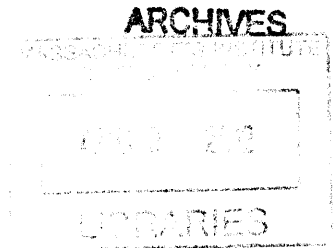# Assessing the value of sustainability initiatives in business-to-business relationships

by

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Submitted to the Engineering Systems Division in Partial Fulfillment
of the Requirements for the Degree of

Master of Engineering in Logistics

at the

Massachusetts Institute of Technology

June, 2012

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Abstract

Environmental sustainability initiatives have risen in popularity over recent decades. Companies are actively seeking to promote innovative practices to reduce environmental impact and attract the "green" shopper. The business-to-business (B2B) segment is no different, and many companies utilize proactive sustainability strategies. This thesis examines the important role that environmental sustainability plays within the B2B segment and makes recommendations on how to prioritize sustainability investments. RetailCo, a national provider of various material goods and services, provided data and support for analysis. Information was collected and analyzed from customer inquiries such as Requests for Proposals and Requests for Information. An online survey, constructed to determine customer sustainability priorities, was distributed to business customers. The results from both data sources were used to analyze customer preferences and priorities. Results were analyzed by industry type, company size, geographic region, and annual spend with RetailCo. Finally, interviews were conducted with select companies to compare survey results. Detailed analysis of all data sources shows that sustainable business customers are larger government or education organizations, and they appear to strongly favor electronics and paper product recycling initiatives. Although many companies show strong support for sustainability initiatives, price and quality continue to dominate purchasing decisions.

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Acknowledgments

I would like to offer my most sincere thanks to my thesis advisors, Dr. Basak Kalkanci and Dr. Eva Ponce. Their guidance and advice have been instrumental in the success of this project, and I am extremely grateful for their support. I could not have done it without them.

Mr. Tim Marshall, my contact at RetailCo, has provided an incredible amount of information and guidance during this project. He has been an enthusiastic supporter of this project from the very beginning.

Additionally, I would also like to thank Ms. Cynthia Wilkinson, Ms. Leslie Coffey, and Mr. Jake Swenson for their assistance in developing and implementing the customer survey.

Ms. Thea Singer of MIT has provided invaluable assistance in reviewing and revising this paper. She has committed a tremendous amount of time to helping the students of the SCM program.

Finally, I would like to thank all my family and friends for their continued support. My colleagues in MIT's Supply Chain Management program have been incredibly helpful during this difficult year, especially Mr. Lucas Kafarski. And lastly, Ms. Erin Weedon has been there since the very start, and I cannot thank her enough for her love and support.

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1. INTRODUCTION

Sustainability. It's a common buzz term in business today. It has many different meanings and many different purposes. It often represents social, economic, or environmental efforts for prolonged industrial activity. Nearly every major company has some type of sustainability policy or strategy designed to improve business practices. According to a recent survey on sustainability conducted by the MIT Sloan Management Review, 70% of companies have placed sustainability permanently on their management agendas (Haanaes et al., 2012). Some companies may be required to implement green initiatives due to government regulation, while others incorporate sustainability as a core competency. This paper will focus specifically on environmental sustainability and its effect on the business-to-business (B2B) segment.

The popularity of sustainability and "being green" has skyrocketed in recent years. Studies have been conducted on a myriad of processes and products. Companies are involved in extensive recycling programs, carbon emission reduction projects, efficient building design, process design, sustainable packaging, and responsible purchasing to reduce their impact on the environment. Many initiatives save companies significant amounts of money. Reducing building heat losses and increasing fuel mileage may result in substantial savings. Other processes, such as recycling and responsible purchasing, may require major capital investment and sustained costs. Obviously, companies are much more willing to invest in sustainable development when they can save money *and* save the environment. But are sustainability initiatives worth investing in if there is no obvious financial benefit? How can companies best prioritize their green initiatives to attract other business customers?

1.1 Objective

To answer these questions, this paper will examine the *value* of sustainability to the business consumer. Many studies have been conducted on how environmental initiatives have affected the buying habits of individual retail customers, but to the best of our knowledge there has been no research to date on the role that sustainability plays within the B2B segment. Environmentally responsible companies seek to prioritize their own sustainability initiatives to attract new customers while maintaining strong relationships with existing customers. This requires a firm understanding of customer preferences. This paper will provide quantitative data to describe business customer interests in varying sustainable programs, as well as generate the "sustainable" business customer profile. RetailCo, a national retail store with over $20 billion in revenue, has provided data and assistance in accomplishing these goals.

Data will be analyzed from three separate sources. Business customer preferences will first be examined based on Requests for Information and Requests for Proposals, which the company has provided for this purpose. Next, this paper will analyze results from an online survey that was designed and developed for this study. The survey was distributed to customers of RetailCo for the sole purpose of determining sustainability priorities. Finally, personal interviews were conducted with sustainability executives and managers of major corporations to provide a supervisory perspective.

1.2 Outline

A review of pertinent literature has been conducted to cover fundamental concepts of the customer-corporate relationship and corporate social responsibility. This review also provides a

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brief analysis of recent consulting reports that discuss the importance of sustainability to businesses and the retail customer. The methodology section describes the collection of data, survey format, and interview organization. Results from these sources are analyzed, compared, and contrasted in the data analysis and results section. Conclusions, recommendations, and further areas of study are presented in the final section. The online survey and interview questions are provided as appendices.

2. LITERATURE REVIEW

The study of sustainability and its increasing impact on the business environment has grown steadily in recent years. There is a very diverse amount of literature on the general topic of "green solutions". Many scholarly articles focus on the advantages and disadvantages of environmentally friendly products and processes, as well as the role of social responsibility in shaping corporate policy. However, academic scholars and consulting companies have not conducted significant studies on the value of sustainability within business-to-business (B2B) relationships. In order to provide the reader with a thorough understanding of sustainability value, this literature review will focus on the fundamental concepts of environmental sustainability and corporate social responsibility (CSR), the value of sustainability to the retail customer, and customer willingness-to-pay (WTP) for sustainable solutions.

2.1 Defining Sustainability and Other Concepts

The term "sustainability" has multiple meanings, yet many academics today view this concept as pertaining strictly to the environment. The United Nations established the World Commission on Environment and Development in 1987 to provide leadership and guidance for environmentally responsible industrial growth. The Brundtland Commission, as it was eventually called, provided this now common definition: "Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future." (Brundtland Commission, 1987). Current research and scholarly work continue to cite the commission as laying the fundamental groundwork for responsible development. The report notes the important role of the business community in driving any sustainability changes:

"Many essential human needs can be met only through goods and services provided by industry, and the shift to sustainable development must be powered by a continuing flow of wealth from industry". The Dow Jones Sustainability Indexes (DJSI), founded in 1999 to measure the financial success of the most successful sustainable companies, defines corporate sustainability as "...a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments." (SAM Group, 2011)

While these sources provide general, overarching definitions of sustainable development, scholars have focused on individual dimensions associated with the term (Choi and Ng, 2011). Social Sustainability is often reflected in the popular term "corporate social responsibility". As noted in numerous articles, Mohr, Webb, and Harris (2001) define CSR as "...a company's commitment to minimizing or eliminating any harmful effects and maximizing its long-run beneficial impact on society." Choi and Ng (2011) applied this now familiar CSR terminology to the environment. Environmental sustainability addresses the competition between the developed and natural worlds, and reflects ordinary citizens' increasing concern with the degradation of the environment (Choi and Ng, 2011). Sheth et al. (2011) identify the increasing importance of economic sustainability and "mindful consumption" for the consumer. This concept describes the impact of out-of-control industry growth on the financial sector and the importance of responsible consumer utilization (Sheth et al, 2011).

The different pillars of sustainability provide a challenge to corporate executives. A study by McKinsey & Company shows that 55% of surveyed company executives define sustainability as

relating to the environment. Another 41% view sustainability in a social context. However, 56% of the surveyed executives have more than one definition for the term (Bonini et al, 2010). In many industries, the DJSI weighs social and economic factors greater than environmental factors (DJSI Annual Review, 2009). Although social and economic sustainability play a vital role in determining company strategy, this paper will concentrate on environmental sustainability and its impact on shaping B2B corporate strategy.

Recent studies have maintained that customers are more likely to purchase products or services from a company that maintains values similar to theirs. Bhattacharya and Sen (2003) noted that companies seek to cultivate this relationship by appealing to common values with the consumer. The authors refer to this as the customer-corporate (C-C) relationship. Despite this favorable relationship, B2B relationships are less likely to embrace this strategy for financial reasons. For example, Company A may sell materials to Company B, but Company B sells its products directly to the consumer. As a result, Company B will more likely benefit from a strong C-C identification with the consumer rather than with their upstream supplier (Bhattacharya and Sen, 2003). It should be noted that several organizations with strong sustainability strategies maintain strong corporate ties with other like-minded companies, but this is the exception rather than the norm.

Sustainability, corporate social responsibility, and the customer-corporate relationship demonstrate fundamentally how companies ought to pursue environmentally conscious strategies. Companies that are not involved in specific sustainability initiatives are less likely to endorse and value those same initiatives practiced by their suppliers. Although this recent research has

focused on relationships with the retail customer, it is reasonable to predict that some basic principles apply to B2B relationships as well. Analysis of survey results will show customer preferences for sustainability initiatives. By embracing similar values, RetailCo may be able to attract new customers and maintain existing contracts based on their sustainability principles.

2.2 Sustainability and the Retail Customer

Most scholarly research to date has focused on retail customer responses and buying habits. Unfortunately, there has been little focus on the role of sustainability value in B2B relationships. In this section, the purchasing patterns of the individual consumer are examined. This area, which has been studied thoroughly, provides some indication about the level of importance of sustainability initiatives to the general public. Many of these findings are likely applicable to the B2B segment as well.

Choi and Ng (2011) provide some concrete proof that environmental sustainability can play a major role in customer buying habits. In a detailed online survey, individuals were questioned about purchasing products from different companies based on their sustainability reputation. The results were fairly obvious, but are important to recognize. Choi and Ng found that a company's sustainability reputation has an impact on consumer buying habits. A negative environmental sustainability reputation strongly discourages customers from purchasing products, and has noticeably greater impact than a positive reputation. The study also noted that offering a low price does not seem to compensate for this poor sustainability reputation. Finally, Choi and Ng's results further confirmed the importance of C-C identification. That is, an environmentally

conscious individual will be significantly more likely to do business with a like-minded company (Choi and Ng, 2011).

