

**STRATEGY FOR DE-COMMODITIZING A
COMMODITY: FOCUSING ON
REPLACEMENT FILTERS**

by

NATE SMITH

B.A., University Missouri – Kansas City, 1999

A THESIS

Submitted in partial fulfillment of the requirements

for the degree

MASTER OF AGRIBUSINESS

Department of Agricultural Economics

College of Agriculture

KANSAS STATE UNIVERSITY

Manhattan, Kansas

2011

Approved by:

Major Professor
Dr. Kevin Gwinner

ABSTRACT

Creating product differentiation as it pertains to a commodity is a difficult undertaking. Products defined as a commodity in the market place are typically very similar in nature and allocating marketing funds to execute the four P's of traditional marketing: Product, Promotion, Price, and Placement can be a daunting task that may provide little to no economic reward. The goal in marketing a product that is thought of as a commodity is to reduce the amount of waste in capital and labor, while at the same time extracting as much profit as possible in the targeted market.

It is extremely important for the firm to know the market for which it competes. Pricing is usually the primary factor that goes into the purchasing decision of a commodity; therefore the commodity must be priced competitively within the target market. To achieve a positive margin between the perceived market value of the commodity and the price for which the firm is commanding, the company must focus on two areas of marketing. First, the critical value factors must be perceived more valuable for the product the firm is attempting to sell in the market place than that of the competition. Second, a preeminent distribution channel must be in place to adapt to the ever changing nuances of the market. Availability of the commodity is critical because potential customers can easily find another source for a like product.

This thesis analyzes the agricultural replacement filter business and provides recommendations to the firm, in this case John Deere Company, on how to capture business from owners of John Deere equipment that currently purchase replacement filters

from another source besides John Deere. The study begins by taking a look at the filter business from a macro level to understand the broader market, and then drills down to the variables that drive the purchasing decision of the customer. The results indicate that price is the number one reason why potential John Deere filter customers conduct business with non-John Deere sources. However, based on deeper analysis, into the factors that drive customers away from the John Deere distribution channel, a strategy is provided to add business by increasing the value of the John Deere filter for the consumer that will in turn increase revenue for the firm.

The agricultural machinery business is a highly competitive industry. Similar to most industries, there is increasing customer and distribution consolidation within this market. This in turn increases the value of each producer. The primary distribution channel for agricultural equipment, mainly OEM dealers (original equipment manufacturers) 'seeds' rural North America with complete goods such as tractors and combines that producers use to work the land. However, the equipment must be maintained with service parts for the machine to operate productively and efficiently. The service parts the distribution channel sells to end-users are also extremely competitive because of the many products available.

Machine filters such as fuel, air, and engine oil are service parts that end-users must systematically replace to keep their machines running efficiently when their equipment is in use. Filters that have surpassed their service life-cycle inhibit the performance of the machine, eventually causing the customer expensive down time. Filters, as well as other maintenance parts that are consumable, are an expense many operators look to minimize to

increase their net profit. Therefore, many producers will try to find the best deal when replacing filters. The assumption of the author is that customers base their purchasing decision on the price of the product versus other factors such as quality, availability, or brand loyalty.

TABLE OF CONTENTS

List of Figures	vi
List of Tables	viii
Acknowledgments	ix
Chapter I: Introduction	1
Chapter II: Literature Review and Theoretical Frameworks	10
2.1 Defining Customer Value	10
2.2 Blue Ocean Strategy	11
2.3 Strategy Canvas	14
2.4 ERIC Model.....	16
Chapter III: Methodology	18
3.1 First Survey - Exploratory.....	18
3.2 Second Survey - Quantitative	19
3.2.1 Data Collection.....	20
3.2.2 Sample	21
3.2.3 Measures.....	22
Chapter IV: Results	23
4.1 Exploratory Results	23
4.2 Second Survey Results	28
4.3 Cross Tabulations of Second Survey	40
Chapter V: Conclusion, Implementation, and Summary	61
References	77
Appendix a	78
A1 Dealer Financial Analysis (DFA)	78
A2 32G (Parts Operations Report).....	79
A3 Exploratory Survey Comments based on the question, “Why do customers buy John Deere filters?”	80
A4 Quantitative Survey Questions.....	81

LIST OF FIGURES

Figure 1.1: 2008 Parts Market Share for Deere Farm Equipment	6
Figure 1.2: 2009 Parts Market Share for Deere Farm Equipment	6
Figure 2.1: Example Strategy Canvas.....	15
Figure 2.2: Sample ERIC Model.....	17
Figure 4.1: Initial Survey Results	24
Figure 4.2 Levels of Importance	25
Figure 4.3: Initial Strategy Canvas.....	27
Figure 4.4: Job Titles of Participants	29
Figure 4.5: Fiscal 2010 Dealer Purchases	30
Figure 4.6: Survey Question 1 “If owners of John Deere equipment are currently not purchasing filters from your dealership, please indicate which source your customers are utilizing most frequently to buy filters. Please choose one.”.....	31
Figure 4.7: Survey Question 2 “Please indicate which filter manufacturer is your strongest competitor. Please choose one.”	32
Figure 4.8: Survey Question 3 “Please select the most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.”	33
Figure 4.9: Survey Question 4 “Please select the second most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.”	34
Figure 4.10: Survey Question 5 “Please select the third most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.”	35
Figure 4.11: Survey Question 6 “Please select the fourth most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.”	36
Figure 4.12: Survey Question 7 “On average, rate how John Deere filters are priced relative to the competition. Please select one.”	37

Figure 4.13: Survey Question 8 “Would a John Deere filter specific financing program increase sales for your dealership? An example would be a 180 NPNI offered by Farm Plan/Ag Line with a minimum of \$500 in purchases.” 38

Figure 4.14: Survey Question 9 “If John Deere were to offer an ordering program for all Ag and Turf filters, which program do you think would be the best to drive additional sales for your dealership? Please choose one.” 39

Figure 5.1: Revised Strategy Canvas..... 63

Figure 5.2: ERIC Model 67

LIST OF TABLES

Table 1.1: Financial Data on John Deere Filters	3
Table 1.2: 2009 Filter Market Share for Agricultural Equipment	4
Table 1.3: 2010 Replacement Filter Brand Preference.....	4
Table 1.4: Replacement Parts Demand (000), Engine Maintenance, All Equipment Dealers.....	7
Table 1.5: Replacement Parts Demand (000), Deere Only Engine Maintenance.....	8
Table 4.1: COG Total Purchases * Q1: Source buying from Cross tabulation.....	41
Table 4.2: COG Total Purchases * Q2: Strongest competitor Cross tabulation.....	43
Table 4.3: COG Total Purchases * Q3: Why buy from other suppliers (first) Cross tabulation	44
Table 4.4: COG Total Purchases * Q4: Why buy from other suppliers (second) Cross tabulation	46
Table 4.5: COG Total Purchases * Price to competition Cross tabulation.....	48
Table 4.6: COG Total Purchases * Q9: Best program to drive additional sales Cross tabulation	50
Table 4.7: Job Title * Q1: Source buying from Cross tabulation.....	52
Table 4.8: Job Title * Q2: Strongest competitor Cross tabulation.....	53
Table 4.9: Job Title * Q3: Why buy from other suppliers (first) Cross tabulation	54
Table 4.10: Job Title * Q4: Why buy from other suppliers (second) Cross tabulation.....	55
Table 4.11: Job Title * Q7: JD price relative to competition Cross tabulation	56
Table 4.12: Job Title * Price to competition Cross tabulation.....	58
Table 4.13: Job Title * Q9: Best program to drive additional sales Cross tabulation.....	59

ACKNOWLEDGMENTS

The author wishes to acknowledge the faculty and staff of the Kansas State Masters of Agribusiness (MAB) program. The enthusiasm and dedication Dr. Allen Featherstone and his team provided by delivering a program of study that meet the needs of agribusiness professionals is the reason why enrollments continue to increase year-over-year. First, I want thank Dr. Kevin Gwinner for his willingness to assist me in researching a topic which had little to no previous investigation. Dr. Gwinner's expertise in the field of marketing proved to be invaluable resource and the support he provided was very much appreciated. Second, I would like to thank Dr. Allen Featherstone and Dr. Vincent Amanor-Boadu for the time they invested into providing additional guidance and recommendations for this thesis project. Third, I would like to recognize Kevin Heikes, class of 2010. The presentation for which Kevin delivered in January 2011 was the motivation needed when I started to feel overwhelmed with work, school, and family. Fourth, to my fellow cohorts of 2011: without your help and encouragement through the whole process, I would have not been able to complete this long journey. Last but certainly not least, to Lynnette Brummett and Mary Bowen. Lynnette and Mary's attention to detail and their ability to make sure I was where I needed to be, when I needed to be, and general support was priceless.

I would also like to thank my supervisors at John Deere who supported my continuing education efforts from beginning to end. Those individuals are Ken Sevigny, Bob DeVine, Tiffany Turner, and Tammy Lee. Without the support from these individuals, this degree would not have been possible.

Finally, I would like to thank my wife and children: Carla, Abigail, Anderson, and one to be named at a later date. Without their love, support, encouragement, and willingness to adapt to my hectic schedule, I would not have been able to obtain my MAB at Kansas State University. Your patience and love will always be treasured in my heart.

CHAPTER I: INTRODUCTION

Webster Dictionary offers several definitions for the term 'commodity' including: (1) An economic good such as a product of agricultural or mining, (2) A mass produced unspecialized product and (3) A good or service whose wide availability typically leads to smaller profit margins and diminished importance of factors (such as brand name) other than price. In a 1913 edition of Webster's Dictionary, John Locke defined a consumable as; "capable of being consumed, that may be destroyed, dissipated, wasted, or spent." Mr. Locke also offered an example for the word commodity; Consumable Commodity. Examples of typical consumable commodities include grains, beef, and natural gas. Frequently, consumers make purchasing decisions as it pertains to commodities for items like fuel which is dispensed in vehicles and bottled water from a convenience store. But how does a firm successfully differentiate their branded commodity over the competition? The answer to that question is the amount of value, perceived or real, the company can add to their product or service.

The objective of this paper is to answer the following question: How does a firm successfully de-commoditize a product that is considered a commodity and capture additional market share? More specifically, how does John Deere Company grow the OEM (original equipment manufacturer) filter business and impede competitive firms from taking away sales from John Deere's distribution channel, the John Deere dealer?

Background of John Deere Company

John Deere Company was founded in 1837 when a blacksmith by the name of John Deere invented a plow that was able to scour through the sticky prairie soil in Grand Detour, IL.

Over the next 174 years, John Deere Company has grown into a multi-national firm selling agricultural, construction, forestry and turf equipment with revenues of \$26 billion in fiscal 2010. The distribution channel has been created through independent John Deere dealers located throughout the world that not only sell the complete machine, but also retail parts and service labor to support the requirements of the end-user.

The breakout of sales between the three revenue generating departments of an average John Deere dealership in the United States, that are complete good sales, parts sales and labor sales, are approximately 80%, 13%, and 7%. Average gross margin for the dealer in each department is roughly 5%, 32%, and 61% respectively (Dealer Financial Analysis January 2011). While it is important to John Deere to populate rural North America with as much machinery as possible to maintain market share dominance, gross margin is substantially less than what the dealer is able to achieve selling parts and service after the machine has been delivered to the producer.

From a filtration perspective, the sale of replacement filters to John Deere dealers represents 7%, or \$131M, of total parts sales. The following table offers additional financial data about the filter business:

Table 1.1: Financial Data on John Deere Filters

	2008 [*]	2009 [*]	2010 [*]
A&T & CF[†]: Sales fiscal year ending October	A&T = \$113 million C&F = \$37 million Total = \$150 million	A&T = \$117 million C&F = \$30 million Total = \$147 million	A&T = \$131 million C&F = \$34 million Total = \$165 million
Fiscal Yr. Operating Profit year ending October (A&T, CF)	A&T = \$38 million C&F = \$11 million Total = \$49 million	A&T = \$41 million C&F = \$9 million Total = \$50 million	A&T = \$45 million C&F = \$11 million Total = \$56 million

[†]Source of data from Sales Business Unit Sales Report ending October 2010

[‡]A&T = Agricultural and Turf and C&F = Construction and Forestry

Table 1.1 indicates John Deere Company has continued growing filter sales over the last three years at a rate of 4.9%.

From a market share perspective, it is difficult to measure the share the dealer distribution channel has with John Deere filters because there is not an official reporting structure that OEM's utilize to determine parts market share. In lieu of utilizing AEM (Association Equipment Manufacturers), that reports on whole good market share, MacKay & Company, a market research firm contracted by John Deere Company and other agricultural equipment manufacturers, develops estimates and forecasts for a myriad of specific market trends including the sale of service parts to farmers/producers/end-users. The following tables and charts provide an overview of the findings from the research MacKay & Company has conducted over the last several of years.

Table 1.2: 2009 Filter Market Share for Agricultural Equipment

Distribution Channel	Lube Oil Filters	Air Filters	Fuel Filters	Hydraulic Filters	Cab Air Filters
Equipment Dealer	61%	61%	59%	37%	68%
Auto Parts Store	23%	25%	25%	14%	20%
Co-Op	4%	3%	4%	10%	3%
Farm/Fleet	4%	3%	3%	6%	2%
Independent Shop	2%	2%	2%	5%	2%
Other	6%	6%	7%	28%	5%

Source: McKay and Company 2009 Study

Table 1.2 indicates that the Equipment Dealer on average is enjoying approximately 57% of the replacement filter business for the agricultural market. The Equipment refers to all agricultural equipment dealers, not just John Deere Company. This would include other multi-national companies like Case-New Holland (NYSE symbol CNH) and AGCO (NYSE symbol AGCO). The Auto Parts Stores is the next closest competitor at 21%.

Table 1.3: 2010 Replacement Filter Brand Preference

	Lube Oil		Engine Air		Fuel		Hydraulic		Cabin Air	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
OEM Brand	34%	34%	46%	44%	42%	39%	NA	47%	NA	78%
NAPA	14%	15%	15%	14%	16%	16%	NA	14%	NA	12%
Fleetgard	12%	8%	7%	7%	9%	9%	NA	7%	NA	7%
Baldwin	7%	8%	7%	7%	8%	8%	NA	6%	NA	4%
Fram	9%	8%	6%	5%	5%	5%	NA	4%	NA	3%
Wix	7%	7%	4%	6%	5%	5%	NA	7%	NA	7%
AC Delco	4%	4%	3%	3%	4%	4%	NA	3%	NA	3%
Purolator	1%	2%	1%	1%	2%	2%	NA	1%	NA	2%
Luber-Finer	2%	1%	1%	0%	1%	1%	NA	0%	NA	0%
Donaldson	1%	2%	1%	4%	1%	1%	NA	2%	NA	4%
Other	5%	6%	3%	3%	2%	1%	NA	2%	NA	3%
Don't Specify	4%	5%	6%	6%	5%	6%	NA	7%	NA	8%

Table 1.3 indicates the OEM brand is the preferred replacement filter but according to the data, it appears that the Equipment Dealer is not selling the OEM brand exclusively and is offering other brands of filters. By taking the information in Tables 1.2 and 1.3, two brief conclusions can be drawn: (1) The majority of the replacement filter business is coming

back to the equipment dealer but it appears the dealer is offering more options than the OEM brand and (2) Based the data in Table 1.3, on average the OEM brand preference percentage has decreased over the last two years and other brand preferences is increasing.

Figure 1.1: 2008 Parts Market Share for Deere Farm Equipment

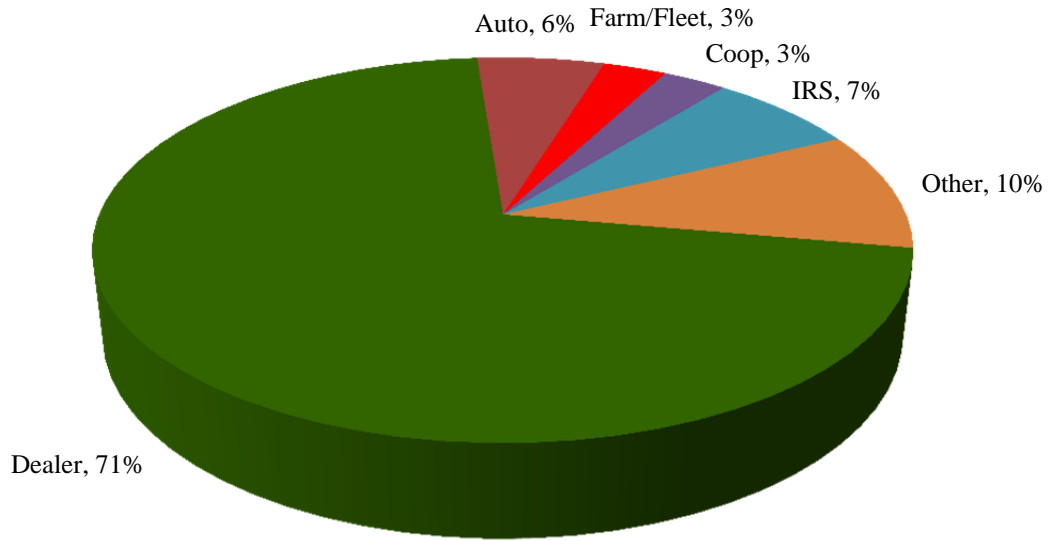


Figure 1.2: 2009 Parts Market Share for Deere Farm Equipment

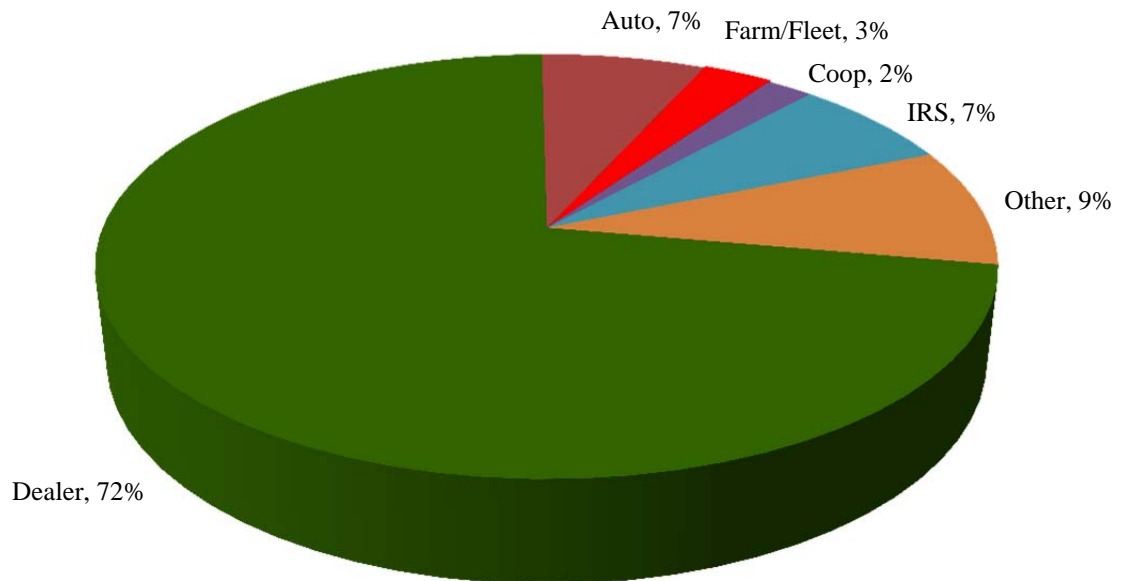


Figure 1.1 indicates that in 2008 owners of agricultural equipment in which their fleet is primarily John Deere, purchased replacement service parts, excluding starters, alternators and batteries from the John Deere dealership 71% of the time. Figure 1.2 indicates that in 2009, owners of agricultural equipment in which their fleet is primarily John Deere, purchased replacement service parts, excluding starters, alternators and batteries from the John Deere dealership 72% of the time, a one percentage point increase. The following are the descriptions of the other categories:

- Auto: Auto Parts stores such as NAPA, Car Quest and Auto Zone
- Farm/Fleet: Tractor Supply and Orscheln Farm and Home
- Coop: Cooperatives
- IRS: Independent Repair Shops
- Other: Internet, Catalog Companies, etc.

