THE PENNSYLVANIA STATE UNIVERSITY SCHREYER HONRS COLLEGE

DEPARTMENT OF SUPPLY CHAIN AND INFORMATION SYSTEMS

BEST PRACTICES OF REDUCING CUSTOMER GUARANTEE RETURNS FOR MOBILE DEVICE COMPANIES

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ABSTRACT

In the competitive market of mobile phones, profitability and customer satisfaction are closely related results that frequently place competitive pressure on companies. Oftentimes, in order to achieve success in one realm there has to be compromise in the other. The goal for many of these companies is to offer high levels of flexibility and choice for the consumer without cannibalizing sales and profits. In this specific scenario, a certain service provider's mobile phone return policy was investigated in order to maximize profitability while maintaining adequate levels of customer service. Mobile phone returns data was analyzed, and the company's salespeople were interviewed to find the most common issues that result in returns. The results concluded that the main reason for returns was due to mismatch between the customer and the mobile device. Given these findings, suggestions to increase the compatibility of customers and phones were presented.

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Chapter 1

Introduction

A certain mobile phone service provider's Customer Guarantee policy for new mobile devices allows customers to return their mobile phone with little to no penalty within a certain time frame. Many customers have been using this policy,resulting in lost lost revenue for the company. Sometimes these returns are due to functional issues, but oftentimes they are due to buyer's remorse or change in personal tastes of the purchaser. The purpose of this thesis is to analyze the nature of these returns and provide options for the company that will achieve a ten percent reduction in Customer Guarantee returns in 2014 for mobile phone devices.

Much of the research will be done through investigating buyer's behavior. An observation of Customer Guarantee policies across the hi-tech consumer products industry will work as a reference for the company to compare its return policy. This will help to determine if there will be any room for optimizing and improving the policy without penalizing the customer or negatively affecting sales. Analysis of the similarities and differences between the company's policies and competitors' policies will set limitations as to how significantly the return policies can be changed.

Additionally, the research will find the amount that the Customer Guarantee is costing the company, and the most common reasoning behind returns. Based on research, there will be multiple Customer Guarantee return reduction options. The research will evaluate the benefits, costs, and risks of each of the options.

With the information from this thesis, the company will be able to choose the optimal method of Customer Guarantee returns that reduce costs most effectively without cannibalizing revenues.

Chapter 2

Background and Terminology

Mobile Device

A mobile device is any compact or semi-compact device that allows for either internet, cellular, or data transmission without the need for wired connection. The primary categories of devices that the company sells are 3G Internet phones, 3G Smartphones, 4G Internet phones, 4G Smartphones, Basic phones, and Tablets. Although some products do not offer a cellular calling feature, the terms mobile device and mobile phone will be used interchangeably throughout this research in reference to the company's wireless products.

Customer Guarantee

Customer Guarantee is a service offered in many different industries. The vast majority of major retailers allow some sort of return policy for their products. These policies benefit both the retailer and the consumer economically because they protect against defective products, which allows risk-averse buyers to spend more money than if they did not have a guarantee. Some corporations that are known for their flexible return policies are Costco, Kohls, and L.L. Bean, all who have no limit on their return windows.

However, there are numerous costs that accompany these guarantees. In recent years, the mobile phone industry has become a competitive market, with average time between phone generations lasting less than one year. This has applied a considerable amount of pressure to wireless providers, who oftentimes subsidize phone costs with service plans of typically one to two years. Commonly, every one or two years (depending on the length of the contract) phone

companies allow customers to receive a free eligible mobile phone upgrade. Oftentimes, with the influx of phone options coupled with the duration between phone upgrades, many consumers have trouble deciding what phone they want, and "buyer's remorse," or the customer's regret of buying a new phone and returning it in favor of another or getting his/her money back, is a common phenomenon. In the consumer electronics sector, as many as ninety five percent of returns are unconnected to product defects, with sixty-eight percent of returns characterized as "no trouble found," and twenty-seven percent with "buyer's remorse" (Douthit, 2011).

Guarantee Restrictions

Originally, the phone return policy for the company was thirty days with no defects. However, this policy was shortened to fourteen days after customers were recorded to have returned their mobile phones starting after around the twentieth day. Additionally, a restocking fee of \$35 was introduced to reduce early returns. Although data for the switch from a thirty-day guarantee to a fourteen-day guarantee was unattainable, according to the supervisors of the project, the change in return policy did not significantly reduce the number of returns.