Consulting companies such as The Boston Consulting Group (BCG), Deloitte, and McKinsey & Company (2010) have conducted thorough studies on sustainability and the retail consumer. BCG and McKinsey researched the role that sustainability plays in defining corporate strategy, while Deloitte conducted a thorough review of the "green shopper". BCG identified numerous benefits for investing in sustainable products and processes (Berns et al, 2009):

Table 1: Sustainability Benefits

Pricing Power	• Stronger brand and greater pricing power
Cost Savings	• Greater operational efficiencies • More efficient use of resources • Supply chain optimization • Lower costs and taxes
Employee Recruitment and Engagement	• Enhanced ability to attract, retain, and motivate employees • Greater employee productivity
Market Share	• Improved customer loyalty; lower rate of churn
New Market Entry	• Enhanced ability to enter new markets • More potential sources of revenue
Risk Premiums	• Lower market, balance-sheet, and operational risks • Lower cost of capital • Greater access to capital, financing, and insurance

Sources: The Sustainability Initiative 2009 Survey, BCG and *MIT Sloan Management Review*

McKinsey and Company conducted a similar survey in which they asked 1,749 companies how they valued sustainability. The results are shown below in Figure 1:

0% 10% 20% 30% 40% 50% 60%	
Reputation Building	55%
Cost Savings	53%
Growth Opportunities	39%
Risk Avoidance	29%
Other Indirect Benefits (Media Coverage)	29%
Customer Loyalty	29%
Employee Attraction and Retention	26%
Do Not Track Value	19%

Figure 1 – "Keeping track of sustainability's impact." Benefits of sustainability.

Source: How companies manage sustainability, *McKinsey Quarterly*, 2010

Accenture examined the benefits of sustainability initiatives by asking 247 "decision-makers" at major worldwide corporations. As seen in Figure 2 below, executives viewed sustainability initiatives as vital to a company's reputation and as a driver for reduced costs:

	0%	10%	20%	30%	40%	50%	60%
Improved reputation and trust						49%	
Seen as a responsible company						47%	
Lower costs					42%		
Improved brand					41%		
Met requirements of customers or suppliers				38%			
More competitive				37%			
Improved staff moral				36%			
Driven innovation			34%				
Combated rising energy costs			33%				
Increased consumer demand			31%				
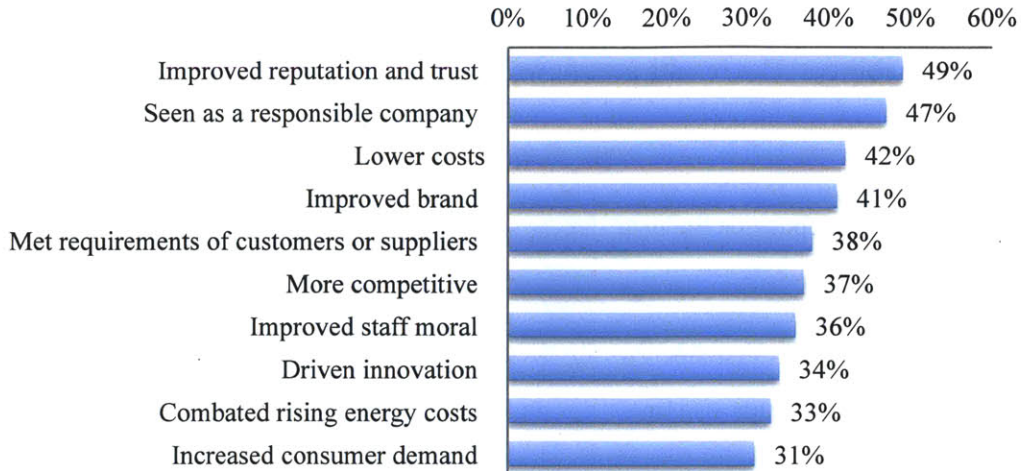
Figure 2 - Benefits to initiatives as seen by top company decision makers.

Source: Decision maker attitudes and approaches towards sustainability in business in 2011. Accenture, 2011.

According to the results from multiple consulting surveys, CSR and cost savings are more likely to drive a company's sustainability strategy. A positive company image can have a substantial impact on attracting new customers and increasing the revenue stream.

Accenture provided the only consulting report that addressed specific actions and initiatives that were taken to reduce environmental impact. As seen in Figure 3, these initiatives do not have a *direct* impact on the environment. Rather, they examine what actions companies are taking towards environmental responsibility.

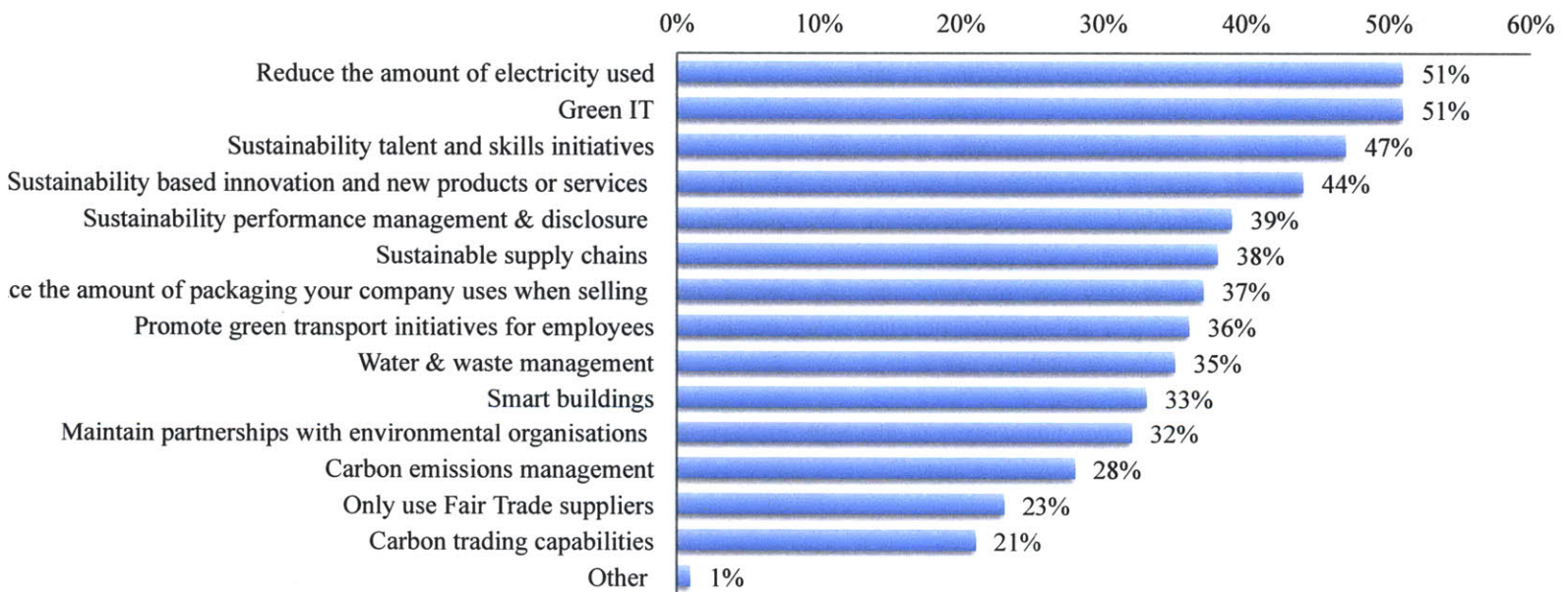|	0%	10%	20%	30%	40%	50%	60%
Reduce the amount of electricity used						51%	
Green IT						51%	
Sustainability talent and skills initiatives						47%	
Sustainability based innovation and new products or services						44%	
Sustainability performance management & disclosure					39%		
Sustainable supply chains					38%		
ce the amount of packaging your company uses when selling					37%		
Promote green transport initiatives for employees					36%		
Water & waste management					35%		
Smart buildings				33%			
Maintain partnerships with environmental organisations				32%			
Carbon emissions management				28%			
Only use Fair Trade suppliers			23%				
Carbon trading capabilities			21%				
Other	1%						

Figure 3 - Sustainability initiatives practiced by major worldwide companies.

Source: Decision maker attitudes and approaches towards sustainability in business in 2011. Accenture, 2011.

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Deloitte's study indicated that although many people are willing to buy a green product and even actively sought a green product, a very limited number made the green purchase.
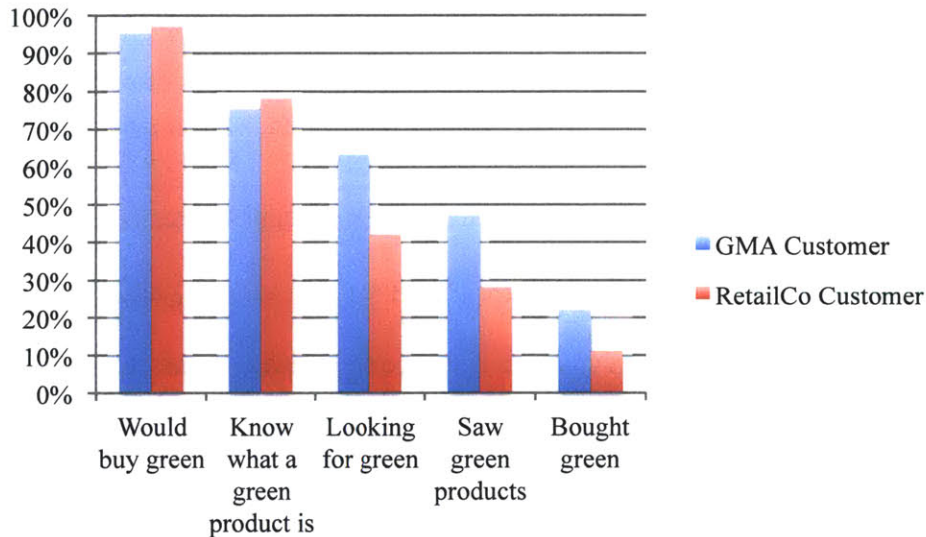
Figure 4 - Retail Customer opinions on green products

Source: Retail Sustainability Study: Green Insights for RetailCo, 2008.

