

ABSTRACT

SHEEK, SUSAN ADA. Supply Chain Linkages: Opportunities for the U.S. Textile Supply Chain. (Under the direction of Dr. Nancy Cassill & Dr. Jeffrey Joines.)

This research provides insight into the linkages that occur within retail supply chains which may provide opportunities for the U.S. textile supply chain. As the retail industry is becoming more consolidated, textile manufacturers are finding themselves competing against each other in order to become suppliers to these vital outlets. Learning more about retailers' expectations of their suppliers will help manufacturers understand how they can better position themselves. In order to gain a broad perspective of the current industry this research examined three products in three types of retail stores: denim jeans, activewear, and upholstered furniture in discount, department, and specialty stores. Furthermore, this project examined a range of drivers to determine what effect they have on the success of supply chain configurations. Company-controlled drivers included efficiencies of production (price, quality, delivery), branding and marketing, and services offered to the customer. Community-controlled drivers included energy prices, trade legislation, and labor force availability. Understanding the effects of these drivers will lend greater understanding of successful supply chain configurations.

The review of literature identified a conceptual framework that guided the study. Hines and Clark's (1997) Competitive Advantage Model states that improvements of company-controlled drivers and community-controlled drivers can lead to a firm's optimal competitiveness.

The methodology used in this study consisted of three phases. Phase I used inductive research design to collect quantitative data from secondary sources. Phase II used a deductive research design to collect qualitative data from industry professionals. Informational interviews were conducted in order to gather primary data regarding current retail supply chain configurations. In total, thirty-one executives from twenty-six companies were interviewed. These firms represented fiber, yarn, fabric, cut and sew, and retailers for both the apparel and home furnishings markets. Phase III consisted of an analysis of the aggregate results from Phases I and II.

This research indicated that there are some existing strong linkages as well as opportunities for new linkages to occur. There is diversity in supply chains for these three products across retail channels. Discount retailers are most concerned with price and capacity while specialty retailers are looking for full-package garment suppliers. By forming networks among themselves, U.S. manufacturers have the opportunity to meet this demand. Department stores continue to increase private labels creating opportunities for U.S. manufacturers to assist in product development. As reflected in this research, apparel textile supply chains in the U.S. are diverse and struggle to communicate openly. Also, there appears to be a missing linkage between manufacturers in apparel supply chains and retailers. This could present an opportunity for the formation of valuable partnerships that utilize trade legislation to combine U.S. production efficiencies with lower labor wages off-shore for lower total production costs.

Home furnishing textile supply chains in the U.S. display strong linkages with more long-term relationships. Yarn availability has been a challenge for upholstery manufacturers

and may present an opportunity for U.S. yarn mills to provide specialty yarns. Concerning company-controlled drivers, production efficiencies and customer service were shown to be the most crucial to success. Continuing to improve their services can help U.S. manufacturers build customer loyalty. For community-controlled drivers, utilizing trade legislation to access lower labor costs presents an opportunity for U.S. manufacturers. Recommendations for future research include the examination of different replenishment strategies for retailers as well as the further development of U.S. textile manufacturer networks.

Supply Chain Linkages: Opportunities for the U.S. Supply Chain

by
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BIOGRAPHY

Susan Ada Sheek was born and raised in Charlotte, North Carolina. After high school, she attended Appalachian State University in Boone, North Carolina. While in school, she received the Celia Moh Scholarship, a full academic scholarship funded by the U.S. home furnishings industry. Upon graduation, she received a Bachelor of Science in Interior Design and a Bachelor of Science in Business Administration. After college, Susan Ada worked for a non-profit service organization for two years and lived in the Himalayas. While overseas, she taught English, worked in two coffee shops (aiding in finance, staff training, and design), and studied art at Kathmandu University in Nepal. She also became proficient in the Nepali language. Susan Ada enjoyed living overseas and wanted to choose a career that would continue to allow her to travel and experience new cultures. Therefore, in 2007, she moved to Raleigh to pursue a masters degree in Textile Technology and Management at North Carolina State University. In the summer of 2008, Susan Ada completed an internship in the design department of Glen Raven Custom Fabrics. She is still interested in the home furnishings industry and would like to work with residential upholstery fabrics.

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TABLE OF CONTENTS

LIST OF FIGURES	viii
LIST OF TABLES	ix
CHAPTER I	1
INTRODUCTION.....	1
Purpose of this Study.....	5
Significance of this Study.....	7
Limitations of this Study	7
Definitions of Nominal Terms.....	9
CHAPTER II.....	11
REVIEW OF LITERATURE.....	11
Scope of Literature Review	11
Introduction of Literature Review.....	12
Conceptual Framework	12
Supply Chain Dynamics	14
Supply Chain Linkages.....	15
Supply Chain Management.....	17
Value Chain Dynamics.....	18
Convergence of Supply and Value Chains	19
Value Chain Conceptual Framework	20
Shift of Power within the Supply Chain.....	22
Retail Stores.....	24
<i>Current Trends in Retailing</i>	25
<i>Discount Retailers</i>	26
<i>Department Stores</i>	27
<i>Specialty Retailers</i>	28
Retail Supply Chains.....	29
<i>Drivers of Retail Supply Chains</i>	30
<i>National Brands</i>	32
<i>Private Labels</i>	33
Lifestyle Marketing.....	33
Market Analysis	35
<i>Retail Industry</i>	35
<i>Activewear</i>	35
<i>Denim Jeans</i>	36
<i>Upholstered Furniture</i>	37
CHAPTER III	38
RESEARCH METHODOLOGY	38
Research Statements.....	38
Research Design.....	40
<i>Strategy</i>	40
<i>Mixed Methods</i>	40

<i>Concurrent Triangulation</i>	43
<i>Inductive and Deductive</i>	43
Phase 1: Inductive	45
<i>Data Collection: Phase I</i>	46
Phase II: Deductive	49
<i>Instrument Development: Phase II</i>	49
<i>Sample Selection</i>	49
<i>U.S. Activewear Retailers</i>	50
<i>U.S. Denim Jeans Retailers</i>	51
<i>Upholstered Furniture</i>	53
<i>U.S. Manufacturers</i>	55
<i>Sample Validation</i>	55
<i>Data Collection: Phase II</i>	55
Phase III: Analysis	57
CHAPTER IV	58
RESULTS	58
Phase I Results	58
<i>Sample Description</i>	58
<i>Supply chain linkages (Step 1)</i>	63
<i>Current U.S. Production and Market (Step 2)</i>	64
<i>Upholstery Fabric</i>	64
<i>Denim Jeans</i>	65
<i>Activewear (Synthetic knit tops)</i>	67
<i>Energy Prices</i>	68
<i>U.S. Retail Competitive Environment (Step 3)</i>	75
<i>Trends in the U.S. Retail Industry</i>	75
<i>Drivers of Retail Supply Chains (Step 4)</i>	77
<i>Company-controlled drivers</i>	77
<i>Community-controlled drivers</i>	78
Phase II Interview Results	80
Phase II Summary of Results Regarding Each Topic	81
<i>Manufacturers</i>	81
<i>Apparel Manufacturers</i>	81
<i>Location of facilities</i>	81
<i>Production in US</i>	81
<i>Supply Chain Structure</i>	81
<i>Criteria Used When Selecting a Supplier</i>	83
<i>Criteria Used by Retailers When Selecting a Supplier</i>	84
<i>Partnerships: Description and Importance</i>	85
<i>Exchange of Information/Shared Vision</i>	86
<i>Drivers of Supply Chain Success</i>	86
<i>Home Furnishings Manufacturers</i>	89
<i>Location of facilities</i>	89

<i>Production in US</i>	89
<i>Supply Chain Structure</i>	89
<i>Criteria Used When Selecting a Supplier</i>	91
<i>Criteria Used by Retailers When Selecting a Supplier</i>	92
<i>Partnerships: Description and Importance</i>	93
<i>Exchange of Information/Shared Vision</i>	95
<i>Drivers of Supply Chain Success</i>	95
<i>Current Challenges in Supply Chain</i>	97
<i>Company-controlled Drivers</i>	98
<i>Community-controlled Drivers</i>	100
Retailers	101
<i>Supply Chain Structure</i>	101
<i>Private Labels</i>	103
<i>Full-Package Suppliers</i>	104
<i>Sourcing Agents</i>	104
<i>Criteria Used When Selecting a Supplier</i>	104
<i>Partnerships: Description and Importance</i>	105
<i>Exchange of Information/Shared Vision</i>	106
<i>Drivers of Supply Chain Success</i>	107
<i>Current Challenges in Supply Chain</i>	107
<i>Company-controlled Drivers</i>	108
<i>Community-controlled Drivers</i>	109
<i>Supply Chain Comparisons Across Different Retail Stores</i>	111
<i>Opportunities for the U.S. Textile Supply Chain</i>	113
<i>Results in Relation to Conceptual Framework</i>	118
CHAPTER V	121
SUMMARY, CONCLUSIONS, RECOMMENDATIONS	121
Summary	121
<i>Summary of Results</i>	122
Limitations	131
Recommendations for Future Research	132
REFERENCES	133
APPENDICES	136
APPENDIX A: RESEARCH DOCUMENTS	137
Appendix A1: IRB Exemption Letter	138
Appendix A2: Initial Contact Letter	139
Appendix A3: Retailer Interview Questionnaire	140
Appendix A4: Manufacturer Interview Questionnaire	142
Appendix A5: Activewear Retailer Population	144
Appendix A6: Denim Jeans Retail Population	145
Appendix A7: Upholstered Furniture Retail Population	146
APPENDIX B: INTERVIEW RESPONSES	147
Appendix B1: Apparel Manufacturer Interview Responses	148

Appendix B2: Home Furnishings Manufacturer Interview Responses	160
Appendix B3: Discount Retailer Interview Responses	179
Appendix B4: Specialty Retailer Interview Responses	181
Appendix B5: Department Store Interview Responses	197
Appendix B6: Auxiliary Firm Interview Responses	204

LIST OF FIGURES

Figure 1.1: Competitive Advantage Model.....	3
Figure 2.1: Conceptual Framework	13
Figure 2.2: Expanded Conceptual Framework.....	14
Figure 2.3: Frederick's Value Chain	21
Figure 2.4: Kotler and Keller Organizational Chart (2009).....	23
Figure 2.5: Retail supply chain	30
Figure 3.1: Decision Choices for Determining a Mixed Methods Strategy of Inquiry ..	41
Figure 3.2: Steps in the mixed-methods sampling process	42
Figure 3.3: Concurrent Triangulation Strategy.....	43
Figure 3.4: The Inductive Logic of Research in a Qualitative Study	44
Figure 3.5: The Deductive Approach Typically Used in Quantitative Research	45
Figure 3.6: Sample selection process - U.S. Activewear Retailers	51
Figure 3.7: Sample Selection Process - U.S. Denim Jeans Retailers.....	53
Figure 3.8: Sample Selection Process - U.S. Furniture Retailers	54
Figure 4.1: U.S. Production of MMF Sheeting, Poplin, and Broadcloth.....	65
Figure 4.2: U.S. Production of Cotton Trousers, 2002-2007.....	66
Figure 4.3: U.S. Production of Denim Fabric, 2002-2007	66
Figure 4.4: U.S. Production of MMF Knit Shirts.....	67
Figure 4.5: U.S. Production of Knit Fabric	68
Figure 4.6: Crude Oil Prices for March 17, 2008 - March 17, 2009	70
Figure 4.7: U.S. Polyester Staple Prices, September 2006-March 2009	71
Figure 4.8: Apparel Manufacturing Labor Costs – 2008, USA Regional Import Supply Base.....	73
Figure 4.9: Apparel Manufacturing Labor Costs – 2008, Core Asian Import Supplier Base.....	74
Figure 4.10: U.S. Manufacturer Supply Chain with Off-shore Garment Production... 	82
Figure 4.11: U.S. Apparel Manufacturer Supply Chain.....	83
Figure 4.12: Criteria Manufacturers in Apparel Supply Chains Use When Selecting Suppliers	84
Figure 4.13: Apparel Manufacturers' Perception of Retailers' Criteria for Selecting Suppliers	85
Figure 4.14: U.S. Upholstery Manufacturer Vertical Supply Chain.....	90
Figure 4.15: U.S. Upholstery Manufacturer with Purchased Yarn.....	90
Figure 4.16: U.S. Furniture Manufacturer Supply Chain.....	91
Figure 4.17: Criteria Home Furnishings Manufacturers Use When Selecting Suppliers	92
Figure 4.18: Home Furnishings Manufacturers' Perceptions of Retailers' Criteria for Selecting Suppliers	93
Figure 4.19: U.S. Retail Blended Sourcing Strategy	102
Figure 4.20: U.S. Retail Supply Chain with Owned Sourcing Offices	103
Figure 4.21: Retailers' Criteria for Selecting Suppliers	105
Figure 4.22: Competitive Advantage Model.....	119

LIST OF TABLES

Table 3.1. Supply chain analysis matrix.....	46
Table 3.2. Phase 1 Instrument: Secondary Data Collection	47
Table 4.1: NAICS/HTS codes: Denim Jeans	59
Table 4.2: NAICS/HTS codes: Activewear (Synthetic knit tops)	59
Table 4.3: NAICS/HTS codes: Upholstered furniture	60
Table 4.4: Sample Population	60
Table 4.4: Sample Description	61
Table 4.5: Relationship between Crude Oil Price and Shipping Price (in USD)	69
Table 4.6: Survey Instrument for Comments Pertaining to Supply Chain Linkages....	80
Table 4.7: Retail Trends by Store Type.....	112

CHAPTER I

INTRODUCTION

In order for textile products to arrive in a retail store, they must first follow many steps to transform a raw material into a desirable good. The textile supply chain generally consists of five stages, including: inputs (fiber), textile manufacturing (yarn, fabric formation, finishing), textile products, distribution and sales, and textile markets (Frederick, 2008). Traditionally, these segments existed and operated as independent entities that communicated only the necessary information. However, a major shift has occurred wherein members of a supply chain establish strong partnerships, or linkages, that promote open communication and the convergence of production goals throughout the network. Currently, downstream members of the supply chain, such as retailers, interact most directly with customers, therefore gaining strong influence in their respective supply chains. This power held by retailers often forces manufacturers to meet strenuous demands in order to sell their products. Therefore, manufacturers wish to regain some of this strength so that they can work together with retailers to capitalize on their collective ability to meet consumers' demands.

In 2007, the global retail market generated revenues of \$9.1 trillion (Datamonitor – Global Retail, 2008). In the same year, the US apparel retail market generated total revenues of \$291.2 billion, (Datamonitor – Apparel Retail, 2008), and the home furnishings market in the Americas (Brazil, Canada, Mexico, and the US) generated \$173.9 billion (Datamonitor – Global Home Furnishing Retail, 2008). The retail industry is large and consolidated giving it great strength in the global economy. Apparel and home furnishings are two large sectors of

the retail industry that also represent the textile industry. Examining these sectors will give a broad perspective of supply chain relationships in the textile industry.

There are many opportunities for supply chain linkages to be strengthened. Manufacturers can focus on building strong brands, offering innovative products, and delivering quality goods on-time. Retailers have the ability to build lasting relationships with suppliers which include investing in training and facilities. This study will examine opportunities for manufacturers and retailers to align their individual strengths and work together to increase profitability for all parties.

In order for U.S. textile firms to further integrate into the global supply chain, it is important to identify their competitive advantages. Currently, the U.S. apparel industry has three core competencies: design, sourcing, and marketing (Driscoll, 2008). Strengthening these competencies can help textile firms gain more power and shift to a pulled strategy within the supply chain. Traditionally, textile supply chain analysis has ended with a finished good in a manufacturing facility. However, extending this supply chain analysis to include retailers may help manufacturers better connect with actual consumer demand. This project will examine lifestyle branding, including two main sectors: home textiles and apparel. Supply chains for these goods ending in mass, specialty, and department store retailers will be examined in order to reveal current value-added activities. These three types of retail formats make up 18.4%, 19.6%, and 21.2% (respectively) of the formats operated by the 250 most successful global retailers. This is a combined total of 59.2% (Deloitte, 2008).

Specific drivers impacting the strengths and weaknesses of these supply chains will be identified and analyzed in order to further understand the source of competitive

advantages. These drivers will include both company-controlled and community-controlled factors that effect the success of a supply chain. The Competitive Advantage Model (Hines & Clark, 1997), shown in Figure 1.1, will be used as a framework for this study. (See Chapter II for detailed discussion.)

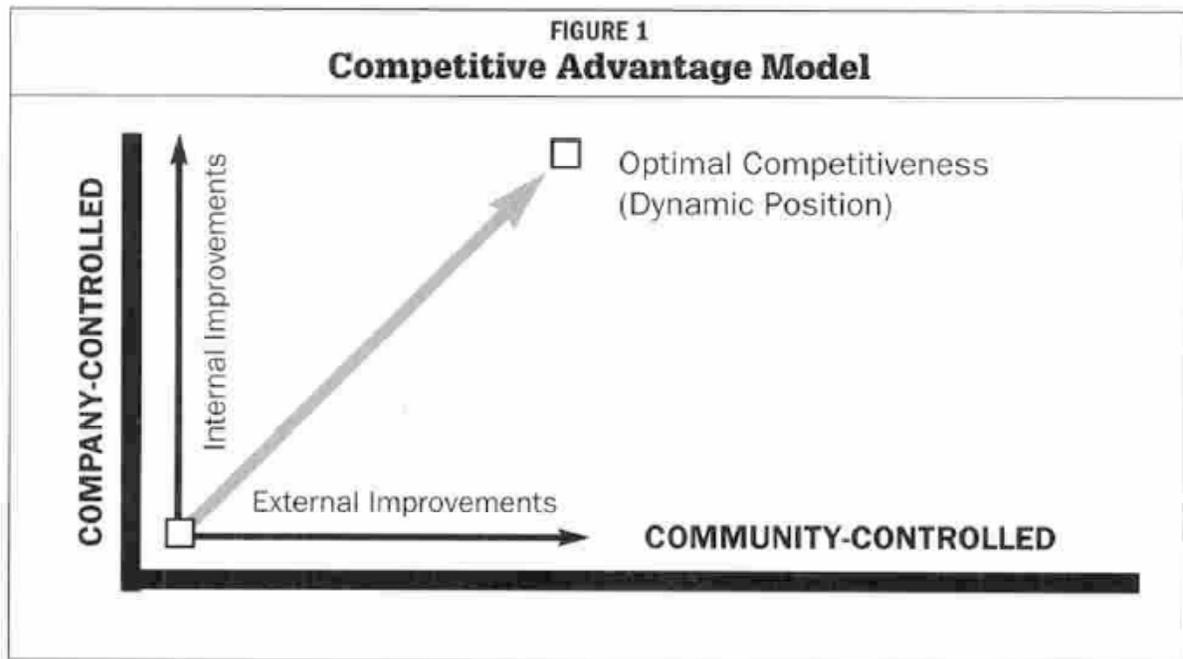


Figure 1.1: Competitive Advantage Model

Source: Hines, B. & Clark, S. (1997). The competitive advantage model: The case of business retention and expansion in Bowling Green, Ohio. *Economic Development Review*, 15(1), 18-22.

Finally, a business model will then be developed that will act as a framework for U.S. textile manufacturers as they seek to strengthen relationships in their supply chain configurations and enhance their global competitiveness.

Supply chain optimization can only occur when all firms work together in a cohesive manner. The linkages, or relationships, among individual firms offer extensive opportunities

for one supply chain to gain a competitive advantage over another. Furthermore, in today's market entire supply chains must compete with other supply chains as opposed to individual components competing with each other. Fung, Fung, and Wind (2008) take this thought one step further with the idea of "network orchestration." This is a broader view of the entire supply chain in that a network orchestrator designs the supply chain using multiple facilities in multiple regions that all collaborate to produce a single product. In this way, manufacturers are able to work together to ensure that retailers' needs are met in an efficient manner.

Currently, it is believed that by improving and increasing the services that they offer, textile manufacturers can strengthen relationships with their customers. However, little research about these supply chain relationships has been completed. Identification of what linkages currently exist as well as their importance in the success of the supply chain and what linkages are missing has yet to occur. Also, it is beneficial to understand the impact of removing any existing linkages. Furthermore, it is necessary to examine current retail supply chains so that their strengths, weaknesses, opportunities, and threats can be identified. It is also important to develop an understanding of what retailers expect from their suppliers. This study will offer insight into linkages among firms in textile supply chains. By starting supply chain analysis at the retail level, a unique approach will be offered that can help textile manufacturers understand how to better position themselves in order to thrive in today's market and seize opportunities to work more closely with retailers to satisfy consumer demand.

Purpose of this Study

The purposes of this research study were to:

1. Perform an analysis of existing U.S. textile supply chains for manufacturers of upholstery fabric, denim jeans, and activewear (synthetic knit tops);
2. Identify both qualitative and quantitative effects of specific drivers on textile supply chains;
3. Determine supply chain structures for apparel and home furnishings goods in three distinct retail channels: discount, specialty and department stores; and
4. Identify what supply chain linkages exist between manufacturers and retailers and what linkages are missing

The primary objectives were to collect data from a sample of major U.S. textile and apparel retailers and U.S. textile and apparel manufacturers as seen below.

- RO1. Determine the supply chain structures that are being used for upholstery fabrics, denim jeans, and activewear (synthetic knit tops) in three retail channels:
- A. Discount retailers
 - B. Specialty retailers
 - C. Department stores
- RO2. Identify what supply chain linkages exist between manufacturers and retailers and what linkages are missing.
- RO3. Identify the effects of specific drivers on textile supply chains
1. Company-controlled factors
 - a. Efficiencies of production (price, quality, delivery)

- b. Branding and marketing
- c. Services offered to customer

2. Community-controlled factors

- a. Energy prices
- b. Trade legislation
- c. Labor force availability

RO4. Perform an analysis of existing U.S. textile supply chains for manufacturers of upholstery fabric, denim jeans, and activewear (synthetic knit tops).

Significance of this Study

This research will provide insight into the linkages, or relationships, that occur within retail supply chains. Currently, retailers appear to carry more power than manufacturers in supply chains, leaving textile manufacturers to compete against each other in order to become a supplier to these vital outlets. Learning more about retailers' expectations of their suppliers will help manufacturers understand how they can position themselves in order to gain more influence in the supply chain. Furthermore, this project will examine a range of company-controlled and community-controlled variables to determine what effect they have on the success of supply chain configurations. Company-controlled drivers may include: price, quality, delivery, branding, marketing, number of vendors, process technologies, service, location, and modes of transportation used. Community-controlled drivers may include: energy prices, trade legislation, taxes, cost of raw materials, duties/fees, and labor force availability. Understanding the effects of these drivers will lend greater understanding of successful supply chain configurations.

The study will also establish the dominant supply chain structures used by U.S. retailers that sell three product categories: upholstered furniture, denim jeans, and activewear (synthetic knit tops). These three product categories represent a sizeable customer base of the U.S. retail industry and can provide a key impact to the U.S. textile industry. Identifying weaknesses in these structures will offer opportunities for U.S. textile manufacturers to strategically align themselves in order to meet the needs of retail supply chains. Furthermore, examination of textile manufacturers' supply chains will reveal competitive advantages that can be inserted into the global marketplace.

Limitations of this Study

1. The study only focuses on three product categories: upholstery fabrics, denim jeans, and activewear (synthetic knit tops). These product categories represent a large portion of the U.S. consumer market, however results cannot be generalized to include other product categories.
2. Sample size constitutes a small representation of the entire retail population for the three product categories.
3. Some respondents may not have full access to specific data needed to answer all research questions.
4. Data received from industry interviews is subject to certain biases and perhaps limited by interviewees' willingness to provide full disclosure of accurate information.

Definitions of Nominal Terms

Brand: A name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers (American Marketing Association, www.marketingpower.com)

Competitive Advantage: Organizational factors that allow a firm to outperform its competitors (Porter, 1985).

Customer: A person or organization that decides to purchase a product or service (Ayers, & Odegaard, 2008).

Department Store: A large retail unit with an extensive assortment of goods and services that is organized into separate departments for purposes of buying, promotion, customer service, and control (Berman & Evans, 2007).

Discount Retailer: Retail location that offers a wide selection of goods at a lower price point; they tend to experience high-volume, low-margin sales (Berman & Evans, 2007). Sometimes referred to as a mass retailer.

Driver: A factor that contributes to the performance of a supply chain

Flexibility: The ability to change or react with little penalty in time, effort, cost, or performance. Categories of flexibility include product mix variation, volume variations, labor flexibility, design-change flexibility, and routing flexibility (Ayers, & Odegaard, 2008).

