Reverse Logistics Process Identification in the Business to Consumer Electronic Commerce

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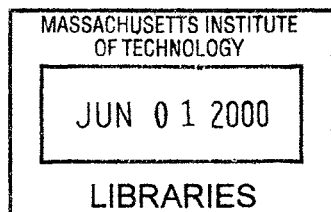
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ABSTRACT

Ever since its birth, B2C electronic commerce has grown at an accelerating pace. To sustain this growth rate, e-commerce will have to increase its customer base at the expense of more traditional channels. To accrue these more mature customers, e-commerce will have to prove its reliability and convenience. Operational excellence and coordination among the supply chain will allow e-vendors to offer services like on-time delivery and simple return processes, vital factors for electronic vendors' success.

The purpose of this thesis is to identify the differences across the reverse logistics process. To accomplish this, the return policies and procedures of ninety-three leading companies that sell products on the Internet directly to consumers were carefully studied. Seven different return processes and four main activities included in them were identified and formally described. Each process is designed to satisfy a specific set of needs, thus they differ considerably from each other.

Since logistics is a major part of the cost structure of operating a virtual store (e-tailer) every aspect of it has to be carefully studied and efficiently performed. The author has selected this sole aspect of reverse logistics to focus the research of this thesis and identify and describe the different processes that are currently used by e-vendors.

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LIST OF ABBREVIATIONS

1. B2C: Business to Consumer

2. B2B: Business to Business

3. SKU: Stock Keeping Units

3. RMA: Return Merchandize Authorization

4. PC: Personal Computer

5. 3PL: Third Party Logistics

6. CRM: Customer Relationship Management

7. CLM: Council of Logistics Management

8. OEM: Original Equipment Manufacturer

CHAPTER 1   INTRODUCTION

1.1   Outline

This thesis is organized into six chapters. After the introduction, the second chapter elucidates the structure and the main issues of the business environment, the trends in the reverse logistics process in B2C electronic commerce. To provide the reader with a richer context, a brief history review of electronic commerce is presented as well as the cannibalization dynamics of more traditional channels. Afterwards reverse logistics and customer returns, in particular, are defined and reviewed.

The third chapter outlines the methodology including the research objectives and the data collection and sample selection processes. A sample of ninety-three e-tailers from different industries with major concentrations in the apparel, furniture, and PC industries is carefully reviewed. Additionally, to capture the customers' impressions and experiences sixty-seven interviews were conducted with active e-commerce customers.

The analysis of the results is presented in the fourth chapter. Seven different processes and four main activities encompassed in them were identified and described To better understand the processes and their differences, the sample is divided into eight categories. The first criterion for dividing the sample in four sets is the type of products sold, then each set is further divided into two groups: those with storefronts and those with no customer facing customer facing physical infrastructure. Each of these groups is reviewed to identify commonalities and discrepancies.

Chapter Five presents the implications of the analysis. It explores a strategic framework in which consumer returns processes in the business-to-consumer electronic commerce can be evaluated and compared. Some of the causes that can create the processes' differences across and within industries are also presented in this chapter. The last section explains the influence that 3PL's and companies like Kozmo.com may on reverse logistics processes.

1.2 Business to Consumer Electronic Commerce

Electronic commerce has been defined by IBM as "A secure, flexible and integrated approach to delivering differentiated business value by changing the systems and processes that run core business operations with the simplicity and reach made possible by Internet technology."[1]

Electronic commerce revenues in the U.S. have grown from $2.6 billion in 1997 to $18.6 billion in 1999; furthermore revenues are expected to reach $80.5 billion by the year 2003[2]. Nevertheless, the Internet accounted for less than 1% of the $2,695 billion of retail revenues[3] in the U.S. In 1999 38.8 million persons[4] made purchases through the Web; interestingly 63% of sales to B2C sites went to first-time buyers.[5]

The birth of electronic commerce coincided with an economic expansion of the United States in the mid-1990's, which created ideal circumstances for growth at an accelerated pace. Although the economic conditions persist and exponential growth is still forecasted for the coming years, such growth would will likely be via e-commerce and the attraction of new customers who are likely to be more demanding. Geoffrey A. Moore described in his book "Crossing the Chasm[6]" that there is a gap of acceptance between "the early adopters" of technology and the more mature users, whom Moore calls "the early majority." The continued success of the Internet depends upon increased reliability and ease of use for this "early majority" to leap in.

Initially only pure electronic vendors, known as e-tailers, like Amazon.com, sold products and services through the Internet, but as long-established firms realized the potential of e-commerce, they started to set up their own e-commerce web sites. These companies, with complementary sales channels, became what are now known as bricks-

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[1] http://www.ibm.com/
[2] eMarketer, 2000
[3] National Retail Federation and US Census Bureau (includes autos, at $670 billion)
[4] eMarketer, 1999
[5] Bizrate.com
[6] Moore Geoffrey A. Crossing the Chasm New York: Special Markets Department at HarperCollins Publishers, 1991

and-clicks companies. Together with the original e-tailers they form the business-to-consumer (B2C) part of electronic commerce.
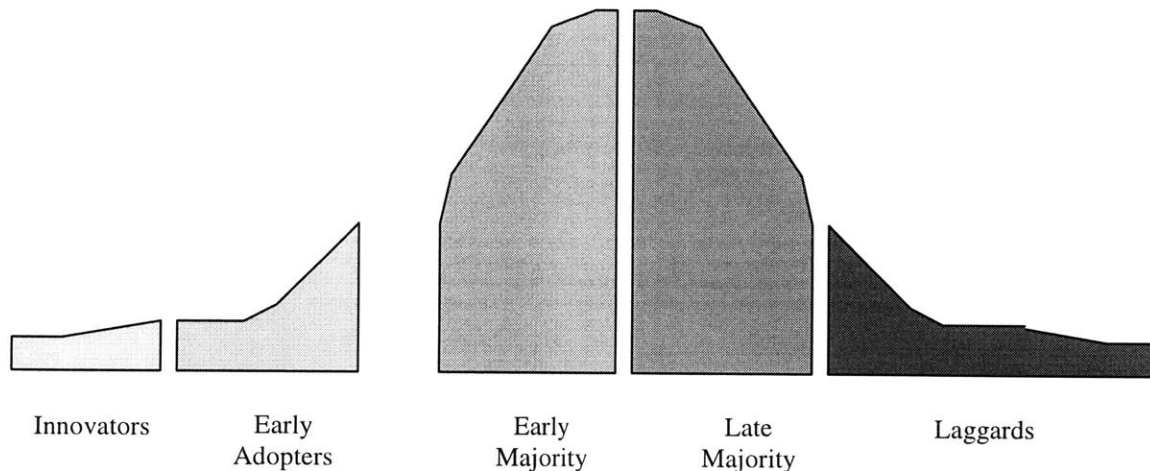
Figure 2.1:   The Technology Adoption Lifecycle Model

The Internet is an alternative sales channel that competes with the more traditional channels for the same customers. For electronic commerce to maintain its growth rate, cannibalization of other channels like catalog and direct sale channels, is inevitable. But if growth continues, eventually all channels will be affected by e-commerce. As Ken Cassar of Jupiter Communications explained, "Merchants must accept that cannibalized sales are better than lost sales."

If Internet commerce is to successfully advance at an accelerated pace, it can only accomplish this growth at the expense of the other channels. Moreover electronic commerce will have to attract customers who have resisted technological advances, people who are more reluctant to change their buying patterns. For the Internet to continue along this path, notable improvements in service and security have to be achieved. Furthermore, matching or surpassing the convenience of the other channels is necessary, even while maintaining competitive prices. Therefore, the next step for firms doing business via electronic commerce is to reach and convince those customers whom Moore categorizes the early and late majorities.

"Crossing the Chasm" between the early adopters and the early majority is a crucial step. To overcome this obstacle, electronic commerce merchants must offer customers significant advantages and high levels of certainty. In the Value Discipline Model[7] framework, electronic commerce allows for significant improvements in customer intimacy. Personalization of customer interfaces is now possible through Customer Relationship Management (CRM) software, where advanced algorithms track customers' preferences in an inexpensive and scalable way.
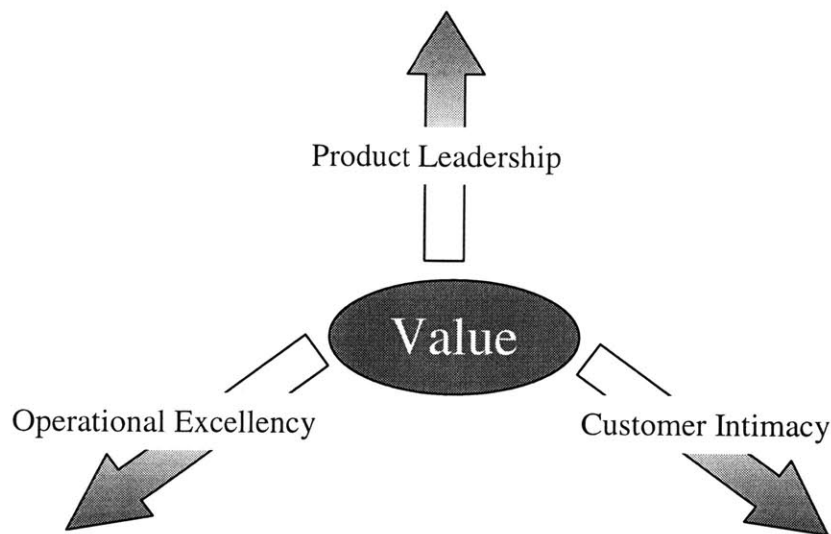
Figure 2.2:   Value Disciplines Model

Regardless of the friendly customer interface and the multiple advantages that CRM and other software could offer, electronic vendors also need to achieve operational excellence to compete with other channels. The operational excellence gains will have to be made in service improvement to mitigate the customers' discontent, often generated by the lack of personalized attention customers get in e-commerce transactions. On-time delivery and simple return processes are vital services for electronic vendors to succeed and are only achievable through operational excellence and coordination.

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[7] Benchmarking Partners

1.3   Reverse Logistics

The Council of Logistic Management (CLM) in its 1995 San Diego conference defined Reverse Logistics as "the disposition of any asset that is no longer suitable to perform its original primary function." Authors Dr. Dale S. Rogers and Dr. Ronald S. Tibben-Lembke argue that reverse logistics includes all the activities included in CLM's definition of logistics and have paraphrased it to define reverse logistics as:

> *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.*[8]

Five important business trends are increasing the relevance of reverse logistics: environmental concerns, excess inventory, lease contracts, repairing and maintaining, and consumer returns. Together they account for an industry worth $35 billion[9] in revenue in the United States.

Reverse logistics for environmental issues, or green logistics as it is also known, is concerned with recovering products that require special disposal to avoid destroying the environment. Governments, especially in Europe, have been imposing regulations to hold manufacturers responsible for recovering products that threaten the environment, and to properly dispose them. This trend is expected to increase significantly in the developed world.

Excess inventory is the consequence of poor synchronization between companies in a supply chain. To compensate for misalignments or poor communication among the different supplier-client nodes in a supply chain, companies create an inventory buffer to

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[8] Rogers, Dale S. and Tibben-Lembke, Ronald S. Going Backwards: Reverse Logistics Trends and Practices pg3

protect themselves from shortages or price variations. In fast clockspeed[10] industries, with constant innovation, inventories become obsolete very rapidly forcing down-stream companies to return them to their original manufacturer. Afterwards the products are redirected through a different channel. A separate reverse logistics infrastructure has been created to support this process. It consists of distribution centers, repackaging, refurbishing, discount brokers, specialized agents and outlet stores.

Lease contracts, by nature, obligate the customer to return the product at the end of the contract. Reverse logistics also embraces the process of reallocating these assets through secondary channels, set to recover some value from them. Historically, the automobile industry has been concerned with these issues since it allocates a substantial part of their vehicles through lease contracts. Today this practice is spreading into many other products like PC and electronics.

Another significant aspect of reverse logistics is the return of a good to its manufacturer for maintenance or repair. Many industries practice this, although it varies considerably among them. For example in the automobile industry, OEM distributors perform the maintenance service so the process is relatively simple and short. Conversely, fine watch manufacturers require that the product be shipped all the way back to their master watchmakers overseas for service and repair.

Finally, products that fail to satisfy their final consumers, either because they are defective or just because the customer decides to return the product, is the last reason why reverse logistics is gaining importance among logistics executives. Recently, with the birth of the electronic consumer, consumer returns, a term used to describe this return process, has grown in importance.