Table 1.4: Replacement Parts Demand (000), Engine Maintenance, All Equipment Dealers

	Total		Dealer		Automotive	
	Potential	\$	Percentage	\$	Percentage	
2005	\$ 962,655.00	\$ 490,571.00	51%	\$ 156,455.00	16%	
2007	\$ 958,636.00	\$ 469,426.00	49%	\$ 148,225.00	15%	
2008	\$ 1,147,940.00	\$ 508,824.00	44%	\$ 238,846.00	21%	
2009	\$ 993,363.00	\$ 434,932.00	44%	\$ 161,152.00	16%	

- Includes Filters (Lube, Fuel, Air, Cab) Belts, Hoses, Oil and Exhaust Systems
- Includes Oil Distributor and Direct Sales
- Nominal Dollars

Table 1.4 indicates that in 2009, the Agricultural Equipment Dealer was only achieving 44% of the Engine Maintenance Replacement Parts business. The 44% also includes

filters. This is a reduction of 7 percentage points since 2005 or a CAGR of -5%. The automotive distribution channel share of the business has been flat during the same time period. According to Table 1.4, total potential for agricultural engine maintenance replacement parts for all Equipment Dealers has increased 3% since 2005 to \$993 million from \$962 million in 2009.

Table 1.5: Replacement Parts Demand (000), Deere Only Engine Maintenance

	Total		Dealer		Automotive	
	Potential	\$	Percentage	\$	Percentage	
2005	\$ 362,396.00	\$ 242,513.00	67%	\$ 57,780.00	16%	
2007	\$ 371,707.00	\$ 221,253.00	60%	\$ 53,832.00	14%	
2008	\$ 449,401.00	\$ 252,253.00	56%	\$ 72,701.00	16%	
2009	\$ 386,366.00	\$ 222,281.00	58%	\$ 65,316.00	17%	

- Includes Filters (Lube, Fuel, Air, Cab), Belts, Hoses, Oil and Exhaust Systems
- Includes Oil Distributors and Direct Sales
- Reflects Potential Deere Equipment; Dealer Sales Would Include Deere Applications Sold by Competitive Dealers
- Nominal Dollars

Table 1.5 indicates that in 2009, the John Deere dealer received 58% of the engine maintenance parts business for customers in the survey that indicated their primary brand of equipment was John Deere. This data suggest that owners of equipment that is primarily John Deere will go back to the John Deere dealer a greater percentage of the time than owners of other brands of equipment; like Case-New Holland or AGCO.

The information presented in this section is intended to provide background information as to why the filter business is important to John Deere Company. First, understanding the economic impact the sale of filters has on John Deere Company is important to understanding the size of the business. Secondly, the data provides a snapshot as to what is

going on in the market place in terms of filter Brand market share, how the competition is penetrating the market, customer buying practices, and market potential. Specifically the data indicates John Deere and its dealer channel is slowly losing the filter business to other distributors and brands. Needless to say, John Deere Company and the dealer channel have enormous economic opportunity to capture additional business.

To achieve the objective of this thesis, which is to grow the John Deere replacement filter business for John Deere equipment, the thesis conducted a literature review of various sources to gain a better understanding of how to deliver value-added solutions and services in an effort to de-commoditize a commodity. The thesis will use two theories that were developed into models to construct a visual framework to gain insight of the current market and create tools to capture more revenue. Next, the thesis will discuss the methodology for obtaining data as well as the qualitative and quantitative results that provide insight to executing the objective. Finally, the conclusion will be explained as well as recommendations made to increase sales.

CHAPTER II: LITERATURE REVIEW AND THEORETICAL FRAMEWORKS

Introduction to Literature Review

This chapter will cover the resources that assisted in developing a framework to examine the way John Deere Company currently pursues the replacement filter business. There is not a significant amount of academic literature specifically pertaining to agricultural filters however the literature in this section of the paper supports the concept of adding value through capitalizing on critical factors. The emphasis of this review focuses on how a firm can apply strategies to enhance the value of the products or services for which they sell, and in turn increase economic profit.

Literature Review

2.1 Defining Customer Value

H. Kurt Christensen, a consultant in strategy and general management as well as a former professor at Northwestern University's Kellogg School of Management authored an article entitled "Defining Customer Value as the Driver of Competitive Advantage" (2010). In this article, Christensen states senior management of companies often make incorrect statements regarding competitive advantage or have a general misunderstanding of what truly constitutes a competitive advantage. These misconceptions occur mainly for three reasons. First, competitive advantage requires the integration of multiple sources of information that are processed in several different departments within the firm as well at different organizational levels. Any errors or omissions of this information can compromise the analysis of competitive advantage in any given situation. Second, there seems to be confusion about how competitive advantage is used and what it means in everyday business literature and scholarly textbooks. Third, misuse of Porter's distinction

between cost based and differentiation based competitive advantage. Christensen defines competitive advantage as the value business provides that motivates its customers (or end users) to purchase its products or services rather than those of its competitors and that poses impediments by actual or potential direct competitors. To have a competitive advantage, the firm must properly define the term and apply it to their organization. Once the company clearly defines its competitive advantage, the firm must begin the task of improving how it currently pursues the business and capitalize on its advantages. The three step process of improving the business begins with the organization fully understanding its customers by systematically gathering information regarding customer-perceived competitive advantage. Second, Christensen states the firm must then begin to understand its competitors. Finally, the company must determine how easy their product or service is to imitate and then fend off imitators. Once the company fully understands the competitive advantage(s) they have over the competition, the firm can then focus on creating or adding value to the products and/or services they provide thus increasing economic profit.

This thesis will apply a component of Christensen's three steps of improving the business by conducting two surveys to gain a better understanding of the customer base and the competition. Once the information has been received and analyzed, the paper will offer recommendations to John Deere Company to create additional value in an effort to profitably increase filter revenues.

2.2 Blue Ocean Strategy

In the book *Blue Ocean Strategy* (2005), W. Chan Kim and Renée Mauborgne offer a systematic approach to creating uncontested market space and making the competition irrelevant. The strategy is called the Blue Ocean Strategy. Most firms operate in a Red

Ocean in which there is a lot of competition and economic profit declines over the long-term. The decline in economic profit occurs for one of two reasons: (1) additional firms entering the marketplace and/or (2) existing organizations spending more on product differentiation thus eating away at margins. Kim and Mauborgne state that for firms to achieve increased long-term economic profit, they must offer products/services in an innovative way that provides customers with increased value which the competition cannot imitate.

An example the authors used was Cirque de Soleil. Traditional circuses tended to focus on benchmarking one another and maximizing their share of shrinking profits because costs were rising. As Kim and Mauborgne describes in their book, Cirque de Soleil offered the “fun and thrill of the circus and the intellectual sophistication and artistic richness of the theater at the same time” (page 14) that essentially broke the value-cost trade-off and created a blue ocean. A value-cost-trade-off is essentially a firm’s belief that they can create additional value at a higher cost or create practical value at lower cost. This new type of circus catered to a customer segment that looked for a classier form of entertainment while at the same time providing them value for their dollar. Although the concept Cirque de Soleil is offering to their customers is similar to what you would find in a traditional circus, the firm understood that to reap maximum economic profit potential, it could not operate in the same way as Ringling Brothers and Barnum Bailey. Cirque had to think outside the box and develop a strategy canvas that wasn’t currently in the marketplace in the exact same form. A strategy canvas is an objective resource or tool firms can utilize to develop a framework to determine the value end-users receive from their product or service(s). Apple is another great example of company that took a Red Ocean, portable

music players as well as music distribution, and created a Blue Ocean with the introduction of the iPod and low priced mp3 downloads to offer customers increased value and run away from the competition.

This paper will leverage the ideas of *The Blue Ocean Strategy*” and apply concepts and tools to create additional value for the replacement filters John Deere sells through its dealer channel. While a true Blue Ocean will likely not be developed in this paper, the concepts will be utilized to add value to John Deere filters in an effort to attract more customers to purchasing product from the John Deere dealer. All of the concepts discussed in the Blue Ocean Strategy focuses only on the Visual Awakening and not Visual Exploration, Visual Strategy, or Visual Communication. The paper will touch on the Visual Awakening that occurred after examining data from the surveys.

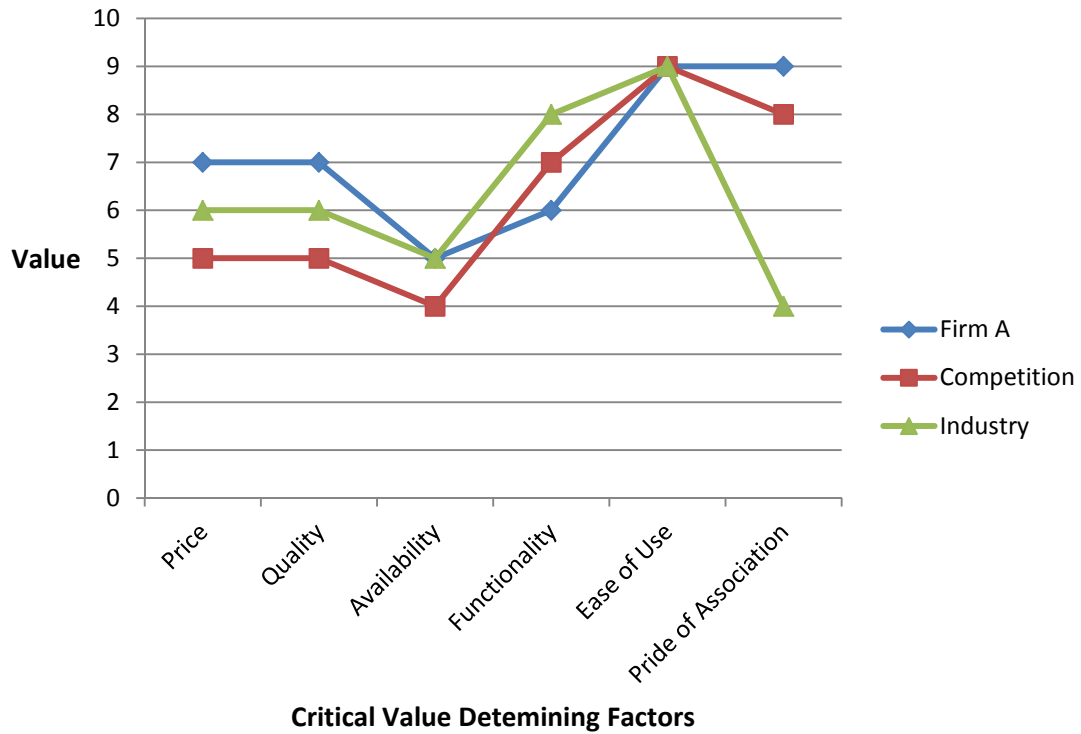
Introduction to Theories/Frameworks

The two theories that will be reviewed in this section of the thesis are the Strategy Canvas and ERIC Model. Each theory offers its own unique perspective of how to objectively analyze the intricacies of a target market and apply the information received from the exploratory and quantitative surveys. After the theories have been applied to the data, the output from the theories will be used to make a recommendation to John Deere Company on how to add value to filters and suggest a strategy to capture additional business.

2.3 Strategy Canvas

To assess the strength of John Deere's competition in the replacement filter business, this thesis will utilize the strategy canvas that is discussed in the book *Blue Ocean Strategy*. A strategy canvas is essentially a methodology a firm can utilize to identify critical to see if the product and/or services their company sells are differentiated from its competitors. A critical value can be a product or service(s) that the competitors in the target market cannot easily duplicate. Developing a strategy canvas is an exercise that seeks to give the user an objective visual of where their firm stands against their largest competitor and the industry in terms of critical values. The authors of *The Blue Ocean Strategy* call the objective visual, a visual awakening. A visual awakening occurs when, through use of the canvas, the leadership of a company challenging a strategy understands that the competition is more efficient than they are in set of critical factors. The Strategy Canvas offers the researcher two key pieces of information: (1) it captures the current state of the known market and (2) begins the process of the visual awakening which is the most critical aspect of going through the exercise.

Figure 2.1: Example Strategy Canvas



The sample example strategy canvas in Figure 2.1 identifies the critical value factors in the horizontal axis while the vertical axis captures the value the firm gives to each factor. In this canvas, Firm A's critical value factors are being compared to the competition and the industry. In this example, the canvas indicates that Firm A scores higher for the factors of Quality, Functionality, and Pride of Association but ranks lower in Price, Availability, and, Ease of Use. The firm's challenge is to determine if they could profitably improve in the factors for which they score low and also create new factors the competition cannot match. Creating additional value for which the competition cannot match is the beginning of creating a Blue Ocean.

2.4 ERIC Model

The second model this thesis will use to identify the value added and non-value added functions of the business is the ERIC Model (Eliminate, Reduce, Increase, and Create). Figure 2.2, the ERIC Model, was introduced to the author by Dr. Vincent Amanor-Boadu; professor at Kansas State University. The model was also discussed in the *Blue Ocean Strategy* and was titled as ERRC (Eliminate, Reduce, Raise, and Create) however, each model accomplishes the same task. The ERIC Model allows the researcher to identify functions or processes within a firm that can be eliminated because they do not provide value. An example of a function that needs to be eliminated is a process which made sense ten years ago to perform, however is now outdated and provides no value. Second, the ERIC Model asks the researcher to reduce activities the firm is currently conducting, that are necessary to the business, but not necessarily value added. The firm needs to analyze activities or policies which add to the cost of producing, marketing, or selling a product that can be reduced.

A specific example is looking at the company's health-care benefit plan. An increasing number of firms are eliminating traditional HMO and PPO plans and are opting to offer high deductible policies to reduce the costs for the organization. This action in turn may allow the company to become more price competitive in the market. The ERIC model challenges the firm to identify and increase actions that are value added. This could be increasing the number of focus group meetings to gain a better understanding of where the market is heading in regards to future product development. Finally, the model asks the researcher to look strategies to create value. The type of value the firm could attempt to create should focus on product or service(s) the competition has yet to introduce in an

effort to deliver unique customer solutions. This could be a company historically focused on manufacturing a product offering services to create additional value for the end user.

The ERIC model will be used as the framework to interpret the results of both surveys.

Figure 2.2: Sample ERIC Model



CHAPTER III: METHODOLOGY

Introduction

Two methods were chosen for the analysis section of this thesis: exploratory and quantitative. The exploratory survey was offered to a number of John Deere dealers in November 2010 and provided initial information about the filter business which assisted in developing the quantitative survey. The second survey is considered the primary research piece of the thesis in which John Deere dealers from all across North America had the opportunity to participate in the questionnaire.

3.1 First Survey - Exploratory

To determine the critical variable factors which drive purchasing decisions for John Deere filters, a two question survey was offered in the form of an email. Fifteen John Deere dealers and two John Deere Company employees were identified to participate in the survey. The purpose of the survey was to find out why customers go back to the John Deere dealer for their filtration needs versus utilizing another supplier. The initial survey was offered for two reasons. First, it provided a small sample of qualitative data to gain an initial perspective on how dealers perceive that end users identify value in John Deere filters. Second, the exploratory survey assisted in developing the primary survey that was given to John Deere dealers during the 2010 Parts and Service Expo in Austin, TX. The respondents were asked the following questions for the exploratory survey:

1. Why do end users buy John Deere filters?
2. How important are the following variables to your customers. Please rank by importance 1-6; 6 being the most important and 1 the least:
 - a. Price

- b. Availability
- c. Quality
- d. Functionality
- e. Ease of Use
- f. Pride of Association (Brand Equity)

The process of gathering the data for the initial survey consisted of contacting dealers with whom the author had past experience. The majority of the dealerships are located in the Midwest, however contact was made with individuals in Canada and on the east coast of the United States. Prior to emailing the identified employees the survey at each dealership location, it was explained to them that John Deere was conducting research to determine why owners of John Deere equipment purchase John Deere filters versus the competition's product.

One of the primary purposes of this survey was to aid in the development of the quantitative questionnaire. With that being said, it was critical to limit the number of questions and allow the dealer to provide feedback through a short answer question. After an agreement was made with each dealership, the individuals received an email asking them to fill out the survey and email it back to the author. The results of the survey are discussed in Chapter 5.

3.2 Second Survey - Quantitative

The second survey was developed after analyzing the results from the first questionnaire. The type of questions developed for the second survey were similar in nature however, rather than focusing on owners of John Deere equipment coming back to the dealership to purchase replacement filters, the second questionnaire was tailored to the customer that

owned John Deere equipment who isn't purchasing their replacement filters from the John Deere dealership. The reason for changing the focus of the questions was to gain a better understanding from the dealers' perspective as to why customers were choosing another source to purchase filters from besides John Deere. The survey is located in the Appendix section of this paper.