Lifestyle Branding: Creating a brand personality and image that's emotional, with aspirations that are unique, strong and broad enough to support brand extensions (Murphy, Karimzadeh, & Wicks, 2007).

Private Label: New brands that are developed by retail stores in order to achieve higher margins and distinguish themselves from other stores with similar product mixes (Ryan, 2004).

Retail: Final sales to mostly nonbusiness customers or end-users, often called consumers (Ayers, & Odegaard, 2008).

Retailer: An entity that sells merchandise in small quantities to the general public for personal or household consumption

Specialty Retailer: Retail location that carries a narrow but deep assortment in the chosen category and tailors the strategy to a given market segment (Berman & Evans, 2007).

Supply Chain: Product life-cycle processes comprising physical, information, financial, and knowledge flows whose purpose is to satisfy end-user requirements with physical products and services from multiple, and linked, suppliers (Ayers, & Odegaard, 2008).

Supply Chain Linkages: Strategic partnerships, or relationships, between firms in a supply chain in the textile complex

Supply Chain Management: The idea that the supply chain is managed as a single entity instead of a group of disparate functions (Feller, Shunk, & Callarman, 2006).

Value Chain: A set of activities and processes that, when linked together, provide value for the end user; stretches across several organizations, each providing the linkages that create the products and services (Dictionary of Human Resource Management, 2001).

CHAPTER II

REVIEW OF LITERATURE

Scope of Literature Review

Before researching specific supply chains, it is important to understand the components that form these linkages. For this research, one must first have a working knowledge of supply chains as well as value chains. This is necessary in order to examine possible strengths, weaknesses, opportunities, and threats of existing supply chains which include the following topics:

- Supply chain management
- Strategies for upstream members to gain power
- Structure of retail distribution channels
 - Mass retail
 - Department store
 - Specialty store
- Market analysis of lifestyle brands
 - Apparel
 - Home furnishings

Defining the role of management in supply chain decisions and relationships will provide the necessary background to understand specific supply chains held by textile firms. Then, two sectors of lifestyle brands will be compared in order to provide a multi-faceted approach to the variety of supply chain linkages that are necessary to provide these goods.

Introduction of Literature Review

In order to identify the competitive advantages of U.S. textile firms it is important to first understand the structure and management of their supply chains. This review will examine the facets of supply chain and the linkages between firms. Furthermore, an overview of supply chain management will reveal how managers can coordinate and synchronize the numerous members of their supply chain. The idea of value-added activities will be introduced in order to provide a starting point for further research. In addition, different types of retail stores will be explored in order to provide a basis of understanding as the supply chain is extended to include them. Finally, a market analysis of home textiles and lifestyle brands will be presented which will provide a multi-faceted approach when performing supply chain analysis.

Conceptual Framework

The Competitive Advantage Model used by Hines and Clark (1997) “illustrates the importance of simultaneously addressing both internal and external factors to help manufacturers achieve a more competitive position” (p. 18) can be seen in Figure 2.1.

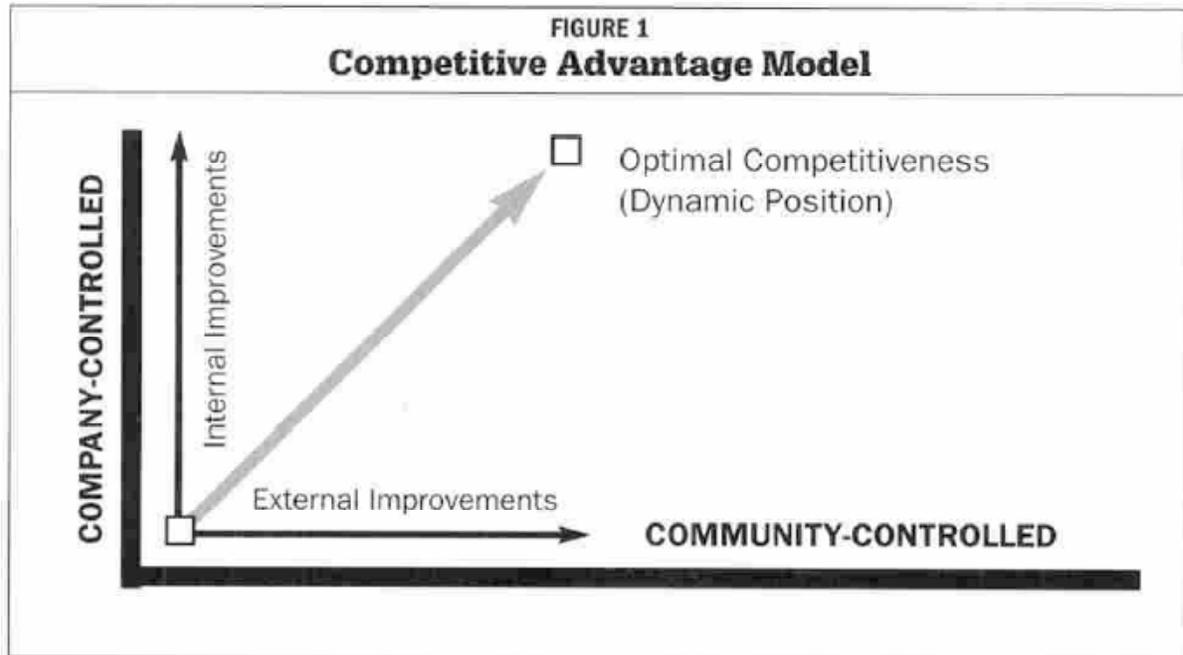


Figure 2.1: Conceptual Framework

Source: Hines, B. & Clark, S. (1997). The competitive advantage model: The case of business retention and expansion in Bowling Green, Ohio. *Economic Development Review*, 15(1), 18-22.

This model separates factors of competitive advantages into two categories: company-controlled and community-controlled. Company-controlled drivers include: price, quality, delivery, branding, location of facility, number of vendors, services offered, and transportation systems. These drivers are things that manufacturers can continually update and improve through innovation in production processes, marketing, and/or service techniques. Community-controlled drivers include: taxes, fees, labor force availability, cost of raw materials, energy costs, and trade legislation. These external drivers are controlled by the government and economic arenas. Because firms cannot change these variables, they must learn how to adapt their businesses in such a way that these potential obstacles become

opportunities. Company-controlled and community-controlled factors are depicted in Figure 2.2.

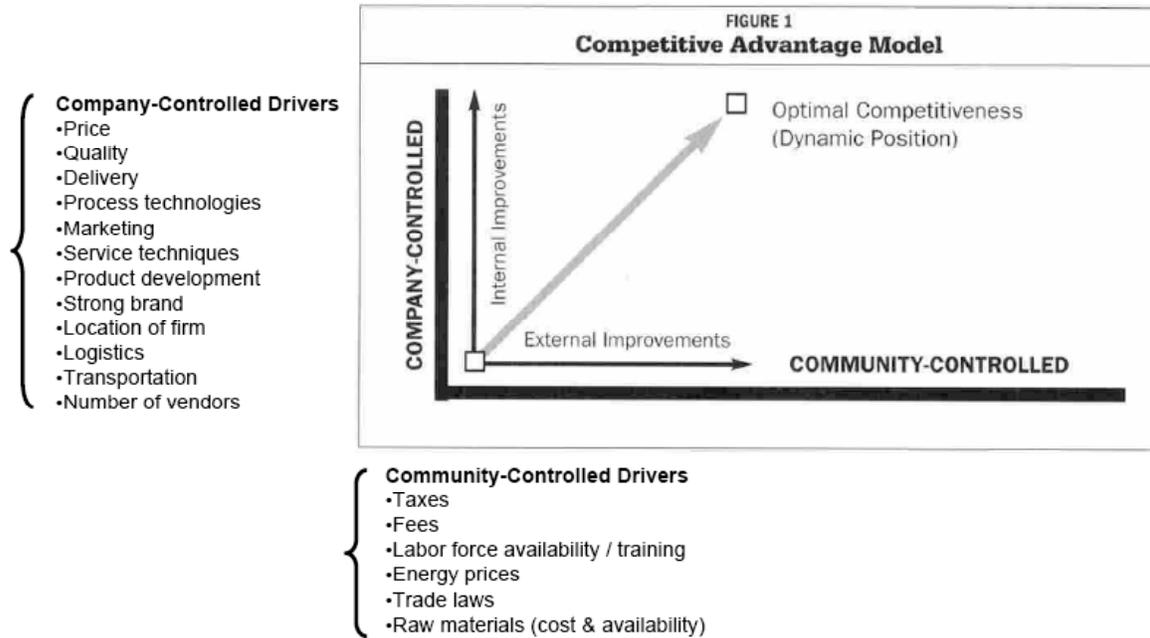


Figure 2.2: Expanded Conceptual Framework

Adapted from: Hines, B. & Clark, S. (1997). The competitive advantage model: The case of business retention and expansion in Bowling Green, Ohio. *Economic Development Review*, 15(1), 18-22.

Supply Chain Dynamics

Every process needed to transform a raw material into a finished good in the hand of a consumer is included in a supply chain. Balsmeier and Voisin (1996) explain that the supply chain includes a network of physical facilities, the technology and processes of transforming raw material into finished goods, and a method for moving material from one facility to the next in the supply chain – extending from the raw material stage to the end

customer. Traditionally, textile firms have ended their supply chain with a finished good. However, by extending the supply chain to include retailers, final consumers, and even follow-up service, textile firms may be able to better understand market demands and respond accordingly. Feller, Shunk, and Callarman (2006) believe that the primary focus of supply chains is to reduce costs by increasing the efficiency of the supply and flow of materials between members. By minimizing physical exchanges, lead-times and cost will decrease, thus increasing productivity.

Supply Chain Linkages

One way the physical exchange of goods can be decreased is through the creation of strategic partnerships. Balsmeir and Voisin (1996) give extensive insight into these linkages between firms. Forming strategic partnerships streamlines a firm's supply chain by establishing stronger relationships with a smaller number of suppliers and customers. This creates a shared responsibility among the involved firms for the success of the product. In order for strategic partnerships to succeed, it is crucial for all firms to have a shared strategic vision. By working together, members of the supply chain share the responsibility of efficient production as opposed to pressuring each other to perform better to make up for another firm's shortcomings.

When creating strategic partnerships there are many components that need to be fulfilled, including: full commitment of top management, technological skills and resources, changes in organizational structure and culture, change of adversarial attitude of the customer/supplier relationship to one of mutual trust, and development of commonly agreed upon performance measures. Receiving full support from management is crucial to the

success of strategic partnerships. Top managers have the capacity to clearly define the vision, strategy, and culture for their organization and then form a successful supply chain based on these attributes. Trust is also very important to the success of strategic partnerships. Companies must shift their mindset from seeing other firms merely as competition to partners with a common goal and begin to employ their core competencies for mutual gain.

In order to strengthen the competitiveness of strategic partnerships, Balsmeier and Voisin (1996) recommend focusing efforts on improved communication, clarification of needs and expectations, elimination of problems and concerns, consistent performance, and the creation of competitive advantages. It is crucial for all members of the alliance to develop a standard for acceptable quality. When upstream manufacturers produce goods that are consistent, downstream purchasers are able to reduce time and costs of excess inspection and quality control of incoming products. Ideally, all levels of the supply chain will have real-time access to information concerning other firms. With increasing information technology, it becomes easier for firms to strengthen communication among themselves by providing accurate data in a timely manner. Furthermore, it is important for firms to have open communication and be able to trust the other partners. This in turn, further strengthens the relationships and enables parties to learn from each other's competencies and experience. When a specific set of firms work together closely, core competencies emerge and they are able to pool their strengths and capitalize on their shared abilities instead of competing against each other.

Some challenges that may face strategic partnerships include soliciting full support from top management and the creation of a complex network to manage. Balsmeier and

Voisin present six potential obstacles when forming a global supply chain: lack of shared vision, culturally frozen beliefs, no shared sense of urgency, lack of a champion, lack of appropriate skills for the reinvented business, and not enough visible involvement by senior management. By addressing these issues at the formation of a strategic partnership, firms can strengthen their supply chain and enjoy a successful business relationship.

Supply Chain Management

The idea of supply chain management (SCM) emerged in the 1980's as a new integrative philosophy to manage the total flow of goods from suppliers to the ultimate user (Feller, Shunk, & Callarman, 2006). It has since evolved to include a broader integration of business processes along the chain of supply. The key of SCM is the idea that the supply chain is managed as a single entity instead of a group of disparate functions. Balsmeir and Voisin (1996) add that SCM is a strategy that integrates multiple organizations' objectives, thus increasing the efficiency of the entire supply chain.

According to the Supply Chain Resource Cooperative (SCRC) at North Carolina State University (2000), there are two types of flows that hold the supply chain together: physical flows and information flows. Physical flows consist of the production, transportation, and holding of goods produced. All of these activities are tangible and relatively easy to measure. Information flows enable the members of the supply chain to communicate their goals and objectives as well as facilitate the continual movement of goods up and down the supply chain.

In order for SCM to be most effective, it is important that top management strongly support and implement the strategic plan. Active management of functions in a supply chain

helps to increase customer value and attain a sustainable competitive advantage (SCRC, 2000). Furthermore, managers across firms should cooperate to establish expectations of quality and communication between firms as well as ensuring the necessary information systems are in place to facilitate these goals. This will aid the supply chain in achieving success as a group as opposed to individual entities.

Three major developments have led to the increase in SCM: the information revolution, increased competition and globalization in today's markets, and relationship management. Advances in technology, including personal computers and the Internet, allow information to be shared easily and quickly. Furthermore, instantaneous communications have enabled information systems that can link together all members of a supply chain regardless of their geographic location, including the end consumer. These advances in information technology have led, in part, to the globalization of industries. In order to remain competitive, managers are currently striving to increase their presence in the global market. Customer demands are ever increasing while product life cycles are becoming shorter. All of these factors combined require a great deal of synchronism between the firms in a supply chain, both in strategy and performance. Finally, in order to maintain the complexities of a global supply chain, it is crucial for managers to pursue strong relationships with other firms. This requires a great deal of effort, but is necessary to remain competitive.

Value Chain Dynamics

In order to strengthen their customer loyalty and perhaps gain power within their supply chains, managers are turning to the idea of value-added activities. Yucesan (2007) defines value as a customer's willingness to pay (WTP). This willingness reflects the

benefits perceived by the customer. Willingness to pay is the maximum amount that a customer would pay for a specific good or service. This is often a different amount than the actual price. Therefore, the value created within the supply chain is the difference between a product's cost and a consumer's WTP.

While the goal of a supply chain is to reduce costs, the goal of a value chain is to generate profit. Feller, Shunk, and Callarman (2006) explain how supply chains and value chains flow in opposite directions. In a supply chain, the focus is on the most efficient and cost-effective way for a good to be delivered to the consumer. Value chains, on the other hand, recognize that value ultimately flows from the customer and seek to structure their operations in a way that will deliver the value in demand. Ultimately, managers seek to increase the margin between production cost and customer perceived value. This can be achieved in two ways: decrease production costs or raise consumers' perception of actual product value. Adding value to goods often includes a stronger focus on innovation in product development and marketing.

Convergence of Supply and Value Chains

It may seem that supply chain and value chain are two opposite entities. However, many scholars believe that there is actually a convergence taking place. Feller, Shunk, and Callarman (2006) believe that creating a profitable value chain requires alignment between what the customer wants and what is actually produced by the supply chain. By understanding perceived customer value, companies can organize their supply chains in such a way that goods produced will be what consumers demand. Walters and Rainbird (2007) explain that there is an interdependent relationship between supply and demand. Companies

much understand what customers value before they can create future demand and meet a high level of customer satisfaction. On the other hand, companies must also have a clear understanding of their supply-side capabilities that will support this demand. Chandra and Kumar (2000) recognize that progressive firms are now focusing on revenue growth instead of simply aiming to achieve annual goals in cost reduction. Instead, they are strengthening management of the supply chain in a way that enhances customer satisfaction and enables profitable growth. The result is an emergence of a third generation SCM that is focused on customer intimacy and a synchronized supply chain where consumers have the power to pull value (Feller, Shunk, and Callarman, 2006). We want to know how textile firms can pull this value in order to better meet customer demand.

Value Chain Conceptual Framework

Frederick (2008) has developed a framework that depicts this convergence of supply and value chain. Figure 2.3 is a graphical depiction of how manufacturers can integrate value-added activities into the supply to create a stronger standing and gain more power in the market. Supply chain represents the backbone of this framework. It is divided into five stages: inputs, textile manufacturing, textile products (outputs), distribution and sales, and textile markets. These have been broken down even further to provide clarity of the processes included in each stage. Across the top of this framework are the value-adding activities, including: research and development, design, production, logistics, marketing, and services. These are activities that firms can do in order to raise the consumers' perception of value in the finished product. Finally, Frederick recognizes the importance of a supporting environment. These factors include: utilities, finance, government resources, testing and

training facilities, trade and professional associations, and colleges and universities. These are institutions that can aid companies in further developing and producing goods that meet consumer demand.

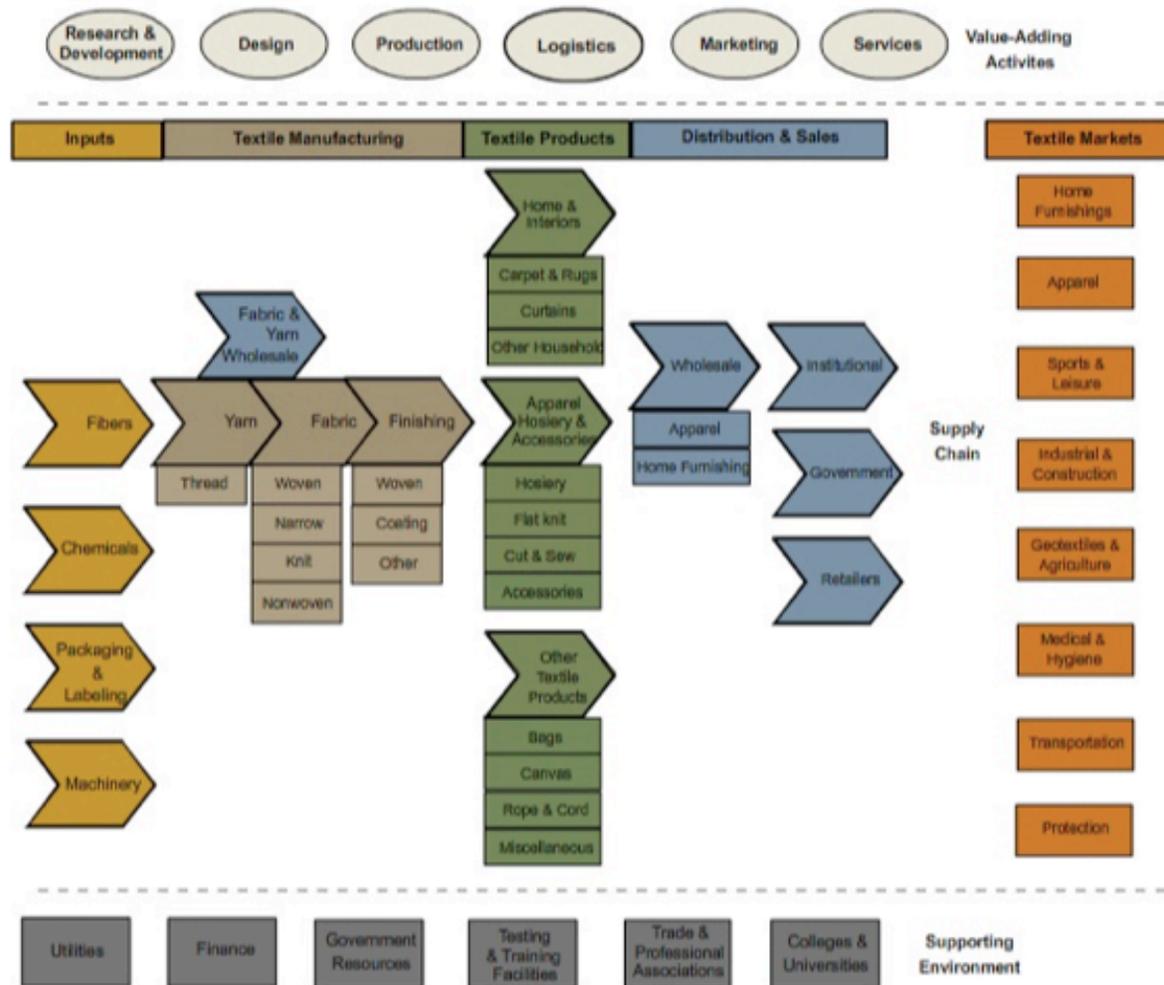


Figure 2.3: Frederick's Value Chain

Source: Frederick, S. (2008). A new model for analyzing, visualizing, and connecting the textile value chain in the "new world of textiles". *Textile Futures*.

This framework will be a useful tool as analyses are performed among existing supply chains in U.S. textile firms.

Shift of Power within the Supply Chain

Currently, there are a variety of ideas that suggest how upstream members of a supply chain can gain power. These include: creating a pull strategy, value-added activities, higher awareness of customer demands, and new product development. Kotler and Keller (2009) explain the difference between a push and pull strategy. In a push strategy, the manufacturer uses his own sales force or budget to encourage intermediaries to stock, promote, and ultimately sell their good to the end consumer. This is often used when there is low brand loyalty which often means the choice to purchase is made in store. A pull strategy occurs when the manufacturer creates an advertising campaign that communicates directly to the consumer in hopes that they will in turn demand the good from local intermediaries. This is possible when the brand is well recognized and enjoys high brand loyalty. One way that manufacturers can increase loyalty to their specific offerings is through value-added activities. As discussed before, these activities have the ability to create a perception of higher value to the consumer which differentiates products from others in a similar market or from commodity goods, thus increasing demand.

In order to strengthen brand loyalty using value-added activities, the manufacturer must have a high awareness of actual customer demand. Balsmeier and Voisin (1996) believe that knowing what features the consumer wants should have priority above speed, quality, and price considerations. If you are able to produce a quality good at a low price point in a short lead-time but it is not what the customer wants, then all those other factors

become irrelevant. Kotler and Keller (2009) display the importance of customers to manufacturers by flipping the traditional organizational chart upside down. In Figure 2.4, you can see how customers went from the bottom of the structure to the top and sides; they have become the focus of all members of the firm.

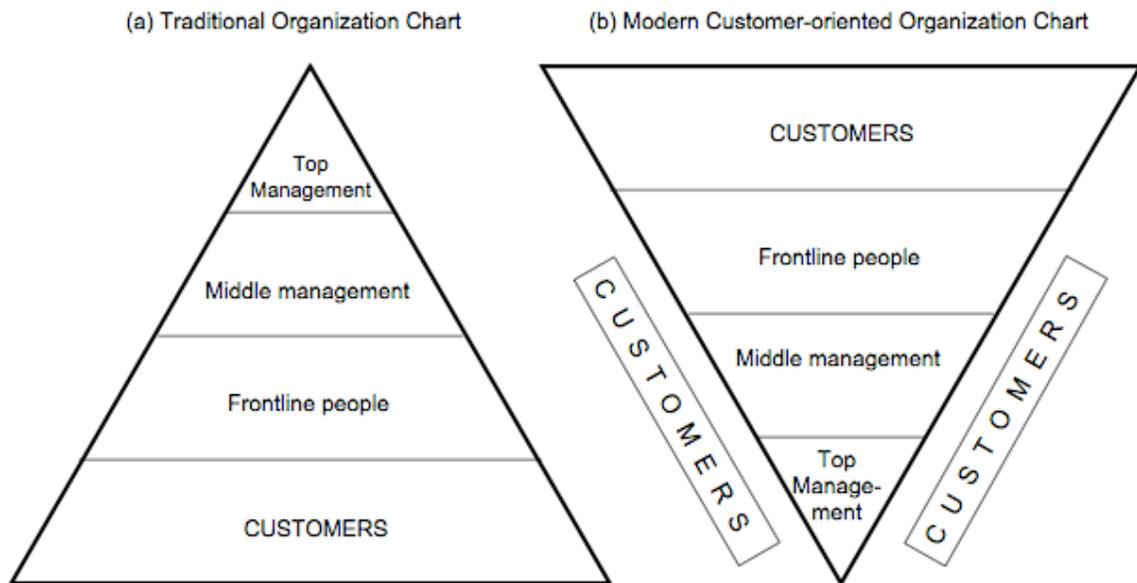


Figure 2.4: Kotler and Keller Organizational Chart (2009)

Source: Kotler, P. & Keller, K. L. (2009). *Marketing management* (13th ed.). New Jersey: Pearson Prentice Hall.