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[9] Rogers, Dale S. and Tibben-Lembke, Ronald S. "Going Backwards: Reverse Logistics Trends and Practices" pg5
[10] Fine, Charles ClockSpeed: Winning Industry Control in the Age of Temporary Advantage. New York: Special Markets Department at HarperCollins Publishers, 1998

1.4 Consumer Returns

The consumer return process occurs when the final consumer returns a product to its vendor, for reasons attributable to either vendor mistakes or for indirect reasons. These include all the motives for which a product could be returned such that the vendor does not have control over them.

Soon after starting his famous catalog operations in 1886, Mr. Richard Sears realized that his Sears Catalog business relied on customers' trust and their willingness to buy without physically touching the products. To enhance this trust, he established a policy to accept returned catalog items no matter what reason the customer gave for the return or the time elapsed since the transaction was made. Since products that failed to satisfy customers could be returned for an exchange or a full refund, customers felt confident purchasing items from the Sears catalog which drove the business to prosperity.

Before Sears & Roebuck catalog operations, consumer returns were not an important issue given that all products were regularly bought at local stores. When Sears & Roebuck started selling nationwide without storefronts, a new type of process needed to be designed. Since the products were typically delivered through the US Postal Service, this process was also the natural way to handle returned merchandize. Thus, customers were encouraged to return the items through this mechanism.

If it wasn't for the return policies offered by Sears & Roebuck, the company would have not prospered as it did, and the catalog industry would not have flourished. Now in the 21st century, electronic commerce faces similar issues. Virtual retailers rely, as Sears & Roebuck did, on customers' trust and their ability to deliver and enhance that trust. Therefore, e-Vendors need to develop processes to return merchandize at the speed and efficiency characteristic of today's business environment.

The B2C segment of electronic commerce consists of pure e-retailers and bricks-and-mortar companies with a complementary electronic channel, or bricks-and-clicks retailers. The process of returning merchandize bought on the Internet can differ

significantly between each group; e-tailers rely on national parcel service providers, while bricks-and-clicks companies can leverage their physical storefronts to manage the returns.

CHAPTER 2   METHODOLOGY

2.1   Research Objectives

The literature review revealed no previous work describing return processes in the B2C electronic commerce. The purpose of this research is to identify the current procedures that e-vendors have and create a framework for future analysis. The objectives of this thesis are:

♦ Research the relevance of reverse logistics to the B2C electronic commerce.

♦ List the activities commonly performed in a B2C return process.

♦ Recognize the return activities that prove common in each of the vendor's groups

♦ Identify and describe the different return processes currently in place in the B2C electronic commerce.

♦ Estimate which return processes are the most common across vendors with different characteristics.

♦ Understand the customers' perspectives on the process of returning purchased goods to e-vendors.

♦ Recognize the different circumstances that lead to different return processes across and within industries.

♦ Compare different return services offered by third parties.

Basically, the objective of this research was to understand the return processes and the motivation for different designs due to the vendors' specific requirements. Hopefully it will establish a precedent for further exploration and bases to develop metrics to measure the efficiencies of the current processes. The results of the study can be of use by companies selling from remote locations that are considering a reevaluation of their consumer returns process, or by those that are starting operations and need a benchmark to design theirs.

2.2   Data Collection

Data for this descriptive research was obtained through an extensive search of the return policies and procedures posted at the vendors' web sites. Ninety-three e-tailers were carefully reviewed and classified according to their industries, infrastructure, return process characteristics and the activities performed.

This method was chosen since it allowed the study of the return policies and procedures as the consumer will observe them. This approach also prevented from any bias that could be generated from personal opinion that could be generated in face-to-face interviews or through surveys.

To collect the data necessary for the customers' perspective on the return processes a different method was followed. Sixty-seven interviews with active online shoppers were done. Personal interviews were chosen to gather this data since it was a more reliable procedure than a survey. Given the difficulty and the customers' low awareness of the subject matter, personal interviews were most appropriate as they allow the interviewer to make sure that the questions were understand correctly. The questionnaire format followed on the interviews is presented next.

2.2.1   Questionnaire

To understand the customer's impressions on the return process in the B2C electronic commerce a questionnaire with six questions was prepared. Sixty-seven consumers that have bought at least once through the electronic commerce were interviewed. The following questions were included

1) How often do you buy products in the Internet?

a)	Every 3 months	d)	Twice a month
b)	Every 2 months	e)	Three times a month
c)	Every month	f)	Four times a month

2) Have you ever returned a product bought through electronic commerce?

3) If you have returned a product, was it possible to do it at a physical store?

        If yes, did you return it at a store?

        If no,   what was the process to return the product?

        How would you describe the process?

            1- Very Complex

            2- Complex

            3- Neither complex, nor simple

            4- Simple

            5- Very Simple

4) Other things equal will you prefer buying from a vendor that besides the electronic storefront has physical stores near you?

        Yes_____

        No _____

5) The airline industry offers restricted (not being able to change flights) and non-refundable tickets at a cheaper price. At what price discount would you buy an item from a company that doesn't allow returns or exchanges?

        Personal Computer?   _____%

        Clothes?   _____%

        Furniture?   _____%

6) If the product is non-defective but you wanted to return it anyway, do you consider that the vendor should pay for the return shipment fare?

        Personal Computer? Yes_____   No_____

        Furniture?   Yes_____   No_____

        Apparel?   Yes_____   No_____

2.4   Sample Selection

To achieve significance on the research, a sample of ninety-three companies that sell on the B2C space of the electronic commerce was decided. Furthermore three main product groups were studied in depth, the furniture industry, the apparel industry and the PC industry. A fourth group, compose of companies in different markets and with different characteristics, was also selected to broaden the perspective of the study.

Consequently, the sample included ninety-three companies divided into four groups,. Thirty-four PC vendors make up the first group, twenty-four companies in the furniture industry form the second. The third is made up of twenty-three apparel e-tailers, and the fourth group includes twelve other companies in different markets through the Internet. Afterwards, each of those four groups was further divided into two sub-groups, those with physical storefronts and those with no customer facing physical infrastructure.

The sixty-seven interviews were conducted to a convenient sample. The target sample was the students, faculty, and universities' staffs in the Boston area whom have bought at least one product on the Internet. To guarantee the intended characteristics of the target sample all the interviews were done near university or colleges and only to those who answer affirmatively to the following question:

Have you ever bought something on the Internet?

CHAPTER 3 ANALYSIS OF RESULTS

This fourth chapter presents the results of the analysis. The first part describes the main activities included in consumer's return processes, and briefly reviews the vendor's groups to identify any commonalities. Afterwards, the seven processes that were identified in B2C e-commerce are described in detail and reviewed against the vendor's groups. The final part of the chapter shifts from the vendors to the consumers' perspectives. The results of the consumer's buying pattern and product returns experiences conclude the chapter.

3.1 Activities Included in the Return Processes

Among the many activities involved in consumer's return processes, there are a few that drive the differentiation among them. This section describes those activities and explains their functions in the process. The four main activities identified for their impact and relevance to the return process are: the return merchandize authorization (RMA) form, the restocking fees, the delivery fares, and the pre-paid shipping tags.

To have a better control of the product flow coming back through the reverse pipeline, most vendors require an RMA form. The common procedure to obtain it is by contacting the vendor's web site and describing the reasons why the product needs to be returned. The flexibility or rigidity in issuing the RMA form varies considerably among companies. The procedure may be as traditional as calling a 1-800-telephone number and soliciting the RMA form from a customer service representative. Or the procedure may be very technology-based like requesting it from the vendor's web page and receiving a printable electronic response through e-mail. Some vendors, especially in the apparel industry, facilitate the process to the customer by including the RMA form in the same box as the purchased product.

There are two types of return products, those returned because of vendor's mistakes or product defects, and those products returned for indirect reasons. In some industries it is common to charge a restocking fee on those items returned for indirect reasons. Another

reason e-tailers may charge a fee is for product or package incompleteness. The procedure commonly followed to charge the fee is through a reduction in the amount credited back to the customer. Fees are most common in industries where obsolescence is a problem, and are not common in industries where the product has a high propensity of being returned, like in apparel.

When a product is returned, additional shipments are required. The current norm is that product delivery is done through a guaranteed national parcel service provider. To avoid misunderstandings, vendors strongly recommend their customers to return the items in the same way since the customer is responsible for the product in transit. If the good is being returned, not exchanged, the standard policy is that the customer pays for the returning shipment. Although this is the common practice, there are some vendors that absorb the cost of all the shipments involved to incentive purchases.

If the vendor agrees to pay for the return shipment, the normal procedure is through a pre-paid tag sent to the customer. Pre-paid tags are agreements with national parcel service providers to accept a pre-defined form to ship a product to the vendor at his expense. Pre-paid tags can be sent to the customers in a variety of ways. They could be sent through the mail, electronically through e-mail, or they could only be an identification number valid with a certain service provider. This practice is still new to electronic commerce and only a few vendors have implemented it. Still, it is worth describing since it alters significantly the consumer returns process.

3.2   Activities Listed by Groups of Vendors

Once the main activities in the return processes have been described, the companies are divided into eight groups. The first criterion for dividing the sample in four sets is the type of products sold, then each set is further divided into two groups: those with storefronts and those with no physical infrastructure that the customer can visit. These divisions allowed the identification of standard activities in competing vendors with similar characteristics. The results are presented through the second section of this

chapter. Afterwards, in section 3.3 seven different process are described and section 3.4 lists the vendors that perform each return process.

The first set includes the PC vendors. The sample consists of thirty-four companies separated into two groups. The first includes eight retailers that sell through both channels: the Internet and the physical storefronts. Group two consists of twenty-six e-tailers dedicated exclusively to electronic commerce. Notice that some manufacturers are considered together with the pure e-vendors. The reason to include them in this group is that their online stores handle the product flow without physical intermediaries, similar to how pure e-vendors operate.

Group 1. In the group formed by bricks-and-clicks PC retailers, seven of the eight e-tailers required either an RMA form or a notifying call previous to any return and only half of them charged a fee for those products that were returned for reasons beyond the vendors' control. Except for Office Depot and Staples, who have private distribution systems, none of the companies paid for the cost associated with the return shipment of the product. Four out of the eight companies required the customers to carry out the same set of activities as shown in Table 3.1

	Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping
1	Officedepot.com*		Yes	No	Yes
2	Staples.com*		Yes	No	Yes
3	Compusa.com	*	Yes	Yes	No
4	Circuitcity.com	*	Yes	Yes	No
5	Pcliquidator.com	*	Yes	Yes	No
6	Joemommacomputer.com	*	Yes	Yes	No
7	Radioshack.com		Yes	No	No
8	Vanns.com		No	No	No

*Office Depot.com and Staples.com require the customer to call a customer service representative instead of an RMA form.

Table 3.1: Personal Computer Vendors with Storefronts

Group 2. Table 3.2 displays all the PC vendors in the study that sell only through the Internet. Interestingly, they behave in a similar way to the vendors In Group 1. More than half, eighteen of the twenty-six vendors that form the list, require the exact same activities that the first group did. All the vendors required an RMA form and nineteen of

them charge a restocking fee to those products returning for indirect reasons. Only one company, J&D Music and Computer World, paid for the return shipment even if the product was non-defective.

	Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping
1	Icdirect.com		Yes	Yes	Yes
2	Esctecnologies.com	*	Yes	Yes	No
3	ECost.com	*	Yes	Yes	No
4	Compaq.com	*	Yes	Yes	No
5	Apple.com	*	Yes	Yes	No
6	Gateway.com	*	Yes	Yes	No
7	Peoplepc.com	*	Yes	Yes	No
8	Volumebuy.com	*	Yes	Yes	No
9	Valueamerica.com	*	Yes	Yes	No
10	TechstoreInc.com	*	Yes	Yes	No
11	Hp.com	*	Yes	Yes	No
12	Netdirect.com	*	Yes	Yes	No
13	Pcshoppingplanet.com	*	Yes	Yes	No
14	Egghead.com	*	Yes	Yes	No
15	Cdw.com	*	Yes	Yes	No
16	Pcmall.com	*	Yes	Yes	No
17	Tekdiscountwarehouse.com	*	Yes	Yes	No
18	Refurbcity.com	*	Yes	Yes	No
19	Pcrush.com	*	Yes	Yes	No
20	jandr.com		Yes	No	Yes
21	Dell.com		Yes	No	No
22	Outpost.com		Yes	No	No
23	Skymall.com		Yes	No	No
24	Insight.com		Yes	No	No
25	Cdworld.com		Yes	No	No
26	Shopibm.com		Yes	No	No

Table 3.2: Personal Computer Vendors without Storefronts

The second set consists of companies that sell furniture on the Internet. Group 3 consists of nine companies operating on both complementary channels, and the fourth group consists of fifteen pure e-commerce competitors. Although most e-tailers in the fourth group were created exclusively to sell on the electronic market, there are also companies with vast experience in other channels, such as catalogs or direct sales.