3.2.1 Data Collection

Data were captured using data collection tablets. In John Deere nomenclature, the tablets are called Data Management Tools (DMT). The DMTs are very similar to the touch screen technology used in the banking industry for Automatic Teller Machines (ATM). The decision to use DMT technology in lieu of hand written answers was made for two reasons: (1) it allowed the participant to quickly fill out the questionnaire versus manually handwriting the information and (2) the information provided was stored electronically and was able to be converted into an Excel spreadsheet easily for initial analysis. The DMTs were located in the center of the filter booth on top of a podium for easy access at the 2010 John Deere Parts and Service Expo in Austin, TX. The expo is held every two years in which dealership organizations from all over North America come to learn about the latest information pertaining to selling parts and service.

As mentioned above, the survey is located in the Appendix, however before the participants could take the survey, they needed to provide John Deere with some information about themselves at the introduction screen. They were asked to give us their first and last name, job title at the dealership, and their six digit dealer account number. This information provided a simple way to segment dealer organizations by volume of annual total parts purchases, filter purchases, and the number locations within a dealer specific organization.

In order to take the information provided from the dealers and make it simpler to analyze, numeric values were assigned to each text based response. For example, in the case of job title, if the participant identified themselves as a Parts Manager, they were assigned a value of 1. A Parts professional was given a 2. If a Service Manager took the survey, they were identified with a value of 3 and a Service professional /Technician was assigned a 4. These numeric values allowed for running cross tabulations to better understand the survey results.

3.2.2 Sample

The survey was offered at the John Deere Parts and Service Expo in Austin, TX in December 2010. The audience primarily consisted of parts and service department personnel from John Deere dealerships across North America. The total number of people that attended the Expo was approximately 4000 and the goal was to have 10% of the attendees take the survey. A convenience bias was introduced because the participants that took the survey were not chosen from a random sample. To recruit participants into the booth in which the survey was being conducted, each member working the booth was charged with encouraging dealers that passed by to take the survey because John Deere wanted their thoughts of the filter business.

The goal of 10% was reached, however after the event there was a problem downloading data from one of the two tablets. Unfortunately, only half of the data was able to be retrieved. Additionally, there were multiple respondents from approximately half of the dealerships that took the survey. As a result of multiple dealership entries, it was necessary to remove duplicate dealer respondents to cleanly run the cross tabulation which will be discussed in the results section of the thesis. The decision was made that if a dealership

had duplicate respondents, or two employees from the same dealership organization took the survey, the Parts Manager would carry the highest value in terms of their thoughts about the filter business. The Parts Manager is considered the expert as it pertains to the filter business. Next, it went down from the Parts Professional, Service Manager and finally to the Service Technician. The reason why the Parts Manager carried the largest weight is because the Parts Manager of the dealer organization typically has a better understanding as to why customers purchase replacement filters from another source versus the other three job titles. The Parts Manager is also the employee doing the majority of the parts ordering for the dealership organization.

3.2.3 Measures

The second survey measured the following variables:

1. Identify sources other than the John Deere dealerships where customers purchase filters
2. Brand names which compete with John Deere
3. Factors as to why customers purchase replacement filters from the competition versus the John Deere dealership
4. Price of John Deere filters relative to the competition
5. Interest in a filter financing program
6. Potential filter ordering programs to assist in driving more business to the John Deere dealership

CHAPTER IV: RESULTS

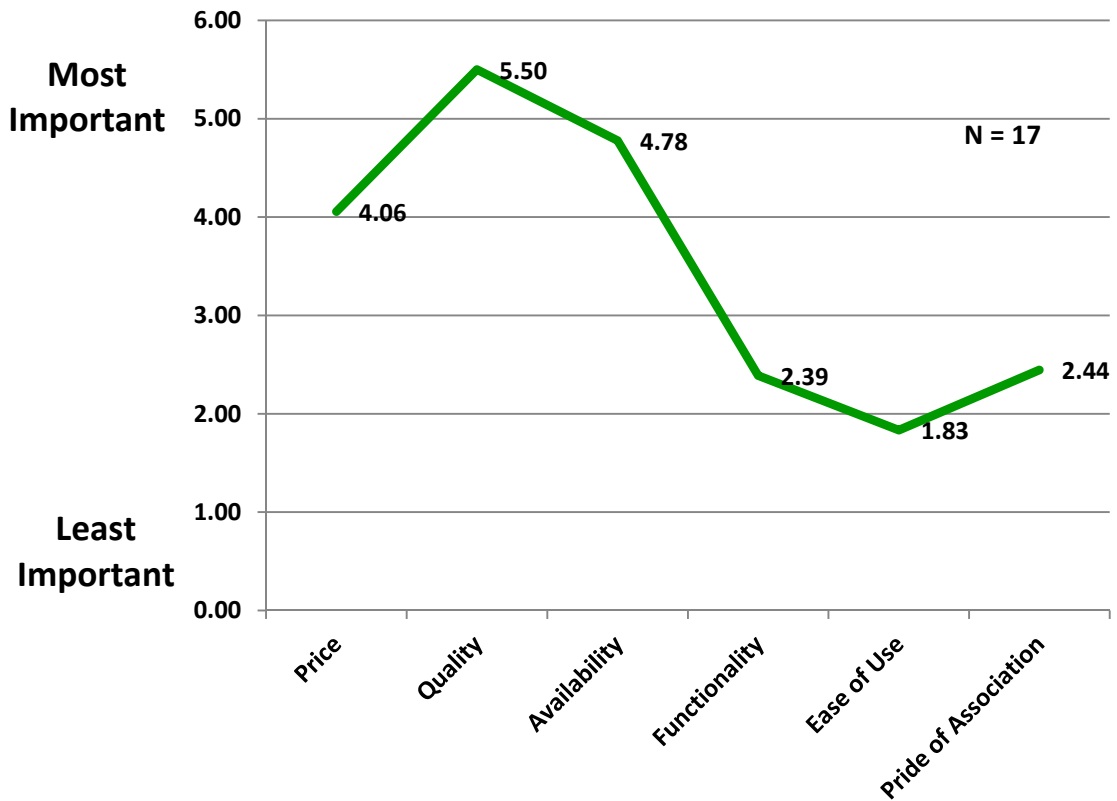
The first section of this chapter will focus on how the participants responded to the first qualitative survey. The second section and the accompanying set of figures, tables, and cross tabulations will examine how John Deere dealers perceive the overall filter business from the perspective of a customer who is not purchasing replacement filters from their local John Deere dealer.

4.1 Exploratory Results

As mentioned earlier, the purpose of the exploratory survey was to gain an understanding as to why owners of John Deere equipment purchase their replacement filters from the John Deere dealership versus another source. A total of 17 people participated in this survey; 15 were John Deere dealer employees and two were employed by John Deere Company.

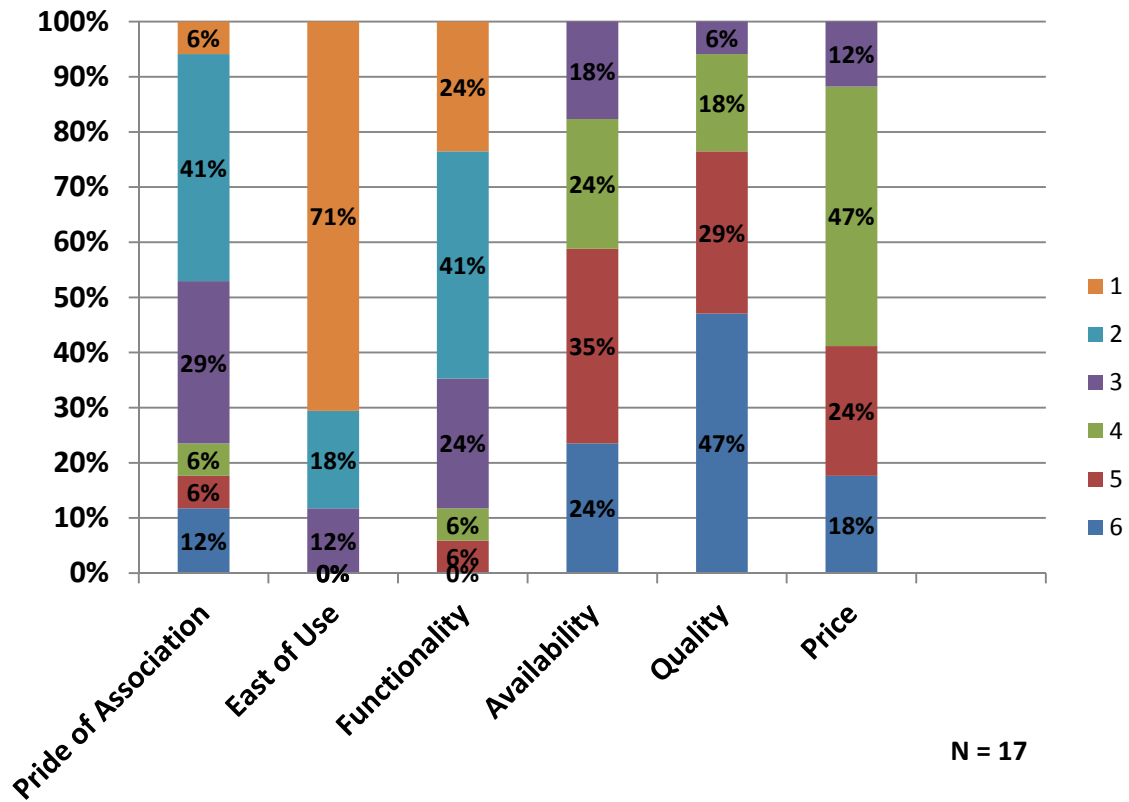
Figure 4.1 indicates the critical factors as to why customers make their purchasing decision. The question asked the respondents to rank the factors from one to six, with six being the most important and one being the least.

Figure 4.1: Initial Survey Results



Filter quality emerged as the most important factor for customers owning John Deere equipment when they make a decision to purchase a replacement filter. The second most important factor was availability and then price. Pride of association (or brand loyalty), Functionality and ease of use came in fourth through sixth, respectively. It was somewhat unexpected that quality took a precedent over price because a filter is considered a commodity/consumable good.

Figure 4.2 Levels of Importance

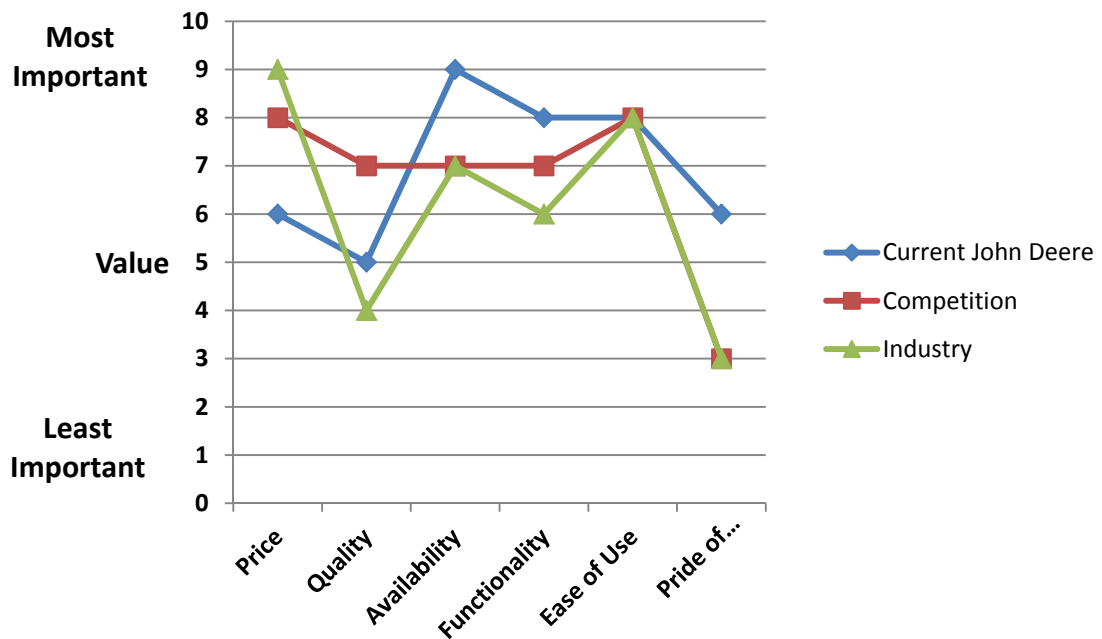


According to figure 4.2, 94% of the respondents rated Quality as 4, 5, or 6; 6 being the most important and 1 being the least. This indicates that the quality of the filter is the most critical factor when a customer makes their purchasing decision. When a filter fails, especially an engine oil or air filter, it can cause tens of thousands of dollars in damage to the engine of the tractor or combine, as well as extended downtime. The written responses to the first question that asked the respondents survey the reason why customers purchase filters was analyzed and out of 17 responses, 14 of the respondents included the word ‘quality’ within their response. The results are a definite indicator that John Deere dealers perceive that customers consider the quality of product over all factors. The comments of the exploratory survey are found in Appendix 3 of the paper. While Quality is important, it

is also extremely important to have the right part at the right time when the customer decides to make a purchasing decision. This is why Availability is the number two critical value and why 82% of the respondents rated it as 4, 5, or 6.

Prior to offering the survey to the respondents, a strategy canvas was created that objectively measured John Deere strengths and weaknesses compared to the industry and of John Deere's largest competitor. It was important to develop an initial strategy canvas prior to receiving the data to start the visual awakening process as described in the *T Blue Ocean Strategy*. The visual awakening provides leaders of a company challenging an existing strategy a mechanism to identify areas within the strategy that need to be changed. Change can come in the form of eliminating a process, reducing programs or processes that are necessary for the firm to operate. This reduction can lower spend allocated towards these functions and redistribute the capital to value-added projects. Change can also come in the form of increasing the funding to a project yielding positive financial results, or creating a new project to increase revenue that the competition has yet to introduce to the market.

Figure 4.3: Initial Strategy Canvas



The initial strategy canvas in Figure 4.3 was developed by objectively assigning a value for each critical determining factor to where John Deere ranks as compared to the competition. It is interesting to note when comparing the initial strategy canvas against the responses from the exploratory survey, price was not the number one determining factor when customers make a purchasing decision. Pricing ranked third in the exploratory survey. The number one critical factor is product quality. Although John Deere may be priced higher than the competition, in theory, as long as John Deere filters are competitively priced in the marketplace and are able to provide our dealers and end users with product differentiation such as quality and availability, John Deere should be able to market this competitive advantage through the dealer channel.

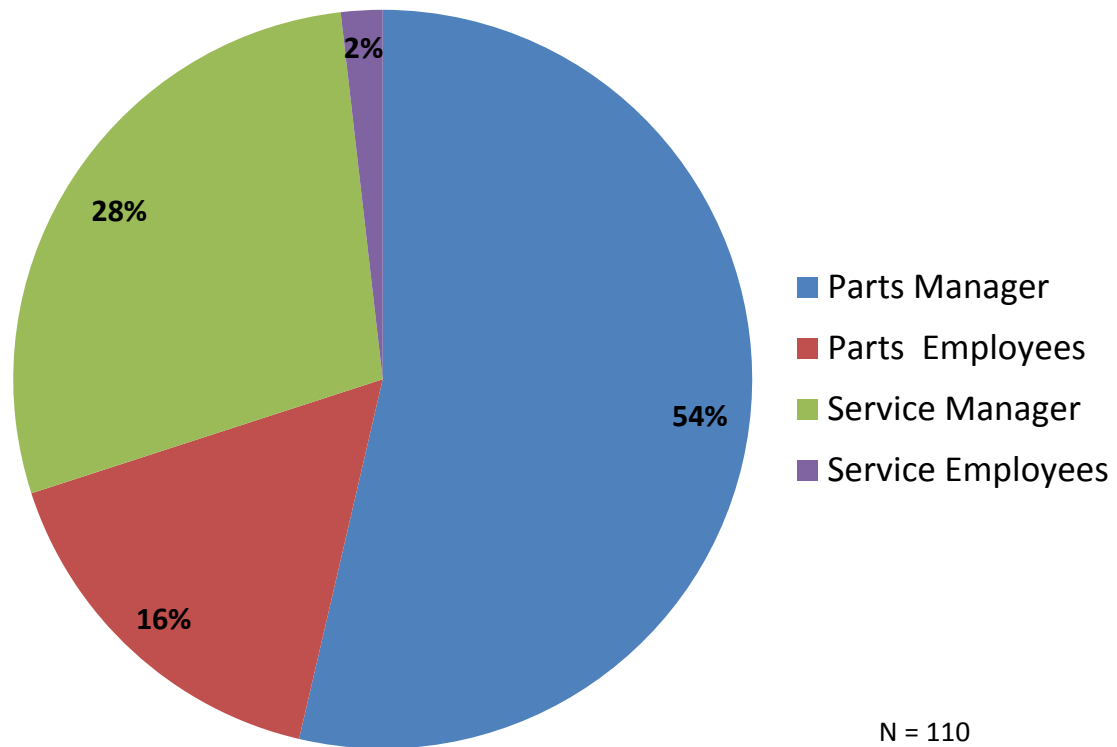
It was a visual awakening to see that pride of association did not rank higher in the survey results as compared to the initial strategy canvas. Generally speaking, when producers state the reason why they purchase a specific brand of equipment, they comment that they buy John Deere because their dad did, as well as their grandfather. There is sense of heritage that has developed over many years. If a similar strategy canvas were to be created focusing on the equipment versus a replacement filter, the assumption is that pride of association would rank higher on the value curve.

The exploratory survey provided an overview as to why John Deere dealers perceive producers purchase John Deere filters for their John Deere equipment. Customers prefer quality of the filter over the other critical variables. Utilizing a quality filter reduces the risk of a customer experiencing a catastrophic mishap with their machine.