These studies demonstrate a bright future for companies willing to invest in sustainability initiatives. All consulting studies that have been researched seek to identify potential benefits of sustainability, but most fail to indicate popular products or initiatives. The Deloitte study indicates that there is much progress to be made in attracting the green consumer but implies that individuals are solely interested in sustainable *products*. This paper will expand on Accenture's analysis of sustainability initiative preferences, with a larger focus on direct-impact initiatives.

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2.3 Value and Willingness to Pay

This paper seeks to examine how the business customer values sustainable initiatives. Similar to the consulting studies, numerous research initiatives have tried to determine how the *individual customer* values sustainable or environmentally friendly products. This is most easily represented by Willingness to Pay (WTP) studies. Economists and researchers use WTP to determine what premium, if any, the consumer would pay for a product or service. This study identifies several recent WTP studies and demonstrates how these surveys may help prioritize sustainability projects.

It is reasonable to assume that most consumers—be they individual or business—view sustainability in the context of an environmentally friendly *product*. Many studies have focused on customer WTP for an electric car, sustainable packaging, or a remanufactured good, among other things. For example, surveys were used to determine that, under certain conditions, consumers would be willing to purchase energy efficient washing machines for a premium of approximately 30% (Sammer and Wustenhage, 2006). In other studies, researchers have determined price premiums for recycled cameras, sustainable floral packaging, and sustainable cotton. The amount of studies on WTP and price premiums for individual products is staggering. However, they all have one goal in mind – determine if a sustainable product is viable in the marketplace for an increased price.

Many companies incorporate less tangible sustainability initiatives to reduce their environmental impact. Other studies have focused more on the value that individuals place on incorporating recycling programs or saving threatened wildlife habitats. For example, Roe et al. (2001)

examined U.S consumers' willingness to pay for renewable energy sources. Their conjoint analysis survey results indicate that consumers would be willing to pay a premium of 0.5% to 7.0% for greener energy, depending on education and location. Surveys have proved to be an effective tool in approximating how consumers value both sustainable products and environmental initiatives.

These studies have focused on a specific product or service, and are not compared to other sustainability initiatives. It is beyond the scope of this paper to conduct surveys on individual processes or products. Rather, this study will examine the priorities among interested companies and determine a sustainable business customer profile. This will be further examined in the methodology and analysis sections.

2.4 Contingent Valuation and Conjoint Analysis Methods

The contingent valuation method has historically been used to estimate WTP for non-market or environmental features. These surveys may ask open-ended questions, such as "how much would you be willing to pay for _____ ?" or they may ask the customer to choose between two options. Magat et al. (1988) compared open-ended contingent valuation and choice based methods. The authors noted that choice valuation questions resulted in 58% higher WTP values than open-ended questions (Magat et al, 1988). Contingent valuations of both forms have been used in the past to value environmental damage created by man-made disasters. The National Oceanic and Atmospheric Administration (NOAA) conducted a detailed study on the accuracy and effectiveness of contingent valuation. This report, which has become a preeminent reference

for survey construction, noted that WTP accuracy from contingent valuation surveys is flawed

due to the following customer variables (NOAA, 1995):

- Inconsistencies with making rational choices

- Misunderstanding of budget constraints

- Misunderstanding about program requirements or environmental conditions

- Overestimation of customer philanthropy

(NOAA, 1995). These are just some of the many variables that may reduce the overall accuracy

of a contingent valuation method. However, properly prepared and researched surveys may

produce more accurate WTP estimates. These surveys require dedicated and incentivized

customers, and often require thorough research and time commitment.

Conjoint analysis is a more recent survey method that is used to determine customer attribute

priorities. These surveys are often used to determine WTP for new market entrants, and may

cover anything from restaurant preferences, to pianos, to environmental features. Conjoint

analysis surveys are often referred to as discrete choice experiments, and may ask respondents to

choose between a number of options. They may also require the respondent to rank different

attributes on the basis of attractiveness (Roe et al., 1996). Adaptive based conjoint analysis

surveys utilize specialized software to identify specific attributes. Results of conjoint analysis

surveys are calculated using linear or logistical regression.

A comparison of contingent valuation and conjoint analysis survey formats reveal some obvious

differences. Stephens et al. (2000) conducted a thorough literature review and case study to

determine the level of accuracy for both methods. The authors identify that conjoint analysis surveys typically overestimate WTP values because of the positively weighted "MAYBE" option. As a result, when customers are asked similar questions using conjoint analysis and contingent valuation, WTP values can cover a wide range. Additionally, Stephens et al. (2000) noted that previous studies have resulted in conjoint analysis surveys having three to five times greater WTP results. The difference in these results can be attributed to survey construction, question selection, and customer incentives.

2.5 Literature Review Summary

This literature review laid some groundwork about sustainability concepts, summarized recent studies of sustainability value and the retail customer, and examined willingness to pay as an estimation of consumer demand. Although companies may focus on providing long-term stability in the context of economic sustainability or seek to develop their company image relative to consumer values, this paper will concentrate on how business customer preferences for environmental sustainability initiatives. Unfortunately, there is no literature available that properly examines B2B relationships in terms of sustainability value.

3. METHODOLOGY

In order to determine how companies prioritize their sustainability initiatives, three sources of data have been collected. First, information was compiled from numerous request for proposals (RFPs) and requests for information (RFIs). Secondly, an online survey was constructed and distributed to RetailCo's customers. The information collected in this survey provides details on the sustainable business customer profile as well as customer priorities. Finally, interviews were conducted with sustainability managers and executives to determine corporate strategies. These three methods provide a wide-ranging perspective of sustainability within B2B relationships.

3.1 RFP and RFI Analysis

RetailCo provided a series of RFPs and RFIs for analysis. These documents were originally sent by customers to inquire about RetailCo's sustainability practices. Traditionally, RFPs and RFIs are utilized as part of the procurement process. Additionally, some of the documents are standard environmental questionnaires. This research identifies initiatives that are important to RetailCo's customers, and the topics mentioned in these documents are tallied and analyzed based on their frequency.

3.2 Online Survey

3.2.1 Survey Construction

The survey developed has two objectives: define the sustainable business customer and determine their priorities when it comes to green initiatives. RetailCo assisted in construction of the survey and distribution to their customer base.

The first part of the survey attempted to define the sustainable business customer. The major variables included company size, company costs, respondent position, respondent experience, sustainability strategy, and sustainability experience. Additionally, the survey would identify how important sustainability was in supplier-selection, since the respondents were most likely responsible for most purchasing and procurement.

The second part of the survey attempted to determine which attributes were most important in supplier selection, and which sustainability initiatives were valued most. This required the survey taker to rank the following attributes on a scale of 1 to 5:

- Price
- Quality
- Delivery
- Service
- Convenience
- Long-term Relationship
- Sustainability
- Risk

Initially, the survey was designed to incorporate many of the questions and inquiries found in other RFIs and RFPs. To shorten the survey and allow for maximum distribution, the list of initiatives was reduced to seven specific sustainability measures:

- Electronics Recycling

- Paper Recycling

- Sustainable Packaging

- Carbon Footprint Reduction

- Responsible Purchasing

- Renewable Power Investment

- Environmentally-friendly Products

These initiatives were selected based on the RetailCo's sustainable priorities, but were also taken from RFIs and RFPs. Other initiatives, such as participation in the Leadership in Energy and Environmental Design (LEED) and ISO 14001 Environmental Management System programs, are expected to be limited in popularity in the United States and have thus been left out of the survey. The LEED Program, started by the U.S. Green Building Council, promotes the construction of energy saving facilities. ISO 14001, an international environmental certification program popular in Europe, has yet to gain significant momentum in North America.

The respondent was then asked to rank the previously listed sustainability initiatives on a scale of 1 to 5 based on the level of importance. The final part of the survey used a discrete choice option to determine an approximate willingness-to-pay for specific initiatives. Respondents were given an option between two vendors, each offering the same product but at a different price. The higher priced option resulted from increased costs associated with implementing a

sustainability initiative. Two different surveys were prepared: the first with a 5% price premium and the second with a 10% price premium.

As discussed in the literature review, economists often use conjoint analysis and contingent valuation surveys to determine value for environmental initiatives. An adaptive choice based conjoint analysis study that analyzed customer priorities was considered. Although this method would likely have produced more accurate results, it is unlikely that we would have received sufficient feedback from the RetailCo's customers based on the length. Our goal was to limit the survey to approximately fifteen minutes in length. Both adaptive choice based conjoint analysis and contingent valuation surveys require specific software applications. These software costs were beyond the funding of this project and thus could not be utilized. Therefore, this study used a basic conjoint analysis discrete choice format. This format asked the respondent to choose between two discrete options.

3.2.2 Survey Analysis

Analysis of survey results was conducted using the Microsoft Excel spreadsheet software program. Results were filtered and analyzed based on varying criteria, including company size, annual spend with RetailCo, location, and industry type. Linear regression was performed on these variables using the XLSTAT add-in program. This program allowed the use of categorical data as independent variables, and it also contained a basic logistical regression function for analysis of the survey's WTP section. Multiple regression models were created using XLSTAT and Excel using a variety of independent variables. Efforts to conduct an effective logistical

regression on customer WTP were found inconclusive, and have not been included in this study. Further discussion of logistical regression is included in Section 5.2.

3.3 Interview Analysis

Two interviews were conducted with a number of sustainability executives of major corporations. These interviews provided two key pieces of information: they provided a robust description of company sustainability priorities from the manager's perspective, and they provided data to compare/contrast with the survey results. As indicated above, the survey respondents are not likely to be highly invested in sustainability. By interviewing personnel with a vested interest in environmental affairs, we can determine if and how a company's sustainability strategy has an effect on their purchasing habits.

Managers and executives were notified of this project via MIT's Center for Transportation & Logistics biweekly newsletter and through other private contacts. Due to customer confidentiality requirements, the RetailCo was unable to provide details and contact information for their B2B customers. Interested participants were sent a cover letter and accompanying questions to guide the interview, which are included in Appendix II.