Immediately below the customers are the frontline people. Their task is to interact with customers on a personal level and ensure their satisfaction. Middle managers can be seen next in the chart, and their charge is to support the frontline so that they can continue to serve

customers well. Top managers become the base and support of the entire structure. It is their responsibility to hire, train, and support good middle managers. The depiction of customers along the sides of the structure is a representation of the belief that all members of a firm must keep customer interests at the forefront of their mind and pursue relationships with these individuals. Customers today have high standards and expectations in the retail marketplace. By stepping up to this level and even stretching it further, manufacturers can gain a competitive advantage over other firms.

Finally, manufacturers can gain power in the supply chain by developing innovative product offerings. In today's market, retailers have large influence and will often present the designs for goods they want produced to the manufacturers. In turn, manufacturers compete on price, quality, and speed to acquire the job. However, it is believed that by offering their own creative products, manufacturers can regain some power back from retailers. Feller, Shunk, and Callarman (2006) stress the practicality of product design. They urge firms to remember that designs should align with current production capabilities and supply chain restraints. Furthermore, customer demand should be a forefront of the design and should embrace a holistic view of the product life cycle. These are some of the ways that manufacturers are currently gaining influence within supply chains.

Retail Stores

According to Kotler and Keller (2009), "retailing includes all the activities in selling goods or services directly to final consumers for personal, nonbusiness use" (p. 442). These are strong establishments and can exist in a variety of forms including store, nonstore, and retail organizations. There are many current issues relevant to the retail industry. Increases

in production of commodity goods are leading manufacturers to differentiate their products by increasing value-added features. This is intensifying competition in the marketplace. In addition, increases in costs among raw materials such as energy and oil are causing input costs to rise. This rise of input costs in combination with increasing competition causes margins to drop. Furthermore, consumers are also affected by these rising costs of petroleum and are experiencing lower levels of disposable income. Retailers are also affected by additional costs that rise as a result of expanding environmental regulations. These issues certainly present challenges to retailers today (Datamonitor – Global Retailing, 2008).

Current Trends in Retailing

Kotler and Keller (2009) offer seven trends they see emerging in the retail business. First, there is a rise of *new retail forms* and combinations. Consumers are seeing bank branches in supermarkets and coffee shops in bookstores. Department stores are even establishing partnerships with branded goods wherein they “rent” space to other companies who are then responsible to stock, staff, and sell merchandise in that area. This creates lower gross margins for the store, but also lowers operating costs. A second trend is the *growth of intertype competition*. Traditionally, supermarkets competed amongst themselves and department stores competed amongst themselves. However, today you see competition between department stores and discount stores. Consumers are willing to trade in the department store experience if they feel that quality goods are available at lower prices. Another trend developing is the *competition between store-based and non-store-based retailing*. The continued maturity of the internet increases customer use of and dependence on e-commerce. The fourth trend is *growth of giant retailers*. Large retailers are able to

dictate to manufacturers which products to make, how to make them, how to price and promote them, when and how to ship, and even offer suggestions to improve production and management strategies. These retailers have an extremely large amount of influence over manufacturers which can be intimidating to smaller firms. The fifth trend is the *decline of middle-market retailers*. Today growth is seen at the top of the market in luxury goods and specialty stores and at the bottom of the market structure in discount retailers such as Target and Wal-Mart. A *growing investment in technology* is the sixth trend. Retailers are able to keep track of their inventory and sales with extreme precision using new information systems. Finally, major retailers are increasing their *global retailers*. It is becoming more common to see Western stores around the world, and the demand for these branded products continues to increase. Textile firms would be wise to examine these seven trends and identify opportunities for their own growth and integration into the global marketplace.

This study will examine supply chains across three retail sectors: discount retailers, department stores, and specialty stores.

Discount Retailers

Discount retailers offer a wide selection of goods at a lower price point. They tend to experience high-volume, low-margin sales. Berman and Evans (2007) offer a more expanded definition. These stores offer average- to good-quality merchandise at competitive prices. Recently, firms have strived to improve customer perception of their stores by updating their image and offering higher levels of service. In general, discount stores tend to be smaller than department stores, but the sales per square foot are often higher, thus improving productivity. Datamonitor reports that consumers have turned to discount stores

during the current “economic slump” to purchase branded goods at lower prices. Some of the current challenges facing discount stores include: competition from other retailers, too rapid expansion of some firms, saturation of prime locations, and the dominance of Wal-Mart, Kmart, and Target stores (Berman & Evans, 2007).

Department Stores

Department stores are one of the most common types of retail store. “A department store is a large retail unit with an extensive assortment of goods and services that is organized into separate departments for purposes of buying, promotion, customer service, and control. It has the most selection of any general merchandise retailer, often serves as the anchor store in a shopping center or district, has strong credit card penetration, and is usually part of a chain” (Berman & Evans, 2007, p. 144). Furthermore, department stores offer a wide range of products, including: apparel, furniture, appliances, home furnishings, paint, hardware, toiletries, cosmetics, photo equipment, jewelry, toys, and sporting goods. There is usually no one merchandise line that dominates the others. Today, department stores are improving their strategic position in the marketplace to gain customers. They are building stores in the centers of cities as well as in suburban shopping centers closer to higher-income families. In addition they are updating merchandise more often, remodeling existing stores, introducing their own private labels, and increasing market penetration by using catalogs, websites, and phone services (Kotler & Keller, 2009).

In an effort to differentiate themselves from other retailers, department stores are demanding exclusive lines and proprietary products. By offering items that are only available in one location, these stores are hoping to secure customer loyalty. One specific

way department stores are achieving this exclusivity is through the development of diffusion brands. These are labels created by high-end designers at more affordable prices. Some diffusion brands include: Nicole by Nicole Miller, Liz & Co. by Liz Claiborne, Oscar by Oscar de la Renta, Simply Vera by Vera Wang, and American Living by Polo Ralph Lauren. One drawback of demands for individual lines is that they may reduce the ability for manufacturers to achieve economies of scale in design and production, thus resulting in higher costs of production. (Driscoll, 2008).

Specialty Retailers

Specialty stores offer a smaller selection of goods and have a specific target market. A specialty store “usually carries a narrow but deep assortment in the chosen category and tailors the strategy to a given market segment” (Berman & Evans, 2007, p. 142). By offering a tailored selection, these stores are able to offer sales expertise which is not available in department stores, their main competitors. Consumers shop at specialty stores because of the superior customer service, variety of choices within a specific product category, welcoming store atmosphere, fewer other customers and the lack of unrelated merchandise (Berman & Evans, 2007). Specialty stores are performing well in today’s market with a sales forecast of \$8,933.4 billion for 2011. This is a 28.9% increase since 2006 (Datamonitor – Global Specialty Retail, 2007).

Some specialty retailers are now vertically integrated. This model incorporates the roles of a traditional wholesaler such as design, sourcing, and marketing with the competencies of a retailer. These additions include merchandise buying and allocation as well as store operations such as real estate site selection and labor scheduling. By combining

these roles, specialty stores are able to deliver products to the customer more efficiently. Furthermore, national apparel wholesale brands often support their brand by spending 3% to 5% of sales on advertising and marketing. Vertical apparel brands are able to achieve sufficient exposure simply by changing their storefront windows. These are often changed weekly as new merchandise arrives in stores (Driscoll, 2008).

Retail Supply Chains

According to Ayers and Odegaard (2008), retail supply chains are distinctive because of four main functions they carry out. The first unique function of retail supply chains is to provide an assortment of products from which the customer can choose. This requires a variety of suppliers to provide a range of goods. Secondly, retailers buy in large quantities which are in turn broken down and sold in more consumable sizes. Third, retailers tend to hold inventory in close proximity so that they are able to better meet consumers' needs. Finally, retailers offer services that help enhance the perceived value of the product in the eyes of the consumer. These services can include gift wrapping, credit, alterations, and repair services. Because of these unique activities, retailers require multi-faceted supply chains.

Figure 2.5 depicts six basic requirements for a retail supply chain, from right to left: customers or end-users, retailers, distributors, original equipment manufacturers (OEMs), first-tier suppliers, and second-tier suppliers. Second-tier suppliers can be located in domestic or international markets. One crucial category that is not included in this model is the service providers. These can include: warehouse operators, transportation companies, trading companies, and customs brokers. These service providers are important because they

act to connect the firms within the supply chain. Although supply chains for individual retailers will take on different forms, it is most likely that they will maintain these seven components (Ayers, & Odegaard, 2008).

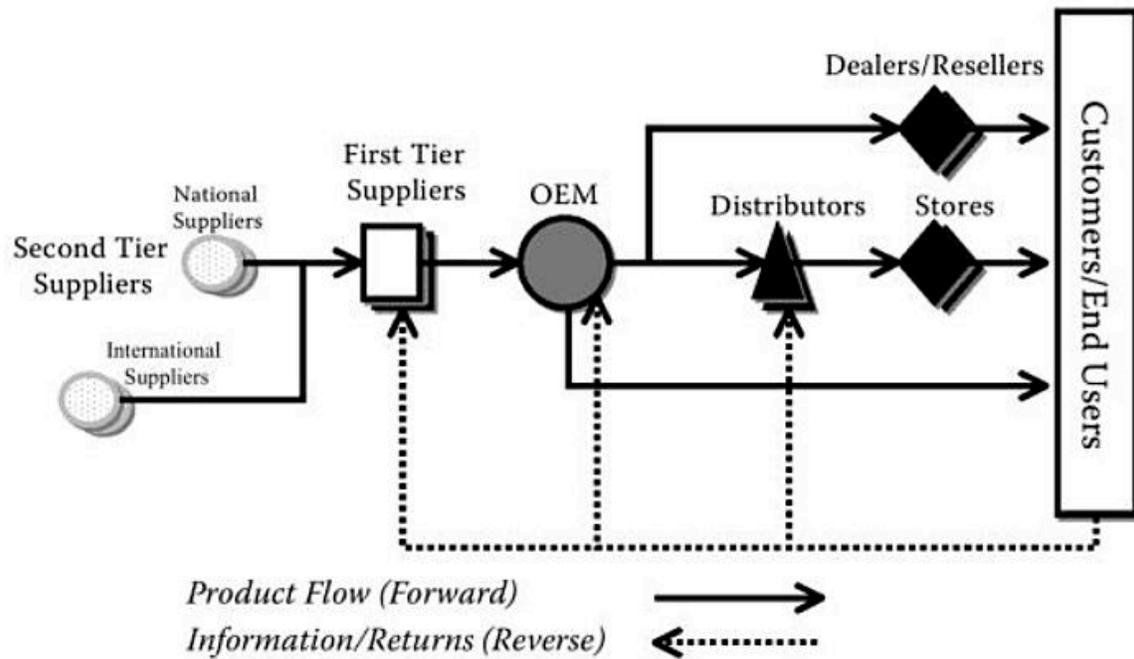


Figure 2.5: Retail Supply Chain

Source: Ayers, J. B., & Odegaard, M. A. (2008). *Retail supply chain management*. New York: Auerbach Publications.

Drivers of Retail Supply Chains

Supply chains are continually evolving in order to remain viable in the current market. Understanding the drivers that cause these changes can help supply chain members

better understand how to prepare for future transitions. By acknowledging drivers, managers can better identify and address important issues that could increase their successfulness (Ayers, & Odegaard, 2008).

Ayers and Odegaard (2008) present six current drivers that they predict will have the largest impact on retail supply chains. Innovation is the first driver. This incorporates technical advances in both products and processes. These new developments could require new suppliers or distribution channels. Extended product design refers to the necessity for features or services beyond the base product. For example, if a computer is the base product, then a mouse would be an extended product. These items are not always able to be produced by the same supply chains causing a need for adjustment. Globalization is the third driver to be discussed. Today sourcing and selling across international borders is very common. For retail supply chains this effects trade for raw materials, manufacturing, distribution, marketing, and sales. The next driver is the flexibility imperative. Supply chains that are able to respond quickly and efficiently to market and technology changes certainly have an advantage over those who are slower to adapt. Some areas that may require flexibility include: product mix, volume, base product design, and extended product features. The process-centered management driver consists of a focus on multicompany business processes for designing or improving organizations and systems. In other words, this driver is managers who focus on end-to-end processes instead of local processes at individual firms within a supply chain. It is crucial that the supply chain be viewed as one whole entity as opposed to multiple members. Finally, collaboration is a significant driver of retail supply chains. By examining end-to-end processes, managers must take note of intra- and

intercompany cooperative efforts to meet mutual goals. Information sharing is a very large component of collaboration. When members of a supply chain have a common goal and are sharing information effectively, they can greatly increase their chances of success (2008).

Hines and Clark's (1997) conceptual framework used for this study also presents many drivers that impact the success of retail supply chains. These are divided into community-controlled and company-controlled factors. Community-controlled factors are determined by the environment in which the company operates and include: energy prices, trade laws, cost and availability of raw materials, taxes, duties/fees, and labor force availability. Company-controlled factors are things that individual companies can do to improve their supply chain competitiveness. These drivers include the following: price, quality, delivery, branding and marketing, number of vendors, process technologies, services offered, mode of transportation of goods, and location.

National Brands

According to the American Marketing Association, a brand is a “name, term, sign, symbol, or design, or a combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competition” (<http://www.marketingpower.com>). Most individuals associate a certain reputation of performance or characteristics with a specific brand. There are many functions that a brand can have for a firm, including: form of identification used when handling or tracing a product, help organize inventory and accounting records, and offer legal protection for certain aspects of product or manufacturing process (Keller, 2005). National branded

products are sold in multiple stores while a private label is only available in one specific retail store.

Private Labels

Private labels are new brands that are developed by retail stores in order to achieve higher margins and distinguish themselves from other stores with similar product mixes. Some stores use private labels for opening price points on basic items, such as sweaters, knits, pants and home furnishings. However, other retailers take a more daring approach and create private labels for fashion forward categories including juniors, young men's and kids, intimate apparel, and footwear (Ryan, 2004). In order to be more competitive, private labels are continuing to improve product quality and design (Keller, 2005). Retailers sometimes use well-known designers such as Isaac Mizrahi (Target) or Nicole Miller (J.C. Penney) to develop their private labels in order to promote quicker brand recognition and acceptance (Casabona, 2006). On average, margins for private labels are 6 – 10 percent higher than those achieved on national brands (Ryan, 2004). Private labels currently tend to make up 15 – 20 percent of a store's product mix, but that number is expected to continue to increase as retailers see opportunities in the marketplace.

Lifestyle Marketing

In today's market there has been a shift of focus from product categories to lifestyle segmentation. Lines between customer segments has blurred to the extent that it is difficult to distinguish between gender, ethnic, age, income, level of education, and occupation buying patterns. Therefore, the idea of lifestyle marketing has emerged. A relatively new concept, lifestyle marketing allows firms to develop a more realistic profile of its customers.

The ability of firms to collect extensive data about their customers has enabled this transition. Checkout scanners, memberships, and frequent buyer programs all help retailers acquire information about their customers' buying habits. "Lifestyle marketing pinpoints the way in which an individual lives and spends money" (Michman, Mazze, & Greco, 2003). When performing a lifestyle analysis, it is important to include factors such as consumers' activities, interests, and opinions. Activities include sports, work, entertainment, and hobbies. Interests can include topics such as job, house, family, fashion, and food. Opinions take into consideration social issues, politics, education, business, and outlook on the future. These factors combined with demographics such as age, occupation, income, education level, geography, and stage in the family life cycle can help marketers better target their customers (Michman, Mazze, & Greco, 2003).

Some companies today develop their own image of a lifestyle they want to convey. They then develop an assortment of products that consumers can purchase which will help them attain this lifestyle. Therefore, instead of simply advertising their product offering, they are advertising a new way of life. For example, Tommy Bahama claims to be the "purveyor of the island lifestyle" (www.tommybahama.com). They sell shirts with tropical prints, crisp linen pants, sunglasses, residential furniture, outdoor furniture, rugs, and even their own rum. By purchasing this wide range of products with this brand, consumers are led to believe they can attain the way of life that is presented. The idea of lifestyle branding associates a certain trade name with a way of life that appeals to the consumer.

Polo Ralph Lauren is a company that has excelled in lifestyle branding. Mr. Lauren has a very clear image of the lifestyle he wants to portray, and he has gone to great lengths to

make that lifestyle accessible to individuals of all income levels. There are free-standing Polo Ralph Lauren and Rugby stores in addition to outlet stores. He just recently introduced his new line, American Living, in J.C. Penney stores nationwide. This brand evokes a sense of heritage and durability with clean plaids, smooth leather, and luxurious wood grain. Polo Ralph Lauren can be seen on items including clothing for all ages, shoes, perfume, linens, towels, decorative home accessories, and even paint. Keeping his vision constant over many years and continuing to offer a wide variety of quality goods, Mr. Lauren has built a very successful lifestyle brand (Brodie 2007).

Market Analysis

Retail Industry

In 2007, the global retail industry generated total revenues of \$9.1 trillion (Datamonitor – Global Retail, 2008). Retail sales experienced decline in 2007 and continued into early 2008. Increases in food and energy costs in addition to decreasing home values and a weakening credit market have markedly reduced consumers' disposable incomes. This decline has had varied effects on activewear, denim jeans, and upholstered furniture categories.

Activewear

Despite lower sales in other areas, sports apparel seems to be a growing market. This is the result of a variety of drivers. First, there is a growing population of sports enthusiasts in a wide margin of ages. Second, many brands have added perceived value to their products by introducing performance characteristics such as wicking or antimicrobial properties. This focus on performance reduces the importance of fashion and increases the opportunity for

strong brand equity. Another reason activewear is selling is due to relatively low prices. Finally, athletic apparel is now commonly being worn for nonathletic occasions. For example, clothing that is acceptable for the gym is also appropriate for coffee shops and grocery stores (Driscoll, 2008).

One successful strategy for sports apparel has been the introduction of high-end designers who deliver a sense of fashion to this category. Puma has enlisted designers Alexander McQueen and Philippe Starck, and Stella McCartney has completed multiple lines for Adidas. These well-known names attract customers who might not otherwise be interested in purchasing athletic apparel (Driscoll, 2008).

Due to the current growth in activewear sales, many specialty retailers are expanding their product mix to include these items. Limited Inc now offers a line of sports apparel and yogawear under their Victoria's Secret brand, Bebe Sport has opened approximately 55 stores, and J.Crew has added yoga gear to their product mix. Furthermore, apparel companies are investing in athletic apparel specialty retail stores. For example, VF Corp. recently acquired Lucy Activewear Inc, which consists of 65 lifestyle specialty stores.

Denim Jeans

Denim continues to be a multi-billion-dollar global industry. It is currently available in virtually every retail channel and at every price point. In order to ensure its continued success, many companies are continuing to offer innovation in both product design and performance. Cotton Incorporated recently introduced denim woven with s-twist yarns which create atypical surface characteristics. They have also developed the STAY TRUE COTTON™ finish which helps darker denim maintain its original color for a longer period

of time (New Twists, 2007). Some denim jean brands are introducing exclusive lines by well-known designers in an attempt to attract and maintain customers. The U.S. market continues to provide strong demand for denim jeans, however there appear to be growth opportunities in emerging middle-class markets in countries such as China and India.

Upholstered Furniture

Furniture sales in the U.S. generally correlate with the U.S. housing market. The U.S. housing market is influenced by current interest rates, consumer confidence, and employment trends (Leon, 2008). Due to the current economic slump, fewer houses are being purchased, and therefore, residential furniture sales are in decline. In order to stay competitive, some furniture manufacturers are closing domestic plants and shifting production overseas. Another struggle for U.S. furniture manufacturers is that many discount retailers are improving their upholstered furniture product mix which causes many customers to shift their purchases to these stores, forcing smaller furniture retailers to close their doors. One way furniture manufacturers are fighting this shift is by opening their own retail locations. By handling their own design, production, and distribution, middlemen costs are eliminated and furniture companies are able to achieve higher profit margins (Leon, 2008).

CHAPTER III
RESEARCH METHODOLOGY

Research Statements

The purposes of this research study were to:

5. Perform an analysis of existing U.S. textile supply chains for manufacturers of upholstery fabric, denim jeans, and activewear (synthetic knit tops);
6. Identify both qualitative and quantitative effects of specific drivers on textile supply chains;
7. Determine supply chain structures for apparel and home furnishings goods in three distinct retail channels: discount, specialty and department stores; and
8. Identify what supply chain linkages exist between manufacturers and retailers and what linkages are missing

The primary objectives were to collect data from a sample of major U.S. textile and apparel retailers and U.S. textile and apparel manufacturers as seen below.

- RO1. Determine the supply chain structures that are being used for upholstery fabrics, denim jeans, and activewear (synthetic knit tops) in three retail channels:
- D. Discount retailers
 - E. Specialty retailers
 - F. Department stores
- RO2. Identify what supply chain linkages exist between manufacturers and retailers and what linkages are missing.
- RO3. Identify the effects of specific drivers on textile supply chains

3. Company-controlled factors
 - a. Efficiencies of production (price, quality, delivery)
 - b. Branding and marketing
 - c. Services offered to customer
 4. Community-controlled factors
 - a. Energy prices
 - b. Trade legislation
 - c. Labor force availability
- RO4. Perform an analysis of existing U.S. textile supply chains for manufacturers of upholstery fabric, denim jeans, and activewear (synthetic knit tops).

Research Design

Strategy

Mixed Methods

During primary and secondary data collection, this research will obtain both numeric information (quantitative data) and text information (qualitative data). This combination constitutes the mixed methods procedure. The mixed methods approach was developed in order to provide a structure that could manage the complexity of combining two vastly different data types within one program of study. Originating in 1959, this strategy was initially used to study the validity of psychological traits (Creswell, 2003). Many researchers believe that this method helps to eliminate biases that naturally occur in the utilization of any one strategy by acting as a balance. A mixed methods approach utilizes both predetermined and emerging methods, open-end and close-ended questions, multiple forms of data collection, and statistical and text analysis (Creswell, 2003). Furthermore, this methodology will allow the research to better understand the effect of quantitative components such as energy cost and production prices and their impact on a qualitative concept of supply chain configurations.

Figure 3.1 is a visual depiction of the criteria for choosing a mixed methods strategy for data collection. ‘Implementation’ refers to the decision of whether qualitative or quantitative data will be collected first, or if they will be collected at the same time. ‘Priority’ determines whether qualitative or quantitative data will receive a stronger emphasis, or if they will be considered equally. ‘Integration’ depicts at which point the quantitative and qualitative data will be combined for analysis. ‘Theoretical Perspective’

incorporates the idea that a larger, postulatory frame of reference may be used to guide the entire design of the project (Creswell, 2003). For this research, there will be concurrent implementation and equal priority of qualitative and quantitative components. In addition, these data will be integrated at data collection and maintain an explicit theoretical perspective.

Implementation	Priority	Integration	Theoretical Perspective
No Sequence Concurrent	Equal	At Data Collection	Explicit
Sequential Qualitative First	Qualitative	At Data Analysis	
		At Data Interpretation	Implicit
Sequential Qualitative First	Quantitative	With Some Combination	

Figure 3.1: Decision Choices for Determining a Mixed Methods Strategy of Inquiry

Adapted from: Creswell, J. W. (2003). *Research design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, California: Sage Publications, Inc.

When using the mixed methods technique, one begins with a research goal and subsequently develops research objectives and purpose (Collins, Onwuegbuzie, & Jiao, Q. G., 2006). Figure 3.2 depicts the linear steps in the sampling process.

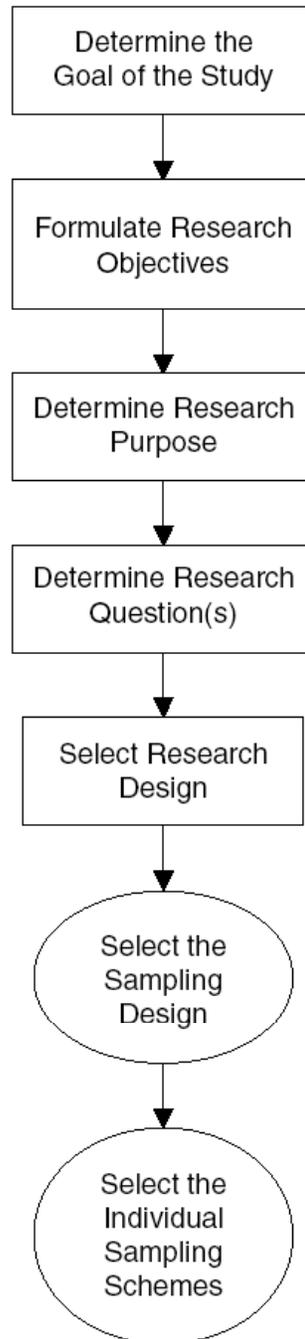


Figure 3.2: Steps in the mixed-methods sampling process

Source: Collins, K. M. T., Onwuegbuzie, A. J., & Jiao, Q. G. (2006). Prevalence of mixed-methods sampling designs in social science research. *Evaluation and Research in Education*, 19(2), 83-101.