4.2 Second Survey Results

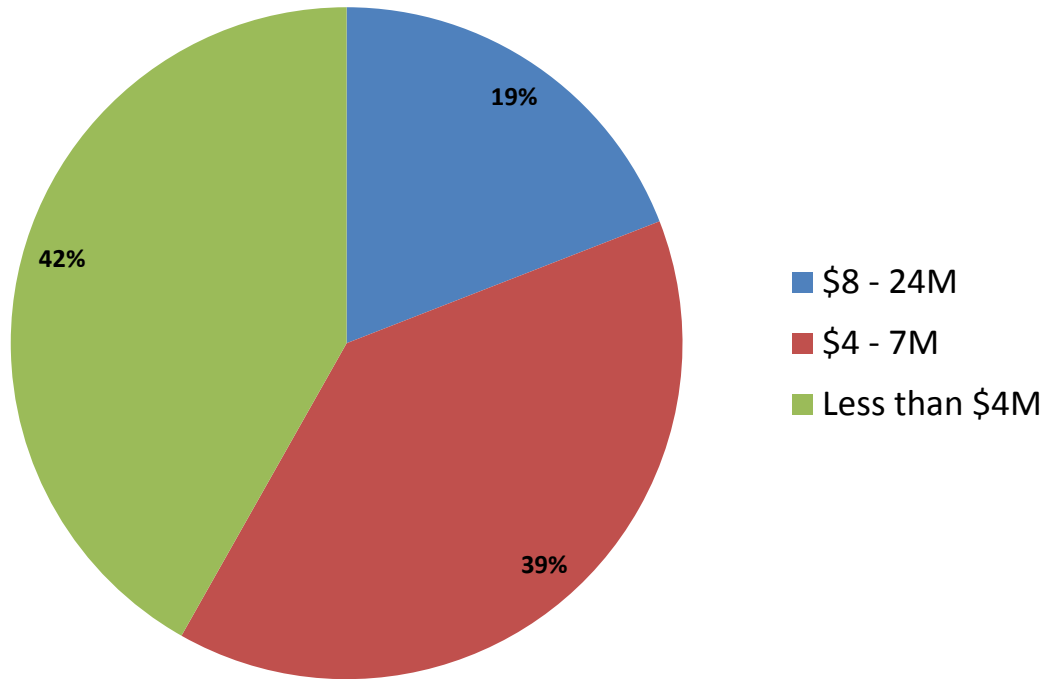
This section will review the results of the second survey offered in December 2010.

Figure 4.4: Job Titles of Participants



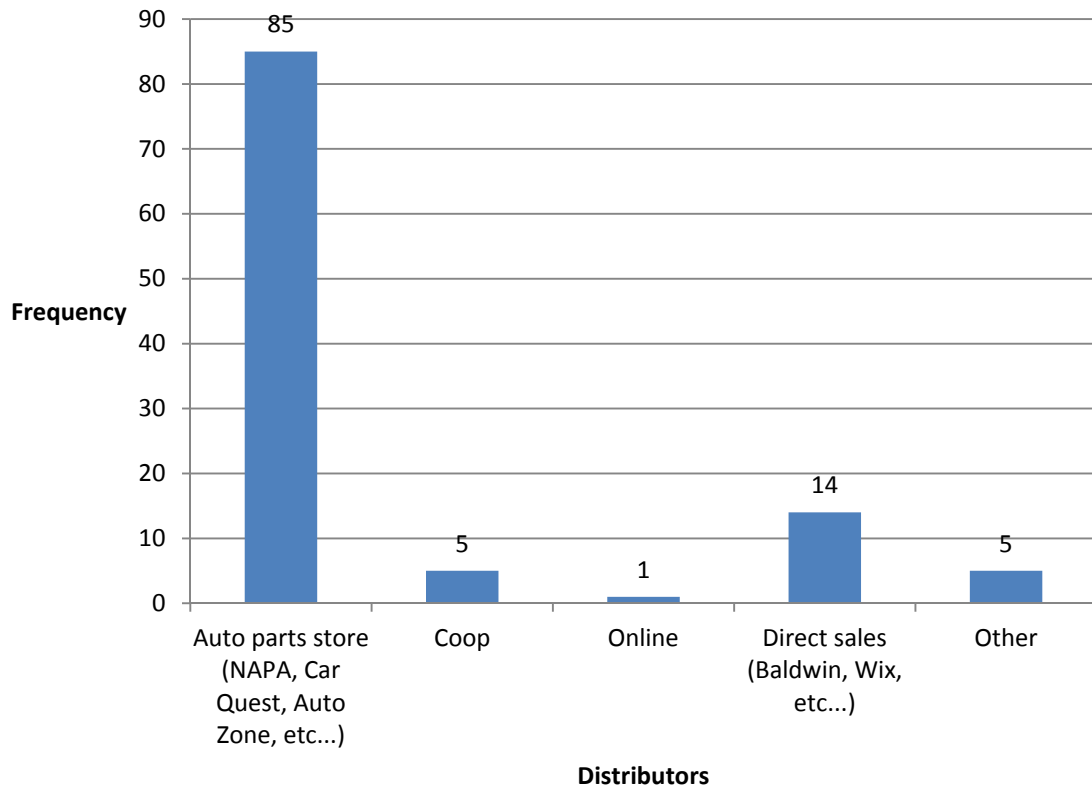
As mentioned earlier, there were over 400 respondents to the survey, however due to technical difficulties with the capturing tool, the DMTs, approximately only 200 surveys were usable. Also as previously stated in 3.2.2, there were duplicates in the dealerships that responded to the survey and the decision was made to eliminate duplicates from the data based on job title. After the duplicates were removed, the data that were analyzed came from a total of 110 respondents (Figure 4.4). The majority of the dealership employees that took the survey, 54% of them, were Parts Managers. Service Managers consisted of 28%, Parts employees 16%, and finally Service employees at 2%.

Figure 4.5: Fiscal 2010 Dealer Purchases



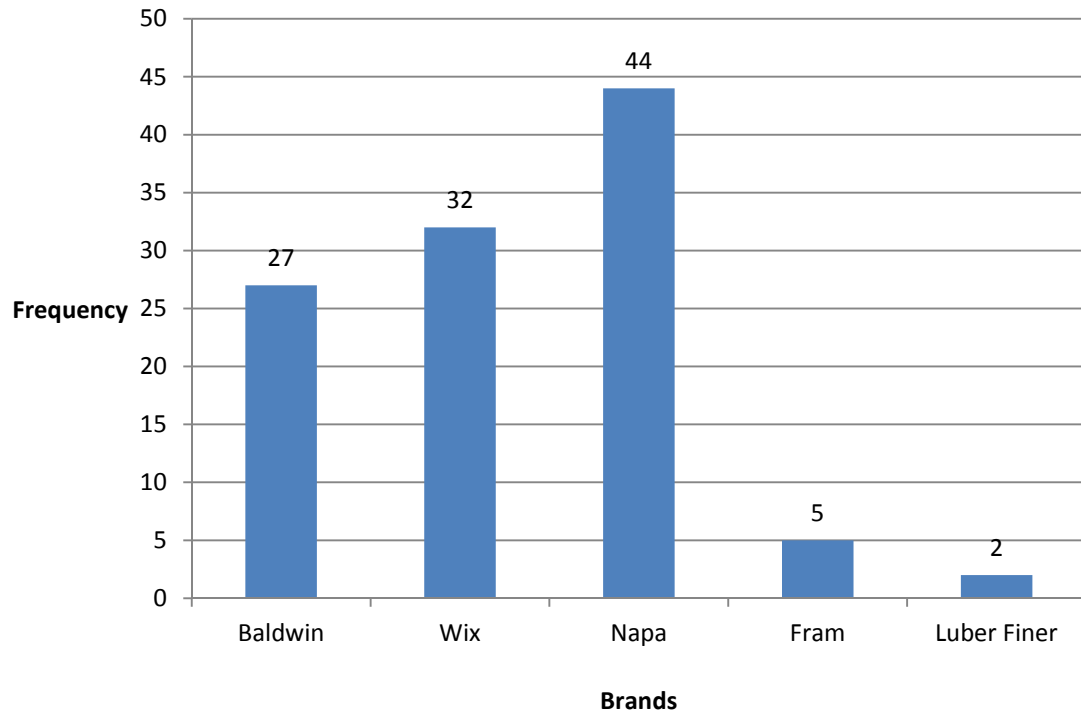
Nineteen percent of the dealers purchased \$8 – \$24 million in total parts from John Deere over the last 12 months (Figure 4.5). Thirty-nine percent purchased between \$4 - \$7 million and 42% less than \$4 million during the same time period. The data obtained for Figure 4.5 came from an internal report called the 32G. The 32G captures dealer purchases as it pertains to the parts they buy from John Deere Company. An example of the 32G can be found in Appendix 2.

Figure 4.6: Survey Question 1 “If owners of John Deere equipment are currently not purchasing filters from your dealership, please indicate which source your customers are utilizing most frequently to buy filters. Please choose one.”



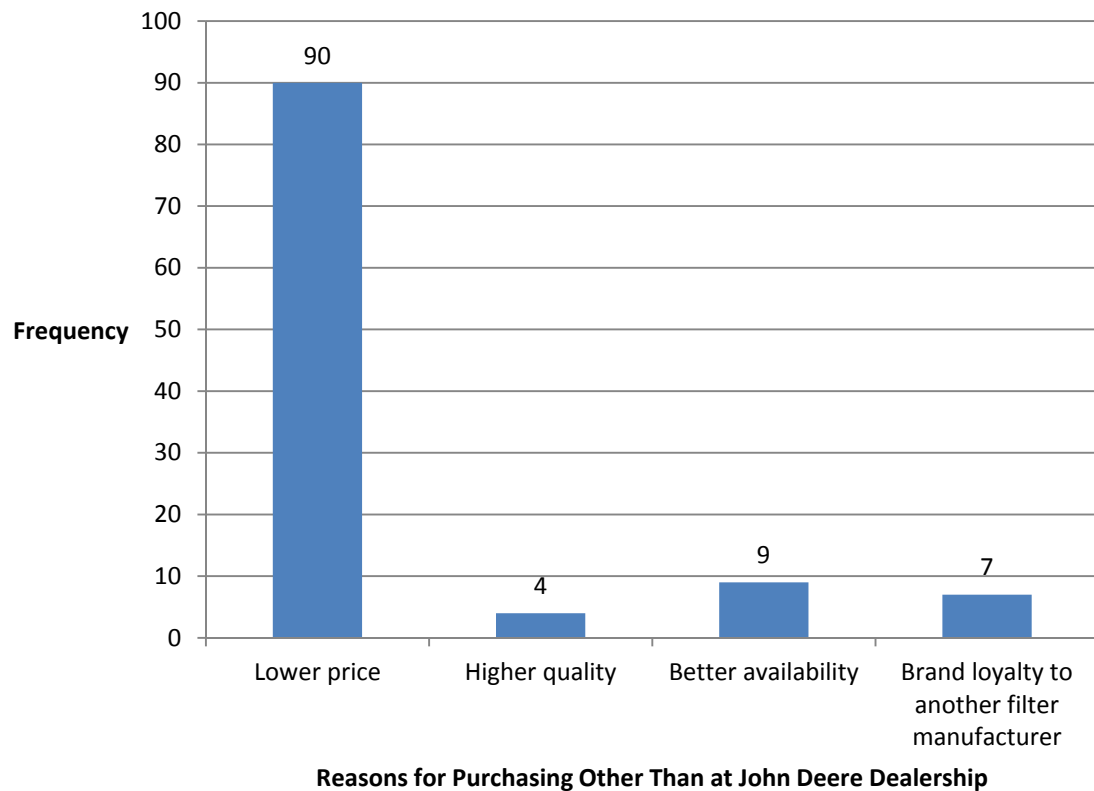
An overwhelming majority of the participants indicated the auto parts store distribution channel as the source where owners of John Deere equipment purchase replacement filters if not at the John Deere dealership (Figure 4.6). Seventy-seven percent of the respondents said the Auto Parts Store was the largest competitor to their filter business followed by Direct Sales, Coop/Other, and Online distributors.

Figure 4.7: Survey Question 2 “Please indicate which filter manufacturer is your strongest competitor. Please choose one.”



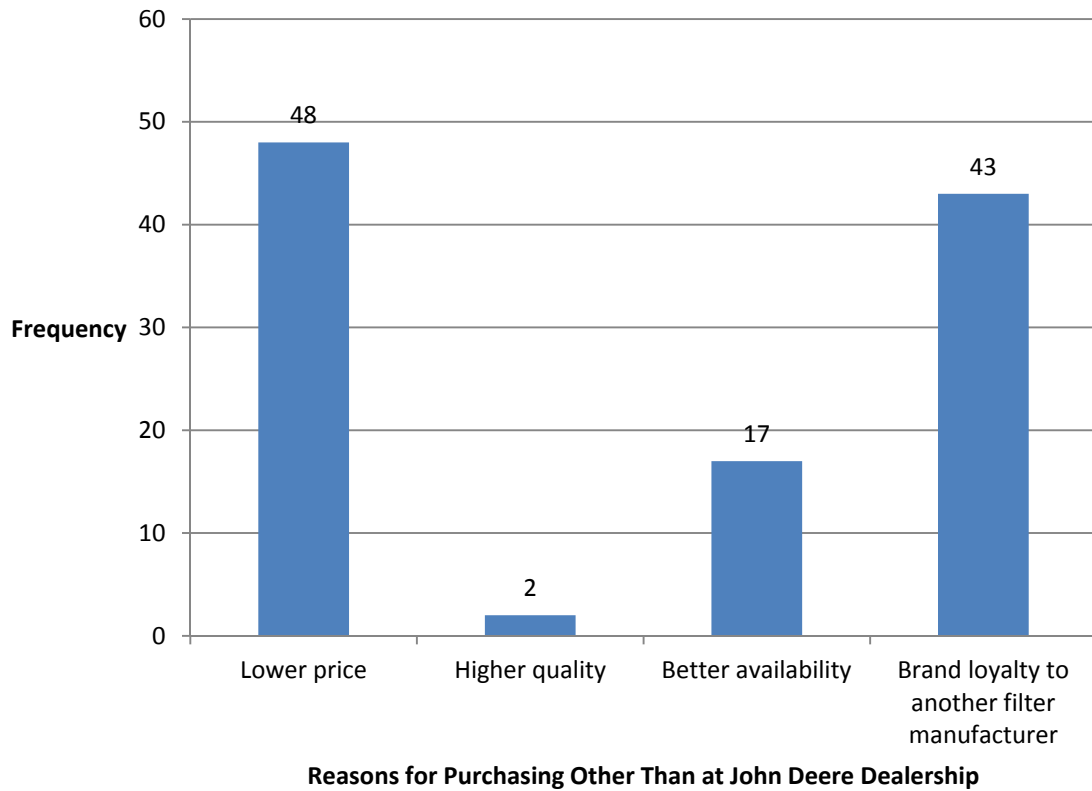
Forty-four out of the 110 respondents, or 40%, indicated NAPA was the strongest competitor by brand (Figure 4.7). Wix filters came in a relatively a close second; however it is important to note that Wix manufactures filters for NAPA. Wix and NAPA filters are typically sold through Auto Parts Stores however Baldwin Filters, which ranked third on this question, are usually retailed through internet sales and regional sales professionals.

Figure 4.8: Survey Question 3 “Please select the most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.”



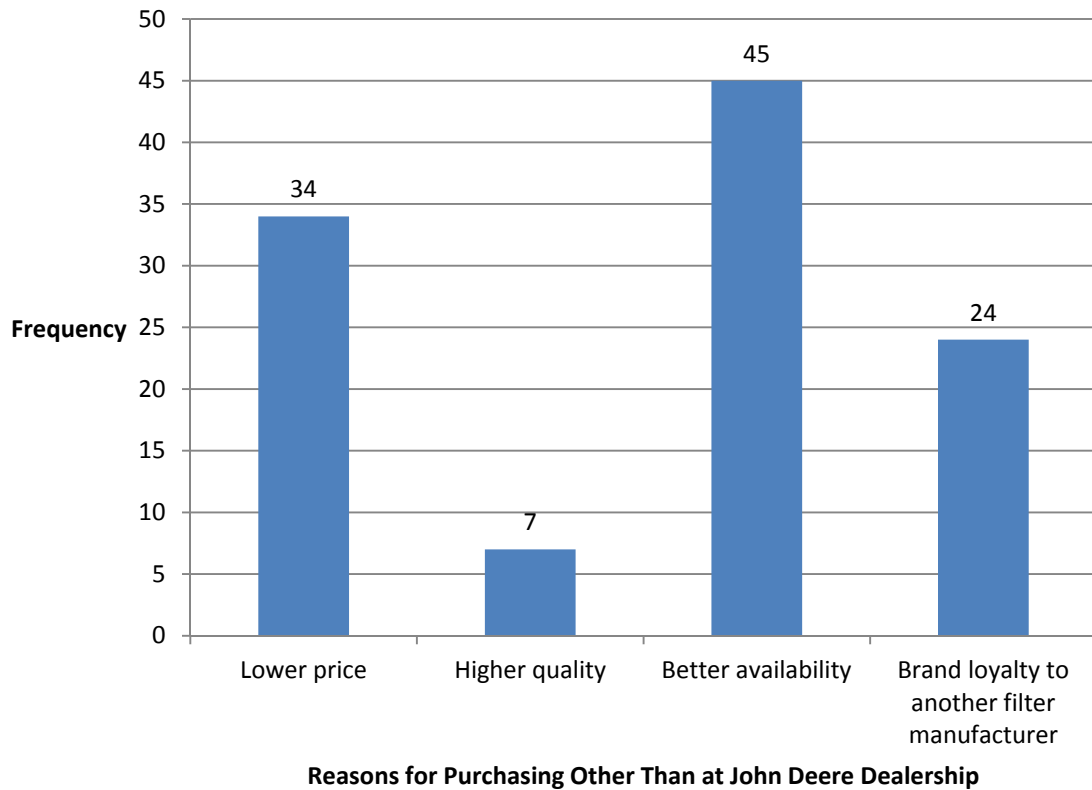
Question 3 asked the respondents to select the primary reason why customers purchase from other suppliers (Figure 4.8). Eighty-one percent of the participants indicated the main reason was price followed by better availability, brand loyalty, and finally higher quality. The respondents did not have the ability to select ‘other.’

Figure 4.9: Survey Question 4 “Please select the second most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.”