Managers were then asked about their job assignment, experience, and company sustainability policy. They were then asked to rank the seven sustainability initiatives identified in section 3.2 by level of importance. They were then asked about their division or department's involvement in purchasing/procurement and sales and operational planning (S&OP). Again, the goal of this

interview was to determine the level of involvement of environmental affairs within B2B

relationships.

4. DATA ANALYSIS AND RESULTS

In this section, the three sources of data are analyzed, compared, and contrasted. Data from customer inquiries is examined briefly, followed by the survey results. The survey data is then filtered according to multiple factors, and a sustainable business customer profile is developed. Finally, this paper examines the sustainability strategies of two distinguished companies.

4.1 RFP and RFI Analysis

RetailCo collected these documents and provided them for analysis. The RFPs and RFIs were analyzed based on the number of times a specific sustainability initiative was mentioned, and these were then summed to determine how frequently customers inquired about RetailCo's involvement with said initiative. The following industries inquired about sustainability initiatives from RetailCo: publishing, telecommunications, finance, government, consulting, and pharmaceuticals. Twelve documents were analyzed for sustainability initiatives. RFIs and RFPs from smaller businesses were not available. Figure 5 presents the results of this analysis.
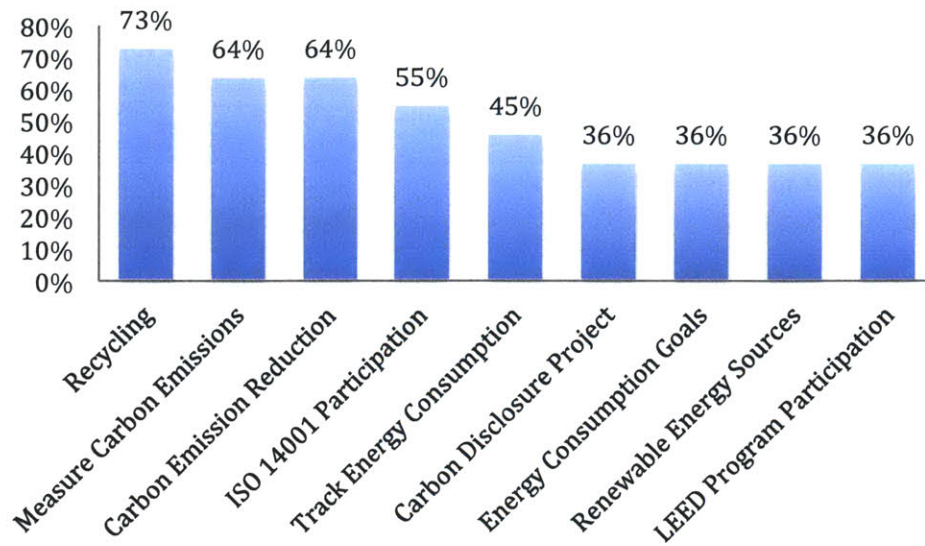
Figure 5 - Popular sustainability initiatives based on customer inquiries

Figure 5 clearly shows that the majority of companies requesting information on sustainability projects are interested in recycling, carbon emissions, ISO 14001 program participation, and energy consumption. Companies have shown interest in other initiatives such as LEED certification, hazardous waste minimization, sustainable packaging, and eco-conscious products. These initiatives were mentioned in less than 25% of all RFIs and RFPs analyzed.

4.2 Survey Analysis and Results

4.2.1 Sample Profile

The survey was distributed to 4215 companies within RetailCo's online B2B segment. Of the companies that received the survey, 781 customers (18.5%) completed the survey. Other completion statistics are given below in Table 1.

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Table 1 - Survey completion statistics

	Survey 1	Survey 2	Total
Completed / Viewed	68.63%	69.74%	69.20%
Completed / Started	79.55%	78.08%	78.70%
Started / Viewed	86.27%	89.32%	87.90%

As indicated in the Methodology section, two different versions of the survey were distributed, with only the Willingness-to-Pay questions being different.

The customer profile was very diverse, as evidenced several different characteristics. Companies ranged in size from very small (1-100 employees) to very large (greater than 5000). The results were also diverse in the amount of annual spend that they had with the RetailCo. The vast majority of companies spent less than $100,000 with RetailCo. Comparing these two metrics, it becomes clear that nearly 40% of survey-takers are from smaller businesses. The breakdown of company size and company spend are given in Figure 6 and Figure 7 below.
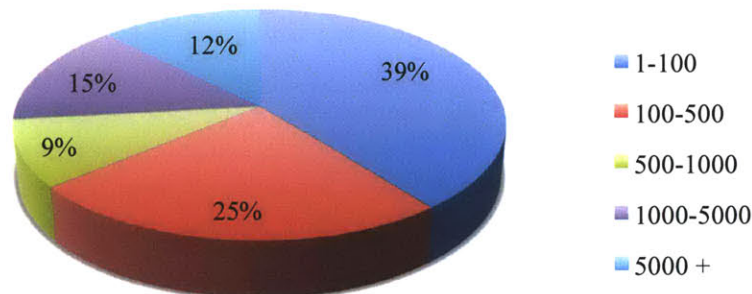

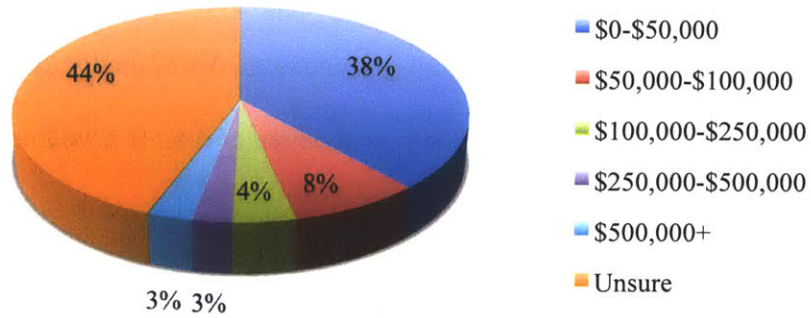**Figure 6 - Respondent's company size by employees**

Figure 7 - Respondent's company annual spend with RetailCo

Other variables were analyzed to aid in determining the customer profile. This included

important information about the survey-taker and their role in the company. The breakdown of
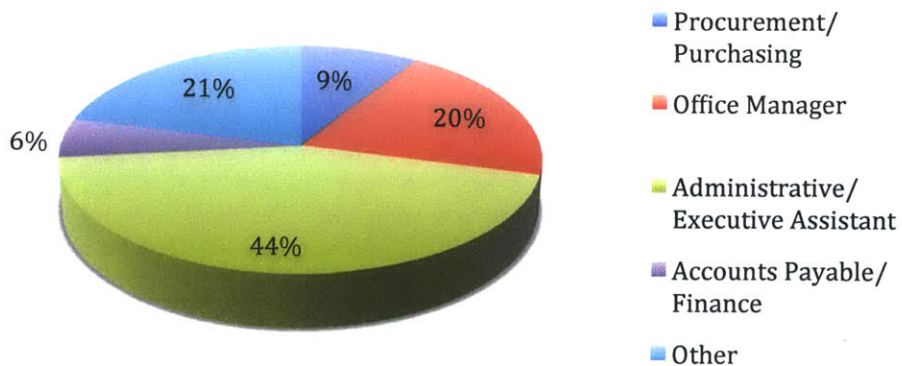
job title is given in Figure 8 below.

Figure 8 - Respondent job-title

The "other" category typically contained job titles such as receptionist, human resources, clerks, and other administrative responsibilities. Less than 2% of survey-takers were higher level executives, and less than 1% were sustainability managers. Additionally, over 67% of all respondents had been working at their current job for greater than five years.

4.2.2 Company Involvement with Sustainability Initiatives

The second part of the survey inquired about green initiatives that are currently employed by the customer. Nearly half (49%) of respondents were unsure if their company had a "corporate sustainability" policy or strategy. Approximately 60% of respondent companies engaged in sustainability practices to reduce their impact on the environment, while 30% were unsure. These "unsure" customers were flagged for further analysis, as their responses to the later part of the survey were likely to be inaccurate.

Table 2 details the involvement of respondent companies with certain sustainability initiatives. Note that this data still includes those responses from companies who were "unsure" if their company participated in sustainability practices.

Table 2 – Currently practiced sustainability initiatives

	Yes	No	Unsure
Active Recycling Program	82%	12%	6%
Track Energy Consumption	38%	24%	38%
LEED Participation	15%	31%	54%
Track Greenhouse Gas Emissions	11%	38%	52%
ISO 14001 Participation	8%	29%	63%

According to unfiltered survey results, the vast majority of companies participate in some type of recycling program. Companies also seem to favor tracking energy consumption to reduce electricity costs. It is important to note the high level of "unsure" responses. In order to provide a more accurate picture of customer interests, the survey results were filtered.

The results were first filtered by sustainability awareness. Respondents who were unaware of any company sustainability policies or initiatives were excluded from these results, as they were less likely to provide reliable responses. The results were then filtered by company size and account spend. Figure 9 identifies company interest based on company size (number of employees). Recycling programs are the most commonly practiced sustainability initiative across the board, having been employed by 85% of companies on average. Minimizing energy consumption becomes a more important measure with larger companies, as demonstrated by the 18% difference between companies with less than 500 employees and companies greater than 5000 employees. Furthermore, greenhouse gas reduction and LEED certification also gain significantly in popularity, with both initiatives nearly three times as popular with larger companies.
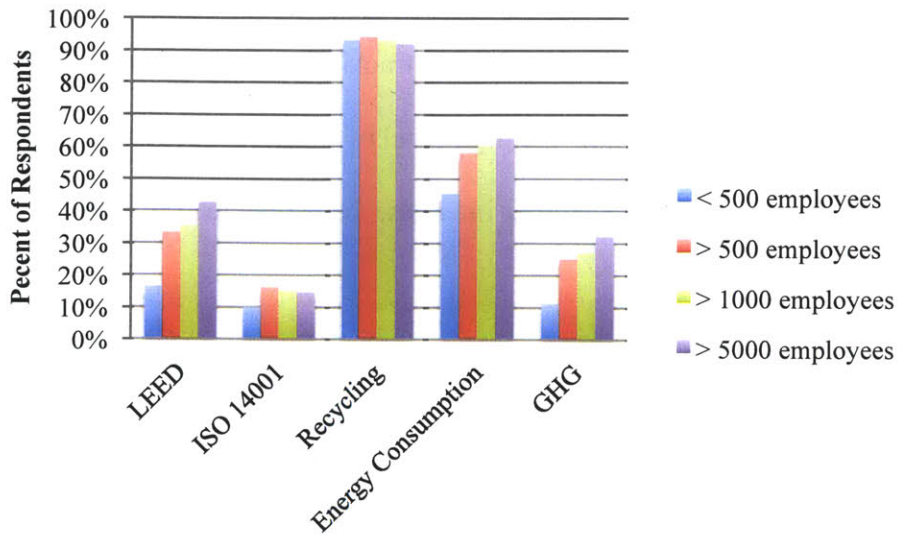
Figure 9 - Sustainability initiatives currently practiced based on company size. The sample size ranges from 331 respondents for smaller companies (less than 500 employees) to 75 respondents for larger companies (greater than 5000 employees).