Concurrent Triangulation

In the concurrent triangulation approach, quantitative and qualitative data are collected during the same phase of the research study. This strategy is often used “as a means to offset the weaknesses inherent within one method with the strengths of the other method” (Creswell, 2003, p. 217). Figure 3.3 demonstrates how data are collected at the same time and will be compared during the data analysis phase.

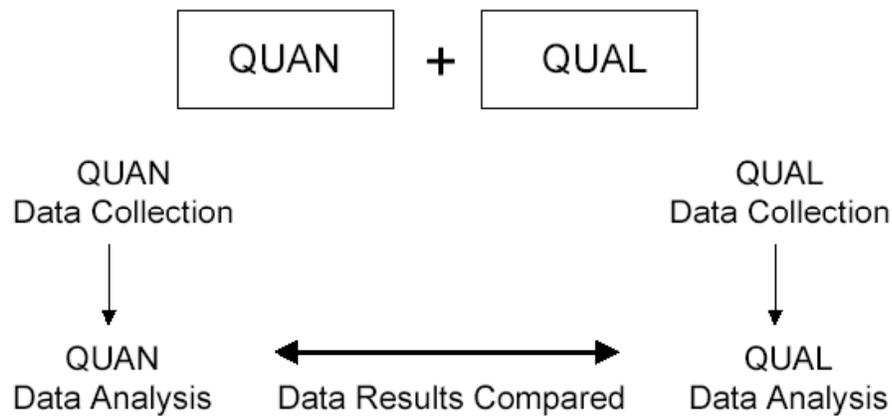


Figure 3.3: Concurrent Triangulation Strategy

Adapted from: Creswell, J. W. (2003). *Research design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, California: Sage Publications, Inc.

Inductive and Deductive

Because this study used qualitative and quantitative data it was important to employ both inductive and deductive research phases. The inductive phase, illustrated in Figure 3.4, was used to gain a better understanding of the data currently available so that a general

theory could then be developed. Once a theory has been proposed, the deductive phase is used to verify the theory which is illustrated in Figure 3.5 (Creswell, 2003).

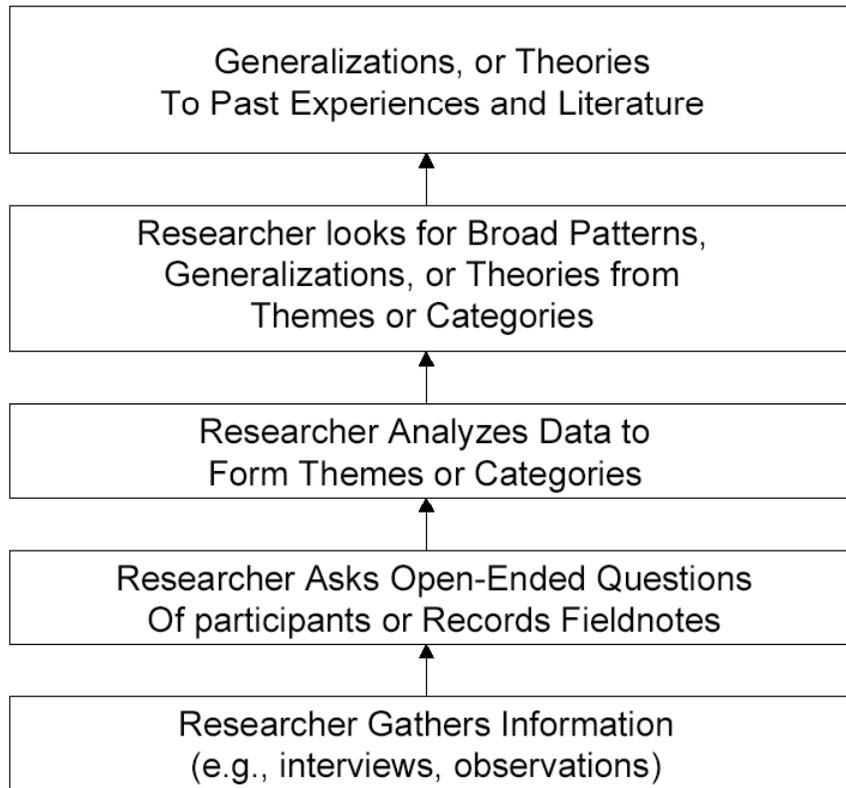


Figure 3.4: The Inductive Logic of Research in a Qualitative Study

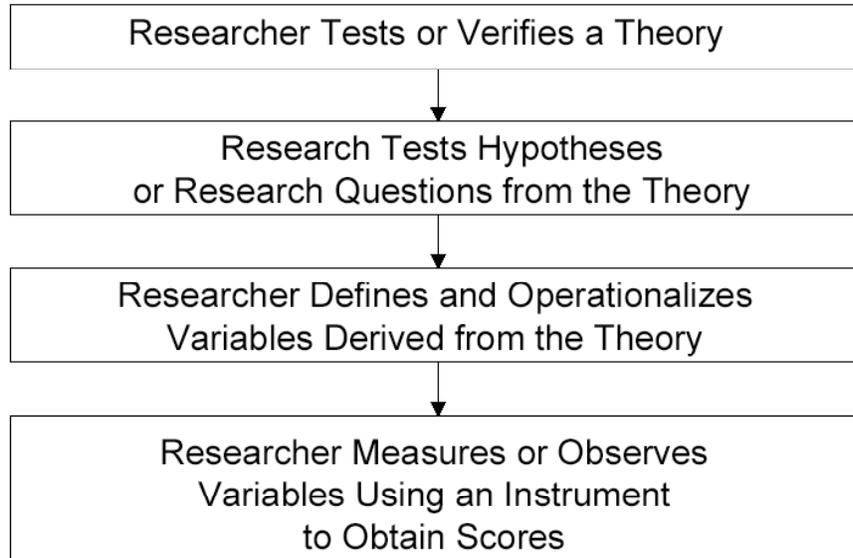


Figure 3.5: The Deductive Approach Typically Used in Quantitative Research

Adapted from: Creswell, J. W. (2003). *Research design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, California: Sage Publications, Inc.

Phase I: Inductive

In Phase 1 of this study, secondary quantitative and qualitative research was conducted concurrently. According to Malhotra, “secondary data are data that have already been collected for purposes other than the problem at hand” (2004, p. 37). Secondary data are easily accessible, relatively inexpensive, and quickly obtained. This type of data research helps to: identify the problem, better define the problem, develop an approach, formulate an appropriate research design, answer research questions, and interpret primary data (Malhotra, 2004). For this research, information obtained from secondary data served to clarify research objectives and develop basic supply chain structures to be used in Phase II.

Data Collection: Phase I

This study examined supply chains for three products in three different retail formats. Configuration for supply chains of discount, specialty, and department stores that sell upholstery fabrics were analyzed. This same procedure was completed for retail supply chains that sell denim jeans and again for athletic knit tops. Table 3.1 depicts the supply chains that were studied. Companies listed are merely representative of the types of retailers that would fall into the specific categories.

Table 3.1. Supply Chain Analysis Matrix

	Lifestyle Brands	
	Home textiles	Apparel
Discount	Lowes, Sam's Club	Target
Specialty	Ashley Furniture, Thomasville	Nike, Polo, North Face
Department	Boyles	J.C. Penney, Nordstrom

External secondary sources were able to provide a depth of knowledge pertaining to the specific research objectives. These data were then able to contribute to the development of the Phase II data collection instrument. These external sources included published scholarly materials, online databases, and government sources. The secondary data for Phase I was collected from Spring to early Fall of 2008. Table 3.2 depicts the steps taken in the secondary data collection process, the sources used, and the contribution they offer to meet the specific research objectives.

Table 3.2: Phase 1 Instrument: Secondary Data Collection

Step	Process	Sources Used	Contribution
Step 1	<ul style="list-style-type: none"> Define supply chain linkages 	<ul style="list-style-type: none"> Textbooks Journal articles Supply Chain Resource Cooperative (NCSU)¹ 	<ul style="list-style-type: none"> Further defined research proposal Established understanding of basic terms Identified factors to be considered in supply chain evaluation
Step 2	<ul style="list-style-type: none"> Locate U.S. production, sales, import/export data for upholstery fabric, denim jeans, and synthetic knit tops 	<ul style="list-style-type: none"> U.S. International Trade Commission² U.S. Economic Census³ OTEXA⁴ Trade literature 	<ul style="list-style-type: none"> Provides industry trends Shows that U.S. textile and apparel manufacturers are shifting overseas Reveals scope of project
Step 3	<ul style="list-style-type: none"> Survey current competitive environment for retail supply chains 	<ul style="list-style-type: none"> Trade show seminars⁵ S&P Industry reports⁶ Internet research Industry journals <ul style="list-style-type: none"> -supply chain mgt. -logistics -textiles and apparel -home furnishings Textbooks Datamonitor reports⁷ TradeStats Express⁸ 	<ul style="list-style-type: none"> Demonstrates linkages in supply chains Reveals strengths of successful configurations Reveals drivers of supply chain competitiveness Identifies market characteristics Identifies examples of global supply chain configurations Shows the top countries that trade with the U.S. Identifies the importance of supply chain management
Step 4	<ul style="list-style-type: none"> Identify current drivers effecting retail supply chain competitiveness 	<ul style="list-style-type: none"> U.S. Department of Energy⁹ OTEXA S&P country profiles Informational interviews Internet research Trade periodicals <ul style="list-style-type: none"> -Home Textiles Today¹⁰ -Furniture Today¹¹ 	<ul style="list-style-type: none"> Understand how energy prices, transportation cost, trade laws, etc effect supply chain performance Reveal current challenges for retail supply chains Provides quantitative analysis points Identifies factors that are government-controlled Provides framework for supply chain analysis

Table 3.2 (continued)

Step 5	<ul style="list-style-type: none"> Analyze Steps 1-4 	<ul style="list-style-type: none"> Discussion with industry professionals and committee members 	<ul style="list-style-type: none"> Assist in sample selection for Phase 1 Assist in question development for industry interviews -potential drivers and effects -potential SC configurations
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Sources:

1. North Carolina State University. (2000). Supply Chain Resource Cooperative. Retrieved from: <http://scrc.ncsu.edu/>
2. United States International Trade Commission. Retrieved from: <http://www.usitc.gov/>
3. U.S. Census Bureau. Retrieved from: <http://www.census.gov/>
4. United States Department of Commerce. International Trade Administration. Office of Textiles and Apparel. Retrieved from: <http://otexa.ita.doc.gov/>
5. Material World Miami Beach, April 8-10, 2008 & MAGIC Las Vegas, August 25-27, 2008
6. Standard&Poor's Net Advantage. (2009). Retrieved from: <http://www.netadvantage.standardandpoors.com/NASApp/NetAdvantage/index.do>
7. Datamonitor. Retrieved from: <http://www.datamonitor.com/>
8. United States Department of Commerce. International Trade Administration. TradeStats Express™. Retrieved from: <http://tse.export.gov/>
9. United States Department of Energy. Retrieved from: <http://www.energy.gov/>
10. Reed Business Information. (2009). *Home Textiles Today*. Retrieved from: <http://www.hometextilestoday.com/>
11. Reed Business Information. (2009). *Furniture Today*. Retrieved from: <http://www.furnituretoday.com/>

Phase II: Deductive

In order to gather primary data for Phase II of the study, a questionnaire was developed. Using a mixed methods approach, the questionnaire contained structured, close-ended and non-structured, open-ended questions. Only qualitative data could be obtained from the questionnaire because none of the data received could be used for statistical analysis. For this study a questionnaire was helpful because it offers structure to the interviews and ensures that all respondents are asked the same questions (Malhotra, 2004).

Instrument Development: Phase II

The focus of the questionnaire for this study was supply chain structures and linkages as well as the identification of drivers and competitive advantages. In order to obtain this information, U.S. retailers and manufacturers were interviewed. Because of the differences in these entities, two questionnaires were developed: U.S. retailer and U.S. manufacturer. Each questionnaire consisted of open and close-ended questions that aided in the collection of qualitative data which would help achieve the research objectives.

Sample Selection

For this study there were four sample groups: U.S. apparel manufacturer, U.S. apparel retailer, U.S. upholstery manufacturer, and U.S. upholstery retailer. Within each of the retail sample groups there were three subgroups that represented the three retail channels to be compared: discount, specialty, and department stores. The first step in sample selection was identifying the key industry leaders in each of these categories according to the corresponding NAICS codes. These were identified during Phase I in secondary data collection. Once the companies in each of these categories were identified, preliminary data

were collected and analyzed. These data included: location, sales, and growth rates. The product mix and manufacturing locations were identified for U.S. manufacturers, and the distribution channels were identified for retailers. Once the sample population was chosen for each category, the sample was validated with industry leaders for each respective market.

U.S. Activewear Retailers

1. The top 25 retailers, based on their 2007 revenues, were identified.
2. The top 25 retailers were then divided into groups based on their distribution channel: discount, specialty, department store, off-price, direct mail, and other. Due to the focus of this study, only those retailers categorized as discount, specialty, or department store were selected.
3. From the top 25 retailers, a company with above average sales, a company with above average earnings, and a company with above average percent growth for that channel were chosen.
4. After these qualifications were met, a convenience sample was taken from the remaining retailers to ensure that all 3 types of retail stores were represented in the sample.
5. If a company reported negative growth or growth of less than 1% they were not considered.
6. For U.S. Activewear Retailers, six were selected (n=6). Figure 3.6 is a model that represents the sample selection process.

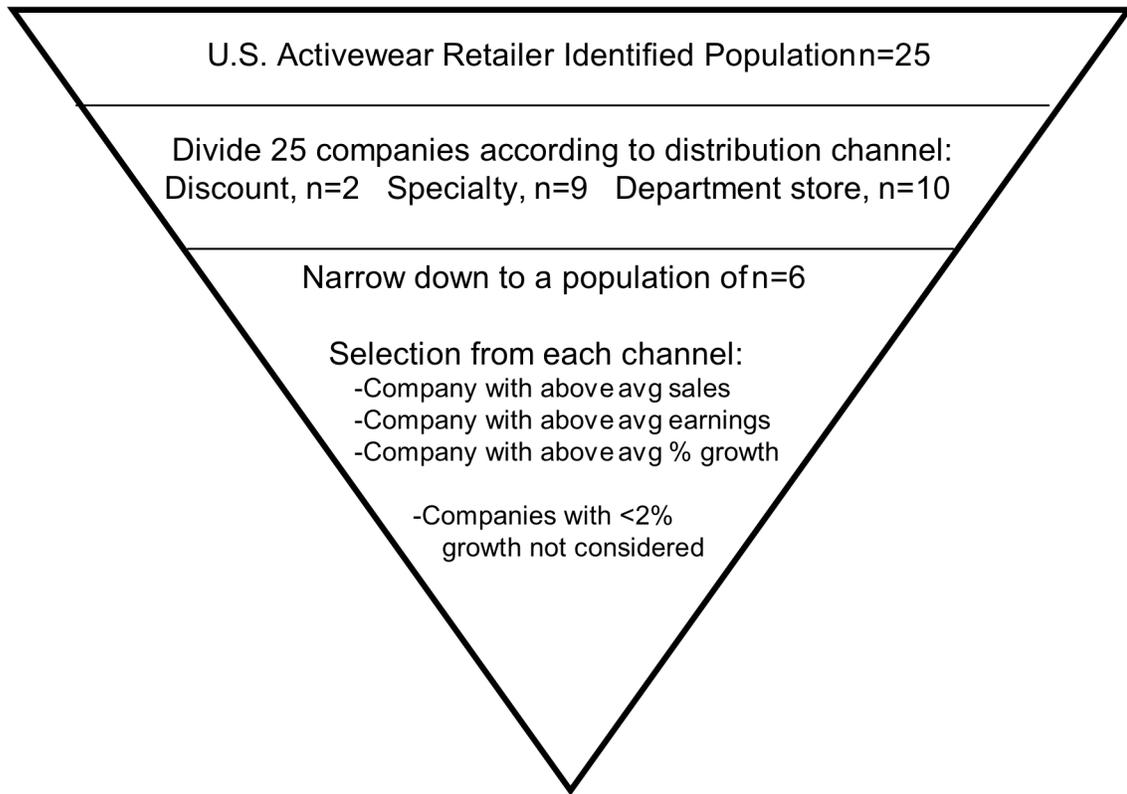


Figure 3.6: Sample selection process - U.S. Activewear Retailers

U.S. Denim Jeans Retailers

1. The top 40 retailers, based on their 2007 revenues, were identified.
2. The top 40 retailers were then divided into groups based on their distribution channel: discount, specialty, department store, off-price, direct mail, and other. Due to the focus of this study, only those retailers categorized as discount, specialty, or department store were selected.

3. From the top 40 retailers, a company with above average sales, a company with above average earnings, and a company with above average percent growth for that channel were chosen.
4. After these qualifications were met, a convenience sample was taken from the remaining retailers to ensure that all 3 types of retail stores were represented in the sample.
5. If a company reported negative growth or growth of less than 1% they were not considered.
6. For U.S. Denim Jean Retailers, eight were selected (n=8). Figure 3.7 is a model that represents the sample selection process.

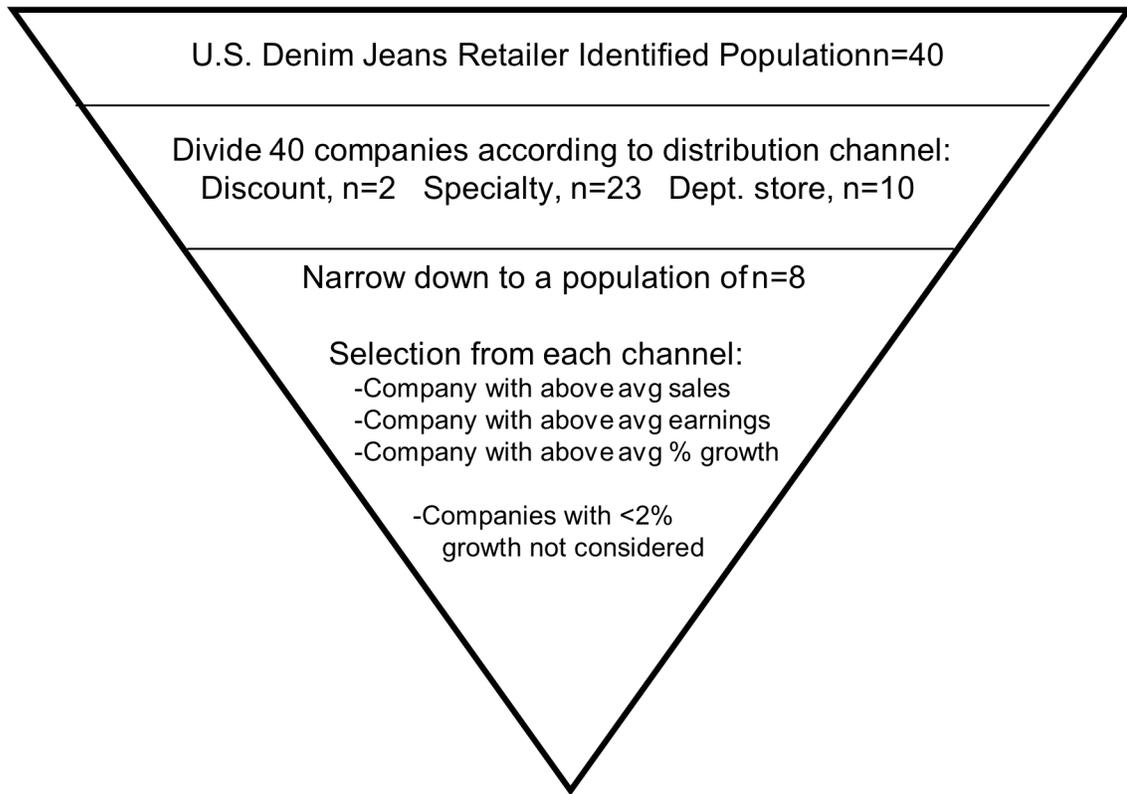


Figure 3.7: Sample Selection Process - U.S. Denim Jeans Retailers

Upholstered Furniture

1. The top 25 retailers, based on their 2005 revenues, were identified.
2. The top 25 retailers were then divided into groups based on their distribution channel: discount, specialty, department store, off-price, direct mail, and other. Due to the focus of this study, only those retailers categorized as discount, specialty, or department store were selected.
3. From the top 25 retailers, one company with above average sales and one company with above average percent growth for that channel were chosen.

4. After these qualifications were met, a convenience sample was taken from the remaining retailers to ensure that all 3 types of retail stores were represented in the sample.
5. If a company reported negative growth or growth of less than 1% they were not considered.
6. For U.S. Furniture Retailers, four were selected (n=4). Figure 3.8 is a model that represents the sample selection process.

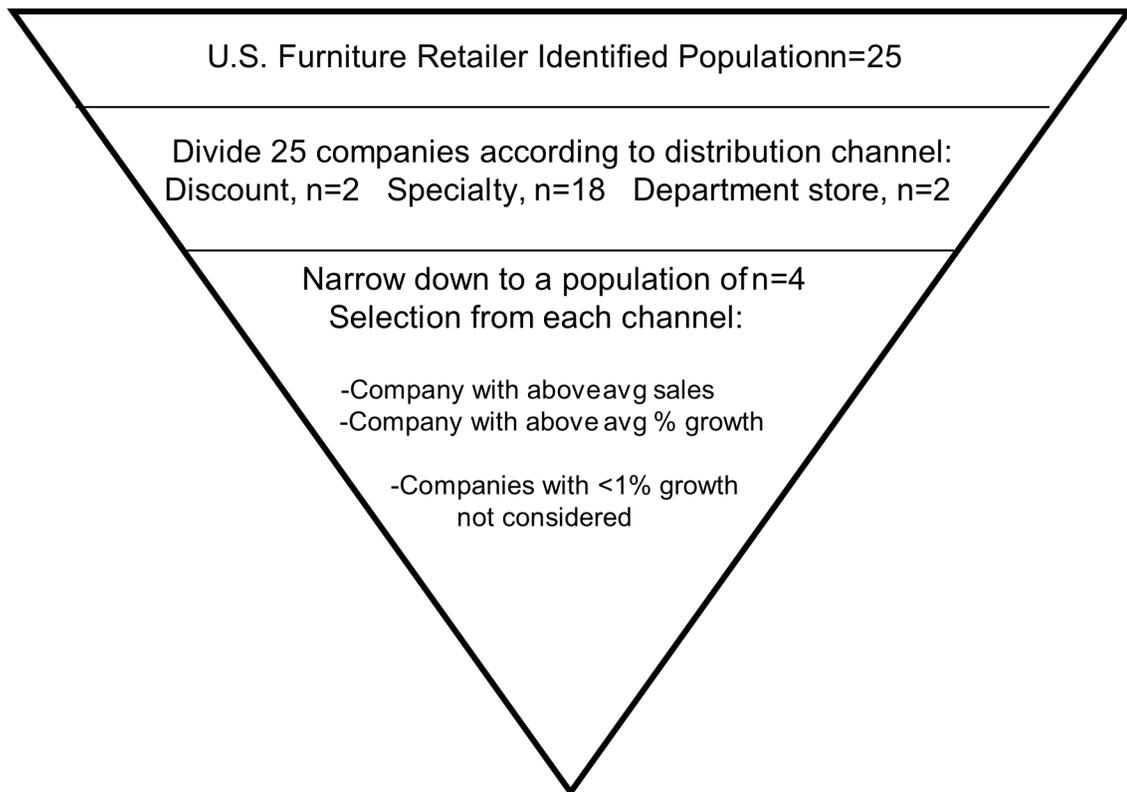


Figure 3.8: Sample Selection Process - U.S. Furniture Retailers

U.S. Manufacturers

A convenience sample was taken for U.S. manufacturers in apparel and upholstered furniture supply chains. Companies were chosen based on their relationships with the Institute of Textile Technology and the College of Textiles at North Carolina State University. In total, the sample size for apparel manufacturers was six. The sample size for upholstered furniture manufacturers was eight.