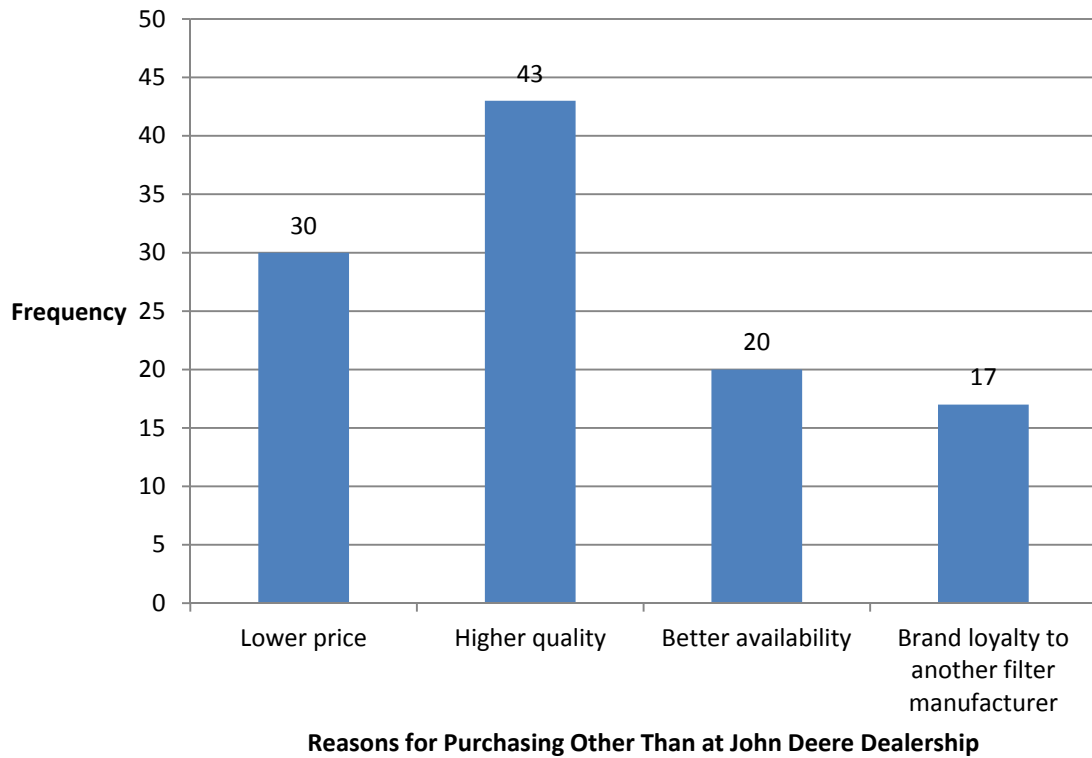
Question four of the survey essentially asked the same question. However, the participant was asked to select the second most important reason why owners of John Deere equipment purchase replacement filters from another supplier. Interestingly enough, 20 of 110 respondents chose lower price again as to why customers purchase filters from some other source (Figure 4.9). Forty-three percent of the participants indicated lower price was the second most important factor and 39% said it was due to brand loyalty to another filter manufacturer.

Figure 4.10: Survey Question 5 “Please select the third most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.”



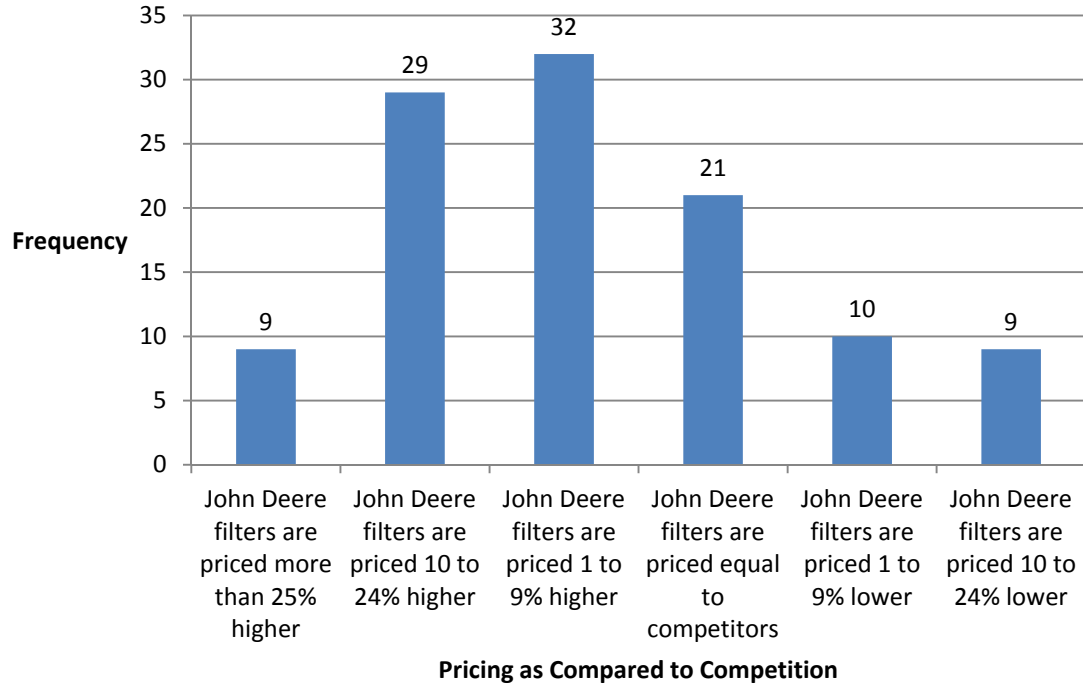
Question 5 asked the participants the third most important factor as to why customers purchase filters from someone else other than a John Deere dealership (Figure 4.10). The results indicate there are still a number of respondents who are selecting still lower price however approximately 41% said better availability was the most important reason for this question.

Figure 4.11: Survey Question 6 “Please select the fourth most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.”



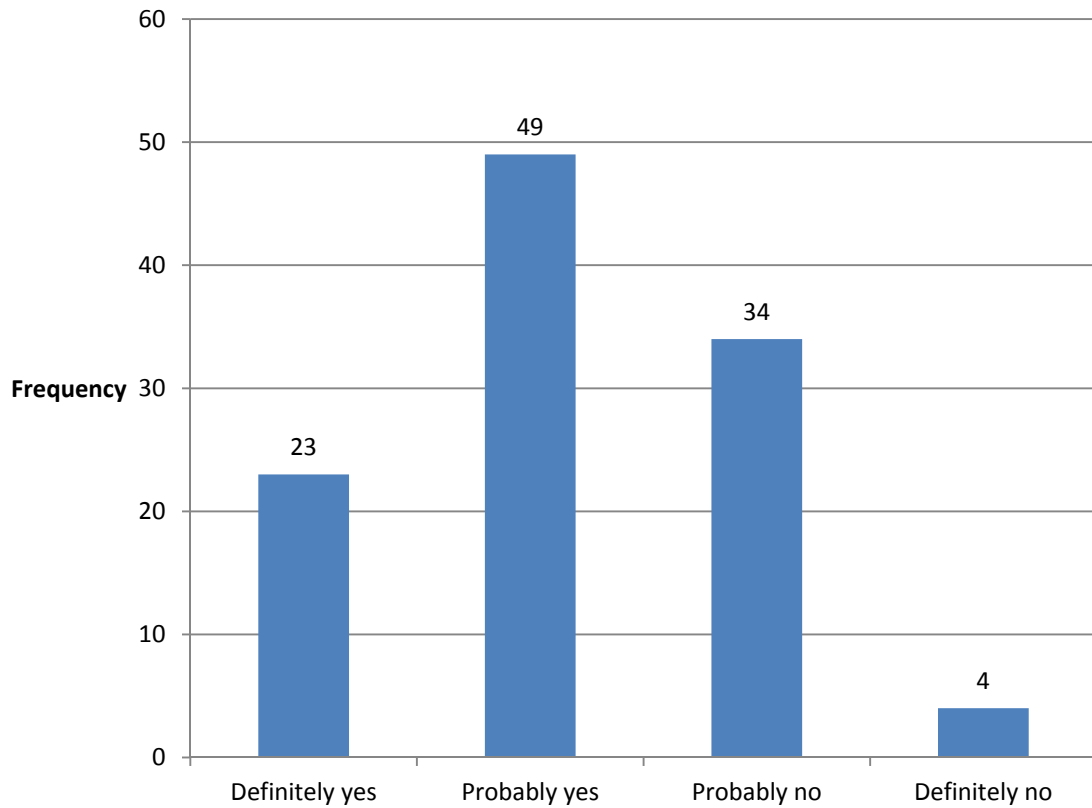
Finally, Question 6 asked the participants the fourth most important reason as to why end users purchase replacement filters from other sources besides the John Deere dealership (Figure 4.11). As witnessed in Questions 3 to 5, a number of respondents again indicated Lower Price. Twenty-seven percent of the participants that indicated lower price was the fourth most important reason, 39% said higher quality, 18% better availability, and 15% brand loyalty to another filter manufacturer.

Figure 4.12: Survey Question 7 “On average, rate how John Deere filters are priced relative to the competition. Please select one.”



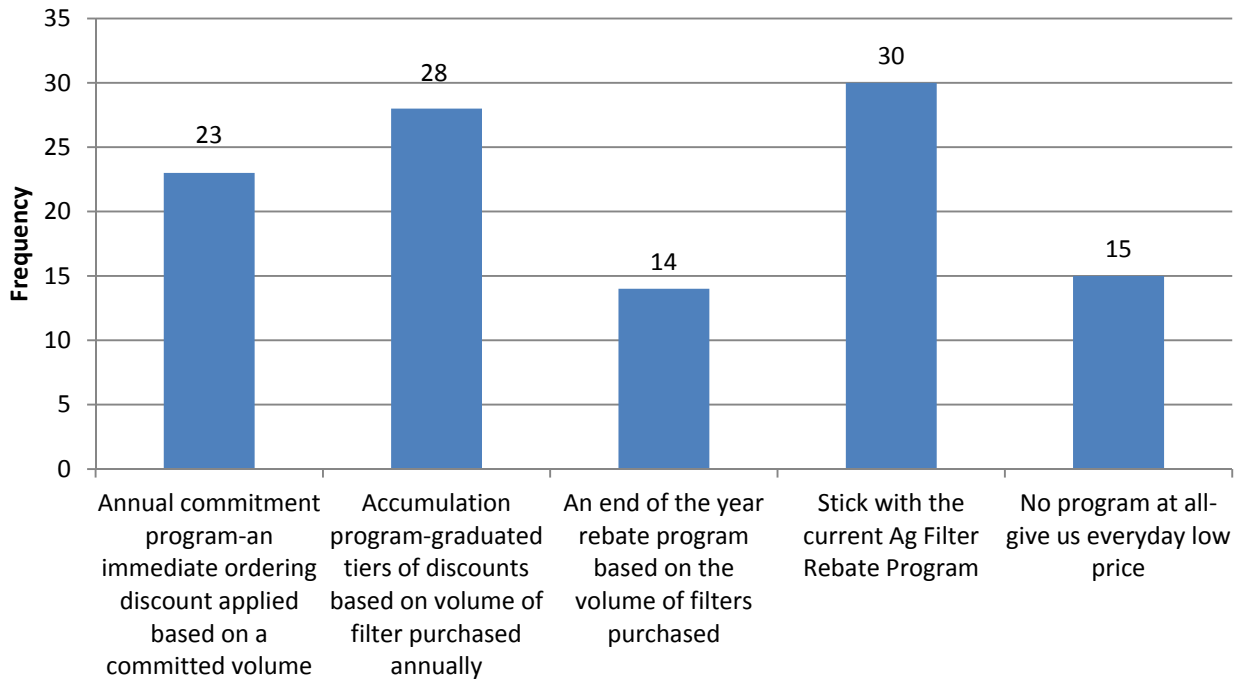
Question 7 asked the dealers to compare the prices of John Deere filters against the competitive brands. Sixty-four percent of the respondents indicated that John Deere filters were priced 1% or higher than the competitors (Figure 4.12). Thirty-six percent said pricing of John Deere filters were equal to or lower than the competition. The majority of the participants, 54%, indicated John Deere filter pricing ranged from 1% to 24% higher. This data clearly indicates there is a perception that John Deere filters are priced higher than other brands.

Figure 4.13: Survey Question 8 “Would a John Deere filter specific financing program increase sales for your dealership? An example would be a 180 NPNI offered by Farm Plan/Ag Line with a minimum of \$500 in purchases.”



Question 8 asks the respondents as to whether or not a filter specific financing program, such as 180 Day No Payment No Interest (NPNI) would be an item that would drive additional sales for the dealership (Figure 4.13). An NPNI program allows the customer to defer principal and interest payments for 180 days which in turn assists with forecasting cash flow. Seventy-two percent indicated probably yes or definitely yes.

Figure 4.14: Survey Question 9 “If John Deere were to offer an ordering program for all Ag and Turf filters, which program do you think would be the best to drive additional sales for your dealership? Please choose one.”



Question 9 asks the respondents to select one order program that would work the best to drive additional filter retail sales (Figure 4.14). Twenty-one percent selected an annual commitment program in which the dealership would commit to a predetermined level of purchases at the beginning of the fiscal year, and would be locked in to the set discount for the next 12 months. Twenty-five percent of the dealers indicated they would like to have a program that provides them the ability to capture additional discount based on reaching specific volume levels. Thirteen percent of the dealer organizations said that they would like to see an end of year rebate based on the total dollars they purchased from John Deere in filters. Twenty-seven percent stated they would like to keep the current ag filter rebate program in place. Finally, 14% said they would like to have everyday low pricing versus offering any type of ordering program.

4.3 Cross Tabulations of Second Survey

Cross tabulation analysis, also known as contingency table analysis, is most often used to analyze categorical data. A cross-tabulation is a two (or more) dimensional table that records the number (frequency) of respondents that have the specific characteristics described in the cells of the table. Cross-tabulation tables provide a wealth of information about the relationship between the variables. The cross tabulations used in this paper primarily attempt to reveal relationships between two sets of variables. The data comes from the survey results from the primary research.

Table 4.1: COG Total Purchases * Q1: Source buying from Cross tabulation

				Q1: Source buying from					Total
				Auto parts store	Coop	Online	Direct sales	Other	
COG Purchases	Total	\$24M - \$8M	Count	16	2	0	3	0	21
			% within COG Total Purchases	76.2%	9.5%	.0%	14.3%	.0%	100.0%
			% within Q1: Source buying from	18.8%	40.0%	.0%	21.4%	.0%	19.1%
			% of Total	14.5%	1.8%	.0%	2.7%	.0%	19.1%
		\$7M - \$4M	Count	30	1	0	8	4	43
			% within COG Total Purchases	69.8%	2.3%	.0%	18.6%	9.3%	100.0%
			% within Q1: Source buying from	35.3%	20.0%	.0%	57.1%	80.0%	39.1%
			% of Total	27.3%	.9%	.0%	7.3%	3.6%	39.1%
		Under \$4M	Count	39	2	1	3	1	46
			% within COG Total Purchases	84.8%	4.3%	2.2%	6.5%	2.2%	100.0%
			% within Q1: Source buying from	45.9%	40.0%	100.0%	21.4%	20.0%	41.8%
			% of Total	35.5%	1.8%	.9%	2.7%	.9%	41.8%
Total		Count	85	5	1	14	5	110	
		% within COG Total Purchases	77.3%	4.5%	.9%	12.7%	4.5%	100.0%	
		% within Q1: Source buying from	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
		% of Total	77.3%	4.5%	.9%	12.7%	4.5%	100.0%	

Table 4.1 compares COG purchases, that are segmented into three groups by the amount of parts business they conduct with John Deere, to the sources other than John Deere that their customers purchase replacement filters. COGs are defined as Contiguous Ownership Groups. COGs are owned by the same ownership group whose areas of responsibility (AOR) for the sale of John Deere equipment directly touch one another.

This cross tabulation indicates that 77% the dealers state their largest competitor in the filter business is the Auto Parts Store. There is little variation between the larger dealers as compared to the mid-size and smaller organizations however; there is some variation between the mid-size and smaller dealership groups. Eighteen percent of the mid-sized organizations stated direct sale sources were their primary competition while 6% of the smaller perceived it to be direct sale firms.

Although the majority of the respondents within mid-size and small categories indicated that Auto Parts Store is the number one source as to where customers are purchasing replacement filters, the mid-size organizations stated that 18% of their customers were purchasing product from a Direct Sales source versus 6% of the smaller dealerships. The 12% point differential comprises the majority of the percentage point spread between the two categories. This explains why mid-size dealers responded that 70% of their customers purchase from Auto Parts Stores versus 85% of the smaller organizations. It appears that medium size dealers are under more pressure from the Direct Sales sources than any other dealer segment.

Table 4.2: COG Total Purchases * Q2: Strongest competitor Cross tabulation

				Q2: strongest competitor					Total
				Baldwin	Wix	Napa	Fram	Luber Finer	
COG Purchases	Total \$24M - \$8M	Count	5	7	8	1	0	21	
		% within COG Total Purchases	23.8%	33.3%	38.1%	4.8%	.0%	100.0%	
		% within Q2: strongest competitor	18.5%	21.9%	18.2%	20.0%	.0%	19.1%	
		% of Total	4.5%	6.4%	7.3%	.9%	.0%	19.1%	
	\$7M - \$4M	Count	13	11	16	3	0	43	
		% within COG Total Purchases	30.2%	25.6%	37.2%	7.0%	.0%	100.0%	
		% within Q2: strongest competitor	48.1%	34.4%	36.4%	60.0%	.0%	39.1%	
		% of Total	11.8%	10.0%	14.5%	2.7%	.0%	39.1%	
	Under \$4M	Count	9	14	20	1	2	46	
		% within COG Total Purchases	19.6%	30.4%	43.5%	2.2%	4.3%	100.0%	
		% within Q2: strongest competitor	33.3%	43.8%	45.5%	20.0%	100.0%	41.8%	
		% of Total	8.2%	12.7%	18.2%	.9%	1.8%	41.8%	
Total		Count	27	32	44	5	2	110	
		% within COG Total Purchases	24.5%	29.1%	40.0%	4.5%	1.8%	100.0%	
		% within Q2: strongest competitor	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
		% of Total	24.5%	29.1%	40.0%	4.5%	1.8%	100.0%	

Table 4.2 indicates 40% of the dealers perceive their strongest competitor by brand is Napa and 29.1% is Wix. There is a small amount of variability between the three groups of dealers in the answers however, it is not statistically significant based on the number of answers for each category by each dealer group. For example, an employee in the small dealer group that selected one option over another represents 2.2% of the dealers within that group and only 0.9% of the total sample.