Similar results have been found when filtered by account spend. "Account spend" refers to the approximate amount of money spent for RetailCo's services and products. Figure 10 provides a breakdown of popular sustainability initiatives by annual spend.

Figure 10 – Sustainability initiatives currently practiced based on annual spend with RetailCo.

Again, recycling clearly ranks as the most practiced green initiative, while energy consumption, LEED participation, and greenhouse gas reduction maintain similar values. Companies with significantly larger annual spends are 30% more likely to participate in tracking and minimizing energy consumption. LEED participation and greenhouse gas reduction are 40% and 29% more likely to be practiced by companies with larger spends, respectively.
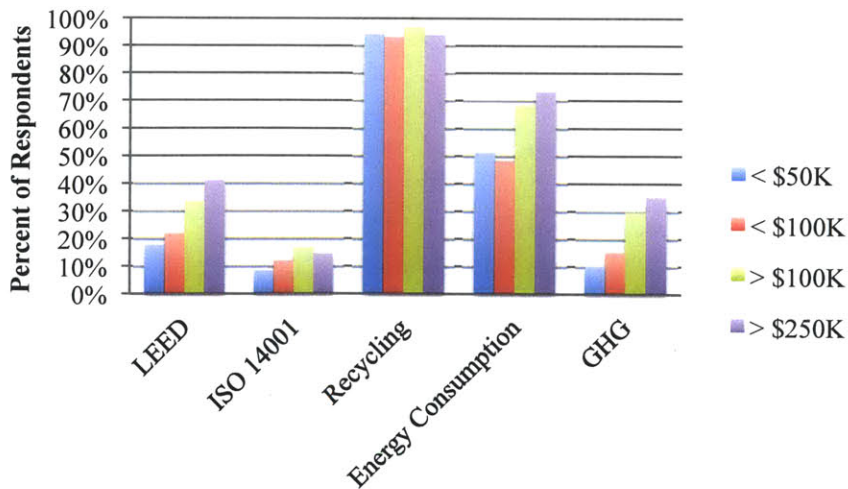
4.2.3 Supplier Selection Criteria

The survey then asked the customer to rank certain supplier selection criteria in order of importance. According to Figure 11, product quality and price were the most important factors selected by all survey-takers. Quality was noted as "very important" by 80% of respondents, while price was similarly selected by 76% of respondents. Delivery, service, and convenience were also significant in supplier selection. All three attributes were selected as "very important" by 60-70% of respondents. Finally, sustainability and company long-term relationship rounded out the bottom of criteria importance. It has also been noted in several of the survey comments, that sustainability and long-term relationships are not as vital in today's difficult economy.
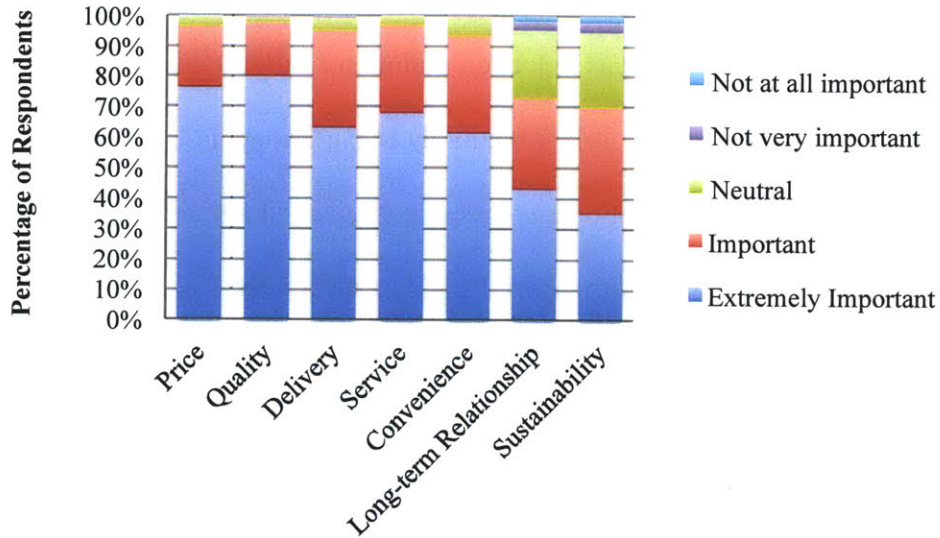
Figure 11 - Supplier selection criteria based on respondent ranking

Further analysis was conducted using linear regression. The independent values consisted of company location, number of employees, annual-spend with RetailCo, industry type, and supplier attribute. Industry type is examined according to the respondent's email top level domain (TLD), which will be described later in this section. The respondent's ranking was the dependent variable. Linear regression produced standardized coefficients that indicated the variables that most strongly affected the score. Specific attribute standardized coefficients are given in Table 3:

Table 3 - Supplier selection standardized coefficients from linear regression.

Attribute	Value	Pr > |t|
Quality	0.271	< 0.0001
Price	0.231	< 0.0001
Service	0.204	< 0.0001
Delivery	0.179	< 0.0001
Convenience	0.153	< 0.0001
Sustainability	0.000	N/A
Long-term Relationship	-0.006	0.792
Risk	-0.074	0.001

This linear regression produced results similar to the raw data analysis indicated in Figure 11. Quality, price, and service dominated customer decisions to select suppliers. All three factors occurred within a 95% confidence level. Only long-term relationship and risk were ranked below sustainability.

4.2.4 Ranking Sustainability Initiatives by Interest

The survey then asked the respondent to rank specific sustainability initiatives by importance. The question did not specify if the company was actively involved in said initiative. Therefore, results may include some initiatives that are not practiced by the respondent's company. Figure 12 shows both unfiltered results and the results from companies classified as "sustainable". As expected, sustainable respondents consistently rank initiatives higher.
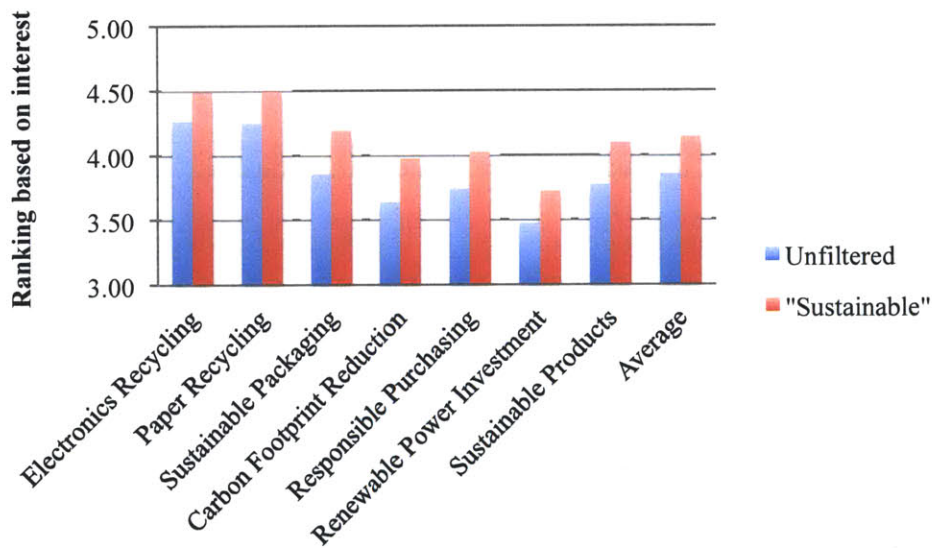
Figure 12 - Ranking sustainable initiatives, unfiltered and "sustainable" responses

"Unfiltered" refers to the complete sample size, while "Sustainable" refers only to respondents that answered YES to question 6 of Appendix I. This question verifies that the respondent is aware of its company's sustainability practices and therefore legitimizes their responses.

Additional filtered results, including company size and annual spend, contain respondents that have been previously identified as "sustainable". Figure 13 displays the average ranking of initiatives, broken down by company size and annual spend.
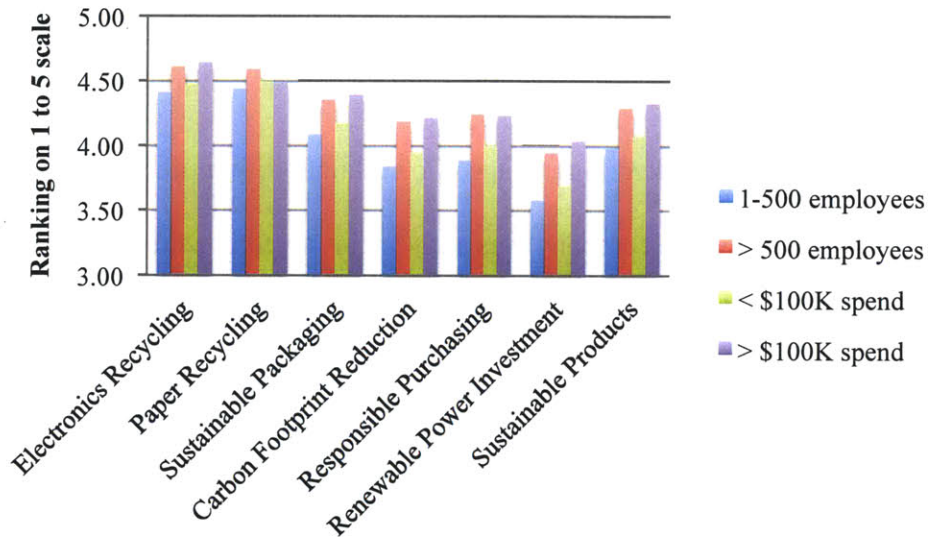
Figure 13 - Ranking sustainability initiatives by company size and annual spend. Companies are already classified as "sustainable".