Group 3. Nine bricks-and-clicks companies who sell furniture form the third group. Unlike the PC market, only two of the nine businesses require an RMA form and none of them charge restocking fees. In this group, only one of the companies absorbs the cost of the return shipment, similar to all the previous groups. Of the nine vendors, seven require

the same set of activities as revealed in Table 3.3. Coldwatercreek.com requires the customer to call

	Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping
1	Levenger.com		Yes	No	No
2	Therightstart.com	*	No	No	No
3	PlowandHearth.com	*	No	No	No
4	Orvis.com	*	No	No	No
5	Crateandbarrel.com	*	No	No	No
6	Hammacherschlemmer.com	*	No	No	No
7	Gumps.com	*	No	No	No
8	Rosssimons.com	*	No	No	No
9	Coldwatercreek.com*		Call	No	Yes

*A customer call to a customer service representative is equivalent to an RMA form.

Table 3.3: Furniture Vendors with Storefronts

Group 4. The fourth group is formed by those e-tailers that sell only on the Internet. In this group, only furnituredirect.com charges a fee to products returned for indirect reasons. Eight e-vendors of the fifteen included in this group do not require RMA forms, the remaining do require it or an equivalent procedure. As Groups 1, 2, and 3, paying for a return shipment is also not common in this Group 4. Table 3.4 demonstrates the activities performed by each vendor. Some vendors require a call or e-mail from the customer previous to the return process, this was considered as soliciting an RMA form.

	Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping
1	Furnaturedirect.com		Yes	Yes	No
2	Myhome.com		Yes	No	No
3	Furniture.com		Yes	No	No
4	Netmarket.com		Yes	No	No
5	Domestications.com	*	No	No	No
6	Goodcatalogcompany.com	*	No	No	No
7	Thecompanystore.com	*	No	No	No
8	Adatom.com	*	No	No	No
9	Iqvc.com	*	No	No	No
10	Fingerhut.com	*	No	No	No
11	BuyChoice.com	*	No	No	No
12	Buyitnow.com	*	No	No	No
13	Widerviewvillage.com*		e-mail	No	No
14	Puertabella.com*		Call	No	Yes
15	Babyproductsonline.com*		Call	No	No

*A customer call or email to a customer service representative is equivalent to an RMA form.

Table 3.4: Furniture Vendors without Storefronts

The groups 5 and 6 are the apparel vendors. In Group 5 are those companies dedicated exclusively to electronic commerce. Group 6 companies complement the customer facing physical infrastructure with the electronic commerce. This set consists of twenty-three vendors, nine pure e-vendors and fourteen bricks-and clicks. Many familiar catalog vendors are listed in both groups; they were divided by the same criterion regardless of their other operations, those having physical storefronts and those who do not. Since it is a common practice in this industry, it was important to note that if the RMA is included in the product's delivery box it is not considered that the vendor required an RMA form.

Group 5. The fifth group consists of apparel vendors with physical storefronts. This group is very homogenous; twelve of the fourteen companies perform the same set of activities. They do not require an RMA form, they do not charge a restocking fee, and they do not pay for the returning shipment. The remaining two companies differ because one requires an RMA form and the other charges a fee for the returned products. These results are displayed in Table 3.5

	Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping
1	Bugleboy.com		Yes	No	No
2	Bloomingdales.com		No	Yes	Yes
3	Bebeshop.com	*	No	No	No
4	Armaniexchange.com	*	No	No	No
5	Easternmountainsports.com	*	No	No	No
6	Hatworld.com	*	No	No	No
7	Wbstore.com	*	No	No	No
8	Jcrew.com	*	No	No	No
9	Gap.com	*	No	No	No
10	Bananarepublic.com	*	No	No	No
11	Disney.com	*	No	No	No
12	Macys.com	*	No	No	No
13	Llbean.com	*	No	No	No
14	Esprit.com	*	No	No	No

Table 3.5: Apparel Vendors with Storefronts

Group 6. The sixth group encompasses the apparel vendors limited to electronic commerce. None of the nine companies charge fees for returned products, and only two of them pay for the cost of the return shipment. Four of the nine vendors require RMA

forms. As seen in Table 3.6, this group is very heterogeneous, four of the nine companies are doing the same set of activities.

	Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping
1	Altrec.com		Yes	No	Yes
2	Bargainclothing.com		Yes	No	No
3	Ashford.com		Yes	No	No
4	Designersdirect.com		Yes	No	No
5	Lucy.com		No	No	Yes
6	Onehanesplace.com	*	No	No	No
7	Shopirish.com	*	No	No	No
8	MVP.com	*	No	No	No
9	Bluefly.com	*	No	No	No

Table 3.6: Apparel Vendors without Storefronts

The fourth set includes all the vendors that sell multiple product lines or products different from those consider in the previous groups. They were included in this research to have a broader perspective of the return processes in the B2C e-commerce. Because of the diversity of their product lines, it is not convenient to make compound conclusions from these groups.

Group 7. The seventh group consists of six bricks-and-clicks companies that sell multiple products. None of the six retailers charge a fee and only two of them absorb the cost of the returning shipment. Just one company in this group requires the RMA form. Table 3.7 presents this information.

	Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping
1	Wal-Mart		Yes	No	Yes
2	Sears.com		No	No	Yes
3	Discoverystore.com	*	No	No	No
4	Bluelight.com	*	No	No	No
5	Target.com	*	No	No	No
6	Dillards.com	*	No	No	No

Table 3.7: Apparel Vendors with Storefronts

Group 8. The eighth group is formed by pure e-vendors, presented in Table 3.8, that sell different product lines. Although the results are not conclusive because of the group's diversity, there are some similarities among them. None of them pay for the return shipment nor charge a fee, and four of the six require an RMA form.

	Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping
1	Buy.com	*	Yes	No	No
2	EToys.com	*	Yes	No	No
3	Mercata.com	*	Yes	No	No
4	Amazon.com	*	Yes	No	No
5	Onvia.com		No	No	No
6	Pets.com		No	No	No

Table 3.8: Apparel Vendors without Storefronts

## 3.3 Reverse Logistics Processes Descriptions

Although reverse logistics processes in the B2C electronic commerce vary considerably, there are some practices which the majority of the companies follow. The first process to be described is the most common, and is the basis for differentiating the rest of the processes. In this section only the process of returning products for indirect reasons are considered.

3.3.1 Process Type A. "The Basic Return Process"

The first process described is the most common in the B2C electronic commerce, and it is especially popular among pure e-tailers. For the customer this is simple, since it only requires filling an RMA form at the vendors web page and shipping the product back through parcel service. The RMA form allows the vendor to control the entrance to the reverse flow of the products protecting them from misunderstandings. It also allows the vendor to capture feedback on the reasons driving the returns. Figure 3.1 presents graphically the process just described.

Egghead.com sells PC's and electronics directly to consumers exclusively through the Internet, making it a B2C pure e-vendor. If a customer wants to return a product they will need to request an RMA form from Egghead's web site and explain the reasons for

returning the product. Afterwards the RMA is issued and is valid for fifteen days. The customer is also responsible for shipping the product in its original condition including packaging, documentation, warranty cards, manuals, and accessories through a prepaid freight service. All non-defective products are subject to a fifteen-percent restocking fee, shipping transactions and insurance are not refundable.
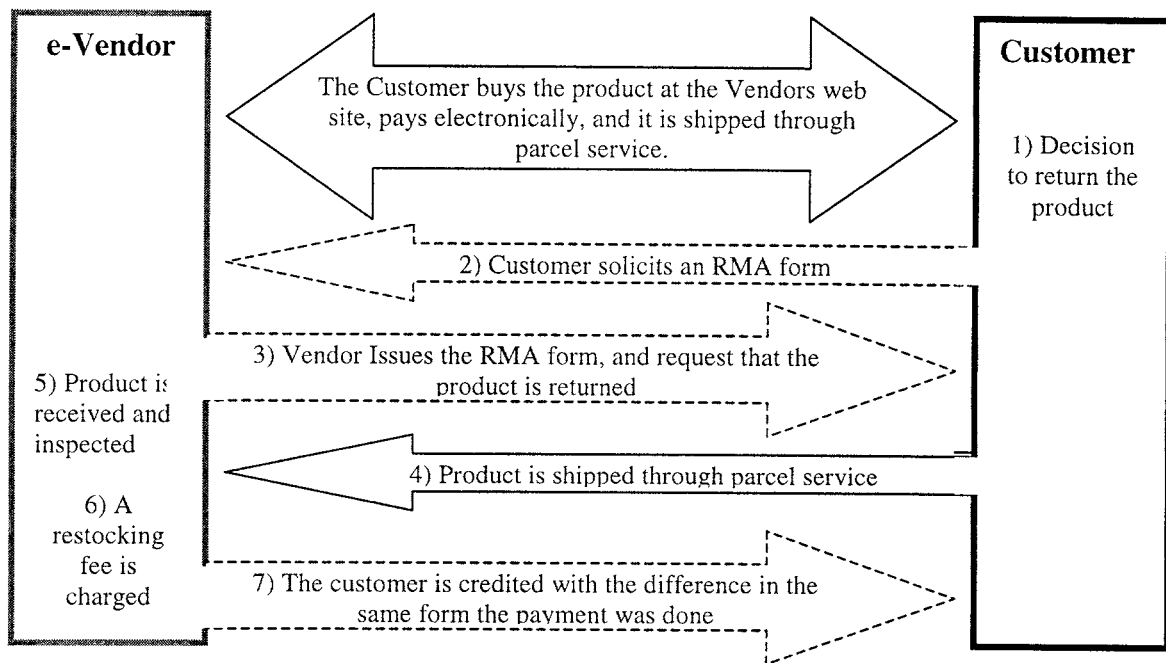
Figure 3.1: The Basic Return Process Map

1) Customer decides to return the product.

2) Customer solicits an RMA form at the vendor's web site.

3) Vendor issues the RMA form and requests that the product be shipped.

4) The product is shipped through a national parcel service.

5) The vendor receives the product and inspects it.

6) If the product is in the agreed condition a restocking fee is charged.

7) The customer is credited the difference in the same form the payment was made.

3.3.2 Process Type B. "The RMA-in-the-Box Process"

The second process consists of basically the same steps as the "basic process," except that filling the RMA at the vendor's web site is not necessary, since it was included with

the product. The purpose of including an RMA form in the product's delivery box is to offer customers certainty and overcome the insecurity of virtual operations. The vendor sacrifices gate-keeping control over the reverse pipeline, but it still captures the feedback information of why the items are being returned. This procedure was inherited from catalog sales, and it is common in the apparel e-vendors. In some cases there is no formal RMA form, still, the customer needs to fill the information required by the vendor in an alternative way. What makes this process distinct is that previous notification to the vendor is not necessary, as displayed in Figure 3.2.

Gumps.com is a furniture e-tailer; previous to their entry into electronic commerce they sold through catalogs. To return a product, all that the customer needs to do is fill the requested information on the back of the packaging slip and return the product to the specified address through insured mail. If the customer lost the packaging slip. they need to contact customer service and an alternative method is arranged.
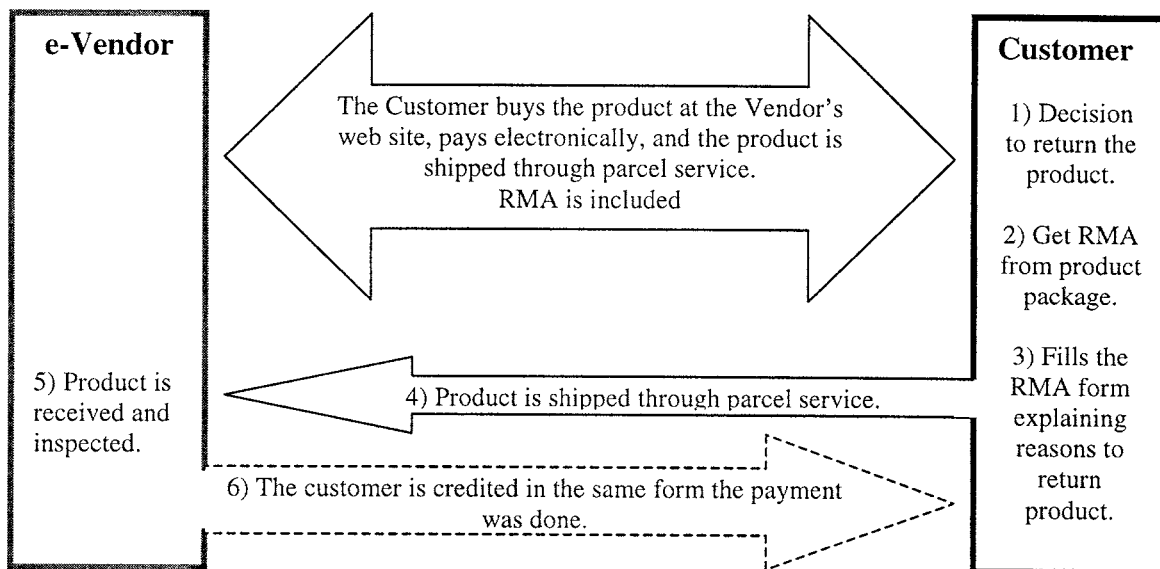

Figure 3.2: The RMA-in-the-Box Process Map

1) Customer decides to return the product.
2) RMA form is included with the product.
3) The customer fills the RMA form explaining the reason for returning the product.