Table 4.3: COG Total Purchases * Q3: Why buy from other suppliers (first) Cross tabulation

			Q3: Why buy from other suppliers (first)				Total
			Lower price	Higher quality	Better availability	Brand loyalty to other filter	
COG Purchases	Total \$24M - \$8M	Count	16	1	3	1	21
		% within COG Total Purchases	76.2%	4.8%	14.3%	4.8%	100.0%
		% within Q3: Why buy from other suppliers (first)	17.8%	25.0%	33.3%	14.3%	19.1%
		% of Total	14.5%	.9%	2.7%	.9%	19.1%
	\$7M - \$4M	Count	36	1	2	4	43
		% within COG Total Purchases	83.7%	2.3%	4.7%	9.3%	100.0%
		% within Q3: Why buy from other suppliers (first)	40.0%	25.0%	22.2%	57.1%	39.1%
		% of Total	32.7%	.9%	1.8%	3.6%	39.1%
	Under \$4M	Count	38	2	4	2	46
		% within COG Total Purchases	82.6%	4.3%	8.7%	4.3%	100.0%
		% within Q3: Why buy from other suppliers (first)	42.2%	50.0%	44.4%	28.6%	41.8%
		% of Total	34.5%	1.8%	3.6%	1.8%	41.8%
Total	Count	90	4	9	7	110	
	% within COG Total Purchases	81.8%	3.6%	8.2%	6.4%	100.0%	
	% within Q3: Why buy from other suppliers (first)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	81.8%	3.6%	8.2%	6.4%	100.0%	

Again, there is little variability in Table 4.3. All dealer groups indicated the primary reason end-users decide to purchase replacement filters is because of lower prices.

Due to the limitations of the DMT, it is important to note again that the respondent could select the same answer for questions four through seven. It was possible for the participant to select Lower Price for each question.

Table 4.4: COG Total Purchases * Q4: Why buy from other suppliers (second) Cross tabulation

				Q4: Why buy from other suppliers (second)				Total
				Lower price	Higher quality	Better availability	Brand loyalty to other filter	
COG Purchases	Total	\$24M - \$8M	Count	11	1	3	6	21
			% within COG Total Purchases	52.4%	4.8%	14.3%	28.6%	100.0%
			% within Q4: Why buy from other suppliers (second)	22.9%	50.0%	17.6%	14.0%	19.1%
			% of Total	10.0%	.9%	2.7%	5.5%	19.1%
		\$7M - \$4M	Count	15	1	7	20	43
			% within COG Total Purchases	34.9%	2.3%	16.3%	46.5%	100.0%
			% within Q4: Why buy from other suppliers (second)	31.3%	50.0%	41.2%	46.5%	39.1%
			% of Total	13.6%	.9%	6.4%	18.2%	39.1%
		Under \$4M	Count	22	0	7	17	46
			% within COG Total Purchases	47.8%	.0%	15.2%	37.0%	100.0%
			% within Q4: Why buy from other suppliers (second)	45.8%	.0%	41.2%	39.5%	41.8%
			% of Total	20.0%	.0%	6.4%	15.5%	41.8%
Total		Count	48	2	17	43	110	
		% within COG Total Purchases	43.6%	1.8%	15.5%	39.1%	100.0%	
		% within Q4: Why buy from other suppliers (second)	100.0%	100.0%	100.0%	100.0%	100.0%	
		% of Total	43.6%	1.8%	15.5%	39.1%	100.0%	

Table 4.4 does offer a little more variability between the answers. While there were respondents that chose lower price more than once, the range between the choices is a little more pronounced. Fifty-two percent of the largest dealers, \$8 – \$24M indicated

lower price was the second most important reason as to why customers purchased their replacement filters from another source but 28% stated it was because of brand loyalty to another supplier. The medium size dealers, \$4 – 8M in total purchases, indicated that brand loyalty to another supplier was the second most important factor. Forty-seven percent of the dealers that purchase less than \$4M from John Deere stated it was lower price, but 37% chose brand loyalty to another source.

Again, it is important to note that due to the limitations of the DMT, the respondent could select the same answer for questions four through seven. It was possible for the participant to select lower price for each question.

Table 4.5: COG Total Purchases * Price to competition Cross tabulation

			Price to competition			Total
			Higher than competition	Equal to competition	Lower than competition	
COG Total Purchases	\$24M - \$8M	Count	11	6	4	21
		% within COG Total Purchases	52.4%	28.6%	19.0%	100.0%
		% within Price to competition	15.7%	28.6%	21.1%	19.1%
		% of Total	10.0%	5.5%	3.6%	19.1%
\$7M - \$4M		Count	28	6	9	43
		% within COG Total Purchases	65.1%	14.0%	20.9%	100.0%
		% within Price to competition	40.0%	28.6%	47.4%	39.1%
		% of Total	25.5%	5.5%	8.2%	39.1%
Under \$4M		Count	31	9	6	46
		% within COG Total Purchases	67.4%	19.6%	13.0%	100.0%
		% within Price to competition	44.3%	42.9%	31.6%	41.8%
		% of Total	28.2%	8.2%	5.5%	41.8%
Total		Count	70	21	19	110
		% within COG Total Purchases	63.6%	19.1%	17.3%	100.0%
		% within Price to competition	100.0%	100.0%	100.0%	100.0%
		% of Total	63.6%	19.1%	17.3%	100.0%

Table 4.5 looks at the size of the dealerships to John Deere filter pricing as compared to the competition. In this cross tabulation, all available answers that listed John Deere filter pricing as higher than the competition as well as lower than the completion were combined into two categories; higher than competition and lower than competition. Fifty-two percent of the dealerships within the \$8M - \$24M category indicated John

Deere filter pricing is higher than the competition. Forty-eight percent said pricing is equal to or less than. Sixty-five percent of the dealers in the \$4 - \$7M and 67% in less than \$4M categories indicated John Deere pricing is higher than the competitors. The larger dealer segments perceive that John Deere filter prices are higher than the competition; however, the majority of the respondents perceive John Deere filter prices are higher than other sources.

Table 4.6: COG Total Purchases * Q9: Best program to drive additional sales Cross tabulation

				Q9: Best program to drive additional sales					Total
				Annual commitment program	Accumulation program	End of year Rebate	Current rebate program	No program - EDLP	
COG Purchases	Total \$24M-\$8M	Count	6	5	1	7	2	21	
		% within COG Total Purchases	28.6%	23.8%	4.8%	33.3%	9.5%	100.0%	
		% within Q9: Best program to drive additional sales	26.1%	17.9%	7.1%	23.3%	13.3%	19.1%	
		% of Total	5.5%	4.5%	.9%	6.4%	1.8%	19.1%	
	\$7M - \$4M	Count	9	7	6	13	8	43	
		% within COG Total Purchases	20.9%	16.3%	14.0%	30.2%	18.6%	100.0%	
		% within Q9: Best program to drive additional sales	39.1%	25.0%	42.9%	43.3%	53.3%	39.1%	
		% of Total	8.2%	6.4%	5.5%	11.8%	7.3%	39.1%	
	Under \$4M	Count	8	16	7	10	5	46	
		% within COG Total Purchases	17.4%	34.8%	15.2%	21.7%	10.9%	100.0%	
		% within Q9: Best program to drive additional sales	34.8%	57.1%	50.0%	33.3%	33.3%	41.8%	
		% of Total	7.3%	14.5%	6.4%	9.1%	4.5%	41.8%	
Total	Count	23	28	14	30	15	110		
	% within COG Total Purchases	20.9%	25.5%	12.7%	27.3%	13.6%	100.0%		
	% within Q9: Best program to drive additional sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
	% of Total	20.9%	25.5%	12.7%	27.3%	13.6%	100.0%		

In Table 4.6, the cross tabulation compares the purchasing size of the dealership to ordering program options dealers believe would capture additional business. Twenty-seven percent of all dealers indicated they would like to stick with the Ag Filter Rebate

program that is currently offered to all dealers. Twenty-five percent of all dealers would like to have an Accumulation Program that would give them additional discount based on order volume. Twenty percent of the respondents chose the Annual Commitment program that would provide a discount based on a committed volume of filter business they conduct with John Deere. Thirty-three percent of the dealers in the \$8 - \$24M range wanted to keep the Ag Filter Rebate program. Twenty-eight percent indicated they would like to participate in an Annual Commitment program, and 23% wanted an Accumulation Program. Thirty percent in the \$4 – 7M category stated they would like to keep the Ag Filter Rebate program and 20% wanted an Annual Commitment. Thirty-four percent of the dealers within the less than \$4M group said they wanted to see a filter program based on Accumulation.

It is important to look at the response rate for those that selected an Annual Commitment Program. Twenty-eight percent of the larger dealers supported a commitment program while 21% and 17% of the medium and smaller dealer did. The lack of support for a commitment program from the two smaller categories makes sense because larger organizations have the buying power to potentially capture the higher ordering discounts much easier than the medium and smaller dealerships. In total, 71% of dealers wanted something different than what John Deere is offering today, which is the Ag Filter Rebate Program.

Table 4.7: Job Title * Q1: Source buying from Cross tabulation

			Q1: Source buying from					Total
			Auto parts store	Coop	Online	Direct sales	Other	
Job Title	Parts Manager	Count	49	0	1	7	2	59
		% within Job Title	83.1%	.0%	1.7%	11.9%	3.4%	100.0%
		% within Q1: Source buying from	57.6%	.0%	100.0%	50.0%	40.0%	53.6%
	Parts	Count	12	1	0	2	3	18
		% within Job Title	66.7%	5.6%	.0%	11.1%	16.7%	100.0%
		% within Q1: Source buying from	14.1%	20.0%	.0%	14.3%	60.0%	16.4%
	Service manager	Count	22	4	0	5	0	31
		% within JobTitle	71.0%	12.9%	.0%	16.1%	.0%	100.0%
		% within Q1: Source buying from	25.9%	80.0%	.0%	35.7%	.0%	28.2%
Service	Count	2	0	0	0	0	2	
	% within Job Title	100.0%	.0%	.0%	.0%	.0%	100.0%	
	% within Q1: Source buying from	2.4%	.0%	.0%	.0%	.0%	1.8%	
Total	Count	85	5	1	14	5	110	
	% within Job Title	77.3%	4.5%	.9%	12.7%	4.5%	100.0%	
	% within Q1: Source buying from	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

In table 4.7, 77% of all respondents indicated the auto parts store is the strongest competitor. The data in this cross tabulation is consistent with Table 4.1 and Figure 4.8, and validates the information provided in Tables 1.2 and 1.4 that auto parts stores are becoming more of formidable competitor in the market place. Additionally, 83% of the Parts Managers, which are perceived to have the most filter product knowledge out of the four job titles surveyed, perceived the auto parts stores are the strongest competitor while 67% and 71% of the Parts personnel and Service Managers did.

Table 4.8: Job Title * Q2: Strongest competitor Cross tabulation

			Q2: strongest competitor					Total
			Baldwin	Wix	Napa	Fram	Luber Finer	
Job Title	Parts Manager	Count	12	17	26	2	2	59
		% within Job Title	20.3%	28.8%	44.1%	3.4%	3.4%	100.0%
		% within Q2: strongest competitor	44.4%	53.1%	59.1%	40.0%	100.0%	53.6%
Parts	Parts	Count	2	8	6	2	0	18
		% within Job Title	11.1%	44.4%	33.3%	11.1%	.0%	100.0%
		% within Q2: strongest competitor	7.4%	25.0%	13.6%	40.0%	.0%	16.4%
Service manager	Service manager	Count	13	7	10	1	0	31
		% within Job Title	41.9%	22.6%	32.3%	3.2%	.0%	100.0%
		% within Q2: strongest competitor	48.1%	21.9%	22.7%	20.0%	.0%	28.2%
Service	Service	Count	0	0	2	0	0	2
		% within Job Title	.0%	.0%	100.0%	.0%	.0%	100.0%
		% within Q2: strongest competitor	.0%	.0%	4.5%	.0%	.0%	1.8%
Total	Total	Count	27	32	44	5	2	110
		% within Job Title	24.5%	29.1%	40.0%	4.5%	1.8%	100.0%
		% within Q2: strongest competitor	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Forty percent of all respondents in Table 4.8 indicated NAPA was the strongest competitor by Brand with Wix coming in second at 29.1%. Forty-four percent of the Parts Managers stated NAPA was the largest competitor, 44% of Parts employees said Wix was the single largest competition, 42% of the Service Managers listed Baldwin, and 100% of the Service department personnel stated it was NAPA. Sixty-nine percent of the total participants either chose Wix or NAPA.

Table 4.9: Job Title * Q3: Why buy from other suppliers (first) Cross tabulation

			Q3: Why buy from other suppliers (first)				Total
			Lower price	Higher quality	Better availability	Brand loyalty to other filter	
Job Title	Parts Manager	Count	50	0	6	3	59
		% within Job Title	84.7%	.0%	10.2%	5.1%	100.0%
		% within Q3: Why buy from other suppliers (first)	55.6%	.0%	66.7%	42.9%	53.6%
	Parts	Count	14	2	2	0	18
		% within Job Title	77.8%	11.1%	11.1%	.0%	100.0%
		% within Q3: Why buy from other suppliers (first)	15.6%	50.0%	22.2%	.0%	16.4%
	Service manager	Count	24	2	1	4	31
		% within Job Title	77.4%	6.5%	3.2%	12.9%	100.0%
		% within Q3: Why buy from other suppliers (first)	26.7%	50.0%	11.1%	57.1%	28.2%
	Service	Count	2	0	0	0	2
		% within Job Title	100.0%	.0%	.0%	.0%	100.0%
		% within Q3: Why buy from other suppliers (first)	2.2%	.0%	.0%	.0%	1.8%
Total		Count	90	4	9	7	110
		% within Job Title	81.8%	3.6%	8.2%	6.4%	100.0%
		% within Q3: Why buy from other suppliers (first)	100.0%	100.0%	100.0%	100.0%	100.0%

Eighty-one percent of all job titles indicated higher price was the number one reason as to why customers with John Deere Equipment purchase replacement filters from other sources (Table 4.9).

Table 4.10: Job Title * Q4: Why buy from other suppliers (second) Cross tabulation

			Q4: Why buy from other suppliers (second)				Total
			Lower price	Higher quality	Better availability	Brand loyalty to other filter	
Job Title	Parts Manager	Count	24	1	5	29	59
		% within Job Title	40.7%	1.7%	8.5%	49.2%	100.0%
		% within Q4: Why buy from other suppliers (second)	50.0%	50.0%	29.4%	67.4%	53.6%
Parts	Parts	Count	10	0	3	5	18
		% within Job Title	55.6%	.0%	16.7%	27.8%	100.0%
		% within Q4: Why buy from other suppliers (second)	20.8%	.0%	17.6%	11.6%	16.4%
Service manager	Service manager	Count	13	1	8	9	31
		% within Job Title	41.9%	3.2%	25.8%	29.0%	100.0%
		% within Q4: Why buy from other suppliers (second)	27.1%	50.0%	47.1%	20.9%	28.2%
Service	Service	Count	1	0	1	0	2
		% within Job Title	50.0%	.0%	50.0%	.0%	100.0%
		% within Q4: Why buy from other suppliers (second)	2.1%	.0%	5.9%	.0%	1.8%
Total	Total	Count	48	2	17	43	110
		% within Job Title	43.6%	1.8%	15.5%	39.1%	100.0%
		% within Q4: Why buy from other suppliers (second)	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.10 indicates lower price is still the second most important reason, 43% of total respondents, as to why customers purchase from other sources. Brand loyalty came in second at 39%. Forty-nine percent of Parts Managers stated Brand Loyalty was the second most important factor as to why customers purchase filter from other distributors.

Table 4.11: Job Title * Q7: JD price relative to competition Cross tabulation

			Q7: JD price relative to competition					Total	
			JD more than 25% higher	JD 10 to 24% higher	JD 1 to 9% higher	equal prices	JD 1 to 9% lower		JD 10 to 24% lower
Job Title	Parts Manager	Count	4	18	16	10	7	4	59
		% within Job Title	6.8%	30.5%	27.1%	16.9%	11.9%	6.8%	100.0%
		% within Q7: JD price relative to competition	44.4%	62.1%	50.0%	47.6%	70.0%	44.4%	53.6%
	Parts	Count	1	4	6	4	1	2	18
		% within Job Title	5.6%	22.2%	33.3%	22.2%	5.6%	11.1%	100.0%
		% within Q7: JD price relative to competition	11.1%	13.8%	18.8%	19.0%	10.0%	22.2%	16.4%
	Service Manager	Count	4	7	8	7	2	3	31
		% within Job Title	12.9%	22.6%	25.8%	22.6%	6.5%	9.7%	100.0%
		% within Q7: JD price relative to competition	44.4%	24.1%	25.0%	33.3%	20.0%	33.3%	28.2%
	Service	Count	0	0	2	0	0	0	2
		% within Job Title	.0%	.0%	100.0%	.0%	.0%	.0%	100.0%
		% within Q7: JD price relative to competition	.0%	.0%	6.3%	.0%	.0%	.0%	1.8%
Total		Count	9	29	32	21	10	9	110
		% within Job Title	8.2%	26.4%	29.1%	19.1%	9.1%	8.2%	100.0%
		% within Q7: JD price relative to competition	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Thirty percent of Parts Managers in Table 4.11 indicated that John Deere filters are priced 10 – 24% higher than the competition. Twenty-seven percent of the Parts Managers believed John Deere filter pricing is 1 – 9% higher. Twenty-two percent of the Parts employees said John Deere filter pricing was 10 – 24% higher than the competition and

33% perceived it to be 1 – 9% higher. Twenty-two percent of the Service Managers indicated John Deere filters were prices 10 – 24% above the competitors and 25% thought pricing was 1 – 9% more expensive.

Table 4.12: Job Title * Price to competition Cross tabulation

			Price to competition			Total
			Higher than Competition	Equal to Competition	Lower than Competition	
Job Title	Parts	Count	38	10	11	59
	Manager	% within Job Title	64.4%	16.9%	18.6%	100.0%
		% within Price to competition	54.3%	47.6%	57.9%	53.6%
Parts	Count	11	4	3	18	
	% within Job Title	61.1%	22.2%	16.7%	100.0%	
	% within Price to competition	15.7%	19.0%	15.8%	16.4%	
Service Manager	Count	19	7	5	31	
	% within Job Title	61.3%	22.6%	16.1%	100.0%	
	% within Price to competition	27.1%	33.3%	26.3%	28.2%	
Service	Count	2	0	0	2	
	% within Job Title	100.0%	.0%	.0%	100.0%	
	% within Price to competition	2.9%	.0%	.0%	1.8%	
Total	Count	70	21	19	110	
	% within Job Title	63.6%	19.1%	17.3%	100.0%	
	% within Price to competition	100.0%	100.0%	100.0%	100.0%	

The option to select a specific filter pricing range that was offered in Question 7 was combined in Table 4.12 into three categories. The pricing ranges that indicated John Deere filter pricing was higher than the competition was combine into one category; higher than competition. Equal to competition was left the same and the ranges which were categorized lower than the competition were combined into one category; lower than competition. The cross tabulation compares job title to pricing. Sixty-three percent of the dealers indicated John Deere filters were priced higher than the competition, 19% equal to, and 17% lower than the competitors with no noticeable variation. The responses were consistent between job titles.