As an alternative to returning the phone, the customer may instead opt to make an exchange as long as the product is in like-new condition.

Policies of the top four United States mobile phone providers were researched and compared as seen in Table 1:

	Company				
	Verizon	AT&T	Sprint	T-Mobile	
Return Policy	14 days	14	14	14 in store, 20	
length				online	
Restocking	\$35	\$35	\$35	\$50 for smart	
fee				phone, \$25 for	
				basic	
Other options	Early termination	Early termination	Early termination	Early termination	
	fee of \$175-\$350	fee of \$175-\$350	fee of \$175-\$350	fee of \$175-\$350	
	after 14 days	after 14 days	after 14 days	after 14 days	

As apparent in Table 1, the policies of the four largest United States mobile phone service
providers have almost identical return policy lengths and restocking fees. The return period
seems to be a standard fourteen days, with a \$35 restocking fee. T-Mobile has a slightly more
segmented return policy, but overall the difference is not significant. More than likely, these
values were not chosen for cost efficiency or market equilibrium, but rather due to the
competition between firms. This is common in an oligopoly market, where retailers attempt to
match their competitors in value so they do not lose customers to their rivals despite it not being
the most cost-effective decision (Che, 1995).

Functional Returns

Functional returns are returns where there was a tangible issue with the device. Overheating, cracked displays, and other features that malfunction or break all fall under functional returns. Functional returns are a minority of the returned products and will not be the focus of this research.

Table 1

Customer Guarantee Returns

Customer Guarantee returns are returns where there is no defect or issue with the device itself, but the customer does not like the device and returns it. Reasons such as dislike of the interface, operating system, or phone features fall under the Customer Guarantee Returns category. These reasons are the ones that will be addressed, analyzed, and solved at the conclusion of the research.

Returned Device

On average, a returned mobile device costs the company between \$200 and \$250. This means that in the data between May 2013 and December 2013, between \$76 million and \$95 million are lost due to Customer Guarantee returns on phones that have no apparent physical defects.

Most Smartphones and other mobile devices are bought from the mobile phone manufacturer at retail cost and are subsidized by the cellular and data contract plans that are offered at the time of purchase. Therefore, phones are heavily discounted initially since they will be paid for as the year- or two-year contracts progress. For example, a Smartphone could be purchased by the company for \$600, but is only sold to the consumer for \$200 because the company charges \$100 a month for two years in a binding data and cellular contract. However, if the phones are returned within the Customer Guarantee period, they cannot be sold as new again even if they are untouched, and the company loses money because the phone contract is terminated without penalty.

The two main options that the company pursues after receiving a return are either reselling the device to a mobile phone buyback and refurbishing company or refurbishing the

device on their own and offering it as a warranty replacement for when a customer needs a replacement device that is under warranty. The company itself does not sell refurbished items in its retail stores, but offers refurbished devices online.

Chapter 3

Methodology

The company provided seven months' worth of mobile phone return data for analysis. Around one hundred reasons for return were provided with the return logs, and around twenty of those reasons were Customer Guarantee returns.

The main reasons for Customer Guarantee Returns were found and sorted by occurrence rate. Additional stratification of data was also investigated. Device types, such as 3G, 4G, and Basic phones were separated and their respective return rates were found.

At the same time, potential methods for return reduction were explored. Some options were: shortening the Customer Guarantee period, increasing the restocking fee, educating customers on their ideal phones, lengthening the return period, or exploring more "try before you buy" options.

After comparing the rates of the company with its competitors, it was apparent that although changing the Customer Guarantee window may reduce return rates, it would also most likely reduce sales due to the Customer Guarantees that other companies were offering. In an oligopoly market, the policies are often chosen for competitive advantage rather than market equilibrium. Therefore, the company's return policy stipulations could not be changed despite their costs.

Charging a percentage of the phone's cost for the restocking fee was also a potential option. This way, the company could hedge its return policy by charging more to return expensive phones and less to return cheaper phones. However, upon further discussion it was feared that this policy would make customers more prone to purchasing low-cost phones such as

basic cell phones, which would also cost the company more in sales. Additionally, subsidization of phones is a common practice in the mobile device industry, so the initial phone cost may not be significant to the customer, as the company bears the majority of the cost of the device in favor of recouping the cost slowly over a one- or two- year cellular and data contract.