27

4) The product is shipped through a national parcel service.

5) The vendor receives the product and inspects it with the RMA explaining the reasons for returning the product.

6) The customer is credited the amount.

3.3.3 Process Type C. "The Traditional In-Store Return Process"

Clicks-and-Bricks companies follow a different approach to the return process. They leverage their infrastructure to maximize customer satisfaction by offering an immediate transaction and avoiding the associated shipment costs. It is clearly a win-win situation for the customer and for the e-part of the business. For the customers, the trip to the store is traded with the instant replacement or return. For those who don't have access to physical storefronts a complementary process is offered, usually similar to The Basic Return Process described as process type A. Figure 3.3 clearly exhibits the process.
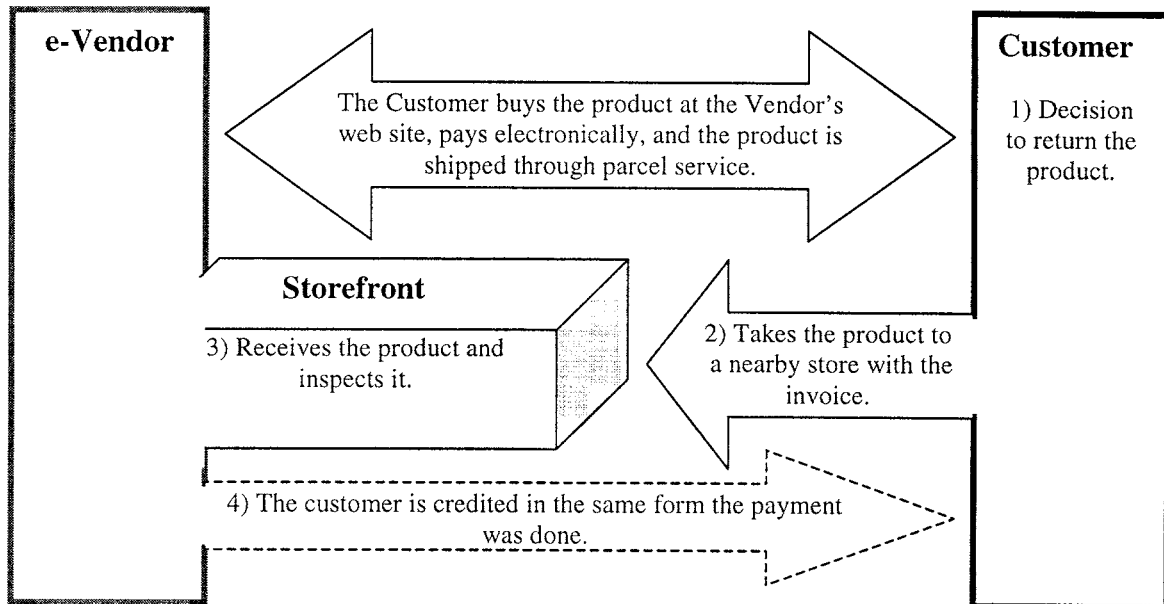
Figure 3.3: The Traditional In-Store Return Process Map

1) Customer decides to return the product.

2) The customer takes the product to a nearby store with the invoice.

3) The vendor receives the product and inspects it.

28

4) The customer is credited instantly in the same form of payment.

Gap.com encourages their online customers to return the products at a physical store. They only require the original invoice, the credit card with which the product was purchased, a valid identification, and the product itself. Customers have multiple options when returning a product to a Gap store; they could exchange the product and pay or be credited for the difference or they could only return the product. For those customers that prefer to return the items via mail, no RMA is necessary, making the alternate process type B.

3.3.4 Process Type D. "The Pre-Paid Return Shipment Process"

Some companies offer to absorb the cost of shipping back returned items. The best way to do it quickly and inexpensively is by sending an electronic tag for the customer to print from his computer, as displayed in Figure 3.4. The tag is issued once an RMA form is filled and authorized, so the vendor has some degree of control over the return process' gate. Paying for the return shipment is an additional purchasing incentive to enhance the customers' confidence. This practice is common in markets where the size of the product is not an issue and the product's intrinsic probability of being returned is high, like in the apparel industry. Usually there are no restocking fees in this process, although there are exceptions.

Altrec.com sells specialized clothing for outdoor activities via electronic commerce. They partnered with the U.S. Postal Service to make returns easy and free for the customer. To return an item, the customer visits the "My Account" section on the vendor's web site and selects the product to be returned. Immediately Altrec.com issues a mailing label and a packaging list for the customer to print his own computer. Next, the customer puts the packaging list inside the package box, tapes the label on the outside of the package, and drops it at any mailbox or U.S. Post Office.
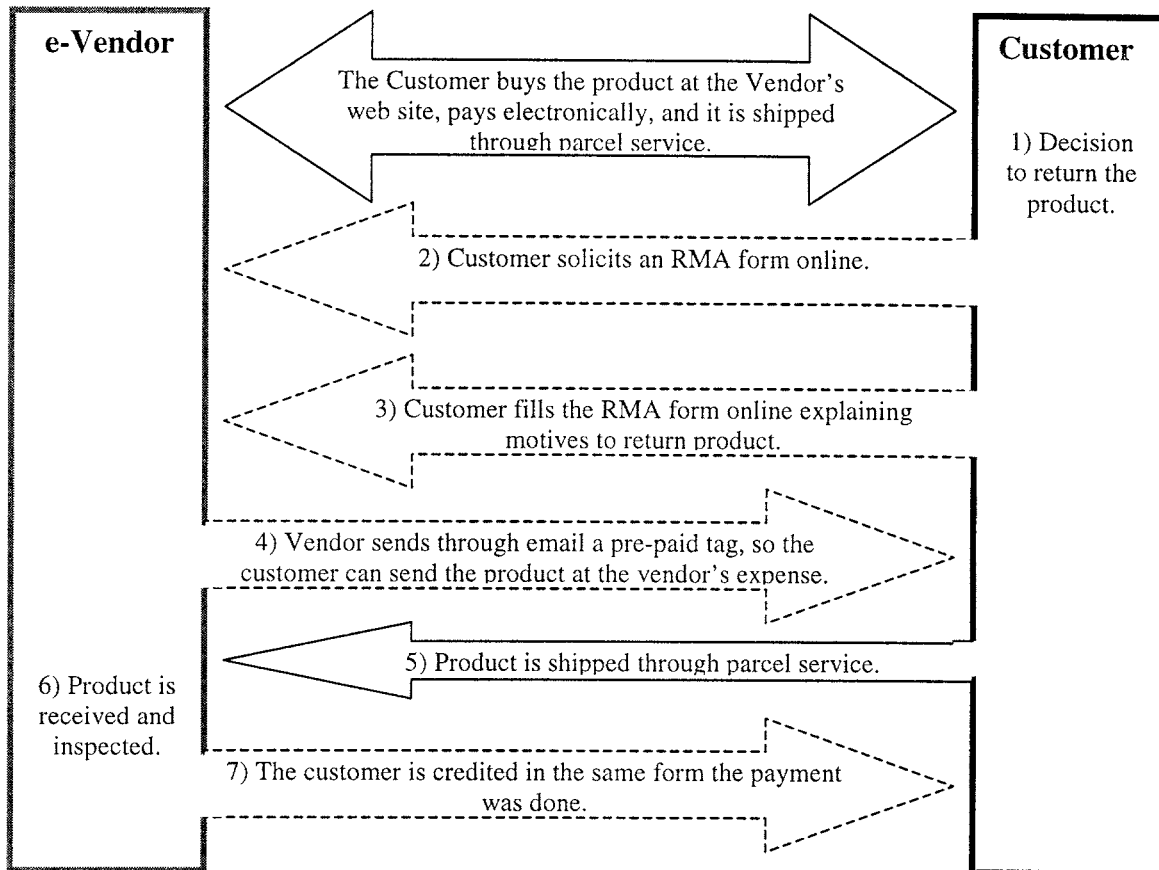
Figure 3.4: The Pre-Paid Return Shipment Process Map

1) Customer decides to return the product.

2) The customer applies for an RMA form at the vendor's web site.

3) The customer fills the RMA form online, explaining the reasons that motivates him to return the product.

4) The vendor sends through e-mail a pre-paid call tag, which also serves as an RMA form, for the product to be shipped at the vendor's expense.

5) The product is shipped through a national parcel service specified by the vendor.

6) The vendor receives the product and inspects it, accompanied by the RMA explaining the reasons for returning the product.

7) The customer is credited in the same form as the payment.

3.3.5 Process Type E. "The 3PL Return Process"

This process requires considerable effort from the vendor, thus is normally seen in industries where margins allow it and customers require it, like in expensive furniture. Due to the price, oversize, and fragility of the products, specialized handling is required to provide certainty and incentive customers to purchase those products via electronic commerce. Most companies following this process do it through operators although email is also possible. Please note that conversing with a customer service representative or sending an email is equivalent to filling an RMA form. Figure 3.5 clearly exhibits the process.
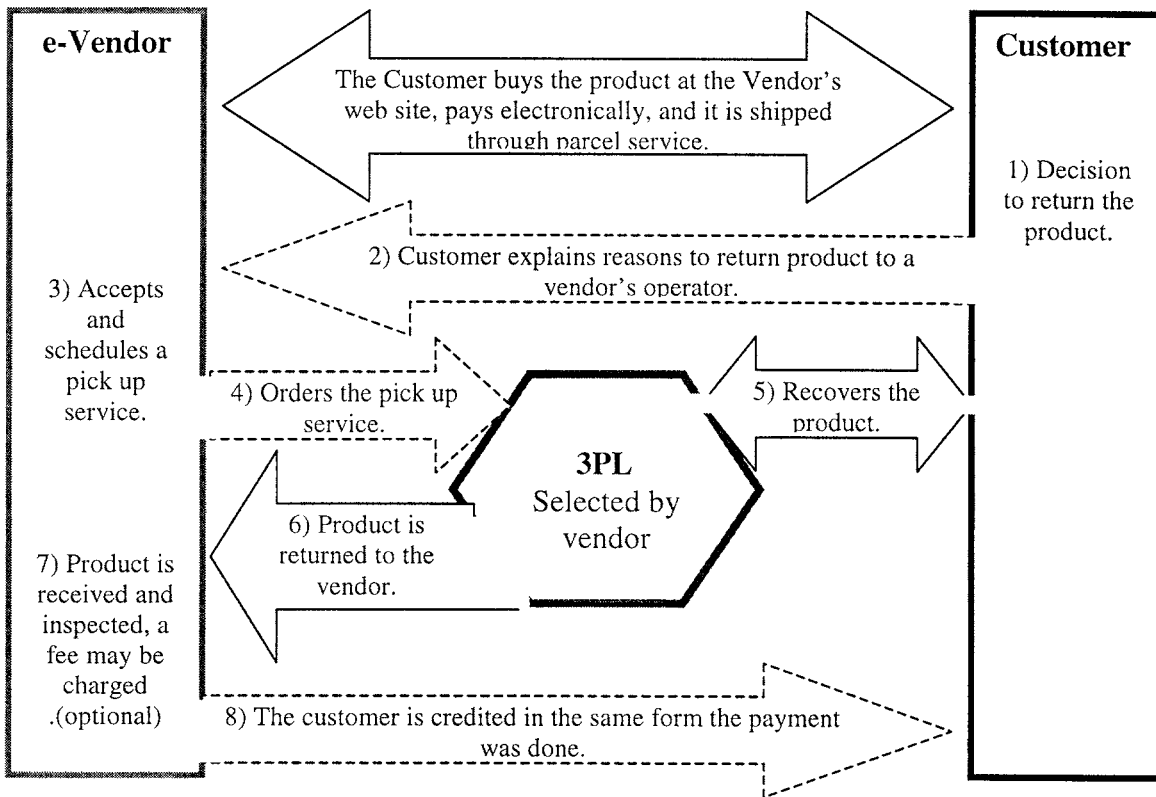
Figure 3.5: The 3PL Return Process Map

1) Customer decides to return the product.