Table 4.13: Job Title * Q9: Best program to drive additional sales Cross tabulation

			Q9: Best program to drive additional sales					Total
			Annual commitment program	Accumulation program	End of Year Rebate	Current rebate program	No program - EDLP	
Job Title	Parts	Count	10	18	5	16	10	59
	Manager	% within Job Title	16.9%	30.5%	8.5%	27.1%	16.9%	100.0%
		% within Q9: Best program to drive additional sales	43.5%	64.3%	35.7%	53.3%	66.7%	53.6%
Parts	Count	5	2	5	3	3	18	
	% within Job Title	27.8%	11.1%	27.8%	16.7%	16.7%	100.0%	
	% within Q9: Best program to drive additional sales	21.7%	7.1%	35.7%	10.0%	20.0%	16.4%	
Service Manager	Count	8	8	3	10	2	31	
	% within Job Title	25.8%	25.8%	9.7%	32.3%	6.5%	100.0%	
	% within Q9: Best program to drive additional sales	34.8%	28.6%	21.4%	33.3%	13.3%	28.2%	
Service	Count	0	0	1	1	0	2	
	% within Job Title	.0%	.0%	50.0%	50.0%	.0%	100.0%	
	% within Q9: Best program to drive additional sales	.0%	.0%	7.1%	3.3%	.0%	1.8%	
Total	Count	23	28	14	30	15	110	
	% within Job Title	20.9%	25.5%	12.7%	27.3%	13.6%	100.0%	
	% within Q9: Best program to drive additional sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Thirty percent of the Parts Managers want an accumulation program and 27% would like John Deere to stick with the ag filter rebate (Table 4.13). Compared to the responses of the Parts Managers, 25% of the Service Managers preferred the accumulation program and

32% suggested keeping the ag filter rebate. There appears to be some slight variation between the two job titles. There is more of a significant variation when comparing the answers of Parts employees to that of the Service and Parts Managers. Only 15% of the Parts employees would like to keep the ag filter rebate program while there was an even split for annual commitment, (27%), or End of the Year Rebate 27%.

In summary as the data suggest, 73% of the total respondents said they wanted something different than what is available today; the ag filter rebate program. However, there is a split between what each job title would prefer as it pertains to a program to assist in driving additional retail sales. If the ag filter rebate program was removed as a selection from and the dealers that selected it as an answer were also subtracted, the accumulation program would be the program of choice based off of the survey. Further validation from the dealer organization will need to take place prior to implementing a program change.

CHAPTER V: CONCLUSION, IMPLEMENTATION, AND SUMMARY

Conclusion

The objective of this thesis was to determine how John Deere Company could grow the OEM (original equipment manufacturer) filter business and impede the infiltration of competitive firms from taking sales from the John Deere distribution channel. As the primary research indicates, price is the key factor in making a purchasing decision for a customer who owns John Deere equipment but does not buy their replacement filters from the John Deere dealer. The results make sense because a filter is considered a commodity. After the useful life of the product is consumed, it is typically thrown away or recycled. Based on one-on-one conversations with Parts Managers over the last few years, it was somewhat surprising to see the number of respondents that indicated John Deere filter pricing was 10% or higher than the competition. The initial assumption was that John Deere would have been a little more price competitive. It was also interesting to see the results from the dealer channel as it pertained to the dealer ordering program they thought would drive additional sales. Although there was not a significant amount of variation between the answers, it was a visual awakening to see how many dealers preferred to keep the current ag filter rebate program. It was a visual awakening because for the past several years the majority of dealers have been telling John Deere they would like to see the program changed or a whole new program created.

To gain additional business, a combination of items need to be looked at. An analysis of pricing will need to take place to validate the responses from the dealers. More emphasis aimed at customers will need to be placed on the value of doing business with John Deere Company and the dealer channel versus an Auto Parts Store. Finally, the development of a

filter specific marketing plan is recommended to be created to capture additional filter sales. Key stakeholders in the creation of the plan should include individuals from John Deere marketing, advertising, and pricing departments. Once the plan has been created, input and validation from the dealer channel will need to take place in order to ensure alignment and increase the chance of success. Success will be measured by future filter purchases from the dealer organization.

Implementation

Based on the feedback provided by the exploratory and quantitative surveys, the following commentary will focus on analyzing the results through the framework of an updated strategy canvas. Second, an ERIC model is developed based on the updated canvas model that will be used as the tool to provide a recommendation on how John Deere should proceed in the future to capture additional filter business.

Figure 5.1: Revised Strategy Canvas

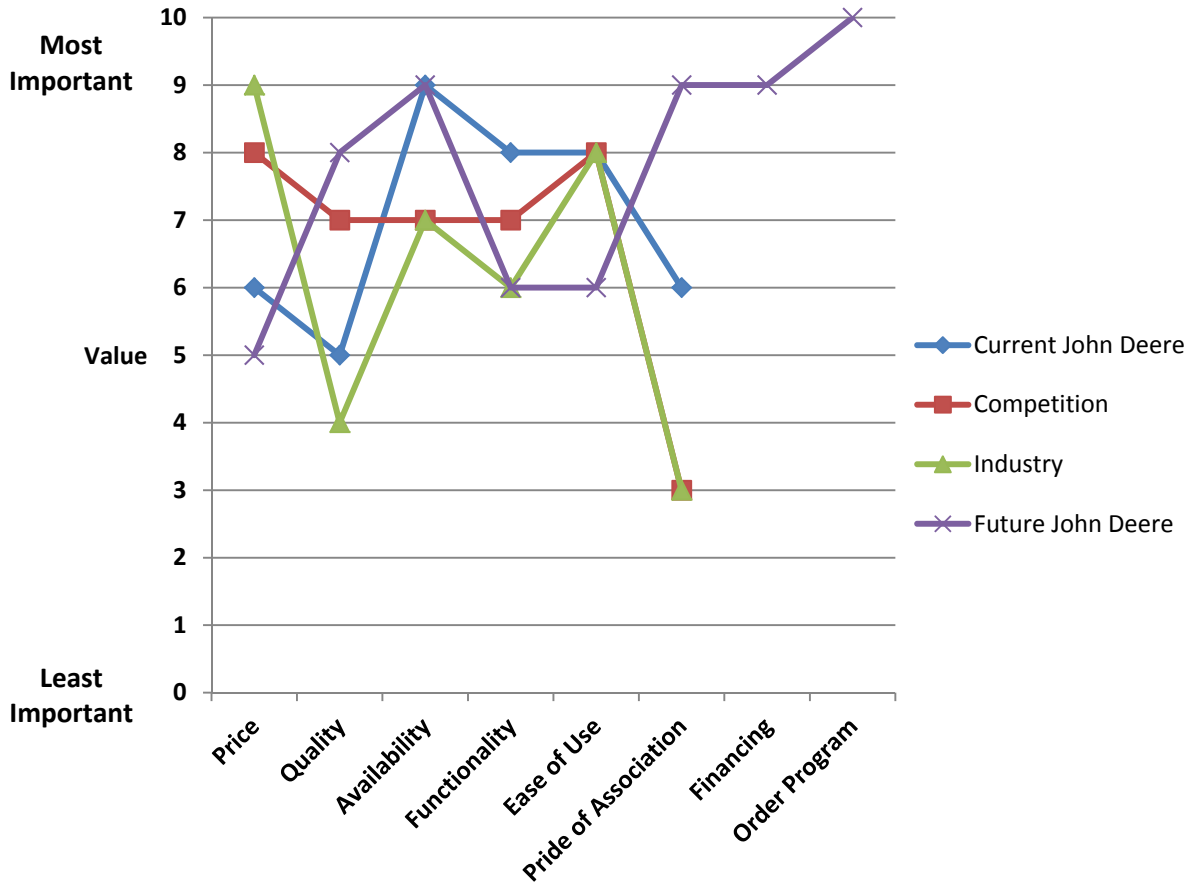


Figure 5.1 is the revised strategy canvas based off of the feedback from both the exploratory and quantitative surveys. The original value curves for Current John Deere, Competition, and Industry remained the same and, a Future John Deere value curve was added. The additional value curve in the canvas serves as a visual framework as the critical value determining factors were based on additional market research.

The price critical variable determining factor was adjusted downwards for three reasons. First, 35% percent of the dealers surveyed indicated John Deere’s price compared to the competition was 10% or higher. Second, 64% of the Parts Managers in Table 4.12, who tend to have more knowledge of the service parts market than anybody else in the

dealership, said John Deere prices were higher; 1% or greater. Third, based off of Table 4.%, 52% of the dealers in the \$8 – 24M range stated John Deere filters are priced higher than the competitors; 1% or greater. There is definitely a perception that John Deere filter pricing is too high in the market place. This validates the reason as to why John Deere dealers are only receiving 58% of the engine maintenance parts business, which includes filters, for John Deere equipment as represented in Table 1.5.

Availability did not score as high in Questions 3 and 4 of the quantitative survey that asked the dealer to select the most and second most important factors as to why customers use other filter sources. However, it was the third most important reason as reflected in Question 5. Availability was also the third most important factor based off of the exploratory research trailing quality and price. Therefore, the score for Availability remained unchanged based on the responses from the exploratory and quantitative surveys.

The Quality critical value determining factor increased for two reasons. First, in the qualitative feedback received by dealers in the comments section of the exploratory survey, the word ‘quality’ was mentioned 14 out of 17 total responses as to why customers purchase replacement filters from their dealership. This indicates customers do perceive the quality of the John Deere filter adds value. Second, it was the fourth most important factor as to why customers purchase filters from another supplier which was reflected in the answers to Question 6 of the quantitative survey. There is an opportunity to capitalize on the quality story of the John Deere filter as compared to the competitors; Baldwin, NAPA, Wix, Luber-Finer, and Fram.

The revised canvas also lowered the scores for ease of use and functionality of the filter based on the exploratory research data. End users of farm equipment expect the filter to easily fit the machine and function as a car owner would. Competitors typically do produce filters that fit John Deere equipment, however, they cannot guarantee the customer that their product is designed to the same specifications as the John Deere filter it is replacing. The reason why competitors can't claim the filter will operate the same as a John Deere filter is because the competition does not have access to John Deere engineering drawings that detail the construction of the filter. The only thing they can do is reverse engineer the design to the best of their abilities. This is another reason why the Quality critical variable was increased in the revised strategy canvas.

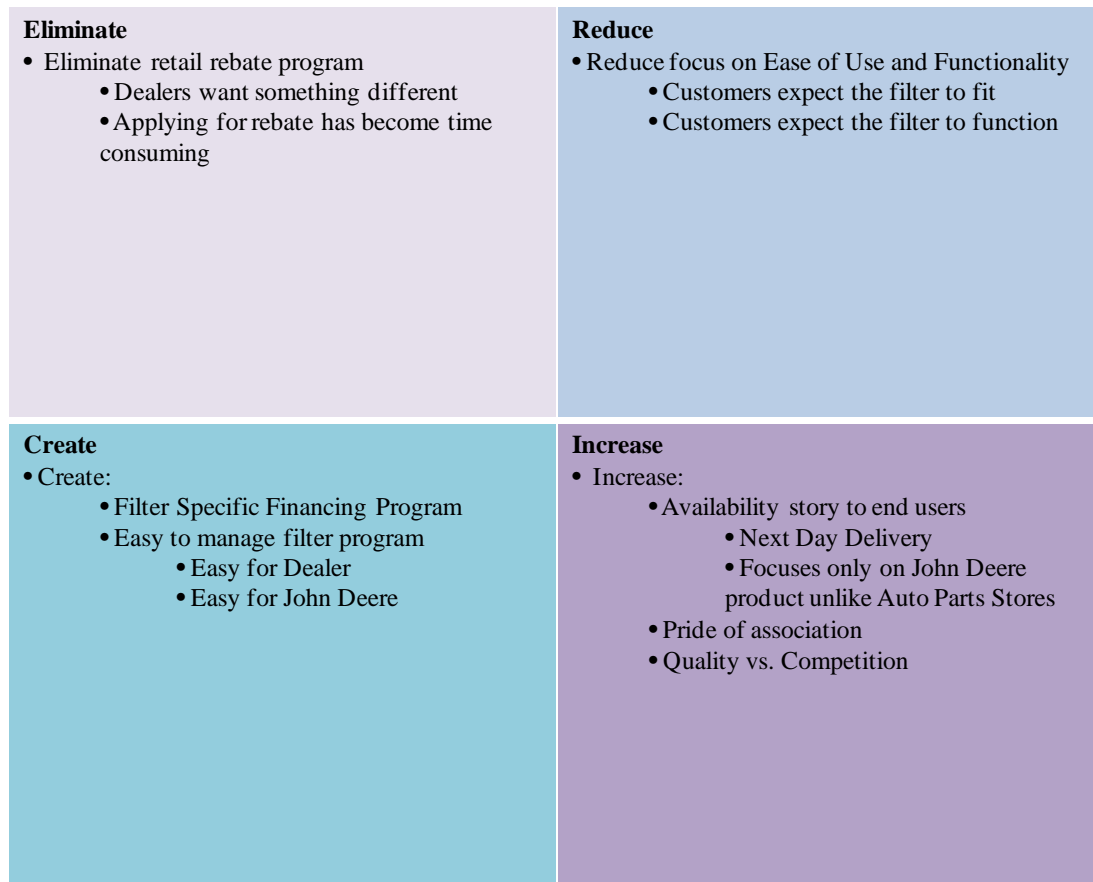
Finally, the pride of association / brand loyalty to another manufacturer score was increased. Pride of association / brand loyalty to another manufacturer tied for second in frequency based on the results from the quantitative survey trailing only Price. This is an indicator that customers have a sense of allegiance to other filter manufactures. Perhaps this is the case because distributors like auto parts stores already serve the needs of the customer for their vehicles. The score for this factor was increased for two reasons. First, there were seven statements made in the comments section of the exploratory survey that contain words very similar to loyalty; trust, Company/Dealer loyalty, value, pride of ownership, and name brand. Second, brand loyalty ranked 4th out of 6 in the same survey that asked dealers to rank the factors influencing why customers purchase their filters from the John Deere dealer. There is an opportunity to leverage the John Deere brand more to sell additional filters.

Based on the exploratory survey and the results from the quantitative survey, two additional critical determining factors were added to the updated strategy canvas. The first is financing and the second is order program. These new factors offer John Deere dealers tools that separate them from the competition and may ultimately increase the filter business for the John Deere Company.

Question 8 in the quantitative survey asked the dealer channel if a filter financing program would increase filter sales at their dealership. Dealers did express a significant amount of interest in offering a retail-based financing program that customers can utilize to improve cash flow. The top two responses to this question were definitely yes and probably yes and represented 65% of the total responses for Question 8.

From an order program perspective, 73% of the dealers, indicated they would like to see a filter program other than the one currently offered; the ag filter rebate program. The response to this question clearly indicates the overwhelming majority of the dealerships would like John Deere to provide a different tool to assist them in facilitating the sale of filters. The challenge will be selecting the right program that will benefit the dealership while at the same time being a profitable venture for John Deere Company. According to the data, the dealers did not agree on an alternative.

Figure 5.2: ERIC Model



The ERIC Model in Figure 5.2 has been created based on the updated strategy canvas in Figure 5.1, which received its input from the primary and exploratory surveys, and should be used as a guide to implementing a filter specific marketing plan. The ERIC Model provides a roadmap, or the framework, for how John Deere should allocate time and resources to eliminate waste, reduce low value desirables, increase high value desirables, and create non-existent processes or products that add value to the firm and its customers. By taking into consideration what drives value for dealers and end-users, the following is a proposed set of solutions to grow the filter business based of Figure 5.2.

Eliminate the Non Value Added

The Ag Filter Rebate Program has been identified in the ERIC Model as a function that should cease to continue in its current state. John Deere has been offering this retail rebate through the dealer organization for the last ten years. The original intent was two-fold. First, it encouraged John Deere customers to come to their local dealership to purchase filters at a discounted retail price of 12% for a 60 day period. Second, it was a tool the dealer could use to fend off local competition. The rebate does not include all John Deere Ag and Turf filters available to the dealer channel which causes dissatisfaction. Only selected filters that are classified as 'competitive' are on the program. Competitive is defined as a filter a customer can purchase from more than one source.

Dealers have also indicated that the process of filing the reimbursement for John Deere is a cumbersome task for the dealership. Someone at the dealership must manually input the information over a web-based system that is time consuming. Over the last ten years John Deere Company has experienced a significant amount of mergers and acquisitions of John Deere dealers. As these businesses become larger, it takes more time to submit the necessary information to be reimbursed for the rebate they issued to the end-user.

Eliminating the Ag Filter Rebate program will save both John Deere Company and the dealer channel the labor it takes to manage it. As the research suggests, 73% of the dealerships indicated they would like to see something offered other than the Ag Filter Rebate Program.

Reduce Time spent on non Value-Added Processes

Although Functionality and Ease of Use is imperative for the customer, there is no need to spend an enormous amount of time and resources promoting these factors. The fact is that

customers expect a filter to perform its basic function no matter who sells them the product. The basic function of the filter is removing abrasive and potentially harmful contaminants from fluid or air before they have the opportunity to damage key components of the equipment. While it is necessary to provide the dealer channel with the appropriate resources to deliver the feature and benefit information of John Deere filters to the end-user, the question remains; are dealers' using the information John Deere is providing to sell the value of the John Deere filter against that of the competition? Based on continuous feedback from the dealer channel through one-on-one conversations and the exploratory survey, it doesn't appear they see value in the basic filter information John Deere provides. Until John Deere Company determines what information dealers need to facilitate additional filter sales, the company should reduce the amount of money it's spending on providing information pertaining to functionality and ease of use and allocate these funds to other projects.