A significant observation is that all initiatives are ranked on average as "very important" on a simple 1 to 5 scale. The high ranking demonstrates a response bias, which will be further explained in Section 5.2. Due to the large upward bias associated with the survey, it would be more accurate to determine the relative ranking of each initiative compared to the average ranking. Table 4 shows the average ranking for each initiative when filtered according to specific company attributes.

Table 4 – Ranking sustainability initiatives by category

	Unfiltered	"Sustainable"	More than 500 employees	Less than 500 employees	Annual spend > $100K	Annual spend < $100K	Average	Std Dev
Electronics Recycling	4.27	4.49	4.61	4.41	4.64	4.47	4.48	0.11
Paper Recycling	4.25	4.50	4.59	4.44	4.48	4.50	4.46	0.06
Sustainable Packaging	3.86	4.19	4.35	4.09	4.39	4.17	4.18	0.15
Purchasing Sustainable Products	3.78	4.10	4.29	3.98	4.33	4.07	4.09	0.17
Responsible Purchasing	3.74	4.03	4.24	3.89	4.23	4.00	4.02	0.17
Carbon Footprint Reduction	3.64	3.97	4.18	3.84	4.21	3.95	3.97	0.18
Renewable Power Investment	3.48	3.72	3.95	3.58	4.04	3.69	3.74	0.21
Average	3.86	4.14	4.31	4.03	4.33	4.12		
Std Dev	0.30	0.28	0.23	0.31	0.20	0.29		

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From these results, it is clear that electronics recycling and paper recycling are valued more than other sustainability initiatives. These results correlate with the findings from the earlier survey questions, which asked what initiatives companies were *currently involved in*. The vast majority of companies already had recycling programs in place, and more respondents favored recycling above the other listed initiatives. Renewable power investment was the least popular of the seven initiatives. This contradicts the findings from the RFI and RFP analysis, where a large majority of companies inquired about carbon emissions programs. Furthermore, companies with more employees and a greater spend are more likely to have a greater interest in sustainability initiatives as a whole, as indicated by the significantly higher averages in Table 4.

Survey results were then analyzed based on industry type. The survey did not contain a specific question asking the customer about their industry due the large variance in company types. Rather, results were analyzed based on the generic top level domain (TLD). The TLD is the last part of the respondent's email address, such as the ".edu" in the email address, "name@mit.edu". The results were filtered based on commercial, organization, government, education, and other categories. The "other" category contains domains that do not fit into the first four categories. Figure 14 displays the results.
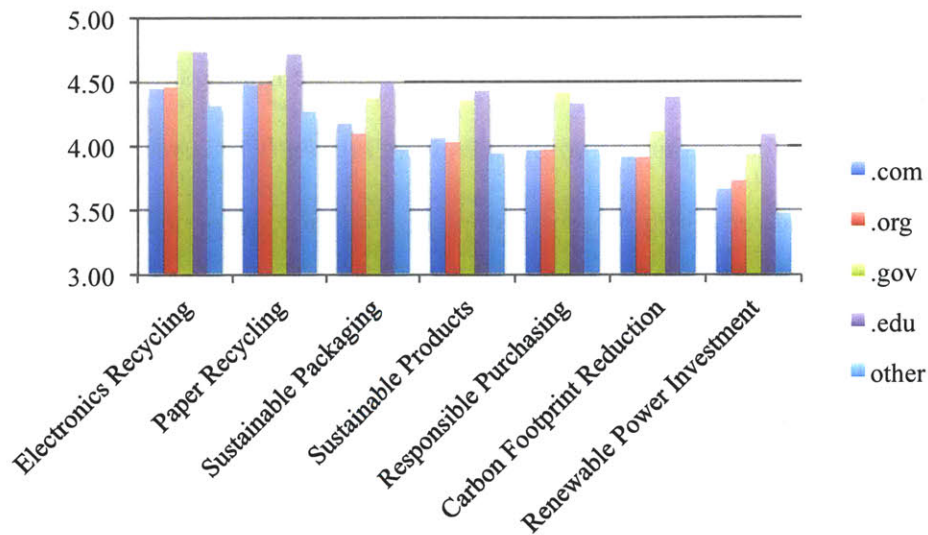
Figure 14 – Ranking sustainability initiatives by respondent email domains

According to this data, government (.gov) and education (.edu) customers are more likely to be interested in sustainable initiatives. Non-commercial (.org) and commercial customers (.com) do not differ widely in their average ranking. Non-commercial organizations are not necessarily non-profits; they may include credit unions, civil institutions, clubs, and others companies. Average rankings are detailed in Table 5.

Table 5 - Ranking sustainability initiatives by generic top level domain

	.com	.org	.gov	.edu	other	Average	Std Dev
Electronics Recycling	4.45	4.46	4.74	4.74	4.31	4.54	0.19
Paper Recycling	4.48	4.49	4.56	4.72	4.26	4.50	0.16
Sustainable Packaging	4.17	4.10	4.37	4.49	3.97	4.22	0.21
Purchasing Sustainable Products	4.06	4.03	4.35	4.43	3.94	4.16	0.21
Responsible Purchasing	3.96	3.97	4.41	4.33	3.97	4.13	0.22
Carbon Footprint Reduction	3.91	3.91	4.11	4.38	3.97	4.06	0.20
Renewable Power Investment	3.66	3.73	3.93	4.09	3.47	3.78	0.24
Average	4.10	4.10	4.35	4.45	3.99		
Std Dev	0.27	0.26	0.25	0.21	0.25		

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This section highlighted customer preferences based on survey results. These results were further analyzed by respondent awareness, company size, annual spend with RetailCo, and finally by generic industry type. Regardless of the type of filtering, electronics recycling and paper recycling are clearly indicated as the most valued by respondents. Furthermore, it becomes obvious that customers associated with government and education organizations are more likely to rank sustainability initiatives significantly higher than other industry types.

4.2.5 Linear Regression Modeling for Sustainability Initiatives

A linear regression model was developed using the following attributes as independent variables: company size, company location, annual spend, industry type (by top level domain), and sustainability initiative. The model attempted to find any correlation between the aforementioned attributes and the ranking score. A respondent score for a single initiative represented a single data point. Combining all the data points for "sustainable" responses yielded a total data set of 3290 observations. The XLSTAT program was used to run the regression model.

Due to the qualitative nature of the inputs and the restricted output values (ranking 1 through 5), a strong goodness-of-fit was not observed. The adjusted coefficient of determination value, or R^2, is only 0.104, indicating a very poor relationship among the observed attributes. Because of the large variance of data, this model cannot be utilized to accurately predict the importance of sustainability initiatives based on a customer profile. However, the linear regression model does provide some key insights into the *relative* importance of customer attributes.

Table 6 – Sustainability initiative standardized coefficients from linear regression

Source	Value	Pr > |t|
Region-NE	0.032	0.1656
Region-MW	0.020	0.3898
Region-S	0.007	0.7630
Region-W	0.000	N/A
TLD-.edu	0.116	0.0007
TLD-.gov	0.058	0.0427
TLD-.com	0.057	0.1881
TLD-.org	0.042	0.2343
TLD-other	0.000	N/A
Employees-5000 +	0.106	< 0.0001
Employees-500-1000	0.086	< 0.0001
Employees-1000-5000	0.063	0.0076
Employees-100-500	0.024	0.2722
Employees-1-100	0.000	N/A
Annual Spend-$500,000+	0.037	0.0595
Annual Spend-$50,000-$100,000	0.053	0.0067
Annual Spend-$250,000-$500,000	0.036	0.0502
Annual Spend-$100,000-$250,000	0.016	0.3946
Annual Spend-$0-$50,000	0.022	0.3852
Annual Spend-Unsure	0.000	N/A
Initiative-Electronics	0.281	< 0.0001
Initiative-Paper	0.281	< 0.0001
Initiative-Packaging	0.166	< 0.0001
Initiative-Products	0.135	< 0.0001
Initiative-Responsible Suppliers	0.107	< 0.0001
Initiative-Carbon Footprint	0.097	< 0.0001
Initiative-Renewable Power	0.000	N/A

The highlighted coefficients provide an indication of the most important factors that affect a respondent's ranking. As indicated earlier, educational organizations and large companies (by employees and annual spend) have the strongest impact. Based on the standardized coefficient value and confidence level, company size has a slightly greater effect on the ranking over company annual spend. Furthermore, companies located in the Northeast are significantly more likely to rank initiatives higher than companies in other geographic regions. Electronic and

paper product initiatives are the most popular to the business customer. The majority of variables are within a 95% confidence level, as indicated by the Pr > |t| value.