2) The customer explains to the vendor the reasons for returning the product via a customer service representative.

3) Vendors accept and schedule pick up of the product.

4) The vendor passes the order to a third party of their choice to execute it.

5) The third party recovers the product and delivers it back to the vendor.

6) The vendor receives the product and determines if it is in the agreed condition.

7) If the product is in the agreed condition a restocking fee may be charged.

8) The customer is credited the balance in the same form as the payment.

Myhome.com is a furniture e-tailer that sells exclusively through the Internet. To encourage customers to buy from them, they offer a one-hundred-percent guarantee and arrange the whole return process, no matter the reason why the product is returned. After contacting them, Myhome.com will assist the customer, if necessary, by arranging for a Furniture Specialist to go to the home for an in-home repair, if this is necessary. If not, they will connect the customer to one of their Design Specialists to assist them in finding a replacement item, or they will coordinate the return of the product for a full refund. And of course, there won't be any restocking, handling, or return charges.

3.3.6 Process Type F. "The Receiving Partner Process"

In an attempt to facilitate the return process for the customer, e-tailers can partner with supermarkets, convenience stores, or virtually any company that possesses infrastructure throughout the customers influence zone. It is particularly important for industries such as furniture, that handle oversize items, to develop a solution that does not involve expensive shipments. Besides avoiding shipments, the process could be accelerated if the receiving partner does a gate-keeping job and notifies the vendor immediately. For those customers who don't have access to a receiving partner, a complementary process is offered, usually similar to what was described as process A. Figure 3.5 exhibits the process.

Hammacher & Schlemmer have partnered with 4,200 supermarkets nationwide to offer their customers a simple procedure of returning unwanted items. H&S are focused in the high-end market for furniture, although they sell other products like apparel and personal care. To align the return process with their target market, they offer an unconditional guarantee for all their products and allow returns and exchanges for any reason without charging a fee. First they suggest calling customer service through a 1-800 number to

prevent, if possible, the return in the first place. If the product still needs to be returned, customers may choose between mailing the product back at their expense or simply taking it to one of the vendor's receiving partners and handing it over to them.
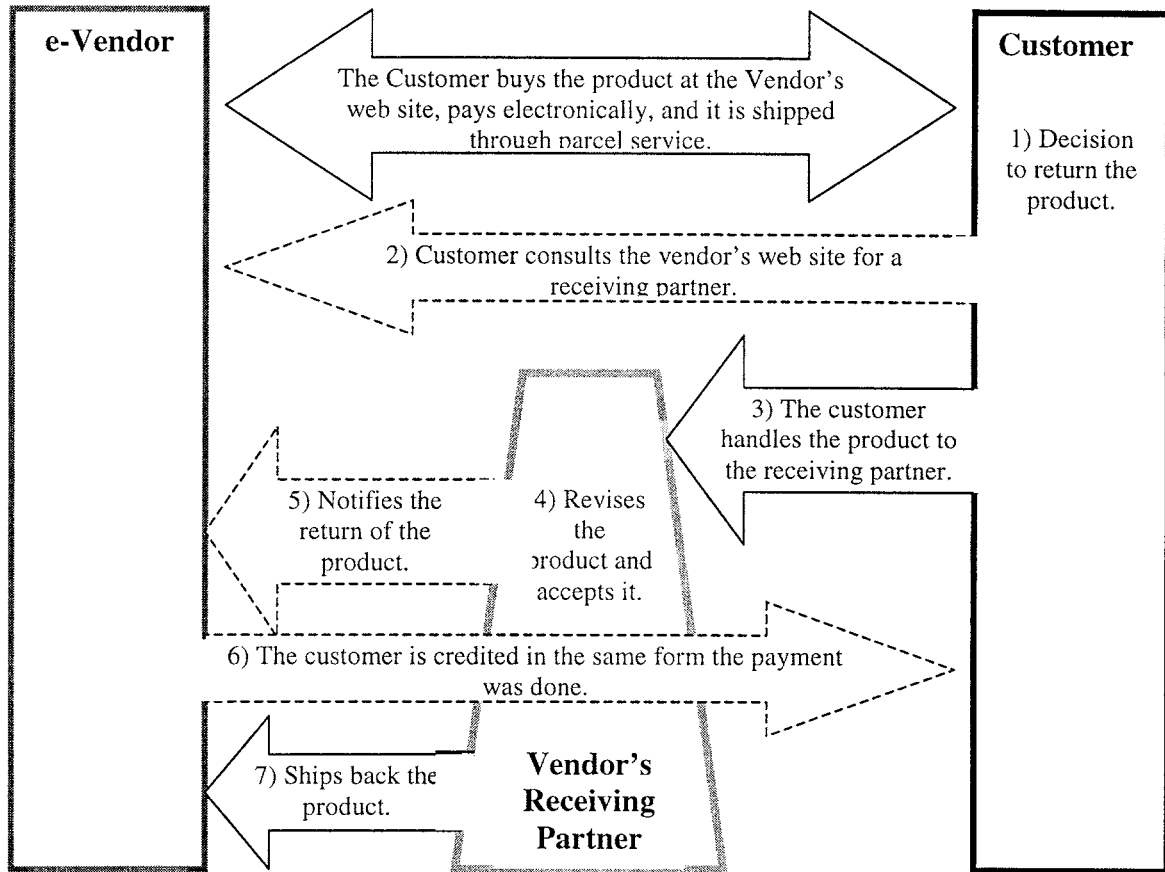
Figure 3.6: The Receiving Partner Process Map

1) Customer decides to return the product.

2) The customer checks to see if there is a receiving partner near and gets the label packaged with the product.

3) The customer hands the product over with the label to the receiving partner.

4) The receiving partner determines if the product is in the agreed condition and accepts it.

5) The receiving partner notifies the e-tailer about the returned product.

6) The vendor immediately credits the customer account or replaces the item, if this is necessary.

7) The receiving partner ships the product to the vendor in an alternative cheap way at the vendor's expense.

3.3.7 Process Type G. "The Vendor Arranged Pick-up Process"

Retailers that have invested over the years in developing nationwide storefronts and delivery systems offer next day delivery as well as next day recovery of returned products for products bought on the Internet. Leveraging their infrastructures built for brick-and-mortar operations, these companies are able to offer better and cheaper services than their pure e-vendor peers. This procedure is ideal for all the entities involved but relies heavily on economies of scale driven mainly by huge initial investments required to set up these networks.
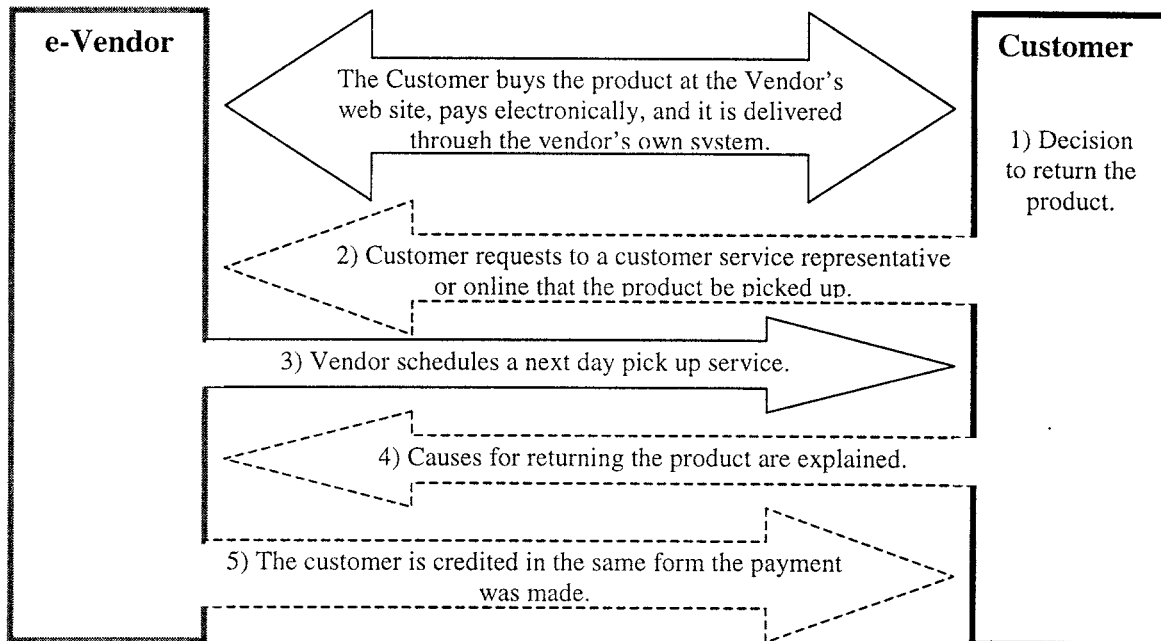
Figure 3.7: The Vendor Arranged Pick-up Process Map

1) Customer decides to return the product.

2) The customer calls, or through the vendor's web site, requests for an item to be picked up for return purposes.

3) The vendor schedules a next-day stop to pick up the product.

4) While picking up the product, the causes for returning the product are gathered through a questionnaire.

5) The vendor credits the customer account.

Staples is a retailer dedicated to the office supply business. Along with their traditional business they sell products via electronic commerce. Through the years they have built close to 1,100 storefronts and equipped them with distribution capabilities. The electronic commerce part of the business leverages these assets and delivers any item the following day of the purchase. When products need to be returned, they ask their customer to call and request that the product be picked up. Staples will recover the product within 5 days of the customer request. Also, returns are allowed at the stores with the packaging slip. Figure 3.7 presents graphically the process just described.

3.4   Activities Included in each Process

The research has shown the different activities performed regularly and the different processes vendors installed to return goods in the B2C space of electronic commerce. To recapitulate, Table 4.9 shows which activities are done in each identified process.

Process	RMA	Shipping	Fees	Pre-Paid Tags
The Basic Return Process	Yes	No	Yes	No
The RMA-in-the-Box Process	Yes	No	Yes	No
The Traditional In-Store Return Process	No		No	
The Pre-Paid Return Shipment Process	Yes	Yes	Yes	Yes
The 3Pl Return Process	Call*	No	Yes	No
The Receiving Partner Process	No		No	
The Vendor Arranged Pick-up Process	Call*	Yes	No	No

*Requires a call to a customer service representative as an RMA form.

Table 3.9: Activities Included in each Process

3.5 Processes Listed by Groups of Vendors

To identify if vendors in common markets and with similar capabilities have comparable processes, the companies were grouped as in section 3.2. Each vendor was assigned a the letter that represents the process type which most resembles its own. If that process differ considerably from those described in section 3.3, a non-classified (NC) was assigned, and it is further explained.

Group 1. The first group consists of PC vendors who besides selling via electronic commerce operate brick and mortar storefronts. In this group, three of the eight companies have implemented process type A and, another three have process type C. the remaining two vendors have process type G, as shown in Table 3.10.

	Company	Process	
1	Pcliquidator.com	A	(The Basic Return Process)
2	Vanns.com	A	
3	Joemommacomputer.com	A	
4	Compusa.com	C	(The Traditional In-Store Return Process)
5	Circuitcity.com	C	
6	Radioshack.com	C	
7	Officedepot.com	G	(The Vendor Arranged Pick-up Process)
8	Staples.com	G	

Table 3.10: Personal computer Vendors with Storefront

Group 2. The second group is formed by those e-tailers that sell PC's only through the Internet. Twenty-three companies of the twenty-six that form the group do a process type A to return merchandise from the consumers. One of the other three e-tailers has a process type B while the other two have non-classified processes, as displayed in Table 3.11. Apple.com computer doesn't accept returns unless the product is defective, and Insight.com asks their customers to send any defective item to the original manufacturer.

Group 3. Group 3 includes the furniture vendors that embrace both channels. Five of the nine companies in this group have processes comparable to type B, making it the most common in this group, and half of the remaining four e-tailers have process type C. Note

that the five companies in this group with process type B have limited storefront geographical coverage.