Lengthening the return period initially seemed counterintuitive, but held certain merits. When customers are given fourteen days to return a phone, they may make a hasty decision to return it, especially if they are not yet used to the phone's features. However, if they are given an extended period of time to leisurely try the phone and become accustomed to it, they may be more likely to keep it. Some non-technology companies, such as clothing companies, offer long or indefinite return windows, and although they experience high return rates, their reputation and customer satisfaction offset the return rates in total profit. But, with mobile phones and technology in general, the rapid release of new products makes this option impractical, as people may purchase a phone, then replace it with a new product even though they were completely satisfied with their last phone.

The final option was educating the customers so that they are paired with their ideal phone on their first purchase. This option was the most practical of the options because, done correctly, the firm could drastically reduce return rates without incurring large costs, especially due to the many resources that are already available for the company. The company website offers photographs, descriptions, pricing, and specifications of all mobile phones in stock. Phone reviews from both customers and critics are also available. Additionally, the retail stores offer floor models of products for customers to try before they commit to a purchase, along with knowledgeable sales staff who assist customers. If these resources are presented to the customer

correctly, they could sell the correct phones to the correct customers, reducing Customer Guarantee returns.

From the potential choices, through discussion with the company project leaders, it was decided that the most viable option to reduce return costs was to educate customers so that they could choose the correct phone for their needs.

In order to better understand the sale process at the retail stores, managers of the stores were interviewed and mobile phone sale methods were researched. Additionally, the managers' personal experiences and opinions on sales and returns were collected.

Chapter 4

Discussion of Findings

Findings in Data

The data analysis identified that almost seventy-five percent of all returns were due to the

buyer being unhappy with the device. Table 2 displays all the possible Customer Guarantee

return reasons alongside the percentage of phones that were returned due to that reason:

Table 2

Return Reasons	Percent of all returns		
Did Not Understand How To Use	4.47%		
Affordability - Device	2.46		
Affordability - Plan	1.53		
Network Coverage	2.43		
Device Form Factor	0.51		
Wanted Different Color	3.60		
Did Not Like User Interface	1.56		
Device Size too big/small	1.81		
Wanted Different Email options	0.08		
Wanted More Features	4.66		
Wanted Less Features	2.12		
Wanted Different OS	8.86		
DFill Return	0.33		
Duplicate Order Sent	0.17		
Incorrect / Incompatible Equipment	2.40		
Price Protection/Adjust/demo	0.05		

From Table 2, it is evident that the most common reasons that customers returned their phones for Customer Guarantee returns were as follows:

- 1. The buyer wanted a different operating system
- 2. The buyer wanted different features
- 3. The buyer did not understand how to use the device
- 4. The buyer wanted a different color
- 5. The buyer could not afford the device.

Of the top five reasons for Customer Guarantee phone returns, four of them were due to

incompatibility between the user and the device.

Upon division of data by phone types, it was found that the top five reasons for return for different types of phones varied to a certain extent. The reasons for Customer Guarantee returns based on the type of device can be seen in Table 3 below:

I able S

	Device Type						
		3 G	3G	4 G	4G	Basic	Tablet
		Internet	Smartphone	Internet	Smartphone		
ason for Return	1	Network	Wanted Different	Network	Wanted	Wanted More	Wanted
		Coverage	OS	Coverage	Different OS	Features	Different OS
	2	Did not	Wanted More	Affordability	Wanted	Wanted	Did Not
		understand	Features	- Plan	Different Color	Different OS	Understand
		how to use					How To Use
	3	Incorrect/Inc	Wanted Different	Did Not	Wanted More	Did Not	Wanted More
		ompatible	Color	Understand	Features	Understand	Features
		Equipment		How To Use		How To Use	
	4	Wanted More	Did Not	Affordibility	Did Not	Affordability	Affordability -
e l		Feature	Understand How	- Device	Understand How	- Device	Device
ľ			To Use		To Use		
	5	Affordibility	Incorrect/Incompa	Wanted More	Device is Too	Wanted	Device Size
		- Device	tible Equipment	Features	Big/Small	Different	Too Big/Small
						Color	

Across all device types, "Did Not Understand How To Use" and "Wanted More Features" scored in the top five reasons for Customer Guarantee returns. This makes apparent the need for greater educational initiatives and resources targeting the customers both before and after they purchase their devices. Because the top reasons for Customer Guarantee return all reflect an incompatibility between the customer and device, finding a more effective method of matching customers with an effective device will significantly reduce returns. In addition, teaching the customers how to use their devices will also help them accept their phones rather than return them.