4.2.6 Willingness to Pay

Survey results from the willingness-to-pay (WTP) questions are represented in Figure 15 below. As indicated in the methodology section, the surveys were distributed in two different formats based on the WTP premium. Survey 1 allowed the respondent to choose between a standard vendor and a "sustainable" vendor, which required a 5% higher price. Survey 2 asked the same questions, but the sustainable vendor prices were 10% higher than the non-sustainable choices. Similar to the results in Section 4.2.3, respondents were identified as "sustainable" based on their response to Question 6 of Appendix I. This was intended to provide a higher degree of accuracy for responses. Survey 1 results are given in Figure 15 below:
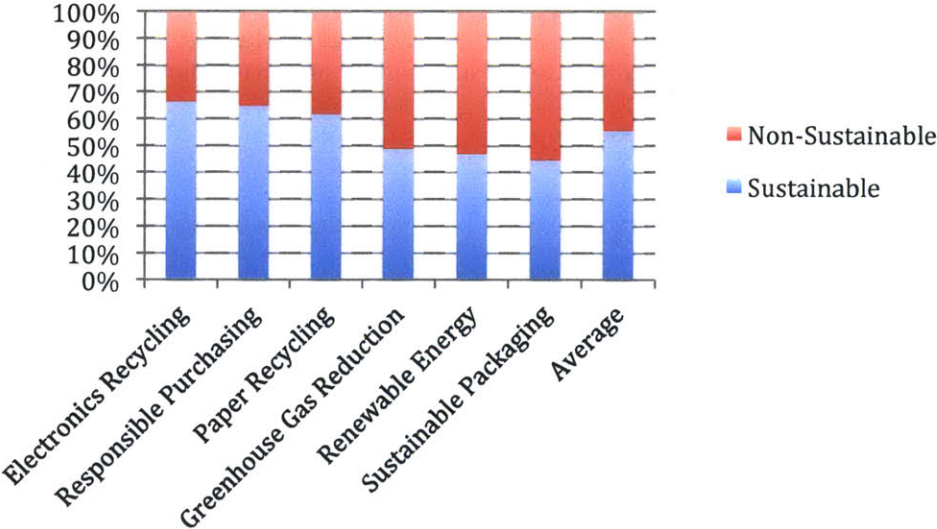

Figure 15 - Percentage of respondents that chose "sustainable" or "non-sustainable" purchasing option based on a 5% price difference

On average, respondents selected the "sustainable" vendor 57% of the time. Electronics recycling, paper recycling, and responsible purchasing appear to be the most popular initiatives based on the listed scenarios. Less than 50% of respondents selected the "sustainable" vendor for carbon emissions, sustainable packaging, and renewable energy initiatives. In comparison, survey 2 results are given in Figure 16:
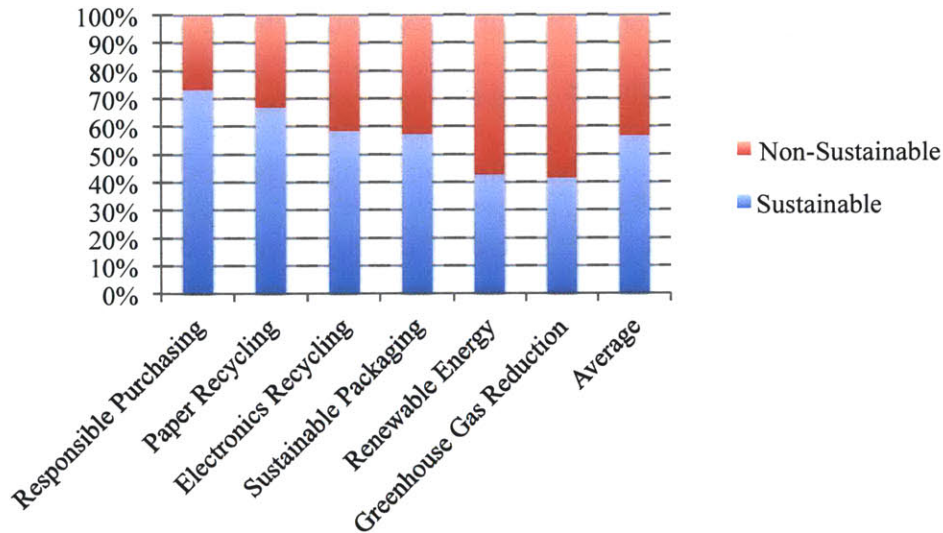
Figure 16 - Percentage of respondents that chose "sustainable" or "non-sustainable" purchasing option based on a 10% price difference

Strikingly, the respondent selected the "sustainable" vendor 57% of the time, the same percentage indicated by survey 1 results. Electronics recycling, paper recycling, and responsible purchasing appear to attract the most interest from respondents. Furthermore, there is a significant increase in the number of respondents who chose the "sustainable" vendor when associated with the sustainable packaging initiative. Further data analysis did not reveal conclusive evidence for this drastic change in opinion. Customer profiles for both surveys are similar and do not appear to affect the results for other initiatives.

Table 7 provides a direct comparison between the two surveys. The base price describes the product original price. The 5% or 10% premium was added to this price as indicated in Appendix I. Considering that price has been determined to be a significant factor in purchasing decisions, it is likely that many respondents chose the non-sustainable option for the greenhouse gas initiative because of the high base price. Price may also play a strong role in the results for the responsible purchasing initiative, which, at $3.49 per unit, achieved substantially more positive responses. Despite the low price associated with renewable energy ($16.99), the majority of respondents opted for the non-sustainable vendor. This further indicates a lack of interest in this initiative.

Table 7 - Comparison of WTP Results

Initiative	Base Price	Sustainable Responses (5%)	Sustainable Responses (10%)	Difference
Electronics Recycling	$139.99	66%	58%	8%
Responsible Purchasing	$3.49	65%	73%	-8%
Paper Recycling	$49.99	62%	67%	-5%
Greenhouse Gas Reduction	$1899.99	49%	42%	7%
Renewable Energy	$16.99	47%	43%	4%
Sustainable Packaging	$89.99	45%	57%	-12%

The objective of this WTP study was to determine if customers would be more likely to choose a certain premium (5% or 10%) and purchase from the sustainable vendor. Based on the above data, there is no conclusive evidence to support one WTP amount over the other. Respondents chose the sustainable vendor for responsible purchasing, paper recycling, and sustainable

packaging more frequently in survey 2 than in survey 1. A statistical significance test could not be conducted due to the different sample pool. Still, this study shows the importance of price in supplier selection. It also reaffirms the popularity of recycling initiatives, as the majority of respondents in both surveys chose electronics and paper recycling vendors over the non-sustainable option.

4.3 Interview Analysis

Two interviews were conducted with executives from highly respected companies with strong sustainable reputations. Appendix II describes the interview content.

The first interview was with the director of environmental sustainability at DrugCo, a worldwide medical and pharmaceutical company with revenues in excess of $20 billion. Based on the listed sustainability initiatives, DrugCo ranked carbon footprint reduction as most important. This was followed by sustainable packaging and renewable power investment. Surprisingly, recycling programs ranked lower in terms of priority when compared to other initiatives. DrugCo's environmental sustainability department did not actively participate in purchasing and procurement processes, although they utilized a balanced scorecard to examine the environmental reputation of its suppliers.

The second interview was conducted with FoodCo, a leading consumer packaged goods company that was well known for their sustainability strategy. The executive in charge of environmental sustainability continually stressed the important role that green initiatives played in the company's strategy. When asked about sustainability initiatives, FoodCo ranked all the

initiatives in Appendix II as equally important. An emphasis was placed on ensuring environmental responsibility throughout the entire value chain. This company promotes sustainability and environmental responsibility as the core of its business strategy.

There are several important observations from the interview analysis. First, the director of sustainability at DrugCo rated recycling programs as less important when compared with other initiatives. This directly contradicts the survey results, where recycling programs are ranked highest. Whereas company employees responded to the sustainability survey, this interview was conducted a top-level executive. Administrative, purchasing, and other support personnel may have a drastically different view of sustainability than management. After all, reducing greenhouse gas emissions by conserving fuel will reflect as direct savings. Recycling programs may not have as obvious of a financial benefit. However, top management personnel may not be responsible for purchasing supplies and consumables.

Second, some companies pride themselves on their sustainable reputation. The sustainability director at FoodCo ranked all sustainability initiatives as equally important, and then provided extensive details on how their company embraces its environmentally responsible image. Granted, this in no way represents the sustainability strategy of other companies. However, public opinion may begin to strongly favor companies with a stronger corporate social responsibility reputation. If this trend continues, other companies will develop business models more dedicated to environmental responsibility.

5. CONCLUSIONS

This study aimed to prioritize RetailCo's sustainability initiatives for future investments. The first part of the online survey identified commonly practiced initiatives practiced by RetailCo's customers. Further analysis in Section 4.2 detailed the "sustainable business" profile and revealed customer sustainability preferences. Understanding customer sustainability preferences will allow RetailCo to prioritize their investments for future sustainability initiatives.

5.1 Observations and Recommendations

Based on the analysis of current data and the review of pertinent literature, this thesis makes the following recommendations:

1. Companies should continue to invest in electronic and paper product recycling programs. Based on customer inquiries and the online survey results, electronics and paper recycling are the most popular sustainability initiatives at this time. This is likely due employees' familiarity with these programs. Many original green policies focused on the "reduce, reuse, and recycle" concepts. As a result, more individuals in a company may identify with other companies that have similar practices. Although recycling programs may be unprofitable, companies participate in them to enhance their environmental responsibility image. This further benefits their organization because of the positive customer-corporate (C-C) relationship.

2. Other sustainability initiatives remain popular with RetailCo's customers. Sustainable packaging and responsible purchasing have acquired a higher level of interest according to respondent rankings and the WTP results. Closer analysis of these initiatives would provide a more detailed picture of customer intentions.

3. Companies should be aware of the "sustainable business customer" profile. Based on the survey conducted, larger companies with greater spend are more likely to be interested in sustainability initiatives. Furthermore, government and educational organizations are more likely than other commercial organizations to participate in green process improvements. The sustainable business customer is located primarily in the northeast region of the United States.

4. Sustainability is popular with the business customer. However, similar to the retail customer, other factors continue to dominate all purchasing decisions. Despite the relatively high interest in green initiatives shown by customers in this survey, nearly all have ranked sustainability as less important than other factors. The response bias has generated overwhelming support for sustainability initiatives, resulting in an average ranking of "very important" for most initiatives. Customers continually note that environmental sustainability is important, but in today's economic climate, they are limited to purchasing based on price and quality.

5. There may be a significant difference in the opinion of employees and executives as to the value of sustainability. An interview with the director of sustainability at DrugCo noted that recycling programs ranked lower in priority than other initiatives. Furthermore, Accenture's research indicated only one third of companies participated in waste and water reduction programs. It is likely that top executives favor initiatives that provide direct savings, such as reducing greenhouse gas emissions and minimizing energy consumption. Analysis of consulting reports shows that company executives and decision makers are primarily interested in company image (CSR) and long-term strategy.

Employees have shown interest mostly for operational and direct-impact initiatives, such as recycling.

5.2 Limitations

The data provided from customer inquiries does not contain an adequate sample size. There were insufficient RFPs and RFIs to make a strong case for customer interests. Although these data sources are a good perspective for customer preferences, the results should be judged inconclusive based on the number of documents provided. Furthermore, there is no weighting structure associated with these questions. A customer may ask RetailCo questions about four different sustainability initiatives, but there is no way to determine which of these four initiatives is most important to the customer without consulting them directly.