	Company	Process	
1	Cdw.com	A	(The Basic Return Process)
2	Cdworld.com	A	
3	Compaq.com	A	
4	Dell.com	A	
5	ECost.com	A	
6	Egghead.com	A	
7	Esctecnologies.com	A	
8	Gateway.com	A	
9	Ibm.com	A	
10	Ic-direct.com	A	
11	jandr.com	A	
12	Netdirect.com	A	
13	Outpost.com	A	
14	Pcmall.com	A	
15	PcRush.com	A	
16	Pcshoppingplanet.com	A	
17	Peoplepc.com	A	
18	Refurbcity.com	A	
19	Skymall.com	A	
20	Techstore.com	A	
21	Tekdiscountwarehouse.com	A	
22	Valueamerica.com	A	
23	Volumebuy.com	A	
24	Hp.com	B	(The RMA-in-the-Box Process)
25	Insight.com	NC	
26	Apple.com	NC	

Table 3.11: Personal Computer vendors without Storefront

	Company	Process	
1	Levenger.com	A	(The Basic Return Process)
2	Plowhearth.com	B	(The RMA-in-the-Box Process)
3	Orvis.com	B	
4	Crateandbarrel.com	B	
5	Gumps.com	B	
6	Ross-simons.com	B	
7	Therightstart.com	C	(The traditional In-Store Return Process)
8	Coldwatercreek.com	C	
9	Hammacherschlemmer.com	F	(The Receiving Partner Process)

Table 3.12 Furniture vendors with Storefronts

Group 4. In the group formed by furniture vendors selling exclusively through electronic commerce, eight of the fifteen e-tailers implemented return process type B. Three companies have process type E, offering their customers extended services by arranging

the whole reverse process themselves. The remaining three e-tailers designed their process requiring RMA forms, making them process type A, Table 3.13 shows which type of processes vendors in the fourth group have.

	Company	Process	
1	Furnituredirect.com	A	(The Basic Return Process)
2	Netmarket.com	A	
3	Widerviewvillage.com	A	
4	Buychoice.com	B	(The RMA-in-the-Box Process)
5	Buyitnow.com	B	
6	Domestications.com	B	
7	Goodcatalogcompany.com	B	
8	Thecompanystore.com	B	
9	Iqvc.com	B	
10	Fingerhut.com	B	
11	Babyproductsonline.com	B	
12	Myhome.com	E	(The 3PL Return Process)
13	Furniture.com	E	
14	Adatom.com	E	
15	Puertabella.com	E	

Table 3.13: Furniture Vendors without Storefronts

Group 5. This group consists of the apparel vendors who also possess physical storefronts, as shown in Table 3.14. The fourteen companies studied that fit into this group use process type C, suggesting that there is an advantage in leveraging the customer facing physical infrastructure to return merchandise from consumers.

	Company	Process	
1	Bugleboy.com	C	(The traditional In-Store Return Process)
2	Bloomingdales.com	C	
3	Bebeshop.com	C	
4	Armaniexchange.com	C	
5	Easternmountainsports.com	C	
6	Hatworld.com	C	
7	Wbstore.com	C	
8	Jcrew.com	C	
9	Gap.com	C	
10	Bananarepublic.com	C	
11	Disney.com	C	
12	Macys.com	C	
13	Llbean.com	C	
14	Esprit.com	C	

Table 3.14: Apparel Vendors with Storefronts

Group 6. For those companies forming Group six, displayed in Table 3.15, the most common process is B; this group is formed by apparel e-tailers without physical storefronts. The main difference between process type A and process type B is the requirement of notifying the vendor by soliciting an RMA form before returning the item; in this case the six companies with process B include the RMA form with the delivered product. Lucy.com, despite having a process type B, includes a pre paid freight tag to be used in case the item needs to be returned.

	Company	Process	
1	Ashford.com	A	(The Basic Return Process)
2	Designersdirect.com	A	
3	Bargainclothing.com	B	(The RMA-in-the-Box Process)
4	Onehanesplace.com	B	
5	Shopirish.com	B	
6	MVP.com	B	
7	Lucy.com	B	
8	Altrec.com	D	(The Pre-Paid Return Shipment Process)
9	Bluefly.com	D	

Table 3.15: Apparel Vendors without Storefronts

Group 7. This group consists of six companies, displayed in Table 3.16, that sell multiple products lines through both physical storefronts and the Internet. Similarly to Group five, all the companies have process type C, reinforcing the conclusion that leveraging the customer facing physical infrastructures to return products from the customers is convenient.

	Company	Process	
1	Wal-Mart	C	(The traditional In-Store Return Process)
2	Sears.com	C	
3	Discoverystore.com	C	
4	Bluelight.com	C	
5	Target.com	C	
6	Dillards.com	C	

Table 3.16: Other Vendors with Storefronts

Group 8. The eighth group is formed by pure e-vendors, who similar to companies in Group 7, sell multiple products lines but without possessing the physical storefronts. Four of the six companies studied have process type A and the remaining two use process type B, as shown in Table 3.17.

	Company	**Process**	
1	Buy.com	A	(The Basic Return Process)
2	Mercata.com	A	
3	Amazon.com	A	
4	Onvia.com	A	
5	EToys.com	B	(The RMA-in-the-Box Process)
6	Pets.com	B	

Table 3.17: Other Vendor without Storefronts

Of the thirty-seven vendors studied that possess customer facing physical infrastructure, twenty-five deal with consumers' returns with process type C and keep alternative processes for those customers that doe not have access to the stores. Of the remaining twelve vendors, five have in place process type B, four have process type A. Another two follow process type G and one more has process F. Additionally, fifty-seven pure e-tailers were also studied. Of these, thirty-two have process type A, seventeen perform type B, four vendors have process type E, and two more have process type D; the remaining two have non-classified processes.

In total, ninety-three vendors that sell products on the Internet were studied. The most common processes were type C in those companies that have physical storefronts, and process type A in those that do not own storefronts.

3.6   Consumer Perspectives

To enlighten some of the consumers' impressions on the return process in the B2C electronic commerce, sixty-seven personal interviews were conducted based on the questionnaire presented in section 2.3. The consolidated results of the interviews are presented in the next section.

3.6.1 Results of the Consumers Survey

The average response to the first question; "How often do you buy products on the Internet?" was 1.27 times per month, with a standard deviation of 8.67. Figure 3.8 shows the distribution of the responses.
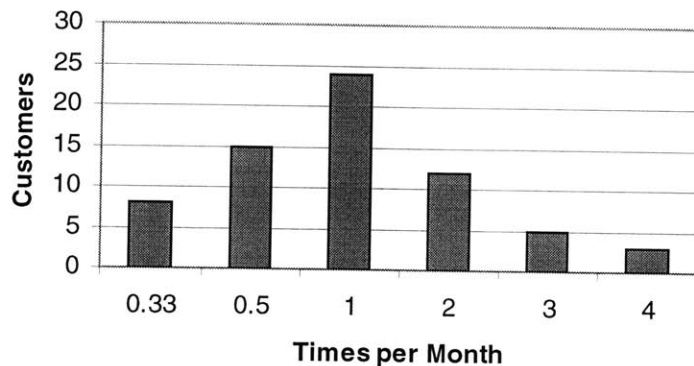
Figure 3.8: Customers Buying Pattern on the Internet

Of the sixty-seven customers interviewed, sixteen, or twenty-four percent, have returned products bought on the Internet, and two of them wanted to return a product but finally decided not to do it. Figure 3.9 displays the number of customers in each category.
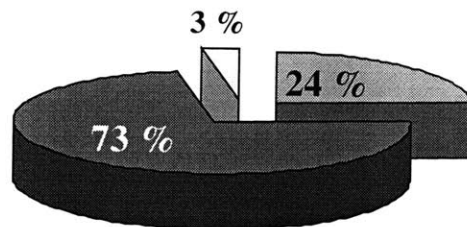
Figure 3.9: Percentage of Customers that have returned a Product

Eleven of the sixteen customers that had to return a product had the opportunity to do it at a store. Of the eleven customers that could return the product at a store, ten did and evaluated the process as relatively simple. The other five customers returned the product through national parcel services and judged the process as neither complex, nor simple. Figure 3.10 shows the distribution of how customers who have returned a product graded the return process.

Returns to Stores

Returns Through Parcel Services
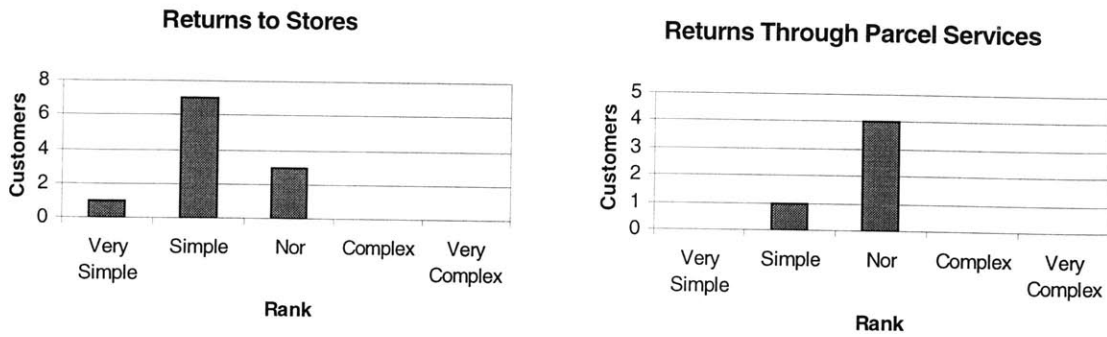
Figure 3.10: Evaluation of Return Processes

Electronic commerce customers were consistent when asked about their preference of buying from a vendor with both customer interfaces, the electronic and the physical storefronts. Ninety-six percent answered that they preferred vendors that possess both complementary channels.

The average answer to the question regarding the discount at which vendors will have to sell their products if they will not accept consumer's returns are shown below: The distribution concerning PC's, furniture, and apparel are presented in Figures 3.11, 3.12, and 3.13 respectively.

Personal Computers   71%
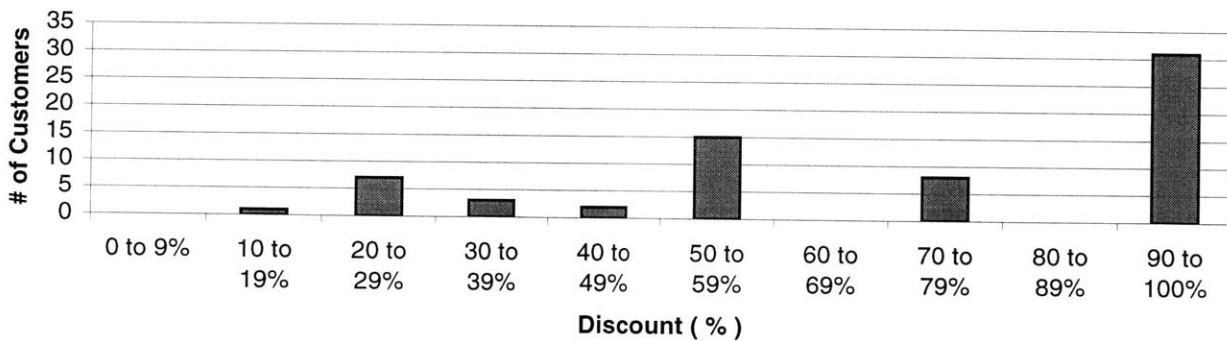
Figure 3.11: Discount Range Required by Consumers in the Personal Computer

Furniture   57%
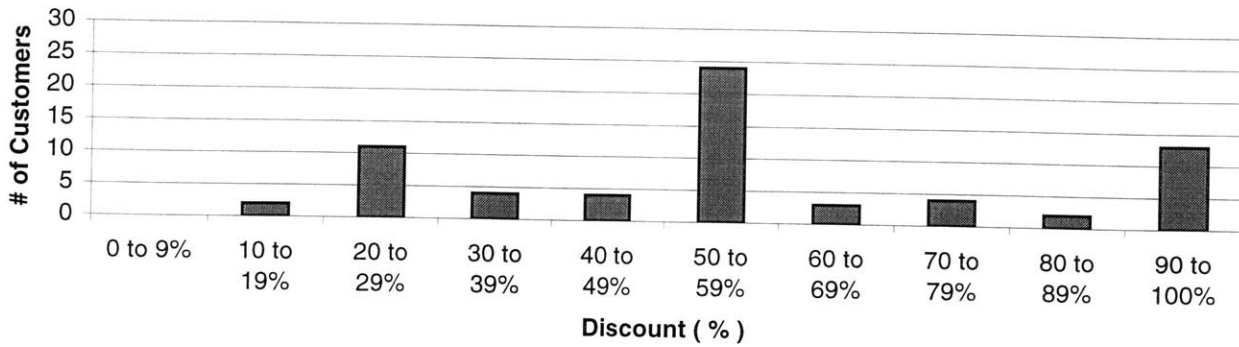
Figure 3.12: Discount Range Required by Consumers in the Furniture