The variations in Customer Guarantee returns according to device types suggest that different priorities and concerns should be raised according to the type of device that the customer is interested in. For instance, Network coverage is the top concern for 3G Internet and 4G Internet phones but not for any of the other device types, so the Network coverage issues should be addressed when 3G and 4G internet phones are sold, but do not have to be taken seriously into account when other device types are being sold. With the Smartphones and Tablets, wanting a different operating system is the number one reason for return, most likely because of significant differences between Apple, Android, and Windows' operating systems. These differences should be readily available to customers in order to reduce returns due to this reason.

In addition to return reasons, sale and return data was also examined in order to find the relationship between the two, and also to see whether there are any specific device types that are returned more frequently than others. The sales data by device type is expressed in percentages in Figure 1:





This data shows that Smartphones are by far the most popular devices, as 3G and 4G Smartphones account for seventy-two percent of all mobile device sales.

A breakdown of return data by device type was also investigated, and the results are displayed in Figure 2:





A comparison between Figure 1 and Figure 2 reveals that sales and return rates throughout device types are mostly consistent. Basic phones have the best sale-to-return ratio, which is followed by 3G Smartphones, Tablets, and 4G Smartphones. Both the 3G and 4G Internet phones have high return rates compared to sales, but they do not account for many sales in the first place. This data shows that Smartphones are purchased and returned at the highest quantities, and special attention should be paid to these devices.

Findings In Retail Store

At one of the corporation's retail locations, two managers were independently interviewed in order to better understand the retail and return processes. They spoke in detail about the sales process, sales training, and phone returns.

The salespeople are trained intensively in a four-week process that teaches them about mobile devices, connecting with the customers, and helping customers find the product that they will be happy with. Salespeople with subpar sales performance or high return rates are evaluated and their shortcomings are improved upon.

The managers stated that the vast majority of customers are looking for Smartphones; therefore, most of the salespeople spend a significant amount of time assisting customers with finding the Smartphone that best suits their needs, given the diverse and numerous types of Smartphones in the market.

The sales process of the mobile phone often occurs in two ways: The customer approaches the salesperson with certain needs and the salesperson matches those needs with a device, or the customer has made up his or her mind already on what mobile device he or she will purchase. In the first scenario, the salesperson asks a series of questions on how the customer intends to use the device and lists phones based on the priorities of the customer. Factors such as ease of use, camera quality, speed of the device, size, and other features allow the salesperson to narrow down the selections to fit the customer's needs.

However, if a customer approaches the salesperson with a specific device already in mind, the salesperson may only briefly check to see if the device solves the customer's needs, depending on how certain the customer seems to feel about wanting the specific device. Oftentimes a customer will choose a certain device due to friends' recommendations, advertisements, price points, or phone reviews.

According to the managers, the latter group of customers is the one that is the most likely to experience buyer's remorse and return devices. This suggests two possibilities: either the salespeople are more effective at assessing customer needs than customers are, or people who do not initially know what phone they want are more likely to be happy with any type of phone. This second possibility can be argued by a psychological phenomenon that states that eliminating consumer choices can greatly reduce anxiety (and therefore buyer's remorse) for shoppers. In the 2004 book *The Paradox of Choice – Why More Is Less* by American psychologist Barry Schwartz, it argues that:

Autonomy and Freedom of choice are critical to our well being, and choice is critical to freedom and autonomy. Nonetheless, though modern Americans have more choice than any group of people ever has before, and thus, presumably, more freedom and autonomy, we don't seem to be benefiting from it psychologically (Schwartz, 2004).

This theory would support the managers' observations that when customers are given free reign of choosing their phone, they will more likely regret their decision later simply because they have too many choices. But, regardless of the reason why customers who independently decide on a device tend to return their device, the return rates are significantly lower when the salesperson helps in the process of choosing a phone.

Salespeople do face a monthly quota of phones they must sell and, since last year, they are no longer penalized for sales that end up being returned. However, sales did stay constant regardless of whether there was a penalty for phone returns or not. A concern that managers had was that if salespeople were too concerned with return rates, it might inhibit overall sales.

An additional driver for phone returns was that the salespeople might not connect properly with the customers and accurately find a phone that fits the customers' needs. This could be due to factors such as misunderstanding of customer needs, apathy of salespeople, or staffing issues where salespeople must quickly sell phones so that they can attend to the next customer.

Overall, the findings in the retail store reinforced many of the issues that the data addressed; namely, return rates are tightly linked with compatibility between the user and device.

