic Commerce*, Vol. 5 No. 4, pp. 5-116.
- King, T. & Dennis, C. (2003), "Interviews of deshopping behaviour: An analysis of theory of planned behaviour", *International Journal of Retail & Distribution Management*, Vol. 31 No. 3, pp. 153-163.
- Ko, R.K.L. (2009), "A computer scientist's introductory guide to business process management (bpm)", *Crossroads*, Vol. 15 No. 4, pp. 11-18.
- Kotzab, H., Grant, D., Teller, C. & Halldorsson, A. (2009), "Supply chain management and hypercompetition", *Logistics Research*, Vol. 1 No. 1, pp. 5-13.

- Kovács, G. & Spens, K.M. (2005), "Abductive reasoning in logistics research", *International Journal of Physical Distribution & Logistics Management*, Vol. 35 No. 2, pp. 132-144.
- Kovács, G. & Spens, K.M. (2006), "A content analysis of research approaches in logistics research", *International Journal of Physical Distribution & Logistics Management*, Vol. 36 No. 5, pp. 374-390.
- Lambert, D.M. (2004), "The eight essential supply chain management processes", *Supply Chain Management Review*, Vol. 8 No. 6, pp. 18-26.
- Lee, T., W. (1999), *Using qualitative methods in organizational research*, Sage Publications, Thousand Oaks, California
- Lee, T.W. (1998), *Using qualitative methods in organizational research*, SAGE Publications Inc, Thousand Oaks, California, United States of America
- Lewis, M. (2006), "The effect of shipping fees on customer acquisition, customer retention, and purchase quantities", *Journal of Retailing*, Vol. 82 No. 1, pp. 13-23.
- López-Bonilla, J.S.M. & López-Bonilla, L.M. (2008), "Sensation seeking and e-shoppers", *Electronic Commerce Research*, Vol. 8 No. 3, pp. 143-154.
- Lummus, R.R., Vokurka, R.J. & Krumwiede, D. (2008), "Supply chain integration and organizational success", *SAM Advanced Management Journal (07497075)*, Vol. 73 No. 1, pp. 56-63.
- Mattsson, E., 2012. Personal contact. In Ecc Sweden, S.C.A. ed.
- Mentzer, J.T., Dewitt, W., Keebler, J.S., Soonhoong, M., Nix, N.W., Smith, C.D. & Zacharia, Z.G. (2001), "Defining supply chain management", *Journal of Business Logistics*, Vol. 22 No. 2, pp. 1-25.
- Mihi Ramírez, A. (2012), "Product return and logistics knowledge: Influence on performance of the firm", *Transportation Research Part E: Logistics and Transportation Review*, Vol. 48 No. 6, pp. 1137-1151.
- Mollenkopf, D., Russo, I. & Frankel, R. (2007a), "The returns management process in supply chain strategy.", *International Journal of Physical Distribution & Logistics Management*, Vol. 37 No. 7, pp. 568-592.
- Mollenkopf, D.A. (2010), "Reverse logistics - effective returns management in an integrated supply chain", Available at: http://www.scmr.com/article/effective_returns_management_in_an_integrated_supply_chain (accessed 10 January 2013).
- Mollenkopf, D.A., Rabinovich, E., Laseter, T.M. & Boyer, K.K. (2007b), "Managing internet product returns: A focus on effective service operations", *Decision Sciences*, Vol. 38 No. 2, pp. 215-250.
- Naturvårdsverket (2013), "Producentansvar", Available at: <http://www.naturvardsverket.se/Start/Produkter-och-avfall/Avfall/Producentansvar/> (accessed 12 January 2013).
- Nilsson, F. & Gammelgaard, B. (2012), "Moving beyond the systems approach in scm and logistics research", *International Journal of Physical Distribution & Logistics Management*, Vol. 42 No. 8/9, pp. 764-783.