Apparel   60%
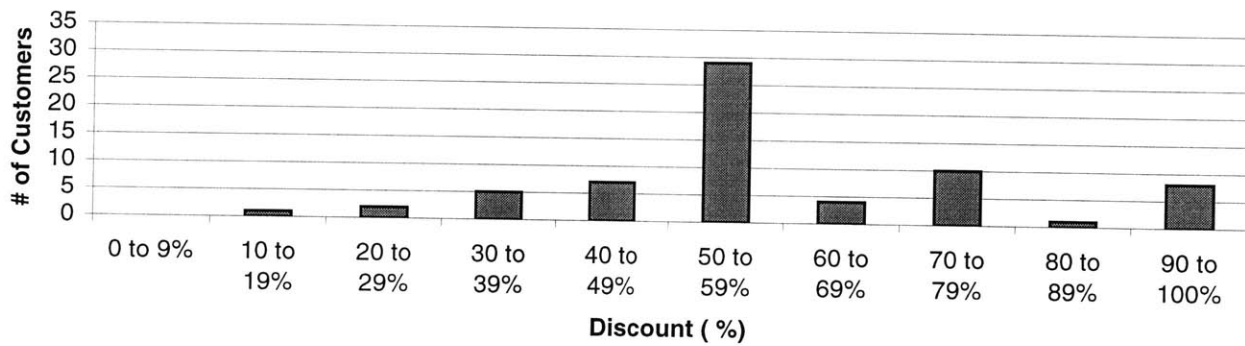
Figure 3.13: Discount Range Required by Consumers in the Apparel

The last question asked the consumer if they consider that vendors should pay for the return shipment fare with regard to each of three markets considered. The following are the percentage of consumers that consider that it is appropriate that the vendors pay the return shipment fare.

PC   70.1 %

Furniture   83.6 %

Apparel   97.0 %

3.7   Summary

Through this fourth chapter the results of the analysis are presented. In the first section the main activities included in the consumer returns processes are defined. The four main activities identified for their impact and relevance to customer returns process are; the RMA form, the restocking fees, the delivery fares, and the pre-paid shipping tags. Then, the second section lists the vendors with the activities they each perform.

The seven main processes identified in the B2C electronic commerce are described in the third section. "The Basic Return Process" is the most standard procedure; "The RMA-in-the-Box Process" varies form it because the RMA form is included in the product delivery package. "The Traditional In-Store Return Process" is the most common in the Clicks-and-Bricks, since it leverages the physical storefronts to ease the return process. The fourth and fifth processes described differentiate themselves with more involvement from the vendor. In "The Pre-Paid Return Shipment Process" the e-tailer sends electronically a pre-paid tag to use with a national parcel service provider, while the main characteristic of "The 3PL Return Process" is that the vendor; arranges with a 3PL to recover the product. "The Receiving Partner Process" handles the return process through receiving partners, and "The vendor Arranged Pick-up Process" picks the product itself; thus, it is only seen in companies that own distribution capabilities.

After stating in section four which activities are performed in each of the seven processes described, in the fifth section all the vendors divided by markets and subdivided by their infrastructures are listed with the correspondent process type. Process type A is the most common process for the pure electronic vendors and process type C for those that possess physical storefronts. The activities and process can be seen together in Appendix A

Finally on the sixth part of the chapter, the frequency with which an active customers buys on the Internet is 1.27 times per month. Of the sixty-seven customers interviewed, twenty-four percent have returned a product bought on the Internet. Another interesting result was that if vendors wouldn't allow returns, the customers said they will only buy

PC's at an eighty-two percent discount, furniture at a sixty-one percent discount , and apparel at a sixty percent discount.

CHAPTER 4   IMPLICATIONS

This chapter presents the causes, implications, and probable future trends based on the findings of this study. It starts with a strategic classification of the processes according to their complexity and orientation. Second a brief review of the reasons for the differences across industries and the cause of these differences within the industries. Next, an analysis of the possible contributions Kozmo.com and other 3PL services as a possible alternative to the last-first mile solution is presented.

The last mile dilemma is finding the most cost-effective form of product distribution to individual customers. As oppose to truckload shipments and less-than-truckload shipments (LTL) where merchandise is moved from a single location to a distant single destination, the last-mile dilemma focus on the delivery of products from a single location to multiple near locations, increasing the cost per item significantly. This activity is typical of urban regions and is currently performed by national parcel service providers. When a product is returned to its vendor, the last mile turns into the first mile and could be performed through the same means.

4.1   Strategic analysis of Return Processes

This section creates a strategic framework to better understand the target orientation of each of the return processes previously described. Figure 4.1 illustrates the return processes in terms of target orientation (low-cost or customer satisfaction) and the operation complexity they imply for the vendor. Through this bidimensional analysis, It is observed that "The Vendor Arranged Pick-up Process" and "The 3PL Return Process" are the most customers-oriented as they pick up the product at the customer's location. "The RMA-in-the-Box Process" is simpler and more customers oriented than "The Basic Return Process" since it includes the RMA form, leaving "The Basic Return Process" as the most cost focus. "The Traditional In-Store Return Process" and "The Receiving Partner Process" are both oriented to the customer, although "and "The Receiving Partner Process" is more difficult to operate since it has to deal with receiving partners who may require numerous negotiations. Finally it shows that a process focus on lower cost but

requires a great deal of complexity is inconvenient. If one proves to be in that quadrant it is probably caused by a misalignment.
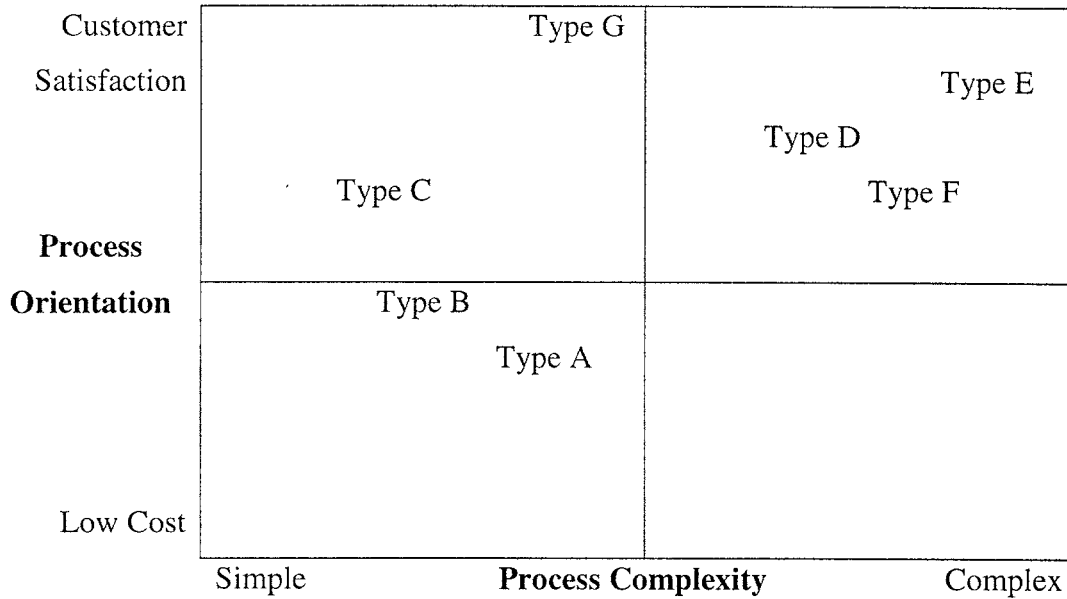
Process Type A: "The Basic Return Process"
Process Type B: "The RMA-in-the-Box Process"
Process Type C: "The Traditional In-Store Return Process"
Process Type D: "The Pre-Paid Return Shipment Process"
Process Type E: "The 3PL Return Process"
Process Type F: "The Receiving Partner Process"
Process Type G: "The Vendor Arranged Pick-up Process"

Figure 4.1: Processes Strategic Focus

On Figure 4.2 the vertical axis represents the processes' focus, but to understand the sacrifice that vendors are making in terms of gate-keeping to offer better service, the analysis shows a control variable on the horizontal axis. Flexible gate-keeping policies improve customer satisfaction but also prevents vendors from controlling what is entering the return pipeline, and since it probably increases the amount of preventable merchandize flowing in, consequently costs will increase. "The Basic Return Process," "The Pre-Paid Return Shipment Process," "The Vendor Arranged Pick-up Process," and "The 3PL Return Process" have excellent gate-keeping control since they require an

RMA form or an equivalent, while "The RMA-in-the-Box Process" offer a lower degree of control. "The Traditional In-Store Return Process" has some degree of control over the in-coming flow of merchandize since a clerk revises the products at the store. Similarly but to a lower degree due to coordination difficulties between the vendor and the receiving partner, "The Receiving Partner Process" has some level of control over what enters the reverse logistics pipeline but it is more susceptible to error.

Customer Satisfaction		Type G
		Type E
		Type D
	Type F	Type C
Process		
Orientation	Type B	
		Type A
Low Cost		

Loose   **Control Level**   Strong

Process Type A: "The Basic Return Process"
Process Type B: "The RMA-in-the-Box Process"
Process Type C: "The Traditional In-Store Return Process"
Process Type D: "The Pre-Paid Return Shipment Process"
Process Type E: "The 3PL Return Process"
Process Type F: "The Receiving Partner Process"
Process Type G: "The Vendor Arranged Pick-up Process"

Figure 4.2: Processes Control Tradeoff

4.2   Reasons for Differences across Industries

Processes vary across industries due to reasons such as the product's intrinsic characteristics, product lifecycle, competitiveness of the industries, and the product's propensity to be returned. Size and fragility are product characteristics that drive vendors to design the return processes differently. When designing a return process, price is also

an important consideration, since it will determine the products' margin available to invest in customer service logistics.

Industries with extraordinary product innovation rates face a product obsolescence problem, which increases the cost of holding inventories, thus prompting firms to set more rigid policies and tighter return processes. In the PC industry the price of products decreases at a 10% rate each month and the lifecycle is only approximately six months, making inventory turns a very important issue. The high cost of keeping inventories makes it costly for vendors to accept product exchanges or returns without charging a fee.

Some industries sell products that have a higher propensity to be returned caused mainly by uncertainties at the moment of purchase. For industries like apparel, this is natural due to the variety of styles, sizes, and customers' preferences. Complex and rigid return policies may discourage customers from purchasing goods from a vendor or through a sales channel like electronic commerce, which enhance these issues.

The last factor that was identified as a cause for differences in the reverse logistics process is the competitiveness of industries. Industries with intensive competition and low margins have reengineered their operations to reduce costs affecting, in a domino effect, the return process. Using the PC and its product obsolescence as an example once more, PC's are often sold with a monitor and a printer manufactured by different companies. In an attempt to reduce inventories vendors have arranged for the three products, that were sold together, to be shipped from their original manufacturers and merged in transit by a third party parcel service. To offer a viable return process for this environment, completely different return processes are needed for these tight procedures.

4.3   Reasons for Differences within Industries

Within industries, return processes vary considerably due to a different set of reasons. Factors such as the pre-Internet background, competitive positions, target markets, and complementary channels account for the main differences. Companies operating in industries such as catalog sales or direct sales had experience selling to customers from

remote locations and consequently they brought their expertise to the electronic commerce. Sears & Roebuck started their catalog operations in the 1800's and built a national franchise based on the premise that any catalog item could be returned for any reason and was guaranteed for a lifetime. By eliminating the uncertainty inherent in virtual operations, they were able to turn their business into a great success. This philosophy persisted aiming experienced catalog vendors, and they reflect it in electronic commerce through a customer friendly returns process.

Vendors who use the Internet as a complementary channel also differ greatly in their return process. Storefronts at convenient and accessible locations allow them to offer their customers immediate exchanges or returns, thus increasing customer satisfaction. Most importantly the customers cost of shipping the product back to the vendor disappears, making the process simpler and cheaper. Most retailers with these characteristics encouraged their customers to return the products to physical stores.

Within any particular industry there is market segmentation so companies can focus their efforts. When focusing on the high-end market, for example, vendors sell with higher margins to compensate for better service and process flexibility offered to their customers. Not only through a product's intrinsic properties can retailers compete in a high-end market. Following the extended product strategy even commodity products can be differentiated through services to serve a specific market. This includes the return policies and procedures thus varying them considerably.