Chapter 5

Conclusions and Recommendations

The results of both the data analysis and interviews within the store show that the vast majority of Customer Guarantee returns are due to a mismatch between customer and mobile device. This must be solved in a two-tier manner: First, customers must know what they want from a product prior to purchasing a device. Then, they must learn how to use the device once they purchase it.

Recommendations for the Company

As understanding the needs of the customers and educating them so they choose a phone that fits their requirements is the goal, there are a number of inexpensive educational initiatives that can be implemented.

Prior to customers purchasing a mobile phone, digitized questionnaires or surveys that match a customer's needs with a device or handful of devices could help to better refine the options that the company offers. Consulting salespeople who have high sales and low return rates on mobile devices would help to draft a questionnaire that suggests phones based on the customer's preferences and needs. Currently, there seems to be a lack of surveys and questionnaires online that adequately suggest mobile phones based on personality or preferences. The questionnaire could even be taken within the store while a customer is waiting for a salesperson. This would save salespeople time because the survey would have already asked some basic questions regarding what type of device the customer would like. Additionally, this method would also reduce the psychological "Paradox of Choice" and save the customer time because the questionnaire would be choosing the phone for the customer. This questionnaire would especially be helpful to customers looking to purchase their devices online, as they have no salesperson to help them assess their needs.

In addition to a questionnaire, brief videos of reviews and phone features should be readily available to the customer. These will show the customers the devices in action, and will give a clearer idea of the device than just seeing a photograph and reading a description of the phone.

Salespeople should also be continuously trained and evaluated on knowledge of new mobile devices that regularly enter the market along with sales and return data for those devices. If salespeople are aware of the strengths and shortcomings of the devices as well as the primary reasons for device returns, they will be able to lead customers to their ideal devices and reduce returns due to common reasons more effectively.

Once the device is purchased, the customer must learn how to use the device effectively so that he or she can fully utilize the device's features and maximize its value, which would further encourage the customer to keep the phone.

The company's website currently features all of the available devices by the company, along with price, device features, specifications, and other details. If instructional videos on how each popular device worked were also available, that would be an easy way for the consumer to start learning how to use the device. Upon purchase of a device, the salesperson could direct the customer to a link or website that houses all instructional information for devices, which the new device owner could use to learn about the phone.

Additionally, in-store workshops could be helpful for customers to learn about their new mobile devices. Computer and software companies such as Apple already offer workshop

services to teach consumers how to use their devices. Smartphones and tablets are becoming complex enough to warrant this as well, and as many people either "wanted more features" or "did not know how to use the device." These workshops could show the phone's features to both mobile device owners and people curious about purchasing a new device.

By following these suggestions, most of which use the existing website infrastructure of the company, the company will be able to cheaply and effectively offer resources to customers to help them find the correct mobile phone on the first try. Because many of the return reasons are due to not understanding a device, whether it be the operating system, features, or the device in general, creating an opportunity for customers to be educated or to educate themselves will greatly improve the mobile device experience, maximize value for the customer, and reduce the rate of return on mobile devices.

Chapter 6

Limitations and Topics for Further Research

Limitations

Many of the limitations for this project stemmed from restrictions on data due to nondisclosure agreements between the company and its cellphone manufacturers. Many detailed aspects of sales and returns data were inaccessible, and those that were accessible were oftentimes difficult to properly categorize and sort due to censorship in some areas of data information.

Additionally, multiple parties involved with the company, from both sales and corporate managers, raised issues with the data itself. Oftentimes, when a customer returns a device, he or she does not submit an accurate reason or a reason at all. Therefore, there were many unspecified reasons for returns that could have significantly affected the data. A more precise and comprehensive returns process could possibly help address the issues with returns more accurately.

Also, returns data was not accessible before a certain period of time. Being able to look at return rates when the Customer Guarantee policy was thirty days versus fourteen days would have given more insight on the return policy's effects.

Further Research Opportunities

If the data is available, having a more quantitative approach to the relationship between sales, return policies, and returns would be beneficial to better understand the implications of return policies.

Additionally, more relationships between brands of mobile devices and their return rates would give both the company and the mobile device manufacturers better insight on what customers want in their mobile phones.

Finally, an assessment of online sales versus in-store sales and return rates would be helpful in seeing if one or the other is more customer-friendly and which should be a priority for improvement. The effectiveness of the suggested questionnaire could be tested by introduction to the online market. If the questionnaire results in fewer returns from online purchases, it would suggest that it might be effective.

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