Increase Time Spent on Value-Added Processes

Parts availability is critical to a customer's operation. Availability becomes even more important when the operator is working during the planting or harvest season and their machine breaks. Machine downtime can cost the producer thousands of dollars an hour depending on the time of year and how many acres they still need to cover. In the quantitative survey, John Deere dealers clearly indicated that price was the most important factor when making a purchasing decision for a replacement filter but tied for second is availability. If a customer has difficulty procuring the replacement part necessary to fix their machine, the price of the needed part becomes less important.

In the event a customer goes to a John Deere dealership in need of the part, and the dealer is out of inventory, 95% percent of the time John Deere Company can deliver a service part to customer's servicing dealership in North America before 8 AM if the order is placed prior to 5 PM CST on the previous day. This type of next day service that John Deere is able to provide the end user is difficult for other filter distributors to match which gives John Deere a competitive advantage. From a marketing and advertising perspective, John Deere should consider increasing advertising dollars to assist in driving home the message of availability. John Deere should capitalize on the value it provides to the end-user, and promote the logistics service which is second to none in the industry.

Increasing the quality of our product would not come without additional cost. For example, if John Deere partners with filter suppliers to develop a product that is superior to what is in the current product line-up or that of the competition, there is no doubt the product will be more expensive. This, in turn, would increase the price of the filter.

Increasing cost in an effort to improve quality will not help the perception that is already out there in the market place that John Deere filters are priced too high. Instead, it is recommended to increase the amount of advertising allocated to marketing functional differences of a John Deere filter as compared to the competition. An example would be the 500 hour engine oil change interval that was announced last year.

ISO (International Organization for Standardization) testing was conducted in 2010 to determine if there were functional differences between a John Deere filter versus the competition. The competitive filters chosen for the study crossed to the John Deere filter that was being tested. This means the competition manufactured a filter that would fit John Deere equipment. John Deere chose to use a third party research firm to conduct the study

in order to eliminate bias from the testing. The study concluded there were specific John Deere filters that did outperform the competitors in the area of efficiency. The efficiency of a filter is measured by the amount of contaminant the filter can remove from fluid or air before it's introduced to an engine, fuel, or hydraulic system. The higher the efficiency ratio is, the more efficient the filter. Based on the findings from the study, John Deere should increase the amount of advertising it does comparing the efficiency of specific filters against the competition. The advertising should be directed towards customers that purchase their replacement filters from a source other than John Deere.

When a customer purchases John Deere equipment, whether it is a tractor or combine, they feel a sense of pride knowing what they bought is quality. John Deere founded the company in 1837 and his motto was, "I will never put my name on product that does not have in it the best that is in me." The goal is to increase that same sense of pride of association with the customer when they are maintaining their John Deere equipment and to ask the question, "Why would I go anywhere else besides a John Deere dealer to purchase replacement parts for my equipment?" To increase the brand loyalty customers have with John Deere replacement parts to the same level as they do with the equipment, it is recommended to allocate resources to promote the value of the John Deere brand in two ways. First, John Deere should leverage the value of OEM quality filters versus the competition that are typically reversed engineered. Specifically, increase the link between original equipment parts and the equipment. Second, the John Deere dealer is a critical stakeholder and the key player to driving additional sales. In an effort to capitalize on the partnership John Deere Company has with its dealer channel, additional targeted

advertising should be developed linking the customer back to the dealership and promoting the dealer as the trusted source to purchase replacement filters.

Create Value

Cash flow for customers in the agricultural industry is vital to their operation because their revenue stream can be extremely variable. It is not uncommon for end users to purchase a six month supply of filters at once, and depending how many machines are in their fleet, the invoice could be in the thousands of dollars. John Deere currently offers no payment, no interest programs through John Deere Financial to assist customers with inconsistent cash flow however there isn't a financial instrument specifically for filters. An example of a program can be a 180 day no payment no interest with a \$500 minimum purchase with varying programs/merchant fees to cover the cost of the customer holding our money based on the amount of filters purchased. A filter specific financing program should be created for two reasons. First, for the first time in recent history, it will show the dealers that John Deere is serious about the filtration business by offering them a finance tool that will assist them in retailing filters. Second, the author is currently unaware of another filter distributor offering a filter specific finance program. This would be a key differentiator in the market place.

Through one-on-one conversations over the years with the dealer channel, dealerships have asked John Deere to create a simple filter ordering program in lieu of offering agricultural filter rebate program. Currently the program does not include all agricultural filters and the dealers must strictly adhere to policies of the program or John Deere will not rebate the dealer when they submit for their rebates. The program's terms and conditions are as follows:

- The dealership can use the 30-day program twice during the year (total of 60 days)
- The dealership must advertise at least a 12% discount off of list price and John Deere will rebate 8% of the filter at dealer cost
- The dealership must submit for the rebate by the 15th of the following month after the conclusion of their sale

It is recommended that John Deere offer a filter program in lieu of what is currently available; the Ag Filter Rebate program. There are a number of reasons why John Deere should change the way it has been conducting their filter business. First, 73% of the respondents in the quantitative survey indicated they would like to have a filter program other than what's currently offered. Second, Table 1.1 reveals that the CAGR for John Deere filters is approximately 4.9% a year and since annual price increases can range from 3.5% to 5%, there are some years where there isn't real growth. Third, Auto Parts Stores are becoming more aggressive by going after the agricultural filter business. Companies like NAPA and Wix have been focusing on the filter business and the data in Table 1.5 validates that claim. Finally, the potential for the John Deere filter business is large. The company is receiving approximately 58% of the replacement filter business for John Deere equipment which is estimated to be \$386 million in the United States.

Identifying the one specific filter program for the dealer channel is challenging for two reasons. First, Table 4.13 is the cross tabulation which compares how the Job Titles selected one potential filter program that would drive additional filter sales. Twenty-seven percent of the Parts Managers indicated they would like to keep the Ag Filter Rebate program and with Parts Managers carrying the highest consideration in the survey, it is difficult to surmise what specific program John Deere should implement. Second, Table 4.6

which compares the size of the dealer organization to how they answered and, 33% of the largest purchasing dealerships and 30% of the medium size indicated they would like to keep the Ag Filter Rebate program.

Based on the combination of the results received from the quantitative analysis, and keeping the idea of becoming easier to do business, the recommendation would be to offer the annual commitment program in lieu of the current Ag Filter Rebate. This recommendation is made for two reasons. First, by locking in their discounts at the beginning of the year, the dealer channel will know what their discount is going to be for filters based on the amount of business they agree to conduct with John Deere. This gives them the flexibility to market filters at the prices that is appropriate for their market and eliminate the burdensome task of manually entering lines of data in order to receive their reimbursement. Second, an annual commitment also gives John Deere the opportunity to capitalize on the purchasing power of the larger dealer organizations as well as assist John Deere supply management in forecasting filter needs to ensure appropriate inventory levels.

Summary

The objective of this thesis is to answer the following question: How does a firm successfully de-commoditize a product that is considered a commodity and capture additional market share? More specifically, how does John Deere Company grow the OEM (original equipment manufacturer) filter business and impede the infiltration of competitive firms from taking away sales from our distribution channel, the John Deere dealer? The thesis addresses the challenge by working through a systematic process which included; analyzing the economic impact of filter sales for John Deere Company, acknowledging through quantitative research that the auto parts store is the most significant

competitor in the market place and that the NAPA brand of filter is selected by customers in lieu of a John Deere filter 45% of the time. Price was the most important factor as to why owners of John Deere equipment make the decision to purchase their replacement filter somewhere other than a John Deere dealership.

After capturing all the necessary data, a framework was needed to develop a plan on how to gain the business of customers' currently not purchasing John Deere filters. This thesis utilized two tools. First, an initial strategy canvas was created based on the results of the exploratory survey to begin the visual awakening to see where John Deere stood against its number one competitor and the industry. Second, the quantitative data were collected and analyzed to determine the factors as to why customers decided to purchase replacement filters through a source other than John Deere. A revised strategy canvas was then developed taking the information received from the quantitative survey and applying a fourth value curve focusing again on the critical variable determining factors as well as identifying additional factors, or additional service(s), the competition is not currently offering.

Finally, an ERIC Model was used to recommend how John Deere should pursue the filter business in the future. First, the ERIC Model allows the researcher to identify functions or processes within a firm that can be eliminated because they do not provide value. Second, the ERIC Model asks the researcher to identify activities the firm should reduce, that are necessary to the business but not necessarily value added. Third, the ERIC Model challenges the firm to identify and increase actions that are value added. Finally, the model challenges the firm to create strategies or tactics to add value to a product or service and

this is a key factor in differentiating a product that is considered a commodity in the market place versus the competition.

REFERENCES

Christensen, H, Kurt. "Defining Customer Value as the Driver of Competitive Advantage." *Strategy and Leadership*, 2010: 20-25.

Kim, Chan, W. Mauborgne, Renee "Blue Ocean Strategy." Boston, 2005.

John Deere. 2011. www.JohnDeere.com (accessed February 2011)

John Deere Dealer Financial Analysis. 2011. <https://dfa.deere.com/DFA/> (accessed January 2011)

John Deere 32G. 2010. <http://32ers.deere.com/32ers/servlet/RedirectCompany> (accessed January 2010)

Amanor-Boadu, V. Advanced Food and Agribusiness Management Class Notes, Department of Agricultural Economics, Kansas State University, Fall 2010.

APPENDIX A

A1 Dealer Financial Analysis (DFA)

Description	Rolling 12 Months Quarter Ending				
	Jan 2011 (383 Dealers)	Oct 2010 (410 Dealers)	Jul 2010 (422 Dealers)	Apr 2010 (410 Dealers)	Jan 2010 (398 Dealers)
INCOME STATEMENT					
John Deere Farm Equipment	18,066,084	17,038,651	15,269,546	15,627,104	14,804,810
John Deere Turf & Utility Products	2,892,788	2,752,956	2,535,064	2,486,930	2,359,301
Frontier Equipment	12,977	15,479	14,955	22,978	18,017
Other Equipment	2,649,508	2,558,956	2,374,682	2,311,844	2,235,114
Used Equipment	15,858,247	14,571,784	13,028,808	13,181,188	11,994,140
Rental Revenue	317,990	290,128	280,653	287,539	279,871
Total Complete Goods Sales	39,797,595	37,227,954	33,503,708	33,917,582	31,691,253
Gross Margin Percent - Complete Goods	5.16%	5.04%	5.26%	5.26%	5.50%
John Deere Farm Attachments	79,333	76,652	75,008	73,585	71,457
John Deere Turf & Utility Attachments	29,606	32,516	27,634	25,030	23,653
Other Attachments	40,721	39,528	35,616	35,436	36,034
Total Attachments Sales	149,660	148,696	138,258	134,050	131,144
Gross Margin Percent - Attachments	10.60%	10.01%	9.92%	9.86%	9.20%
Complete Goods & Attachments Pre-tax Income	1,058,235	743,968	649,172	708,892	697,078
John Deere Parts & Merchandise	5,452,184	5,551,359	5,159,714	5,142,844	4,902,103
Other Parts & Merchandise	1,156,651	1,154,953	1,082,329	1,055,436	1,043,677
Total Parts Sales	6,620,164	6,720,298	6,255,014	6,210,060	5,954,037
Gross Margin Percent - Parts	31.53%	31.51%	31.69%	31.51%	31.52%
Parts Pre-tax Income	921,988	927,596	845,518	825,543	780,379
Customer Labor Sales	1,554,888	1,549,213	1,462,354	1,467,856	1,416,869
Service Labor Allowance	-103,315	-105,279	-106,559	-113,219	-114,473
Total Service Sales	2,903,850	2,870,140	2,721,729	2,726,168	2,632,950
Gross Margin Percent - Service	60.55%	60.73%	60.88%	60.97%	61.20%
Service Pre-tax Income	278,326	261,204	228,702	228,470	215,955
Total Net Sales	49,471,269	46,967,089	42,618,709	42,987,861	40,409,384
Gross Margin Percent - Total	11.96%	12.25%	12.71%	12.60%	12.97%
Variable Expenses	960,652	936,452	900,653	885,942	858,726
Fixed Expenses	4,050,110	4,040,355	3,868,249	3,863,088	3,765,923
Interest Expense	177,653	180,080	173,791	173,851	165,760
Admin & Other Pre-Tax Income	-288,295	-285,013	-281,376	-273,354	-271,083
Pre-tax Income	1,970,254	1,647,763	1,442,040	1,489,601	1,422,384

A2 32G (Parts Operations Report)

Competitive Parts Purchases(Less Returns)							
	Summary Code	January Purch	January Last YR Purch	YTD Purch	Last YTD Purch	%Change YTD/LYTD Purch	Last 12 Months Purch
Ag Management Solutions	MGS	279,730	289,995	642,933	596,042	7.9	4,676,492
Batteries	05S	3,817,184	3,783,188	9,906,806	10,664,381	-7.1	43,786,901
Bearings	92S	3,382,290	3,371,418	8,782,366	9,630,364	-8.8	47,333,725
Belts	37S	3,859,895	4,231,046	7,313,567	10,117,654	-27.7	49,033,526
Chain Total	55T	1,444,038	1,612,051	2,850,477	3,532,827	-19.3	14,255,079
Chain-bulk link, tow, & load binder	54S	179,627	171,181	327,299	310,542	5.4	1,038,164
Chain-roller & other	55S	962,417	1,070,394	1,657,354	2,466,622	-32.8	11,226,691
Chain-tractor tire	53S	302,001	370,472	865,809	755,668	14.6	1,990,229
Chemicals	43S	933,702	1,092,473	2,607,582	2,327,840	12	9,994,867
Combine parts	38S	6,944,503	8,754,689	17,592,826	32,247,335	-45.4	154,083,219
Cotton picker parts	39S	3,154,617	1,307,272	4,822,764	2,097,686	129.9	12,126,666
Cotton stripper parts	36S	52,912	69,243	741,901	558,576	32.8	3,947,945
Disk blades	2LS	971,903	782,455	2,281,606	2,094,509	8.9	10,827,070
Drill parts	32S	1,463,865	1,688,292	3,281,144	2,612,325	25.6	14,525,637
Engine Total	40T	4,970,834	5,178,235	12,646,941	14,773,775	-14.4	57,155,812
Engine kits	41S	1,074,723	1,001,988	2,491,415	2,264,923	10	8,740,066
Engine parts	40S	3,896,115	4,176,253	10,155,533	12,508,854	-18.8	48,415,755
Filters	50S	16,050,845	15,499,312	32,416,094	30,144,740	7.5	134,079,475

A3 Exploratory Survey Comments based on the question, “Why do customers buy John Deere filters?”

	Comments
Survey 1	Quality and name brand
Survey 2	Quality, knowing that they are getting the right filter for their machine
Survey 3	I think it is a combination of all the things mentioned in questions 2 plus the ease to purchase while they are doing business with us anyway. The reason customers do business with us is: Excellent service, quality products, competitive pricing, parts availability. Most customers will not wait for you to order a filter
Survey 4	High quality product that is not only priced right, it has the convenience and pride of ownership factors built in.
Survey 5	Availability, price, and confidence in the product.
Survey 6	Quality and loyalty
Survey 7	Quality and value for OEM machines.
Survey 8	OEM Quality, Dealer Support, Warranty
Survey 9	I think they believe Deere filters are the best quality.
Survey 10	They associate quality with the name. Company/Dealer loyalty.
Survey 11	With the technological improvements on modern engines, and the current changes that consumers are experiencing with the new diesel fuel and engine oil, customers are keeping with oem filters to further protect their investment
Survey 12	Most customers purchase John Deere filters because they are John Deere branded, reasonably priced in most cases, and provide verifiable quality & protection for their equipment. Another deciding factor for most of our customers is the ease in which they may obtain the filters. Most of our customers are serviced by a CSR who delivers them to their farm or business and keeps a supply on-hand.
Survey 13	They understand the value of a quality filter
Survey 14	Getting a quality filter designed for their machine (not a will fit) and product availability
Survey 15	Original equipment, and Quality, Availability
Survey 16	Most do because they have a Deere piece of equipment or are here getting parts for Deere and see if we have them for a different brand.
Survey 17	Trust/quality/availability/consistency in product

A4 Quantitative Survey Questions

Question 1	If owners of John Deere equipment are currently <u>not</u> purchasing filters from your dealership, please indicate which source your customers are utilizing most frequently buy filters. Please choose one.
A.	Auto parts store (NAPA, Car Quest, Auto Zone, etc...)
B.	Coop
C	Online
D	Direct sales (Baldwin, Wix, etc...)
E.	Other
Question 2	Please indicate which filter manufacturer is your strongest competitor. Please choose one.
A.	Baldwin
B.	Wix
C.	Napa
D.	Fram
E.	Luber Finer
Question 3	Please select the most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.
A.	Lower price
B.	Higher quality
C.	Better availability
D.	Brand loyalty to another filter manufacturer
Question 4	Please select the second most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership. Please choose one.
A.	Lower price
B.	Higher quality
C.	Better availability
D.	Brand loyalty to another filter manufacturer
Question 5	Please select the third most important factor why customers purchase filter for John Deere equipment from suppliers other than your dealership. Please choose one.
A.	Lower price
B.	Higher quality
C.	Better availability
D.	Brand loyalty to another filter manufacturer

Question 6	Please select the fourth most important factor why customers purchase filters for John Deere equipment from suppliers other than your dealership.
A.	Lower price
B.	Higher quality
C.	Better availability
D.	Brand loyalty to another filter manufacturer
Question 7	On average, rate how John Deere filters are priced relative to the competition. Please select one.
A.	John Deere filters are priced more than 25% higher
B.	John Deere filters are priced 10 to 24% higher
C.	John Deere filters are priced 1 to 9% higher
D.	John Deere filters are priced equal to competitors
E.	John Deere filters are priced 1 to 9% lower
F.	John Deere filters are priced 10 to 24% lower
G.	John Deere filters are priced more than 25% lower
Question 8	Would a John Deere filter specific financing program increase sales for your dealership? An example would be a 180 NPN I offered by Farm Plan/Ag Line with a minimum of \$500 in purchases. Please choose one.
A.	Definitely yes
B.	Probably yes
C.	Probably no
D.	Definitely no
Question 9	If John Deere were to offer an ordering program for all Ag and Turf filters, which program do you think would best to drive additional sales for your dealership? Please choose one.
A.	An annual commitment program where a immediate ordering discount would be applied based on a committed volume.
B.	An accumulation program with graduated tiers of discounts based on the volume of Ag and Turf filters purchased annually.
C.	An end of the year rebate program based on the volume of filters purchased.
D.	Stick with the current Ag Filter Rebate Program.
E.	No program at all - give us everyday low price.