- Norek, C.D. (2002), "Returns management making order out of chaos", *Supply Chain Management Review*, Vol. 6 No. 3, pp. 34-42.
- Näslund, D. (2002), "Logistics needs qualitative research – especially action research", *International Journal of Physical Distribution & Logistics Management*, Vol. 32 No. 5, pp. 321-338
- Näslund, D. & Hulthen, H. (2012), "Supply chain management integration: A critical analysis", *Benchmarking: An International Journal*, Vol. 19 No. 4/5, pp. 481-501.
- Osterwalder, A. & Pigneur, Y. (2010), *Business model generation: A handbook for visionaries; game changers; and challengers*, John Wiley & Sons, Inc., Hoboken, New Jersey
- Padmanabhan, V. & Png, I.P.L. (1995), "Returns policies: Make money by making good", *Sloan Management Review*, Vol. 37 No. 1, pp. 65-65.
- Peteraf, M.A. & Barney, J.B. (2003), "Unraveling the resource-based tangle", *Managerial and Decision Economics*, Vol. 24 No. 4, pp. 309-323.
- Petersen, J.A. & Kumar, V. (2010), "Can product returns make you money?", *MIT Sloan Management Review*, Vol. 51 No. 3, pp. 84-89.
- Pfeffer, J. & Sutton, R.I. (2006), "Evidence-based management", *Harvard Business Review*, Vol. 84 No. 1, pp. 62-74.
- Piron, F. & Young, M. (2000), "Retail borrowing: Insights and implications on returning used merchandise", *International Journal of Retail & Distribution Management*, Vol. 28 No. 1, pp. 27-36.
- Pokharel, S. & Mutha, A. (2009), "Perspectives in reverse logistics: A review", *Resources, Conservation and Recycling*, Vol. 53 No. 4, pp. 175-182.
- Porter, M.E. (1996), "What is strategy?", *Harvard Business Review*, Vol. 74 No. 6, pp. 61-78.
- Porter, M.E. (2001), "Strategy and the internet", *Harvard Business Review*, Vol. 79 No. 3, pp. 62-78.
- Porter, M.E. (2008), "The five competitive forces that shape strategy", *Harvard Business Review*, Vol. 86 No. 1, pp. 78-93.
- Postnord (2012), "E-handeln i norden 2012", Available at: http://www.posten.se/sv/Documents/PDF/e-handeln_i_norden_2012.pdf (accessed 10 January 2013).
- Reldin, P. & Sundling, P., 2007. *Explaining soa service granularity – how it-strategy shapes services*. Linköping Univeristy.
- Richey, R.G., Roath, A.S., Whipple, J.M. & Fawcett, S.E. (2010), "Exploring a governance theory of supply chain management: Barriers and facilitators to integration", *Journal of Business Logistics*, Vol. 31 No. 1, pp. 237-256.
- Rogers, D.S., Croxton, K.L., Garcia-Dastugue, S.J. & Lambert, D.M. (2002), "The returns management process", *International Journal of Logistics Management*, Vol. 13 No. 2, pp. 1-18.
- Rogers, D.S. & Tibben-Lembke, R.S. (1999), *Going backwards reverse logistics trends and practices*, Reverse Logistics Executive Council, Pittsburgh, Pennsylvania

- Rogers, D.S. & Tibben-Lembke, R.S. (2001), "An examination of reverse logistics practices", *Journal of Business Logistics*, Vol. 22 No. 2, pp. 129-148.
- Rosenbaum, M.S. & Kuntze, R. (2003), "The relationship between anomie and unethical retail disposition", *Psychology and Marketing*, Vol. 20 No. 12, pp. 1067-1093.
- Rosenbaum, M.S., Kuntze, R. & Wooldridge, B.R. (2011), "Understanding unethical retail disposition practice and restraint from the consumer perspective", *Psychology and Marketing*, Vol. 28 No. 1, pp. 29-52.