The construction and dissemination of surveys presents numerous challenges. As indicated previously, the NOAA panel advised careful and cautious preparation of a willingness-to-pay survey (NOAA, 1987). The respondent may misconstrue the wording of even simple questions. Appendix III details some customer confusion with the survey. Furthermore, some of the survey questions were too restricting and did not utilize quantitative data. In order to construct a strong logistical regression model, numerical values are more likely to produce more accurate results over qualitative categories.

There are several biases associated with contingent valuation and conjoint analysis surveys. The respondent is likely to show higher interest for sustainability initiatives knowing that this decision reflects well upon them. This is known as the Acquiescent Response Bias, a term

coined and described by Dorothy Watson (1992). This bias is likely responsible for the higher overall rankings of sustainability initiatives as well as the better-than-expected WTP results.

The survey was disseminated to a large number of diverse business customers. However, the survey was not specifically addressed to procurement and purchasing departments. Instead, respondents occasionally consisted of administrative personnel who had very little knowledge of purchasing and sustainability requirements. This reduced the accuracy of the responses and often inserted a personal bias into the results. This error was somewhat corrected by removing responses from customers who were unsure of their company's sustainable actions.

There was little enthusiasm by larger companies to participate in interviews, and this severely limited the amount of data collected. Personal requests were sent out to sustainability managers and executives via traditional mail and email, but only 5% responded to interview requests. Negative responses cited time and resource commitments as the primary reason for declining an interview offer.

5.3 Further Areas of Study

One of the best ways to further ascertain business customer preferences is to utilize a logistical regression model. Logistical regression uses a logit equation to predict whether a customer will make a "yes" or "no" decision. This is most often represented by a simple binary variable. For example, a logit equation will input company size, spend, geographic location in order to determine the likelihood that the customer will purchase the sustainable option. Logistical

regression modeling was attempted for this project, but deemed inconclusive based on the available data.

The survey asked customers basic information about their company in a simple multiple-choice format. This information provides qualitative inputs to a regression model, unlike traditional quantitative data inputs. Future surveys would be able to create stronger regression models based on open-ended questions, as numerical data provides a higher degree of accuracy for regression analysis. Specific data, such as the *exact* annual spend with RetailCo or the *exact* company size would ensure increased accuracy in regression modeling.

Additionally, the survey should be sent to personnel with decision-making authority. It was clear from some of the comments, which are indicated in Appendix III, that some respondents were bound by contractual obligations or could not make purchasing decisions. This was further reflected by the large number of "unsure" responses when asked about annual spend. The intention was to have personnel who are authorized to make purchasing decisions complete the survey.

Finally, future research should focus on the difference between company perception and employee perception. This study attempted to understand sustainability preferences according to those directly involved in purchasing and procurement decisions. Another study should be conducted based on the priorities as perceived by sustainability managers at major companies. Once RetailCo has prioritized their sustainability initiatives, they should conduct a return on

investment (ROI) analysis on each initiative based on direct customer feedback. The results of that study should be compared to the results presented in this paper.

5.4 Final Thoughts

The literature review identified how customers develop a C-C relationship with a company of similar values. By investing in sustainability initiatives that are popular within the B2B segment, RetailCo can actively promote their company image and attract sustainable business customers. The sustainable business customer profile often consists of companies located in the Northeast region of the United States, is larger in company size, spends more with RetailCo, and is generally involved in government and education industries. This customer is significantly more likely to show support for electronic and paper product recycling than other initiatives. Despite the positive feedback shown for green initiatives, most companies continue to value price and quality above environmental responsibility. It is very likely that sustainability initiatives will continue to gain popularity as the economy strengthens and popular opinion supports greener practices. This study contains the first attempt to quantify the value of sustainability within the B2B segment. Further research and analysis of this topic will further allow RetailCo and other companies to prioritize their sustainability strategies.

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APPENDICES

Appendix I: Customer Survey

Sustainability Value Survey (v1)

The purpose of this survey is to identify the sustainable business customer and to identify sustainable initiative priorities. All results are confidential.

GENERAL

1. Approximately how many employees work at your company?
    a) 1-100
    b) 100-500
    c) 500-1000
    d) 1000-5000
    e) 5000 +

2. Which of the following best describes your job title?
    a) Procurement/Purchasing
    b) Office Manager
    c) Administrative/Executive Assistant
    d) Owner/Partner/President/VP
    e) IT/IS/Technology Services
    f) Sales and Marketing
    g) Accounts Payable/Finance
    h) Sustainability/Environmental Affairs
    i) Other

3. Approximately how long have you been with your company?

4. What is your company's approximate annual spend with RetailCo?
    a) $0-$50,000
    b) $50,000-$100,000
    c) $100,000-$250,000
    d) $250,000-$500,000
    e) $500,000+
    f) Unsure

5. Does your company have a "corporate sustainability" strategy?
(YES/NO/DON'T KNOW)

6. Does your company engage in sustainability practices to reduce its impact on the environment?
(YES/NO/DON'T KNOW)

7. Does your company participate in the LEED (Leadership in Energy and Environmental Design) building certification program?
(YES/NO/DON'T KNOW)

8. Does your company participate in the ISO 14001 Environmental Management System certification program?
(YES/NO/DON'T KNOW)

9. Does your company have an active recycling program?
(YES/NO/DON'T KNOW)

10. Does your company track energy consumption?
(YES/NO/DON'T KNOW)

11. Does your company track greenhouse gas emissions?
(YES/NO/DON'T KNOW)

SUSTAINABILITY VALUE

RetailCo would like to determine the value of our sustainability initiatives to you as our customer.

12.   On a scale of 1 to 5 (1 being least important, 5 being most important), please rate the importance of the following attributes in selecting your suppliers:

    a. Price

    b. Quality

    c. Delivery

d. Service

e. Convenience

f. Long-term Relationship

g. Sustainability

h. Risk

i. Other (Please List)

13. On a scale of 1 to 5 (1 being not interested at all, 5 being very interested), please rate your company's interest in the following initiatives:

1. Electronics Recycling (including ink/toner)

2. Paper Recycling

3. Sustainable Packaging

4. Carbon Footprint Reduction

5. Purchasing from Environmentally-conscious suppliers

6. Renewable Power Investment

7. Purchasing Sustainable Products

8. Other (Please list)

Sustainability initiatives are often costly and sometimes require additional capital investment. The purpose of this survey is to determine customer priorities for green products and processes. For the following brief scenarios, please choose the vendor or product that your company is most likely interested in. If you are a contract customer, please assume that there is no obligation to buy from a specific vendor.

14. Suppose you had to purchase some ink and toner for your place of business. While shopping around, you discover the following options. Which would you select to purchase?

- Vendor 1 is selling ink & toner and they allow you to return empty cartridges. Because the recycling service has an up-front cost of $14, the price of ink & toner is $153.99.
- Vendor 2 is selling identical ink & toner for $139.99, but they do not allow you to return empty cartridges.

15. Your business needs to purchase a variety of paper supplies. Which vendor do you prefer?

- Vendor 1 sells paper supplies at $52.49 per case, and it is widely known that their company recycles nearly 95% of their paper products.
- Vendor 2 sells the same paper supplies for 5% less.

16. Your business requires a new high-efficiency copier. Which option would your prefer?

- Vendor 1 is selling your ideal copier for $2099.99. This vendor implements a popular and innovative greenhouse gas reduction program throughout its business that requires additional costs to implement and maintain.
- Vendor 2 is selling an identical copier for 10% less.

17. Your business is purchasing furniture for a new conference room. When deciding on chairs, what option would you select to purchase?

- Vendor 1 is selling your preferred chairs for $89.99 each.
- Vendor 2 sells the same chairs, and ships them in recycled packaging. The price of the chairs excluding shipping is the same as Vendor 1, but it costs an additional $5 to ship in recycled packaging.

18. Your company requires a substantial amount of corrugated boxes for their operations. What is your purchasing preference?

- Vendor 1 is selling boxes for $18.89 and has a known reputation for importing 20% of their electricity from renewable energy sources.
- Vendor 2 is selling identical boxes for 10% less.

19. Your company needs to purchase office-cleaning supplies for its corporate headquarters. Which purchasing option would you prefer?

- Vendor 1 is selling cleaning supplies for $3.49.
- Vendor 2 is selling similar cleaning supplies for $3.66. The company incurs additional costs because it purchases its raw materials from environmentally responsible producers.

20. Do you have any additional comments on the value of sustainability initiatives to your company?

Appendix II: Interview Questions

We are conducting a study on the value of sustainability in business-to-business relationships. Specifically, this research project focuses on company priorities for sustainability initiatives and supplier selection. All interviewed companies shall remain anonymous.

1. What is your primary responsibility?

2. Can you briefly summarize your company Environmental Sustainability Strategy?

3. On a scale of 1 to 5 (1 being not interested at all, 5 being very interested), please rate your company's interest in the following initiatives. If possible, please provide any details.

   1. Electronics Recycling (including ink/toner)

   2. Paper Recycling

   3. Sustainable Packaging

   4. Carbon Footprint Reduction

   5. Purchasing from Environmentally-conscious suppliers

   6. Renewable Power Investment

   7. Purchasing Sustainable Products

   8. Other (Please list)

4. Which of the above initiatives is *most important* to your company?

5. Does your division/department work with purchasing or procurement to obtain supplies from environmentally-responsible suppliers? Do you have any examples?

6. When selecting suppliers, what sustainability criteria are most important to your company?

7. Do you participate in Sales and Operational Planning meetings?

Thank you for participating in this study. All interviewed companies will remain anonymous, and the results will be published in a master's thesis of the Supply Chain Management program at the end of the year.

Appendix III: Customer Comments

Many customers commented on the survey and provided positive feedback. Below is a sampling of their comments on sustainability and other factors that affect purchasing.

- General appraisal for focusing on the environment.

- There is increased interest in many areas of electronics recycling.

- Companies are focusing more on "direct impact" sustainability programs, and not those upstream in the supply chain.

- Companies should not push sustainability program costs on their customers.

- Price and quality will always outweigh sustainability in this economy.

- Sustainable products are often lower in quality and higher in price.

- Companies are not making it obvious to the consumer that their business is environmentally responsible.

- There is very little flexibility in altering purchasing decisions due contractual obligations and supervisory oversight.

- Universities feel obligated to purchase sustainable products due to student opinion.

- Government organizations are in favor of sustainable solutions, but are still limited by funding at the local and state level.

- Some survey respondents are not authorized to make purchasing decisions