Sample Validation

After the proposed sample populations were selected for each channel, they were validated by leaders from major companies in each market. Each representative was given a copy of the chosen sample and asked if they believed these companies would give an accurate, well-rounded depiction of current retail supply chains. They were also asked if any other companies not represented that would add a significant contribution to this study. These additional companies proposed by industry leaders were added to the sample. Based on these results, companies were contacted to participate in the study.

Data Collection: Phase II

In order to collect primary data from the sample groups, key stakeholders from the chosen companies were contacted by letter. This letter, which is located in Appendix A2, explained the purpose of the research and asked for their participation. These companies were then contacted by phone in order to provide further details and to arrange face-to-face interviews. Once scheduled, interviews were conducted at the arranged times.

Companies were initially contacted by either letter or email, depending on the contact information that was available for each company. Regardless of mode, all companies

received the same initial contact letter, located in Appendix A2, explaining the purpose of the research and requesting their participation. Each company then received a follow-up email or phone call to arrange a personal interview or phone conference. Trips were then coordinated around the location of the companies to be interviewed.

The data collected during the informational interviews were entered into a spreadsheet instrument. Responses were divided into those referring to competitive advantages of manufacturers and those referring to retail supply chain competitiveness. The responses were then grouped together for comparison purposes.

Phase III: Analysis

Data analysis was conducted in three stages:

1. The interviews were transcribed by typing the specific answer to each question on the questionnaire form;
2. The data were organized according to the four categories: U.S. apparel manufacturer, U.S. apparel retailer, U.S. upholstery manufacturer, and U.S. upholstery retailer. The data for retail was further organized by the following three subcategories: discount, specialty, and department store; and
3. The data for all categories and subcategories of apparel were examined and compared to determine what competitive advantages were held by manufacturers and what opportunities existed within retail supply chains. This process was also completed for the categories and subcategories of home furnishings.

CHAPTER IV

RESULTS

The results of the Phase I secondary data collection were analyzed in accordance with the steps developed in Table 3.2. All secondary sources used in the analysis were listed and discussed in detail in the review of literature (Chapter II). The sample description, which was included in Step 5 of Table 3.2, is explained directly below. Following the sample description are the detailed results from secondary data regarding Steps 1 – 4 in Table 3.2.

Phase I Results

Sample Description

The results of Phase I led to the selection of the research sample. This sample included 26 companies that were members of the supply chains of denim jeans, activewear, or upholstered furniture at various levels, including manufacturing and retailing. The sample was chosen based on the population of manufacturers and retailers described by the NAICS codes stated during Phase I secondary research (Step 2). Tables 4.1 – 4.3 display the NAICS and HTS codes that were used to categorize the three products examined in this study.

Table 4.1: NAICS/HTS codes: Denim Jeans

DENIM JEANS	
NAICS code	Description
313210	Broadwoven Fabric Mills
{3132103}	Cotton Broadwoven Twill Weave Fabrics
315224	Men's and Boys' Cut and Sew Trousers, Slacks and Jeans
315239	Other Women's and Girl's Cut and Sew Outerwear
{3152395}	Women's, Misses', Junior's, and Girl's Slacks (Including Jeans and Jean-Cut Casual Slacks)
HTS code	Description
520942	Denim, cotton, of yarns of different colors
610462	Jeans, Women's and girl's, of cotton, not knit
620342	Jeans, Men's and boy's, of cotton, not knit

Table 4.2: NAICS/HTS codes: Activewear (Synthetic knit tops)

ACTIVEWEAR	
NAICS code	Description
313241	Knitting and finishing weft fabric
315191	Knit Outerwear
{3151917}	Men's and Junior Boy's Knit Shirts (From yarns or from fabrics knit in the same establishment)
{3151919}	Women's, Misses, and Junior Girl's Knit Shirts and Blouses (From yarns or from fabrics knit in the same establishment)
HTS code	Description
600631	Knit fabrics, synthetic fibers, unbleached or bleached
610520	Sport shirts, men's and boy's, of manmade fiber, knit
610620	Shirts, women's and girl's, of manmade fiber, knit

Table 4.3: NAICS/HTS codes: Upholstered furniture

UPHOLSTERED FURNITURE	
NAICS code	Description
313210	Broadwoven Fabric Mills
313311	Finished Broadwoven Fabrics
337121	Upholstered Household Furniture
HTS code	Description
520942	Upholstery fabric, cotton, denim
540741-44	Upholstery fabric, woven, nylon, unbleached or bleached, dyed, of yarns of different colors or printed
580110	Upholstery fabric, wool, woven, pile
940140	Couches, convertible sofas, sofa beds, and similar dual-purpose sleep furniture
940161	Dining room furniture, household, of wood, upholstered and Living room furniture, of wood, upholstered

Table 4.4 depicts the sample that was used for this study and represents both the apparel and home furnishings markets. The sample includes manufacturers at varying levels of the supply chain for these goods, two auxiliary firms, and three types of retailers: discount store, department store, and specialty store. In total, 31 executives from 26 companies were interviewed. Their titles ranged from Owner, SVP Brand Management, VP Sourcing, Senior Technical Director – Home Division, Director of Material Innovation to VP Global Logistics. The average number of years in the respondents’ current positions was 6 years, and the average number of years spent in the industry was 22 years.

Table 4.4: Sample Description

Market	Category	Name^a	Position	U.S. Location
Apparel	U.S. Manufacturer	O	Owner	Southeast U.S.
Apparel	U.S. Manufacturer	H	VP Int'l Sales	Southeast U.S.
Apparel	U.S. Manufacturer	Z	Owner	Southeast U.S.
Apparel	Global Manufacturer	J	Mgr, Prod Dev	Southeast U.S.
Apparel	Global Manufacturer	G	Mgr, Production	Southeast U.S.
Apparel	Global Manufacturer	Q	Executive VP	Southeast U.S.
Apparel	U.S. Retailer	C	SVP Brand Mgt	Southeast U.S.
Apparel	U.S. Retailer	D	VP Sourcing	Southeast U.S.
Apparel	U.S. Retailer	I	Mgr, Strat. Sourcing	Mid-west U.S.
Apparel	U.S. Retailer	F	Dir, Mat. Innovation	Northeast U.S.
Apparel	U.S. Retailer	B	DVP Social Compliance	Pacific U.S.
Apparel	Global Retailer	W	Mgr, Technical Services	Southeast U.S.
Apparel	Global Retailer	X	VP Supply Chain Dev.	Southeast U.S.
Both	Global Retailer	A	Sr Tech. Dir. - Home Div.	Mid-west U.S.
Both	U.S. Retailer	U	VP Director of Sourcing	Southwest U.S.
Both	Auxiliary Firm	S	Retail Account Manger	Southeast U.S.
Home Furnishings	U.S. Retailer	V	Mgr, Supply Chain	Southeast U.S.
Home Furnishings	U.S. Retailer	Y	Mgr, Textile Dev.	Pacific U.S.
Home Furnishings	U.S. Manufacturer	R	VP Global Logistics	Southeast U.S.
Home Furnishings	U.S. Manufacturer	E	Mgr, Purchasing	Southeast U.S.
Home Furnishings	U.S. Manufacturer	P	President	Southeast U.S.

Table 4.4 (continued)

Home Furnishings	U.S. Manufacturer	L	VP Customer Relations	Southeast U.S.
Home Furnishings	U.S. Manufacturer	T	Mgr, Supply Chain	Northeast U.S.
Home Furnishings	Global Manufacturer	M	VP Product Dev.	Southeast U.S.
Home Furnishings	Global Manufacturer	N	Market Manager	Southeast U.S.
Home Furnishings	Global Manufacturer	K	Dir. Product Dev.	Southeast U.S.

a.) Company names are not provided in order to ensure confidentiality of company responses.

Supply chain linkages (Step 1)

After examining the firms that comprise the textile supply chain complex and the relationships that occur among them, the term supply chain linkage can be defined as the following: *A relationship that exists between firms in a supply chain wherein there exists open communication and shared vision.* It is not only important that firms which directly exchange goods be in communication, but also that firms further upstream in a supply chain have a relationship with firms downstream. For example, clearly a yarn manufacturer is going to communicate with the fabric mills they supply. However, it may prove beneficial for a retailer to communicate with the yarn manufacturer even though there is not a direct exchange of goods between these firms. In the textile and apparel industries,

Current U.S. Production and Market (Step 2)

In order to better understand supply chain linkages, it is important to understand current U.S. production of upholstery fabric, denim jeans, and activewear (synthetic knit tops). It is also helpful to examine trends in crude oil prices as they directly affect raw material prices and transportation costs.

Upholstery Fabric

Upholstery fabric production is decreasing in the United States. Much of the production has shifted to Asia, specifically China, in order to be located closer to furniture manufacturers. High-end, customized furniture manufacturing remains in the Southeast U.S. in order to achieve shorter lead-times. There is still significant domestic production to support this market segment. Figure 4.1 depicts U.S. production of sheeting, poplin, and broadcloth of man-made fibers (which includes upholstery fabrics) for 2002-2007.

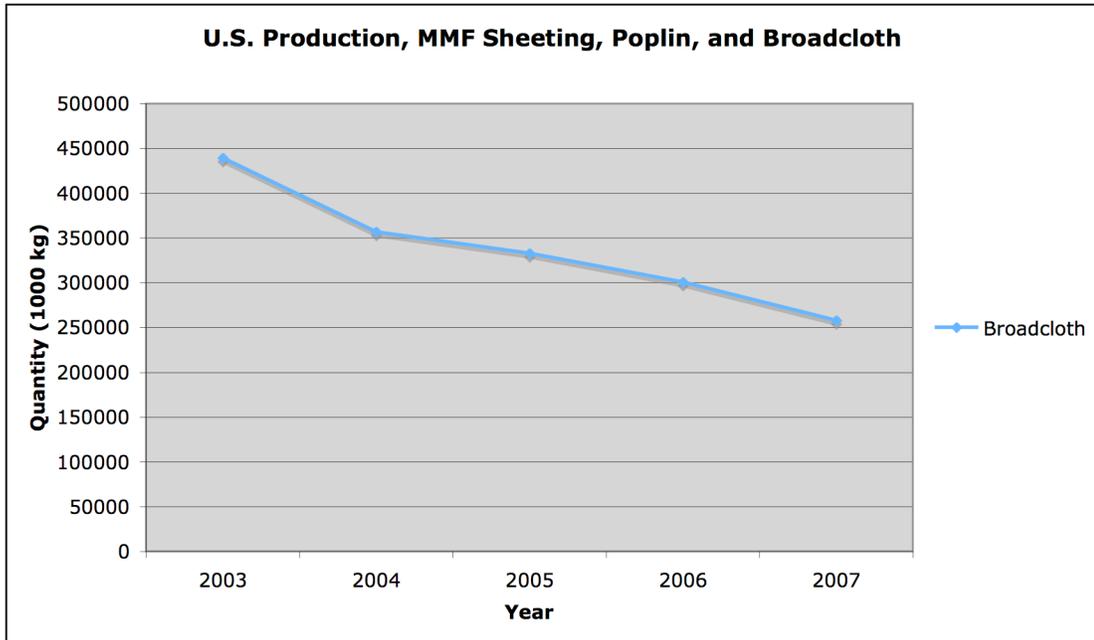


Figure 4.1: U.S. Production of MMF Sheeting, Poplin, and Broadcloth

Source: OTEXA, 2009

Denim Jeans

Denim jean manufacture has shifted to countries with lower labor wages in order to achieve lower product costs. Denim fabric manufacture shifted to locations close to garment manufacturers in order to decrease the transportation of goods and shorten lead-times.

Figures 4.2 and 4.3 depict U.S. production of cotton trousers (which includes denim jeans) and denim fabric, respectively for 2002-2007.

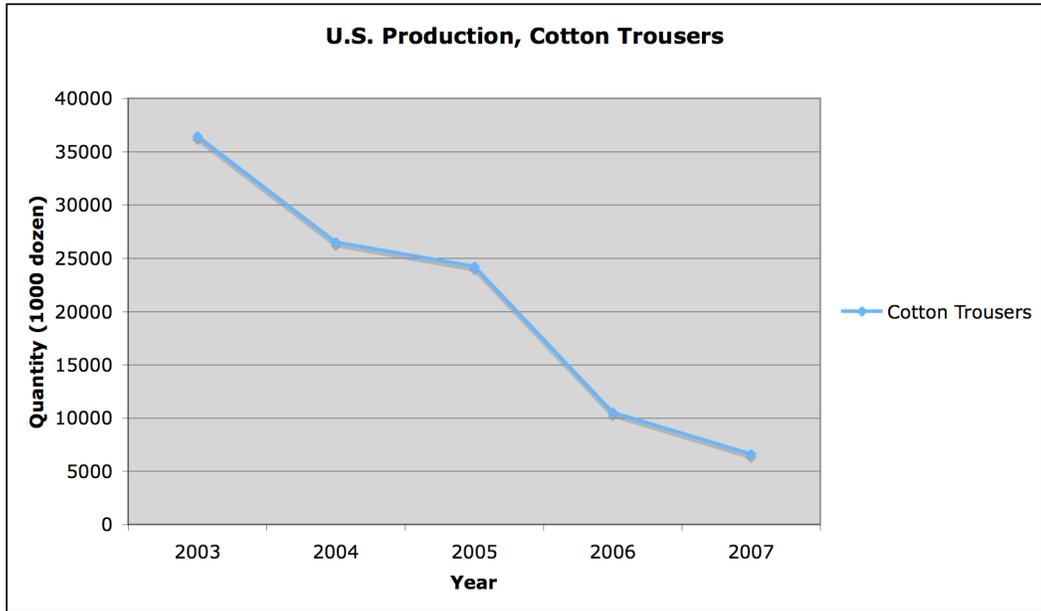


Figure 4.2: U.S. Production of Cotton Trousers, 2002-2007

Source: OTEXA, 2009

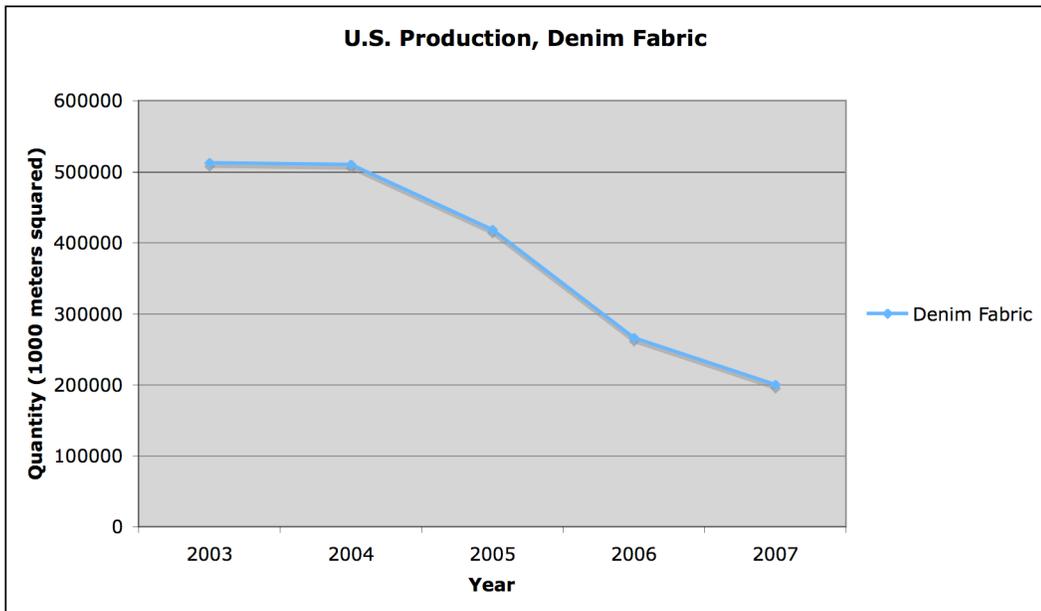


Figure 4.3: U.S. Production of Denim Fabric, 2002-2007

Source: OTEXA, 2009

Activewear (Synthetic knit tops)

Activewear manufacture has also shifted offshore in order to utilize lower labor costs to achieve higher margins. Knit fabric manufacture has shifted to be located close to garment manufacturers. The majority of these items are manufactured in Central America, utilizing the DR-CAFTA free trade agreement. Figures 4.4 and 4.5 display the U.S. production of knit shirts of man-made fiber (which includes synthetic knit tops for activewear) and knit fabric, respectively for 2002-2007.

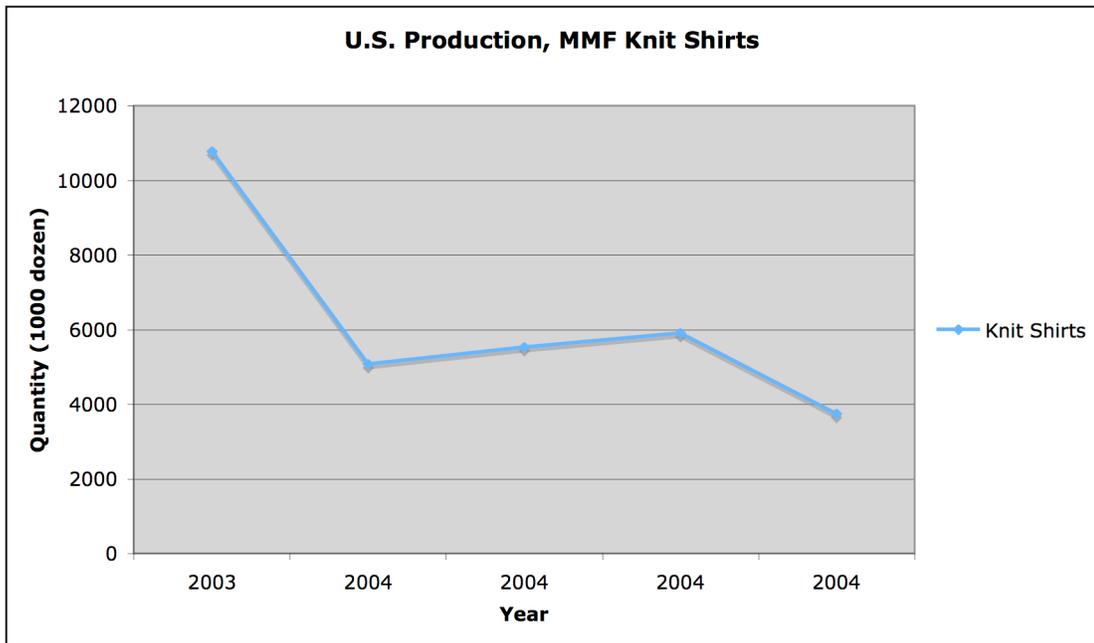


Figure 4.4: U.S. Production of MMF Knit Shirts

Source: OTEXA, 2009

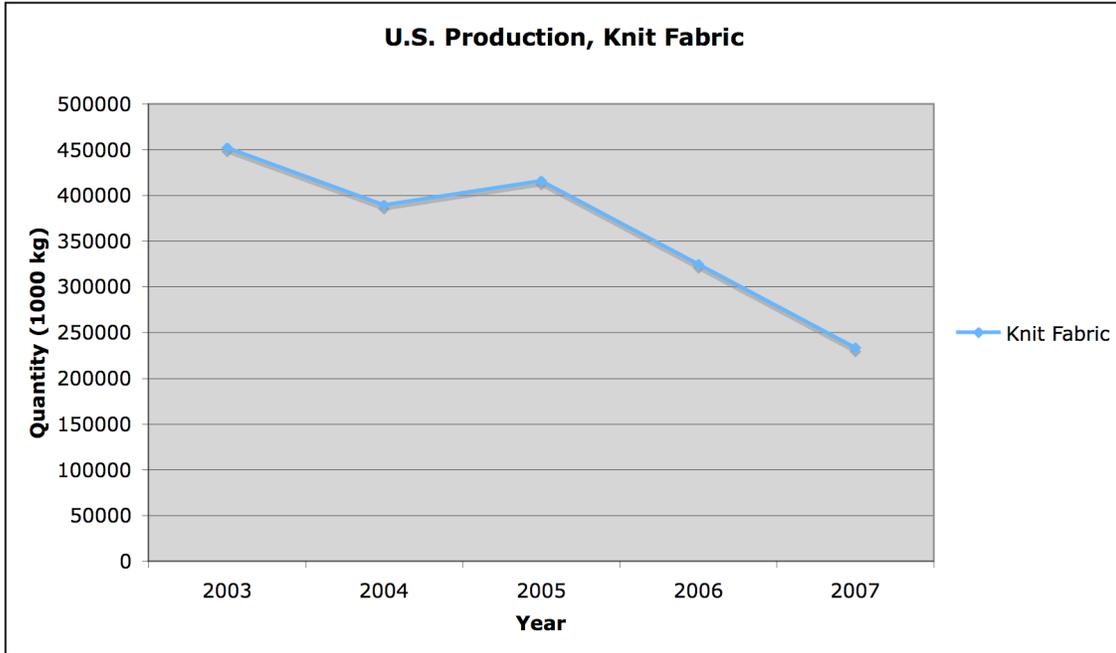


Figure 4.5: U.S. Production of Knit Fabric

Source: OTEXA, 2009

Energy Prices

Crude oil prices influence many factors in textile supply chains. Fluctuations in these prices are directly reflected in transportation costs. When crude oil prices peaked in the summer of 2008, the price of shipping a container from China to the U.S. increased dramatically. Table 4.5 displays the correlation between crude oil price and the cost to ship a 40-foot container from Shanghai to New York.

Table 4.5: Relationship between Crude Oil Price and Shipping Price (in USD)

Year	Crude oil (cost per barrel)	Container shipping cost
2000	\$29	\$3,300
2005	\$50	\$5,100
2008	\$125	\$8,350
Projected	\$150	\$10,000
Projected	\$200	\$15,000

Source: Lynch, D. J. (2008, August 12). Transport costs could alter world trade. *USA Today*, pp. 1B, 2B.

Figure 4.6 depicts crude oil prices from March 17, 2008 until March 17, 2009. Price for a barrel of crude oil peaked on July 14, 2008 at \$146.86. The lowest price recorded was on February 18, 2009 at \$37.41. Such drastic variations in crude oil prices have significant impact on the cost of raw materials and transportation. Furthermore, these fluctuations are unpredictable and make merchandise costing very difficult. Because retailers source many products in Asia, where the average lead-time on an initial garment order is 25-35 weeks, it is very challenging to assign the appropriate cost to manufacture goods. If crude oil prices were to remain high for a long period of time, it could no longer be cost efficient to produce goods in Asia. Therefore, many companies are investing in production facilities in Central America because of its close proximity to the U.S. market and shorter lead-times.

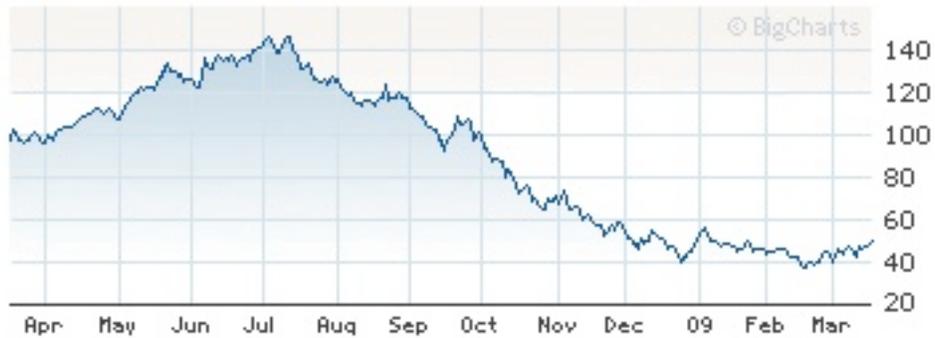


Figure 4.6: Crude Oil Prices for March 17, 2008 - March 17, 2009

Source: Market Data Center. (2009). *The Wall Street Journal*. Retrieved 3/17/09 from: http://online.wsj.com/mdc/public/npage/2_3051.html?mod=2_3002&sid=2271822&page=comm odities

Another factor in textile supply chains that is affected by crude oil cost is the price of synthetic raw materials. Synthetic fibers are derived from organic molecules that are obtained from oil refineries and include the following: nylon, polyester, olefin, acrylic, and spandex (Hatch, 1993). Figure 4.7 depicts the prices for polyester staple fibers from September 2006-March 2009. During this time period, prices peaked at \$0.96 per pound in July and August 2008. Beginning in November 2008, prices dropped to \$0.79 per pound and remain there in March 2009. These fluctuations correlate with crude oil prices which spiked in the summer of 2008 and subsequently dropped in early 2009 (Fiber Price Sheet, 2009).