When electronic commerce started its full potential was not yet understood. Today, although there still is some skepticism, most U.S. companies have initiated operations late in the e-commerce time span. Consequently, to recover lost ground and become a leader in this space as they are in their traditional sector, powerful companies have started very aggressive advertising campaigns focused on services. Free delivery services are common for return process, many companies don't charge fees and some even arrange to pick up the product free of charge. In extreme cases, vendors pay for the returning shipping fee even if the product is not defective.

4.4 Alternative Approaches

Third party logistics, web groceries, and companies such as Kozmo.com posse alternative approaches to the last-first mile distribution. They have built distribution capabilities to deliver products to final consumers. Since the distribution assets are already incurring the costs of touring the customer's geographical area, these distribution infrastructures can also be used to return products from the final consumer to their original vendors. None of these companies handle the reverse logistics process for other companies, although they are in a position to do it. Next, some of the implications and capabilities of some business models are presented.

Homeruns.com, Webvan.com and other web grocers that have recently proliferated are delivering groceries from out-of-town warehouses to final consumers in major metropolitan areas. After delivering the products, the trucks return to the warehouses empty, creating an incentive to further exploit them with back-hauls. With their current infrastructures, e-grocers can recover return products from the customer's home, store them cheaply in their warehouses, and ship them back to the original vendors in a consolidated way.

Kozmo.com sells products and rent videos through a web site and delivers them in less than an hour after the purchase was made. Their inventories are stored in very centric, but small, warehouses and they deliver in bicycles or vans to nearby customers. To facilitate the process of returning the rented videos, Kozmo.com has put drop-boxes in a large amount of retailers in their customers' zone. With the bicycles' back-hauls and the drop-boxes, as the e-grocers, Kozmo.com have the infrastructures to recover products from the customers and ship them back to the other electronic vendors in a consolidated way. This business model has limitations such as size of the products that can be handle.

There are some additional benefits from returning products by these means. First, customer satisfaction will improve since everything is taking car of for him. Gate-keeping control will also improve since there is someone receiving the products that, with proper training, could prevent the entrance of unnecessary merchandise to the return

pipeline. Also the process can be speeded, once the product is recovered by the third party and is in sure hands, the vendor can send another immediately and not wait until receiving the product.

Regardless that the capabilities these companies have allow them to recover and return products, it is not their core competency. Understanding the suitability of these companies to perform the return process for other companies, as third parties, requires a strategic analysis and it is beyond the scope of this thesis.

Chapter 5   Conclusions

5.1   Thesis Summary

Electronic commerce is revolutionizing the retail industry. Still, it is a relatively unexplored sales channel and every day that passes more paradigms change and new issues arise. To successfully maintain the current pace of growth, B2C e-commerce will need to cannibalize more traditional sales channels by surpassing them in convenience. Even so, convenience, although it is vital, is not sufficient. E-commerce needs to prove its reliability for this cannibalization to occur. Reliability means on-time delivery, security of on-line transactions, and customer certainty that if there is any problem, the e-vendors will have the capability and expertise to solve them.

Even if an e-tailer manages to achieve one-hundred-percent correct deliveries, there are always causes to return products that the vendor can not control. These causes or indirect reasons, term used through this thesis to describe those returns over which the vendor does not have control, are approached differently by e-vendors with distinct characteristics.

The purpose of this thesis is to identify these differences across the reverse logistics process. To accomplish this, the return policies and procedures of ninety-three leading companies that sell products on the Internet directly to consumers were carefully studied. Seven different return processes and four main activities included in them were identified and formally described. Each process is designed to satisfy a specific set of needs, thus they differ considerably from each other.

The ninety-three vendors were divided into eight different categories. The first criterion for dividing the sample in four sets is the type of products sold, then each set is further divided into two groups: those with storefronts and those with no customer facing physical infrastructure. Afterwards each group was categorized according to the seven processes and their main activities to look for commonalities and discrepancies.

Finally, the fifth chapter this author explores three additional areas. First a framework to evaluate the processes in terms of their orientation is presented. Through bidimensional approaches, the processes were categorized according to their relative orientation and complexity, and orientation and gate-keeping control. Secondly an analysis of the causes that may be driving the differences in reverse logistics processes across and within industries is presented. Finally, an exploration of alternative 3PL services and their possible contributions to the last-first mile unascertained interrogative is presented.

5.2   Conclusions

Ever since its birth, B2C electronic commerce has grown at an accelerating pace. To sustain this growth rate, e-commerce will have to increase its customer base at the expense of more traditional channels. To accrue these more mature customers, e-commerce will have to prove its reliability and convenience. Operational excellence and coordination among the supply chain will allow e-vendors to offer services like on-time delivery and simple return processes, vital factors for electronic vendors' success.

Vendors in B2C e-commerce offer different return processes depending on their target markets and their infrastructures. Seven processes were identified in this thesis, all of them different but based on needs. E-vendors that have physical storefronts in their customer's geographical zones can leverage them to make the return process faster and simpler for the customers. Independently of the customers they are serving and the products that are returned, using the stores to accept the on-line returns is the preferred way for bricks-and-clicks companies.

Return Merchandize Authorization forms are the mechanism used by e-tailer for gate-keeping and to obtain feedback on reasons for the returns, This feedback is vital in the personal computer industry which operates under tight margins and very short lifecycles. On the contrary, the apparel industry, for instance, does not require previous notification from the consumer that a product is being returned. Still, they require the customer to fill out an alternative form with the reason for the return and to also obtain feedback.

Finally, some return processes were identified as being aimed to completely satisfy the customers, while other focused more on cost. Another interesting finding is that some vendors, in order to simplify the purchasing procedure for the consumer, are establishing processes that are very difficult to operate. Another thing to think about is that strict gate-keeping control may sacrifice customer satisfaction.

In essence there is no best return process. From this analysis, we can see that there is no panacea to handle return products in B2C e-commerce. Different processes suit some vendors best depending on their target markets and their infrastructures. To support this wide array of needs, return processes vary in orientations, simplicity, and tightness of control.

5.3 Further Research

Reverse Logistics in business-to-consumer e-commerce is a relatively unexplored field. Many areas require further research including the discrepancies in return processes and the metrics on which they should be measured. This research presents some of the relevant issues in the following paragraphs.

Although a basic strategic framework is provided in this thesis, many aspects of the return process require deeper strategic analysis. In the same way that companies align marketing efforts to a target segment of the market, return processes must be aligned to support the requirements of this same segment. While the orientation of the processes, the complexity to execute, and the gate-keeping control seem to be the most relevant aspects of reverse logistics processes, other important issues may arise following careful review of the strategic implications.

It is clear that the purpose of the reverse logistics process is to return products from the consumer to the vendor quickly, conveniently and at the lowest cost. What remains uncertain are the tradeoffs between costs and service. For example, the tradeoff of providing better customer services to high-end customers (higher cost), or the tradeoff of

a complex operation for a vendor to simplify a process for the customer. To study these tradeoffs, metrics upon which the processes can be evaluated must be developed.

APPENDIX A

A.1   Tables of Vendors by Activities and Processes

		Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping	Process
Group 1	PC Vendors w/Storefront	1 Pcliquidator.com	*	Yes	Yes	No	A
		2 Joemommacomputer.com	*	Yes	Yes	No	A
		3 Vanns.com		No	No	No	A
		4 Compusa.com	*	Yes	Yes	No	C
		5 Circuitcity.com	*	Yes	Yes	No	C
		6 Radioshack.com		Yes	No	No	C
		7 Officedepot.com		Call	No	Own	G
		8 Staples.com		Call	No	Own	G

		Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping	Process
Group 2	PC Vendors without/Storefront	1 Icdirect.com		Yes	Yes	Yes	A
		2 Esctecnologies.com	*	Yes	Yes	No	A
		3 ECost.com	*	Yes	Yes	No	A
		4 Compaq.com	*	Yes	Yes	No	A
		5 Gateway.com	*	Yes	Yes	No	A
		6 Peoplepc.com	*	Yes	Yes	No	A
		7 Volumebuy.com	*	Yes	Yes	No	A
		8 Valueamerica.com	*	Yes	Yes	No	A
		9 TechstoreInc.com	*	Yes	Yes	No	A
		10 Netdirect.com	*	Yes	Yes	No	A
		11 Pcshoppingplanet.com	*	Yes	Yes	No	A
		12 Egghead.com	*	Yes	Yes	No	A
		13 cdw.com	*	Yes	Yes	No	A
		14 Pcmall.com	*	Yes	Yes	No	A
		15 Tekdiscountwarehouse.com	*	Yes	Yes	No	A
		16 Refurbcity.com	*	Yes	Yes	No	A
		17 Pcrush.com	*	Yes	Yes	No	A
		18 jandr.com		Yes	No	Yes	A
		19 Dell.com		Yes	No	No	A
		20 Outpost.com		Yes	No	No	A
		21 Skymall.com		Yes	No	No	A
		22 Cdworld.com		Yes	No	No	A
		23 Shopibm.com		Yes	No	No	A
		24 Hp.com	*	Yes	Yes	No	B
		25 Apple.com	*	Yes	Yes	No	NC
		26 Insight.com		Yes	No	No	NC

		Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping	Process
Group 3	Furniture Vendors w/Storefront	1 Levenger.com		Yes	No	No	A
		2 Coldwatercreek.com		Call	No	Yes	A
		3 PlowandHearth.com	*	No	No	No	B
		4 Orvis.com	*	No	No	No	B
		5 Crateandbarrel.com	*	No	No	No	B
		6 Gumps.com	*	No	No	No	B
		7 Therightstart.com	*	No	No	No	C
		8 Rosssimons.com	*	No	No	No	C
		9 Hammacherschlemmer.com	*	No	No	No	F

		Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping	Process
Group 4	Furniture Vendors without/Storefront	1 Furnaturedirect.com		Yes	Yes	No	A
		2 Netmarket.com		Yes	No	No	A
		3 Widerviewvillage.com		e-mail	No	No	A
		4 Domestications.com	*	No	No	No	B
		5 Goodcatalogcompany.com	*	No	No	No	B
		6 Thecompanystore.com	*	No	No	No	B
		7 Iqvc.com	*	No	No	No	B
		8 Fingerhut.com	*	No	No	No	B
		9 Buychoice.com	*	No	No	No	B
		10 Buyitnow.com	*	No	No	No	B
		11 Babyproductsonline.com		Call	No	No	B
		12 Myhome.com		Yes	No	No	E
		13 Furniture.com		Yes	No	No	E
		14 Adatom.com	*	No	No	No	E
		15 Puertabella.com		Call	No	Yes	E

		Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping	Process
Group 5	Apparel Vendors w/Storefront	1 Bugleboy.com		Yes	No	No	C
		2 Bloomingdales.com		No	Yes	Yes	C
		3 Bebeshop.com	*	No	No	No	C
		4 Armaniexchange.com	*	No	No	No	C
		5 Easternmountainsports.com	*	No	No	No	C
		6 Hatworld.com	*	No	No	No	C
		7 Wbstore.com	*	No	No	No	C
		8 Jcrew.com	*	No	No	No	C
		9 Gap.com	*	No	No	No	C
		10 Bananarepublic.com	*	No	No	No	C
		11 Disney.com	*	No	No	No	C
		12 Macys.com	*	No	No	No	C
		13 Llbean.com	*	No	No	No	C
		14 Esprit.com	*	No	No	No	C

		Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping	Process
Group 6	Apparel Vendors without/Storefront	1 Ashford.com		Yes	No	No	A
		2 Designersdirect.com		Yes	No	No	A
		3 Bargainclothing.com		Yes	No	No	B
		4 Lucy.com		No	No	Yes	B
		5 Onehanesplace.com	*	No	No	No	B
		6 Shopirish.com	*	No	No	No	B
		7 MVP.com	*	No	No	No	B
		8 Altrec.com		Yes	No	Yes	D
		9 Bluefly.com	*	No	No	No	D

		Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping	Process
Group 7	Other Vendors w/Storefront	1 Wal-Mart		Yes	No	Yes	C
		2 Sears.com		No	No	Yes	C
		3 Discoverystore.com	*	No	No	No	C
		4 Bluelight.com	*	No	No	No	C
		5 Target.com	*	No	No	No	C
		6 Dillards.com	*	No	No	No	C

		Company	Same Activities	Require RMA	Charges Fees	Pays for Shipping	Process
Group 8	Other Vendors without/Storefront	1 Buy.com	*	Yes	No	No	A
		2 Mercata.com	*	Yes	No	No	A
		3 Amazon.com	*	Yes	No	No	A
		4 Onvia.com		No	No	No	A
		5 EToys.com	*	Yes	No	No	B
		6 Pets.com		No	No	No	B

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