- Rubio, S., Chamorro, A. & Miranda, F.J. (2008), "Characteristics of the research on reverse logistics (1995-2005)", *International Journal of Production Research*, Vol. 46 No. 4, pp. 1099-1120.
- Rutten, W.G.M.M. & Van Der Veecken, D.J.M. (1998), "Logistics service management: Opportunities for differentiation", *The International Journal of Logistics Management*, Vol. 9 No. 2, pp. 91-98.
- Scb, 2010. Business statistics internet shopping. Statistics Sweden.
- Stavroulaki, E. & Davis, M. (2010), "Aligning products with supply chain processes and strategy", *International Journal of Logistics Management*, Vol. 21 No. 1, pp. 127-151.
- Stentoft Arlbjørn, J. & Halldorsson, A. (2002), "Logistics knowledge creation: Reflections on content, context and processes", *International Journal of Physical Distribution & Logistics Management*, Vol. 32 No. 1, pp. 22-40.
- Stock, J., Speh, T. & Shear, H. (2002), "Many happy (product) returns", *Harvard Business Review*, Vol. 80 No. 7, pp. 16-17.
- Stock, J., Speh, T. & Shear, H. (2006), "Managing product returns for competitive advantage", *MIT Sloan Management Review*, Vol. 48 No. 1, pp. 57-62.
- Stock, J.R. (1997), "Applying theories from other disciplines to logistics", *International Journal of Physical Distribution & Logistics Management*, Vol. 27 No. 9/10, pp. 515-539
- Stock, J.R. & Mulki, J.P. (2009), "Product returns processing: An examination of practices of manufacturers, wholesalers/distributors, and retailers", *Journal of Business Logistics*, Vol. 30 No. 1, pp. 33-62.
- Thierry, M., Salomon, M., Van Nuen, J. & Van Wassenhove, L. (1995), "Strategic issues in product recovery management", *California Management Review*, Vol. 37 No. 2, pp. 114-135.
- Tibben-Lembke, R.S. & Rogers, D.S. (2002), "Differences between forward and reverse logistics in a retail environment", *Supply Chain Management: An International Journal*, Vol. 7 No. 5, pp. 271 - 282.
- Ulbrich, F., Christensen, T. & Stankus, L. (2011), "Gender-specific on-line shopping preferences", *Electronic Commerce Research*, Vol. 11 No. 2, pp. 181-199.
- Ulwick, A. & Bettencourt, L.A. (2008), "Giving customers a fair hearing", *MIT Sloan management review [1532-9194]*, Vol. 49 No. 3, pp. 61-68.

- Un (1992), "Un conference on environment and development (1992)", Available at: <http://www.un.org/geninfo/bp/envirp2.html> (accessed 15 May).
- Wang, X. (2009), "Retail return policy, endowment effect, and consumption propensity: An experimental study.", *The B.E. Journal of Economic Analysis & Policy*, Vol. 9 No. 1, pp.
- Wood, D.F., Yaros, R.S. (1979), "Recalling products in the drug and cosmetic industry.", *Journal of business logistics*, , Vol. 1 No. 2, pp. 48-59.
- Wood, S.L. (2001), "Remote purchase environments: The influence of return policy leniency on two-stage decision processes", *Journal of Marketing Research*, Vol. 38 No. 2, pp. 157-169.
- Yang, G.-F., Wang, Z.-P. & Li, X.-Q. (2009), "The optimization of the closed-loop supply chain network", *Transportation Research Part E: Logistics and Transportation Review*, Vol. 45 No. 1, pp. 16-28.
- Yin, R.K. (2009), *Case study research*, Sage Inc., Thousand Oaks, California
- Zairi, M. (1997), "Business process management: A boundaryless approach to modern competitiveness", *Business Process Management Journal*, Vol. 3 No. 3, pp. 64-80.
- Zikmund, W.G. & Babin, B.J. (2007), *Exploring marketing research*, Thomson Higher Education, Mason, Ohio