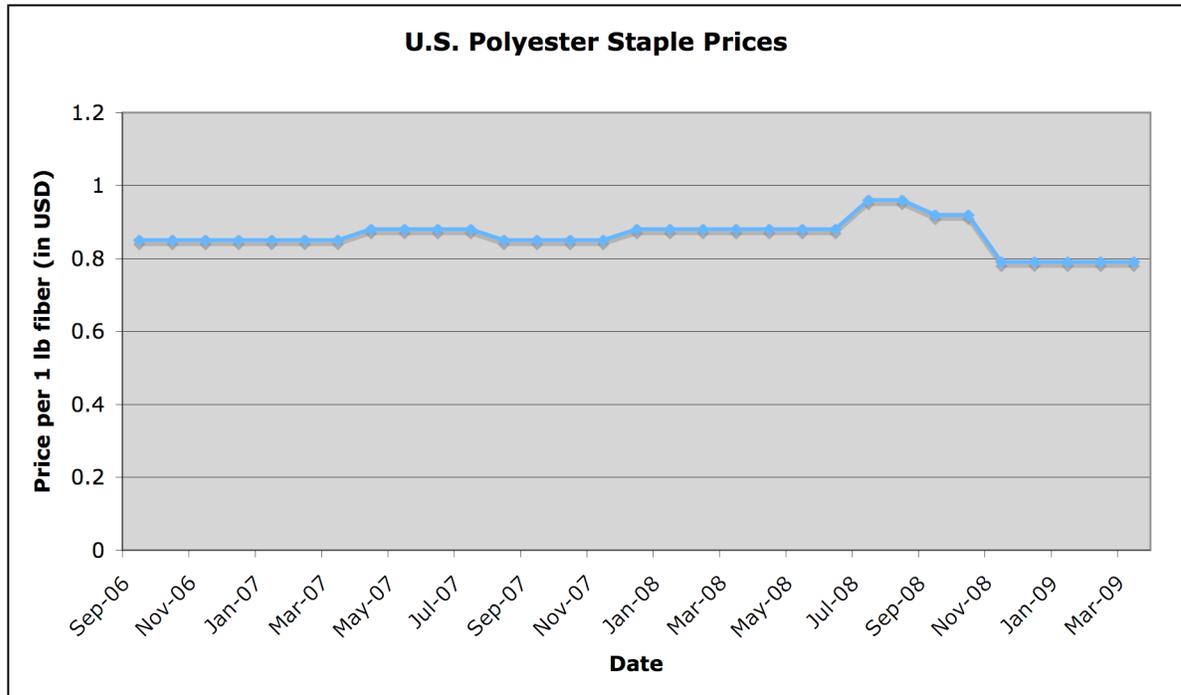


Figure 4.7: U.S. Polyester Staple Prices, September 2006-March 2009

Source: The Fiber Price Sheet, *Women's Wear Daily*

Trade Legislation

The U.S. government institutes free trade agreements (FTA) with other countries in order to facilitate opportunities for doing business with other countries, thus increasing their competitiveness. Under these agreements, tariffs are reduced or eliminated, intellectual property rights are better regulated, and rules of investment are eased. Free trade agreements are established in an attempt to level the international playing field and make transactions beneficial for all countries. Currently, the U.S. has FTA's in place with the following countries: Australia, Bahrain, CAFTA-DR (Costa Rica, Dominican Republic, El Salvador,

Guatemala, Honduras, Nicaragua), Chile, Israel, Jordan, Morocco, NAFTA (Mexico, Canada), Oman, Peru, and Singapore. Agreements are currently pending with Colombia, Korea, and Panama but these have not been approved at the time of this report (OTEXA, 2009).

Another type of legislation that impacts the textile industry is the trade preference program. These programs can be bilateral or unilateral and are designed to give trade benefits to certain countries. The African Growth and Opportunity Act (AGOA) establishes duty-free and quota-free provisions for certain apparel articles manufactured in designated sub-Saharan African countries through 2015. The Andean Trade Promotion and Drug Eradication Act (ATPDEA) was instituted in 1991 in an effort to combat drug production and trafficking in the Andean countries which include: Bolivia, Colombia, Ecuador, and Peru. This agreement provides duty-free trade for roughly 5600 products. The Caribbean Basin Trade Partnership Act (CBTPA) was established to help improve relations between the U.S. and Central America and promote economic development. Finally, the Haitian Hemispheric Opportunity Through Partnership For Encouragement Act (HOPE) was established to help encourage economic development in Haiti (OTEXA, 2009).

Labor Prices

Variation in labor wages among different countries certainly plays a role in sourcing decisions. Both apparel and upholstered furniture require labor-intensive cut and sew operations which affect the total cost of production. Figure 4.8 depicts labor wage rates for the USA regional import supply base. The highest labor rate in this region is \$3.35/hour in Costa Rica and the lowest is \$0.49/hour in Haiti. Figure 4.9 depicts labor wage rates for the

core Asian supplier to the U.S. In this region, the highest labor rate is \$1.36 in Thailand and the lowest rate is \$0.22 in Bangladesh (O'Rourke & Verret, 2008).

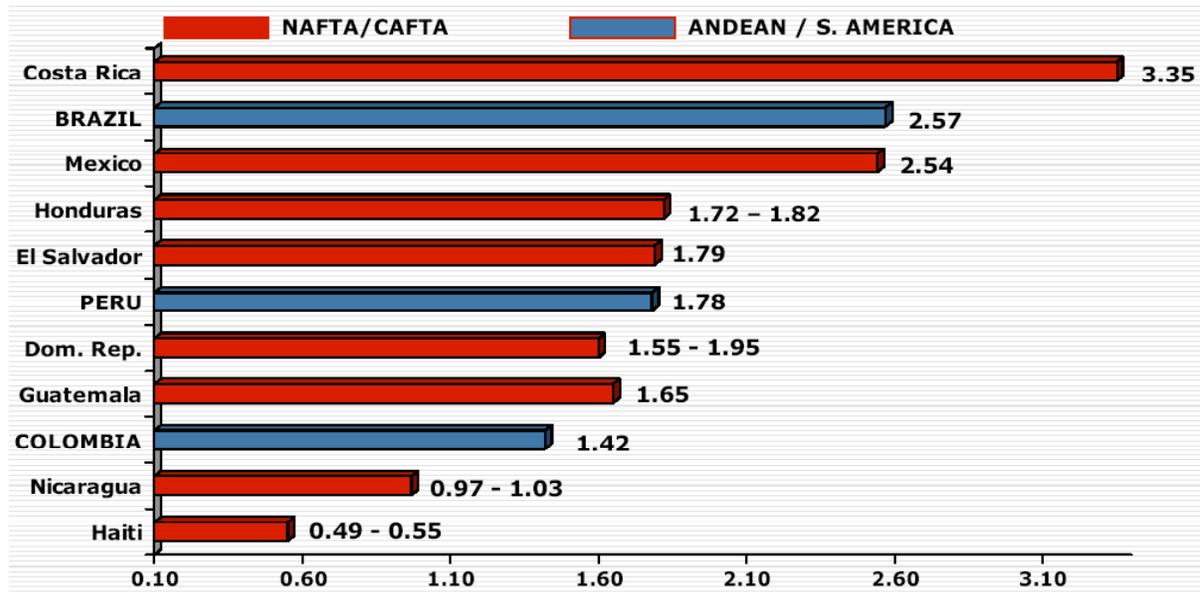


Figure 4.8: Apparel Manufacturing Labor Costs – 2008 (US \$/Hour, including social charges) USA Regional Import Supply Base

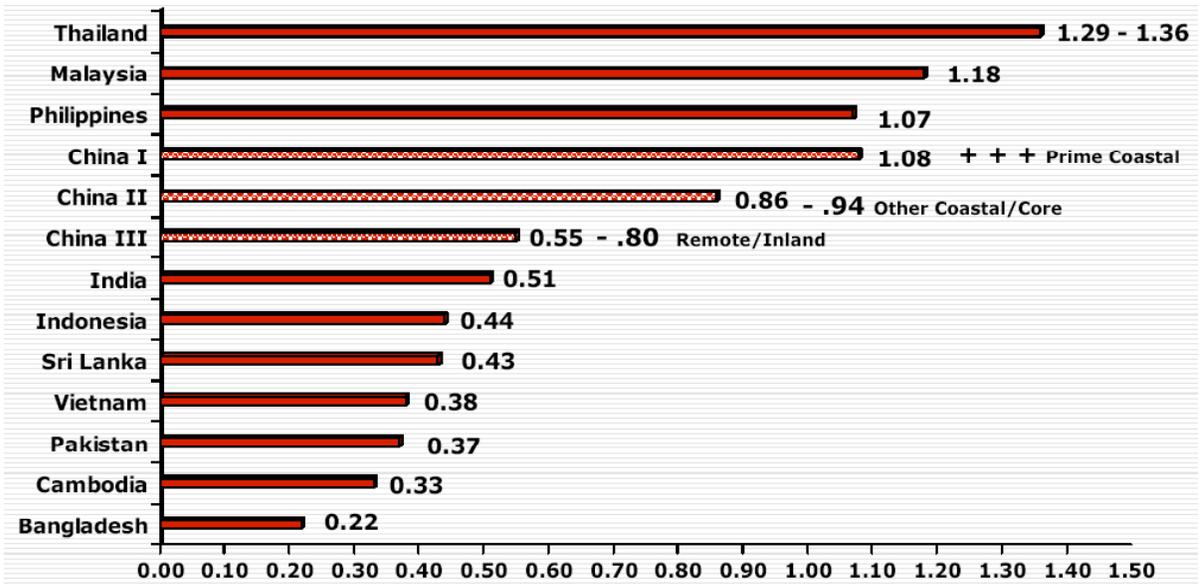


Figure 4.9: Apparel Manufacturing Labor Costs – 2008 (US \$/Hour, including social charges) Core Asian Import Supplier Base

Source: O'Rourke, M. T. & Verret, R. (2008). 2008 Global apparel manufacturing labor cost analysis. Jassin-O'Rourke Group, LLC.

U.S. Retail Competitive Environment (Step 3)

Trends in the U.S. Retail Industry

Table 3.2 outlines the five steps that were utilized in secondary data collection. Specific sources referenced are available in the table (p. 44-45). Examination of aggregate secondary data revealed six key trends currently influencing the U.S. retail industry.

1. Total sales down in 2008.

Retailers have not been spared in the global downturn in the economy. As consumer discretionary spending is reduced, Americans are not purchasing items they do not need. Furthermore, the consumer confidence level is low and U.S. unemployment is high, further resulting in lower retail sales in 2008.

2. Access to capital is becoming increasingly difficult.

Because sales are down, retailers do not have as much capital to invest in purchasing new items and hold inventory. Furthermore, their suppliers are also experiencing lower levels of cash, making it difficult to fill large orders. Therefore, order sizes are becoming smaller as consumer demand is weakened and retailers do not want to hold inventory that is not selling.

3. Retail industry is consolidated.

Retail stores serving the middle-market often offer similar product mixes and struggle to gain customer loyalty. Therefore, many of these stores are having to close their doors. Furthermore, customers are becoming more likely to divide their spending between high-end luxury stores for fashion items and lower-priced discount stores for commodity items. The combination of these factors lead to further consolidation of the retail industry.

4. Private labels increasing significantly

As retailers face a harsh economic climate, they are constantly seeking new ways to increase sales. Many department stores sell the same brands, and sometimes struggle to find variety in their product mix. Adding private labels adds diversity to traditional merchandise seen in retail stores. Furthermore, by eliminating the middle man, retailers are able to offer more affordable prices to their customers while still achieving higher margins.

5. Increased emphasis on lifestyle brands and marketing

Another way retailers are attempting to increase sales is by increasing customer loyalty. As they develop private labels, retailers are seeking to sell the idea of a specific lifestyle to their customer. This could be achieved in harmony throughout the store, more often in a specialty store, or this can be achieved through a diversified offering of multiple brands. By selling a way of life, retailers are able to sell a wide variety of products and receive high levels of commitment from consumers.

6. Advertising in more targeted locations

Retailers are attempting new marketing strategies in order to reach their target customers. They are employing new technologies such as texting specials to consumers cell phones and flashing advertisements on social networking sites. Some email networks also target ads based on the content of messages sent. Online advertisements are able to accurately predict who will be exposed to retailers advertisements, thus making it a more direct option than television commercials.

Drivers of Retail Supply Chains (Step 4)

Using the conceptual framework (presented in Chapter II), secondary research revealed three key company-controlled drivers and three key community-controlled drivers of current retail supply chains. Company-controlled drivers are elements that individual firms can influence while community-controlled drivers are elements that are determined by outside institutions and therefore cannot be changed.

Company-controlled drivers

1. Efficiencies of production (price, quality, delivery)

In today's manufacturing community, quality is a given. Members downstream in a supply chain, including retailers, expect a quality product and will not continue the relationship if it is not delivered. Therefore, sourcing decisions are often a balance between cost and lead times. The general perception is that outsourced production can take two forms: they can be manufactured in Asia at lower costs, but require longer lead times or they can be manufactured in the Americas (USA, Central America, South America) at higher costs but with shorter lead times (Oh & Kim, 2007).

2. Branding and marketing

Creating a pull strategy, when the manufacturer creates consumer demand for their product, is one way that a firm can gain more influence in a supply chain. However, it is often difficult for firms who are upstream in a given supply chain to connect with the end consumer. One way manufacturers can create this connection is by developing a brand for their specific product and marketing it to the end consumer. When the consumer expresses interest in a specific product, retailers or national brand wholesalers are more likely to

specify that particular product in their goods. Branding has been practiced successfully at the fiber, yarn, fabric, and finishing stages of a supply chain. Some firms rely heavily on this strategy, while others ignore it entirely (Borneman, 2004).

3. Services offered to customer

In order to strengthen relationships within a supply chain, individual firms may employ exceptional customer service to achieve a competitive advantage. For example, a yarn manufacturer wants their product to perform to its highest potential. Therefore, they will work with fabric formation mills and perhaps cut and sew facilities to ensure that the best practices are used to enhance the yarn's performance. Other services may include: design, innovative product development, flexibility, accepting small orders, and technical support.

Community-controlled drivers

1. Energy prices

Energy prices affect the total cost of goods on many levels. First, oil prices affect the cost to transport goods. During the summer of 2008, crude oil prices spiked at record highs causing significant increases in shipping costs. Second, cost and reliability of electricity plays a major role in the function of manufacturing facilities. Finally, inefficient use of energy can raise concerns today as there is a global push to be aware of the negative impact manufacturing can have on the environment.

2. Trade legislation

The U.S. currently has free trade agreements with seventeen countries. Understanding these agreements could present opportunities for manufacturers and retailers

alike. While labor may be cheaper in Asia, duties applied to landed goods sometimes exceed these cost savings. Furthermore, agreements such as NAFTA and CAFTA enable free trade in the Western hemisphere. Under these agreements, using U.S.-manufactured yarn and fabric combined with lower labor costs in Mexico and Central America, U.S. textile supply chains appear more competitive in the global market.

3. Labor force

The availability of skilled labor certainly impacts the viability of a given supply chain. In today's economy, with soaring unemployment rates, there seems to be an abundance of highly skilled individuals who are ready to work. This driver also has implications in the realm of social responsibility. Unsafe working environments, under age employees, below-market wages, and excessive hours are no longer acceptable in any production establishment. There are many agencies available who will provide certification ensuring a given mill's working conditions are in line with regulations.

Phase II Interview Results

Data collection in Phase II consisted of informational interviews with 31 executives from 26 companies. The questionnaire used in the interviews was developed using information gathered during secondary research in Phase I. All interview responses were compiled into tables separated by company and are located in Appendix B. Tables are divided into categories representing the following: company information, supply chain linkages, supplier relationships, performance drivers, company-controlled drivers, and community-controlled drivers.

Table 4.6: Survey Instrument for Comments Pertaining to Supply Chain Linkages

Topic	Executive's Comments Regarding Supply Chain Linkages
Company Information	Provides background information. For retailer interview: what products are sold, where are stores located For manufacturer interview: what products are manufactured, where are facilities located
Supply Chain Linkages	Defines supply chain interactions. States a firm's customers and suppliers, and their locations.
Supplier Relationships	Describes the relationships among firms in a supply chain. Lists criteria manufacturer and retailer use when selecting a supplier and the duration and dynamics of supplier/customer relationships. For manufacturers, ask their perception of retailers' criteria for selecting a supplier.
Performance Drivers	States what firms attribute to their current supply chain success. Also lists current supply chain challenges.
Company-controlled Drivers	States how the following drivers impact a firm's supply chain: <ul style="list-style-type: none"> • Efficiencies of production (price, quality, delivery) • Branding and marketing • Services offered to customer

Table 4.6 (continued)

<p>Community-controlled Drivers</p>	<p>States how the following drivers impact a firm’s supply chain:</p> <ul style="list-style-type: none"> • Energy prices • Trade legislation • Labor force availability
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Phase II Summary of Interview Results Regarding Each Topic

Manufacturers

Apparel Manufacturers

There were six textile manufacturers in the sample. Firms represent the yarn, fabric, and cut and sew processes in the apparel supply chain.

Location of facilities. All manufacturers in the sample owned production operations in the Southeast U.S. Two manufacturers only own facilities in the U.S, and the other four own and operate facilities in Mexico, Nicaragua, Honduras, Colombia, Switzerland, India, China and Vietnam.

Production in U.S. Within the sample, three companies produce yarn in the U.S. which included both cotton and synthetic yarns. Two companies produce fabric in the U.S., and one company interviewed owns cut and sew operations in the U.S.

Supply Chain Structure. For the U.S. textile manufacturer sample, there are two main supply chains that are used. Figure 4.10 depicts yarn through finished fabric production occurring in the U.S. Then, these fabrics are shipped to either a U.S.-owned garment manufacturing facility or a garment contractor offshore. Denim jean supply chains often utilize the NAFTA and DR-CAFTA trade agreements to access more affordable labor with

no duties. The federal minimum wage in the U.S. is currently \$6.55, but labor rates are as low as \$0.49/hour in Central America, thus reducing total cost of production. However, commodity items that do not rely heavily on shorter lead-times are often shipped to Asia for garment production. Labor rates in these countries can be as low as \$0.22 which may offset the longer lead-times that are often incurred from Asian production.

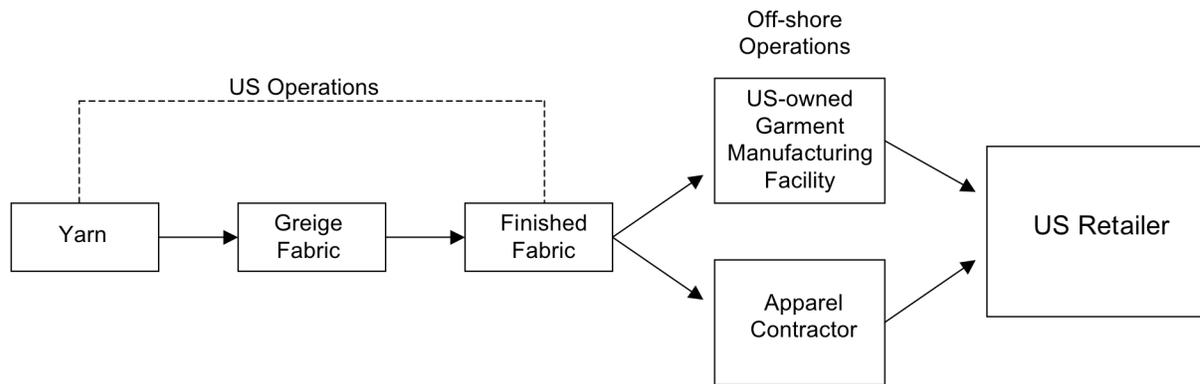


Figure 4.10: U.S. Manufacturer Supply Chain with Off-shore Garment Production

Figure 4.11 depicts a supply chain wherein all production, yarn through finished garment, occurs in the U.S. The labor-intensive process of garment production is often only viable for specialty denim products. However, because this is a healthy market segment, it is important to include this supply chain structure. These supply chains often experience strong relationships which involve multi-firm collaboration from design forward.

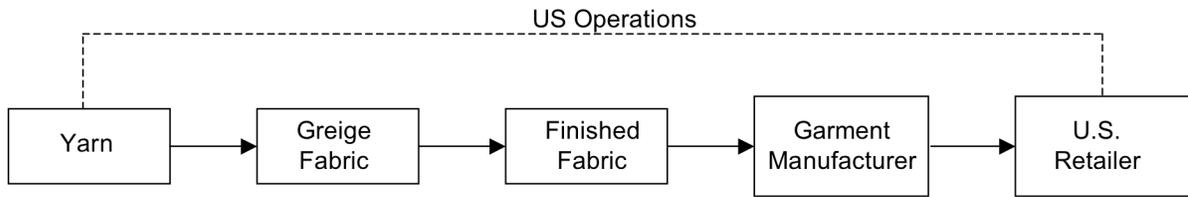


Figure 4.11: U.S. Apparel Manufacturer Supply Chain

Criteria Used When Selecting a Supplier. Interview responses revealed four characteristics that multiple manufacturers seek in a supplier: price, quality, innovation, and lead-times. In addition, it is important to manufacturers that their suppliers be stable. In today's economic climate, manufacturers are continually ensuring that their suppliers will remain in operation, and have back-up plans for all suppliers. Figure 4.12 depicts all the qualities manufacturers listed as criteria for their suppliers.

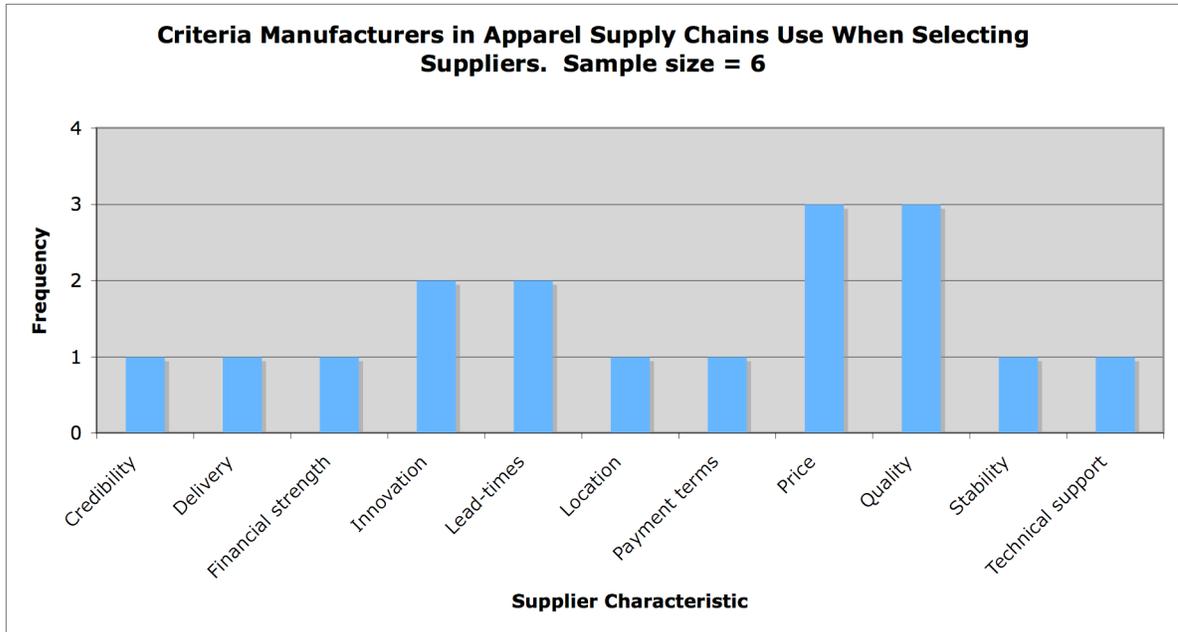


Figure 4.12: Criteria Manufacturers in Apparel Supply Chains Use When Selecting Suppliers

Criteria Used by Retailers When Selecting a Supplier. In addition to their own criteria for selecting suppliers, textile manufacturers were also asked to share their perception of retailers’ criteria for supplier selection. This can help determine if there is miscommunication between these companies. Six characteristics were listed by multiple manufacturers in the sample: price, quality, capacity, innovation, lead-times, and reliability. Apparel manufacturers believe that retailers are more interested in the price of goods than any other characteristic. It is interesting to note that manufacturers have the same criteria for suppliers that they believe are held by retailers, with the addition of capacity and reliability for retailers. Figure 4.13 depicts all the qualities that manufacturers listed as retailers’ criteria for selecting suppliers.

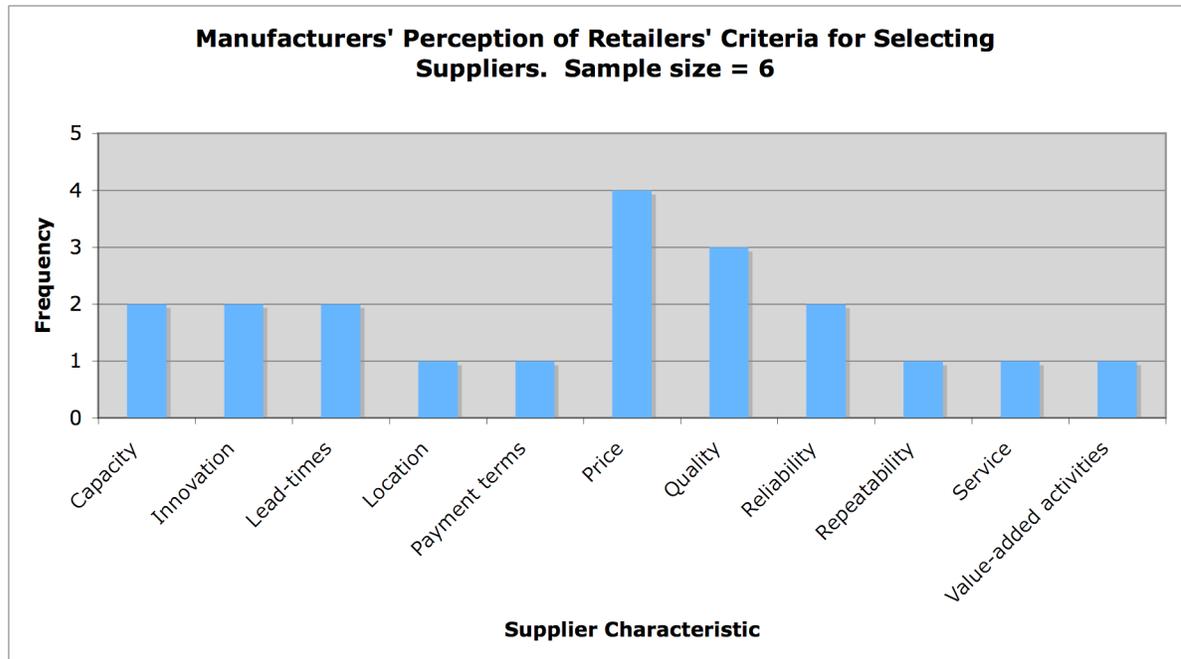


Figure 4.13: Apparel Manufacturers' Perception of Retailers' Criteria for Selecting Suppliers

Partnerships: Description and Importance. Long-term relationships are very important to U.S. textile manufacturers. Some of the most successful relationships occur as a result of time and the willingness of both companies to grow and evolve together. As a manufacturer's needs change, their best suppliers change with them to continue to meet their needs. Also, over time, trust develops between the firms leading to open communication and collaboration in new product development. Partnerships are key to creating a high confidence level in all discussions of cost, quality, innovation, and protection of intellectual property. In a partnership, suppliers can approach manufacturers in confidence regarding the development of new products and in handling any quality issues. Relationships with supporting industries, i.e. power companies and educational institutions, are also important to

help ensure the success of U.S. manufacturers. The most common time for manufacturers to add new suppliers is for the development of a new product that requires specific technology or expertise that is not available from the current network of suppliers.

Exchange of Information/Shared Vision. Interview results show that supply chain communication for general operations is open, but proprietary information is not shared. In general, communication about running schedules is very open. Suppliers provide updates on raw material availability and prices so that downstream manufacturers are prepared and can make adjustments as necessary. In return, downstream manufacturers are open about upcoming orders and inventory issues. One respondent believes it is important to have close relationships with their customers, but that it is crucial to keep a low profile within the textile industry in order to avoid competition.

Manufacturers do not believe that there is shared vision in supply chains. The data reveal that manufacturers believe retailers have little to no loyalty to their current suppliers and will drop a manufacturer over pennies per garment. Furthermore, it seems that retailers are only concerned with their own profitability and not how their sourcing decisions affect the entire supply chain.

Drivers of Supply Chain Success. Manufacturers were asked to identify the qualities that enable the success of their supply chain. The following points are their responses.

1. Supply chains must be responsive to the current market. If an item is not selling well at retail, manufacturers should be willing to stop production. In the same way, if a product oversells, manufacturers must be able to increase production.

2. Innovation: Having an innovative product differentiates one manufacturer from another. The ability to work closely with a customer in product development gives a manufacturer an opportunity to show the full extent of their capabilities and strengthen customer loyalty.
3. Customer service: Regardless of size of firm and products manufactured, manufacturers have the ability to offer extensive customer service. This ensures that their product is handled in the best manner possible as it continues in production, and it also increases customer loyalty.
4. Consistency: When customers know that products coming from a specific manufacturer will always be the same quality, it gives them a greater level of confidence.
5. Trade legislation: Many U.S. manufacturers can produce yarn and finished fabric in cost-effective methods. By partnering with firms in other countries for cut and sew operations, they are able to compete with Asian supply chains.

Current Challenges in Supply Chain. Even successful supply chains experience challenges that must be addressed. The following are the challenges that face U.S. manufacturers today.

1. Access to capital: In today's economic climate, order quantities are down. This leads to lower cash flows, making it difficult for manufacturers to access the capital they need to purchase raw materials for production. Retailers will not use suppliers who do not have the credit to support their orders.

2. Fluctuations in raw material costs. Chemicals and some synthetic fiber prices directly reflect the price of crude oil. Cotton prices have been fluctuating as well. It is difficult for manufacturers to cost goods if there are significant variations in raw material costs.
3. Volatility in governmental agencies: Some supply chains depend heavily on free trade agreements, such as NAFTA and DR-CAFTA, to provide goods to U.S. retailers at competitive prices. With a new Administration, there is talk of making significant changes to trade legislation which would have a major impact on some respondents. This also applies to Central American government's decision to increase wages. Respondents reported that some cutting operations have shifted to Asia because Central American is no longer cost-effective if wages are raised.
4. Lead-times, logistics and quality issues in goods manufactured off-shore: Many U.S. manufacturers own facilities in other countries to help remain competitive in the global market. However, as production moves farther away it becomes more difficult to manage. Customs, tariffs, and duties also become complicated and hard to understand.
5. Push toward globalization: It seems that manufacturing continues to chase lower labor costs. In this effort, there arise concerns about human rights and environmental impact. Furthermore, when oil prices rise like they did in 2008, manufacturers suddenly seem interested in investing in the Western hemisphere. The effort to return to a sustainable and responsible business model is a challenge that faces many manufacturers.

Home Furnishings Manufacturers

There were six textile manufacturers and two furniture manufacturers in the sample. Firms represent the yarn, fabric, cut and sew, and furniture assembly processes in the upholstered furniture supply chain.

Location of facilities. All manufacturers in the sample owned production operations in the U.S. Seven companies own manufacturing facilities in the Southeast U.S. and one company is located in the Northeast U.S. Five manufacturers only own facilities in the U.S., and the remaining three own and operate facilities in China and France.

Production in US. Within the sample, one manufacturer produces yarn and five companies weave upholstery fabrics in the U.S. Both furniture manufacturers in the sample produce upholstered furniture in the Southeast U.S.

Supply Chain Structure. Within the sample, there were two supply chain structures utilized by the U.S. textile manufacturers and both the U.S. furniture manufacturers use similar configurations. Figure 4.14 depicts a vertical supply chain wherein a single company manufactures yarn through finished woven upholstery fabric. One company that utilizes this configuration also has vertically integrated operations in other countries to serve local markets.

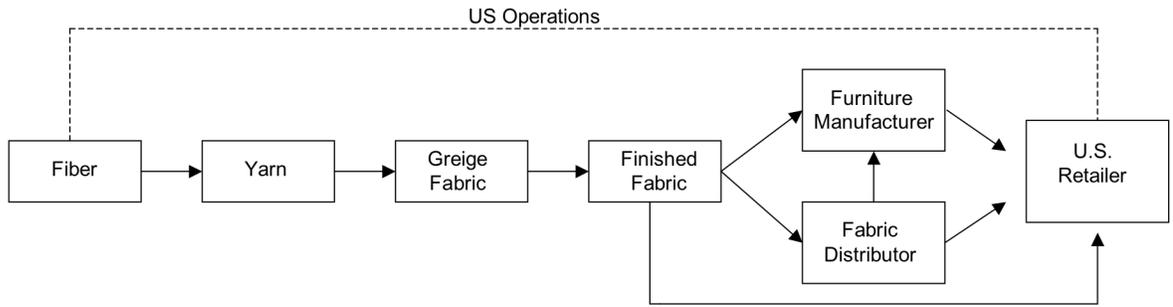


Figure 4.14: U.S. Upholstery Manufacturer Vertical Supply Chain

Figure 4.15 depicts a more common supply chain structure in which firms purchase yarns and then dye and texturize them in-house to add variety to and specialize the purchased yarns to meet their needs. This is due, in part, to the lessening availability of domestic yarn suitable for weaving upholstery fabric. Operations are vertically integrated from yarn forward, producing finished woven upholstery fabric. In order to meet more competitive price points, U.S. textile manufacturers will sometimes form partnerships with mills in China, but do not often purchase these mills.

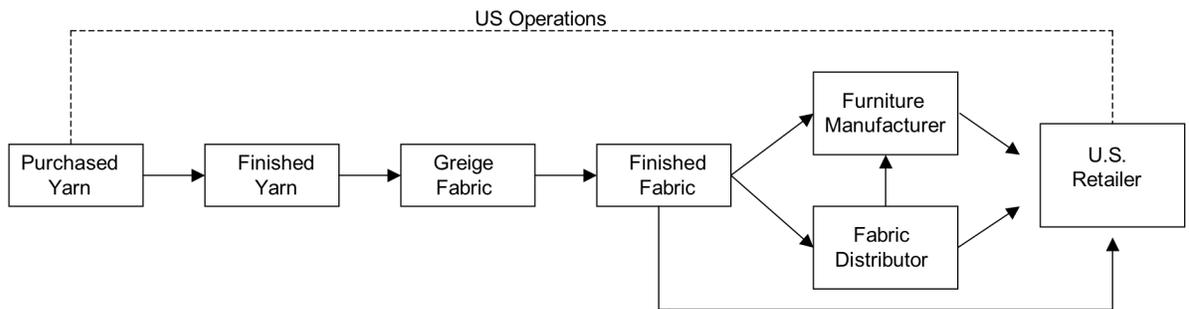


Figure 4.15: U.S. Upholstery Manufacturer with Purchased Yarn

Figure 4.16 depicts the supply chain structure utilized by the U.S. furniture manufacturers in this study. Because they are such large customers of U.S.-manufactured upholstery fabrics, it is important to understand their supply chain structures as well. U.S. furniture manufacturers purchase upholstery fabrics either directly from mills or from a fabric distributor. A significant portion of furniture manufacturing remains in the Southeast U.S. due to high costs of shipping, due to weight, and the customization often expected from furniture customers. Furniture manufacturing does occur in China, but they generally purchase upholstery fabrics from local sources. Some U.S. manufacturers have partnered with or purchased mills in China for this reason.

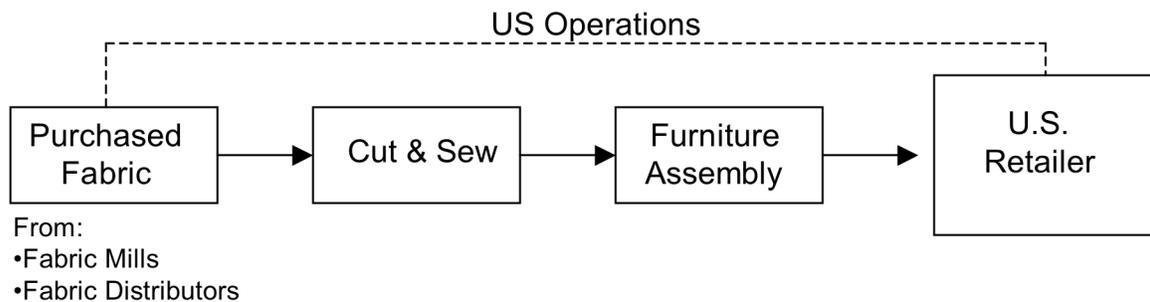


Figure 4.16: U.S. Furniture Manufacturer Supply Chain

Criteria Used When Selecting a Supplier. There are six characteristics that multiple manufacturers seek in a supplier: long-term stability, availability, capability, relationship viability, sophistication, and value-added product. There is usually a high cost for U.S. upholstery manufacturers that is associated with switching yarn suppliers. Therefore, the most frequent answer was the long-term health, financial strength, and overall stability of a

firm. Figure 4.17 depicts all the qualities that manufacturers listed as criteria for selecting suppliers.

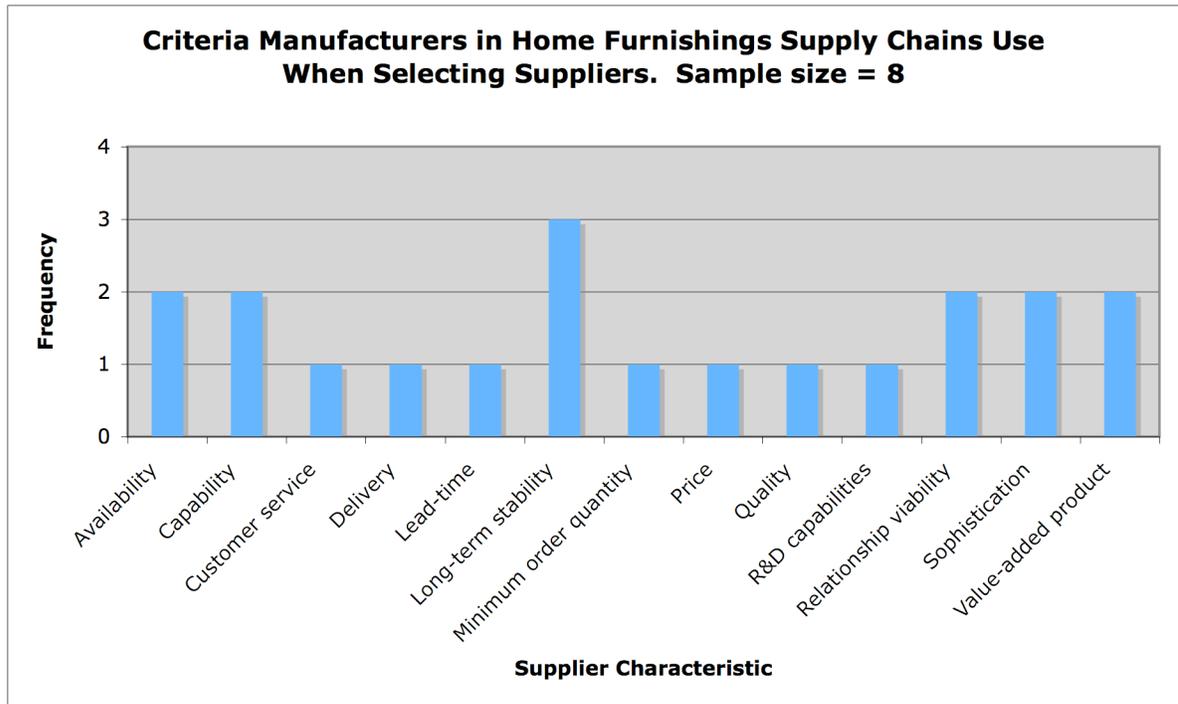


Figure 4.17: Criteria Home Furnishings Manufacturers Use When Selecting Suppliers

Criteria Used by Retailers When Selecting a Supplier. Manufacturers in the home furnishings supply chain were also asked to share what they believe is most important to U.S. retailers when selecting suppliers. Five characteristics were listed by multiple manufacturers: product offering/design, price, good fit for the retailer, quality, and a value-added product. There are many upholstery manufacturers competing for furniture manufacturers’ attention. Therefore, upholstery suppliers must distinguish themselves through fabric designs. Figure

4.18 depicts all the qualities that manufacturers listed as retailers' criteria for selecting suppliers.

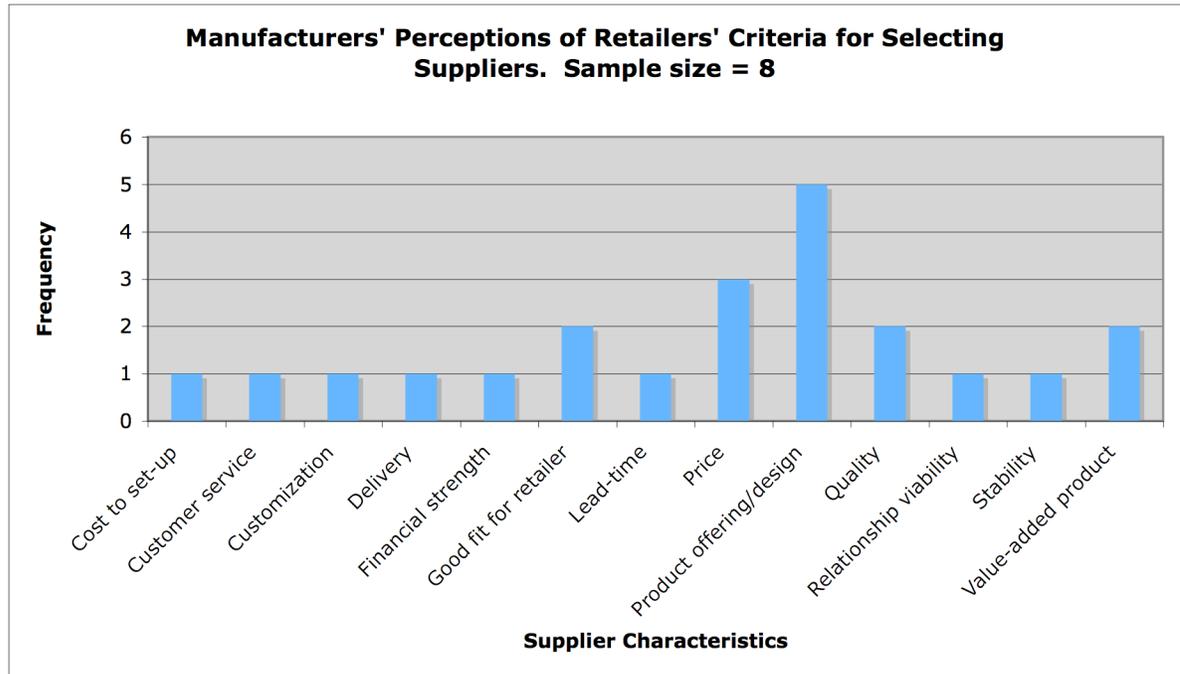


Figure 4.18: Home Furnishings Manufacturers' Perceptions of Retailers' Criteria for Selecting Suppliers

Partnerships: Description and Importance. The U.S. furniture industry experiences strong relationships with their suppliers and even feel a sense of family with other employees. Furthermore, these relationships have existed for many years, allowing deep levels of trust to be developed. This trust results in flexibility and open communication between firms. When upholstery manufacturers understand the needs of furniture manufacturers, they are able to develop products and services that are relevant to their

customers, thus further strengthening loyalty between these firms. Relationships are a priority, and significant time is spent ensuring that their health is maintained.

Today, many domestic upholstery manufacturers struggle to find yarn suppliers in the U.S. due to recent business closings. This is a challenge because U.S. upholstery manufacturers would like to purchase domestic yarn, but it is becoming increasingly difficult. Therefore, relationships between U.S. yarn and upholstery manufacturers are very strong and practice open communication to help ensure the long-term viability of all parties.

Some U.S. upholstery manufacturers are beginning to form relationships with retailers. By taking their product directly to retail, upholstery manufacturers are able to present their fabrics in the way they would like them to be seen. Furthermore, product scope is not narrowed by a middleman such as a furniture manufacturer or fabric distributor. Traditionally, these middlemen saw all the fabrics developed by upholstery manufacturers and then made selections regarding the fabrics they believed would sell the best, thus drastically narrowing the number of designs shown to retailers. However, when an upholstery manufacturer goes directly to retailers, they are able to see a more extensive product offering and are more likely to specify a fabric from that firm. In this way, demand switches to a pull scenario from the retailer, influencing the buying decisions of furniture manufacturers and fabric distributors. Upholstery manufacturers are also working with retailers to educate them about the qualities of their fabric and to help raise customer awareness. These efforts are beneficial because they help the upholstery manufacturers interact with end customer which helps them better understand actual market demand so they can direct their products and designs appropriately.

Exchange of Information/Shared Vision. Communication between U.S. yarn and upholstery manufacturers is open for many reasons. When suppliers to upholstery manufacturers close their doors, upholstery manufacturers must find new suppliers and therefore must clearly define their needs and expectations from these firms. Upholstery manufacturers share forecasting and current sales information so that suppliers can plan for upcoming demand and adjust their production accordingly. Also, once a relationship is established, upholstery manufacturers want to know the financial standing of their suppliers in order to know they have a reliable source for inputs. Regardless of circumstance, when a customer does not receive goods at the time promised, it reflects very poorly on the upholstery manufacturer. For this reason, upholstery manufacturers have back-up suppliers for all their major inputs.

Drivers of Supply Chain Success

1. Relationships with customers: U.S. upholstery manufacturers work hard to understand their customers. Developing strong relationships helps build open communication, trust, and the ability to anticipate customer needs. Once these needs are understood, upholstery manufacturers can develop product lines and services that are tailored to their customer. This dedication further strengthens loyalty and the ability to work together in a mutually beneficial relationship.
2. Shorter lead-times: When customers purchase a customized piece of furniture they want it as soon as possible. This fact, in addition to high transportation costs due to weight, has helped keep a significant portion of furniture manufacturing in the U.S.

- By utilizing domestic upholstery manufacturers, furniture manufacturers are able to keep their lead-times short and remain competitive.
3. Design: In order for production to run smoothly, it is important to have clear design direction. It is not crucial from where the direction comes, but there must be a well-developed concept that is communicated throughout the supply chain so that everyone is working toward a common goal. Upholstery mills and furniture mills agree that upholstery fabrics produced in the U.S. have a competitive advantage in their aesthetic appeal. Being located in close proximity to the consumer helps designers understand what will be visually appealing to their customer. Furthermore, upholstery manufacturers understand what furniture manufacturers are looking for and tailor their designs to each customer.
 4. Technology: The use of technology has increased the level of communication between firms. There are systems today that improve communication between the design department and mill in one company. This helps organize orders and keep information flowing openly. Also, some companies have developed networks that can be accessed by all their suppliers to ensure that product specifications, expected delivery times, and current orders are readily available to all parties.
 5. Reliability of suppliers: Having the confidence that their suppliers are stable is crucial to upholstery and furniture manufacturers alike. Furthermore, it is important that suppliers maintain consistent quality products and meet contracted delivery times.

Current Challenges in Supply Chain

1. Economy: Fluctuations in the economy affect all members of a supply chain. Some companies shared that their orders are currently half of what they were one or two years ago. When there are not orders to fill, companies find it difficult to access capital. When this capital is not available, it can become difficult to fill orders due to insufficient funds to purchase raw materials or hold inventory. In an attempt to increase demand or ensure customer loyalty, manufacturers are trying to find ways to offer a better product at the same price.
2. Predicting customer needs: Custom-order upholstered furniture is a significant portion of the higher end market. However, it is very difficult to know what inventory to carry when there are thousands of frames and thousands of fabrics, trims, and finishes from which customers can choose. It is crucial for furniture manufacturers to deliver high quality, specialty products with short lead-times to ensure customer satisfaction and loyalty. Therefore, they are constantly working with upholstery manufacturers and distributors to develop efficient inventory systems.
3. Change/loss in vendors: As mentioned previously, many domestic yarn manufacturers have closed their businesses this year putting enormous stress on upholstery manufacturers. As the number of vendors decreases, customer loyalty increases but the versatility suffers. Remaining yarn manufacturers are struggling to adapt to new customers' demands and upholstery manufacturers are trying to narrow their yarn needs in order to accommodate their suppliers. In addition, many

upholstery manufacturers are depending on their own dyeing and texturing capabilities to add desired characteristics to the purchased yarn.

Company-controlled Drivers

1. Efficiencies of production

Two qualities that impact efficiencies in supply chain were listed more than any other: quality and lead-times. U.S. manufacturers have advanced technology and skilled labor which enable them to produce consistent, high-quality goods. Furthermore, their proximity to the U.S. market allows them to gain an advantage in lead-times. These two factors are crucial in making U.S. supply chains competitive with those in Asia. Late deliveries can incur charges and possibly the loss of customers. The domestic textile manufacturing industry must value and protect their competitive advantages in these two areas.

For the high-end customer, price is not always as important as quality and lead-times. However, lower-tier products are very focused on price right now. These manufacturers often have a global footprint and are seeking to cut costs wherever possible. Some solutions include: standard warps and yarns to shorten lead-times, new machinery to add speed, simplification of chemicals used and process steps, and consolidation on freight routes. Streamlining their supply chain can help reduce costs and improve competitiveness.

2. Branding and marketing

Most respondents agree that brands are a major factor in consumer purchasing decisions. However, the overall consensus is that upstream branding of textile products (ie fiber, yarn, fabric) is not crucial to success. First, it requires significant time, effort, and

financial investments to build and sustain a brand. Many U.S. manufacturers do not feel that they have these qualities to devote. Also, there are many well-established national brands and private labels that do not wish any “infringement” on the value they have claimed for a specific product. In other words, a well-known denim jeans brand only wants their name on the product, not an additional yarn or fabric brand. However, there seems to be some opportunity for upstream brands to partner with existing brands to help develop and sell a story to the consumer. One specific example would be possible opportunities to sell a green product story. In this sample, one yarn manufacturer, one upholstery manufacturer, and one apparel fabric manufacturer currently maintain healthy brands.

3. Services offered to customer

The majority of respondents believe that customer service is an area in which U.S. manufacturers can have a significant impact on the loyalty of their customers. By offering training and technical support, manufacturers assure that their products are further processed into high quality finished goods that represent all members of the supply chain well. Another valuable service in today’s market is inventory management. The willingness to hold inventory or extend credit to customers greatly increases customer loyalty. Offering fashion-forward designs and customized products is another important service. Many manufacturers overseas are not willing to accept small batches or specialized orders. These orders are opportunities for U.S. manufacturers to increase flexibility and maintain domestic production. As vendor bases are narrowed, communication becomes more open and relationships are strengthened.

Community-controlled Drivers

1. Energy prices

As energy prices rise, the repercussions can be felt throughout the supply chain. Many raw material costs directly reflect the price of crude oil. As oil prices rose in the summer of 2008, raw material prices increased. Some manufacturers have seen prices come back down, but others claim they never did. It is believed that energy costs should be spread throughout the supply chain evenly. The rise in energy costs can create opportunities for U.S. manufacturing. The cost to ship a container is greatly impacted by oil prices, making it more advantageous to produce goods in the Western hemisphere in some cases. Furthermore, it is often true that the closer firms in a supply chain are located to each other, the lower the impact of energy prices. Electricity costs can be unreliable and extremely expensive in Central America, greatly impacting companies who utilize these countries for production.

2. Trade legislation

Many U.S. manufacturers can produce yarn and fabric quite efficiently. Combining these strengths with lower labor costs in Mexico and Central America can help create supply chains that are competitive with Asian production. However, a key component of these supply chains is trade legislation. Free trade agreements such as NAFTA and DR-CAFTA enable goods to flow duty-free between the Americas. Many manufacturers emphasized the importance and necessity of these trade agreements.

Another legal issue is the continued expansion of government regulation on consumer products. Even manufacturers who are currently compliant must pay extensive dues to

receive necessary certification to continue producing these goods. Some examples include the Consumer Product Safety Improvement Act (2009), Lacey Act (2008), and CARB (2009). This is money spent on non value-added goods and can be a significant hindrance to U.S. manufacturers.

3. Labor force

Due to the current high U.S. unemployment rate, there is an abundance of skilled labor. However, labor costs are lower in Central America and Asia, often making them more competitive locations for labor-intensive processes, such as cut and sew. As these regions experience increases in minimum wage and more job opportunities there seems to be decreasing employee loyalty as workers will shift jobs for better pay or desirable hours.

Retailers

There were eleven retailers in the sample. Nine companies sell apparel products, four companies sell upholstered furniture, and two companies sell both product types. The sample included mass, specialty, and department stores.

Supply Chain Structure

Retailers often use sourcing agents to locate new suppliers to produce private label goods. Sourcing agents develop a network of mills with a variety of skill sets. After connecting retailers to garment manufacturers, sourcing agents continue acting as a liaison between the two entities, but the retailer will also work directly with the mill. In some cases, retailers will specify the fabric they want to be used, but many times they only interact with the garment manufacturer. Direct importers are often used for specialty goods. These firms have relationships with mills in various locations and an office in the U.S. where retailers can

come to request production assistance. In this relationship, retailers generally only interact with the importer. In this study, many retailers used a mixed strategy, employing the services of a sourcing agent for most products and utilizing a direct importer for more specialty goods, such as denim jeans. Figure 4.19 depicts the supply chain for a retailer that utilizes a sourcing agent and direct importer.

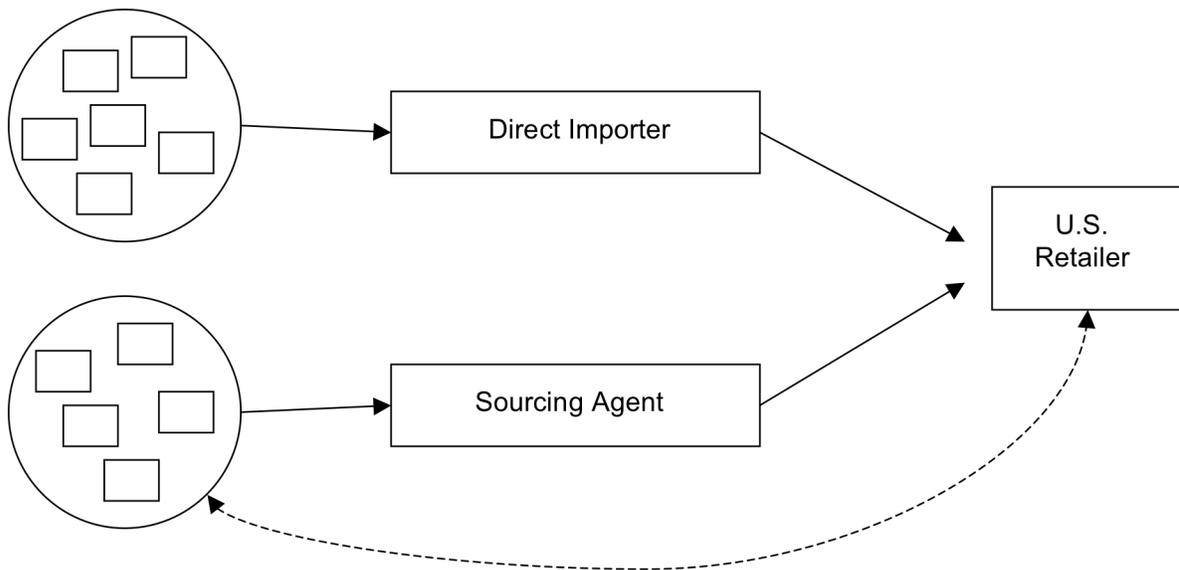


Figure 4.19: U.S. Retail Blended Sourcing Strategy

Some retailers have their own sourcing offices located internationally. This offers an advantage because they work directly with the mills and do not have to hire a third party service. However, it can be very expensive to set up new offices and it takes many years to build up a substantial network that can support the full production of a large retailer. These

firms are more likely to specify yarn and fabric suppliers for their finished goods because they have enough volume to have influence in the supply chain. Figure 4.20 depicts the supply chain for a retailer who owns their own sourcing offices.

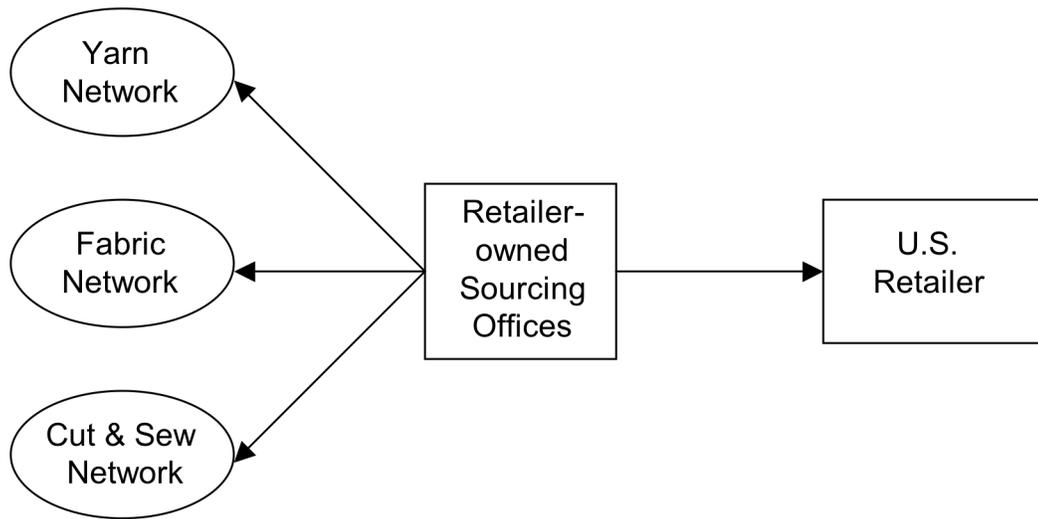


Figure 4.20: U.S. Retail Supply Chain with Owned Sourcing Offices

Private Labels. Department stores often use private labels for two purposes. First, they help add variety to their product mix, which serves to distinguish themselves from other department stores. Second, retailers are able to offer quality products to customers at lower prices, while achieving higher margins due to the elimination of a middleman or wholesaler. Design for private labels is completed in-house so that it can target specific customers. Private labels are steadily becoming larger percentages of retailers' product mixes. Four of the retailers in the sample actively use private label as part of their business strategy. These

products offer opportunities for U.S. textile manufacturers because as these lines continue to grow, retailers must locate manufacturers capable of producing quality goods.

Full-Package Suppliers. When retailers source products for their private labels, they often seek full-package suppliers. Retailers develop a prototype, or detailed specifications, and then find a garment manufacturer who is able to source all the necessary components and deliver a finished product. Most retailers are not concerned where inputs come from as long as the finished garment meets design and quality standards. One respondent shared that a typical full-package supplier handles design, marketing, inventory, sales, and distribution. The retailer is intimately involved in creative direction, compliance, packaging, and in-store merchandising. There are not many full-package suppliers in the Western hemisphere. Some retailers stated that they would be interested to do business in this hemisphere if there were full-package suppliers available.

Sourcing Agents. In order to locate suppliers, retailers often employ sourcing agents. These are firms who establish networks of trustworthy suppliers that can produce a wide variety of goods. Retailers then send product specifications to the sourcing agent who, in turn, compiles a suggested list of suppliers. The retailer then visits the individual facilities and makes their selection. During production, the sourcing agent will ensure quality of goods produced, act as an intermediary between retailer and suppliers, and ensure social compliance of mills.

Criteria Used When Selecting a Supplier

The six most frequent characteristics that retailers listed as important when selecting suppliers are as follows: price, quality, capability, flexibility, logistics, and social

compliance. Figure 4.21 depicts all the qualities that retailers listed as criteria for selecting suppliers.

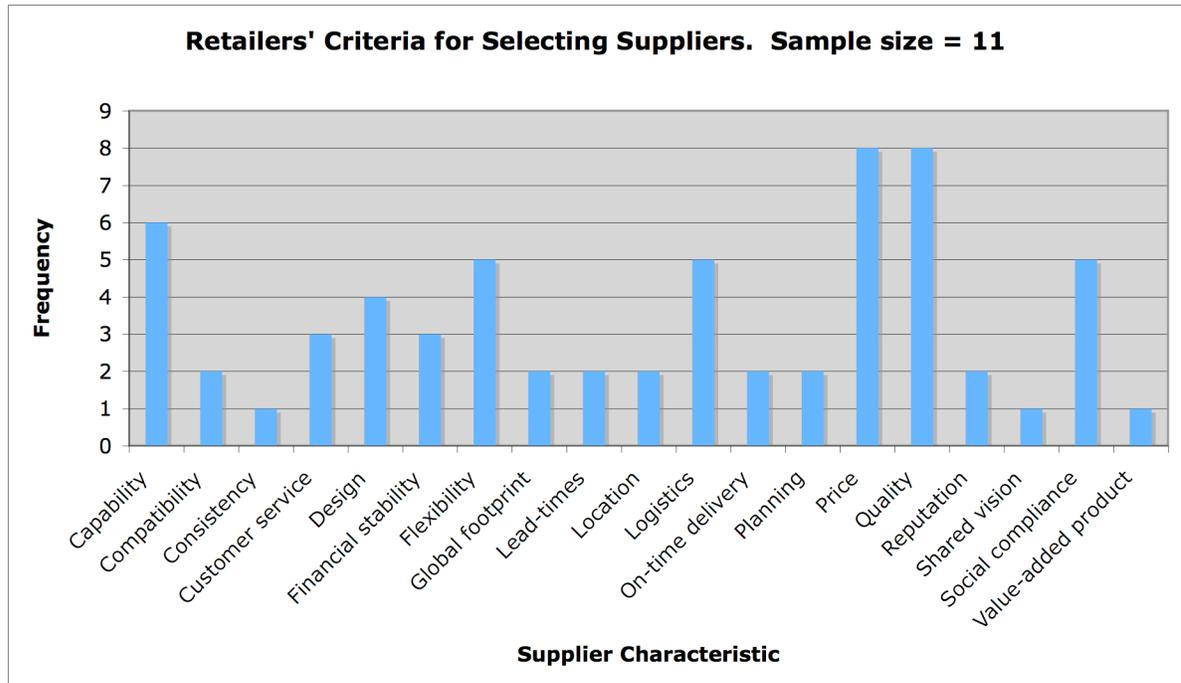


Figure 4.21: Retailers’ Criteria for Selecting Suppliers

Partnerships: Description and Importance

Retailers believe engaging in long-term partnerships helps ensure consistent quality of goods. When a new product is introduced, the transition often goes more smoothly if an existing supplier can begin producing the new item. There are some retailers who find it valuable to build relationships with fiber, yarn, and fabric manufacturers. This often occurs during product development, but can also be used as a means for negotiation. By knowing true costs of production upstream in the supply chain, retailers can ensure that garment

manufacturers are quoting accurate prices. Although some retailers specify which fabric or yarn mills they want to act as suppliers garment manufacturers, it does not appear to be overly common. There is a dichotomy regarding suppliers' design capabilities: some retailers see strong value in this, and others believe they have a clear vision and do not want supplier input. In these cases, it is important for manufacturers to communicate openly in order to determine if the relationship is a good fit. Many retailers are making efforts to narrow vendor base to ensure closer relationships and to gain more influence. In general, it appears that retailers maintain relationships with manufacturers as long as they feel they are benefiting. However, if a manufacturer cannot keep up with capacity or compete on price, retailers will locate another supplier who can.

Exchange of Information/Shared Vision

It is important to retailers that they have open communication with their vendors. They want to be aware of progress made on orders and delays that are occurring. In order to achieve this visibility, many retailers develop network systems that track product specifications, orders, and expected delivery times and require suppliers to utilize them. Advances in technology are listed as a major factor enabling supply chain management today by the Supply Chain Resource Cooperative at North Carolina State University (2000). Research confirmed that technology does indeed play a role in strengthening communication throughout the entire supply chain. Retailers believe that all parties must be transparent about their needs and want to hear about problems when they arise. They understand there will be problems, but want to hear about them as soon as they occur in order to help work through them or prepare for the repercussions. Vision is usually developed by retailers, but

does not seem to be shared throughout the supply chain. Balsmeier and Voisin (1996) state that a lack of shared vision can be detrimental in a complex network. Research shows that retailers seem to understand the importance of shared vision, but may need to be more proactive about its implementation.

Drivers of Supply Chain Success

One of the key elements of a successful retail supply chain is a clear design concept that begins with retail and is communicated throughout the different firms involved in production. If retailers develop a well-defined marketing story they are trying to sell or create detailed prototypes or product specifications, then manufacturers understand what is expected from them and can work towards that common goal. Experienced vendors who are willing to communicate openly and be flexible to meet changing market demands will help contribute to a successful supply chain. Furthermore, when a supply consists of vendors who have a global footprint they are better able to meet customer demands. For example, a vendor may own a mill in Asia that can produce the initial order at a low cost, but with longer lead-times. Then, once the product is on retail shelves, replenishment orders can be fulfilled in another mill that the vendor owns in Central America. Production costs may be more expensive, but shorter lead-times and the ability to react to actual market demand is of high value to retail supply chains. This collaboration between manufacturers and retailers increases the opportunity of having the right product on retail shelves at the right time.

Current Challenges in Supply Chain

A major challenge facing retail supply chains is the difficulty in developing accurate forecasts. There is much volatility in the market today: fluctuating crude oil prices,

decreased discretionary spending, and numerous business closings, for example. Trying to predict consumer behavior in high fashion markets while considering all these variables proves to be a struggle. Therefore, retailers feel that they must select flexible suppliers who are able to produce and deliver garments in the shortest amount of time possible so that they can be more responsive to consumer spending behavior. By producing quality, attractive items, retailers believe they can encourage customers to begin purchasing again.

Company-controlled Drivers

1. Efficiencies of production

It is important that production capabilities be considered from the beginning of product development. Understanding the strengths of an existing supply chain can help manufacture goods in a more efficient process. This supports the idea that Feller, Shunk, and Callarman (2006) present when they discussed the importance of practicality in product design. Efficiencies of production, such as price, quality, and delivery shape the sourcing plan. Many retailers stated that they consider quality to be a “given,” manufacturers understand that retailers will not accept goods that aren’t made with care. However, most retailers are quite concerned with the price of goods and want to ensure that they provide acceptable customer price points that can deliver profitable retail margins.

2. Branding and marketing

Brands are often the most valuable asset any firm owns. Some brands have existed for many years and have acquired a respect that only time can deliver. Therefore, retailers will protect a brand’s reputation at all costs. Retailers demand that mills are socially

compliant and that final products exhibit great quality so that the brand will be well-represented.

3. Services offered to customer

Retailers in the sample believe that the ultimate service they can give their customers is to have the right product in their stores at the right price and the right time. If consumers do not like the product mix, they will go to another store to make their purchase. One way that manufacturers can help ensure that products are sold is to deliver quality goods on time. Another service suppliers can offer is honest feedback regarding current mill capabilities as well as upcoming opportunities. All parties communicate openly about market trends and product forecasts. Manufacturers and retailers working together ultimately provides a valuable service to the end-consumer.

Community-controlled Drivers

1. Energy prices

Many retailers are developing proactive strategies to drastically reduce energy consumption in order to reduce long-term costs. This involves making changes in retail stores as well as investing in current research and new technologies. Another energy price that is often mentioned is the price of crude oil. This impacts raw material prices and transportation costs. However, energy prices are not usually significant enough that they cause retailers to refrain from sourcing goods in the Far East. The efficiencies of production and low labor costs continue to outweigh shipping costs. Fluctuations in these prices make

costing of merchandise very difficult. Retailers want to pass higher costs on to customer or other firms in the supply chain, but cannot do so if they arise unexpectedly.

2. Trade legislation

Most U.S. retailers see free trade agreements as opportunities to reduce costs and try to configure their supply chains in a way that takes advantage of them. However, the general impression of free trade agreements in the Western hemisphere is negative. Retailers believe that NAFTA and DR-CAFTA are too confusing to be helpful. More specifically, they believe Asian fabric production and sewing efficiencies outweigh the shorter lead-times available in Central America. Anti-dumping legislation causes great concern to U.S. retailers due to the unpredictability that is created. Because there is no set limit, retailers cannot plan around the regulations. Finally, many retailers expressed concerns regarding the new Consumer Product Safety Improvement Act (2009). They believe sufficient time was not allowed to enable retailers to plan for the significant loss in merchandise.

3. Labor force

Social compliance is very important to retailers. Not only do they want to ensure that employees are provided with safe working conditions, but they also do not wish to harm the reputation of their brands in any way. The other major issue retailers face is labor wages. Some garments require labor-intensive processing to achieve desired designs. Therefore, retailers are always interested to learn about opportunities for lower labor wages. Currently, there seems to be a shift away from Chinese production into countries such as Vietnam, Cambodia, and Indonesia due to their lower wage rates. Many retailers stated that wage rates

in Central America are high enough to lessen their competitiveness with many Asian countries.

According to Kotler and Keller (2009) there are seven trends emerging in the retail industry. The idea of new types of competition was certainly discussed during the course of the research. Customers who previously shopped only at specialty and department stores are now more willing to shop in mass, or discount, stores leading to growth in this area. Many retailers are investing heavily in non-store-based retailing today, another idea presented by Kotler and Keller. Technology is becoming more of a focus for retailers as they attempt to increase communication within supply chains and manage their logistics in the most efficient method possible. Some decline has been seen in middle-market retailers, but the luxury market has not seen an increase. This may be due to the current economic condition. The idea of new retail forms developing and the expansion of global retailers were not discussed during the research. This is most likely a direct result of the current economic situation.

Supply Chain Comparisons Across Different Retail Stores

Retailers in the sample represented three types of retail stores: mass, specialty, and department stores. All retailers sold apparel, home furnishings, or some combination of both. There are some similarities for these categories that are depicted in Table 4.7.

Table 4.7: Retail Trends by Store Type

	Apparel	Home Furnishings
Specialty Store	<ul style="list-style-type: none"> • National brands source garments/fabrics throughout globe in order to meet volume and price • Specialty denim often produced in U.S. (West coast) or Central America with U.S. denim 	<ul style="list-style-type: none"> • Experience close supply chain relationships • Significant upholstery and furniture production in the Southeast U.S. This allows for extensive customization and lead-times can be as short as 2 weeks • One retailer is vertically integrated from fabric through finished furniture
Department Store	<ul style="list-style-type: none"> • Produce apparel for private labels • Often utilize a sourcing agent or direct importer, but one retailer owned sourcing offices overseas • Lead-times are often 25-35 weeks from initial order • Uncommon to have relationships in the supply chain beyond fabric mills, but often only interact with garment manufacturer • National brands are distributed based on individual store sales 	<ul style="list-style-type: none"> • Use blended strategy to source furniture. Some upholstery fabrics and furniture are produced in Southeast U.S. and some is produced in China. • Lead-times are often 1 year from initial order • No customization • Some variety in product offering
Mass Store	<ul style="list-style-type: none"> • Own and operate sourcing offices internationally • Size enables them to work directly with mills • More likely to interact further back in the supply chain in order to achieve economies of scale 	<ul style="list-style-type: none"> • Upholstery fabric manufactured and furniture assembled in China, then imported to U.S. • No customization • Very little variety in product offering

Opportunities for the U.S. Textile Supply Chain

1. Regardless of company size or product type, all manufacturers have the opportunity to distinguish themselves by the services they offer their customers. This is a company-controlled driver that contributes significantly to the success or failure of any given supply chain. In today's marketplace, research shows that textile firms may benefit from investing in relationships that will build loyalty in their supply chains. Furthermore, servicing a product as it moves downstream creates an opportunity for manufacturers to ensure that their product is processed in the best way possible, thus enhancing its performance in the finished good. This is a way to ensure that a firm's reputation is associated with quality.
2. Yarn suppliers are rapidly decreasing in the US. This is especially true for the home furnishings industry. There is significant production of upholstery fabrics in the US, and many express concerns about the availability of yarn suppliers. These manufacturers want to purchase domestic yarns, but find that this is becoming increasingly difficult. Furthermore, some manufacturers are currently purchasing up to 60% of their total yarn supply from a single supplier. This could have huge repercussions for a fabric manufacturer if something were to happen to the yarn manufacturer. Also, yarn manufacturers today can become so overwhelmed with trying to meet demands of new customers in a timely fashion, that they are unable to offer customer service, therefore decreasing customer loyalty.
3. The willingness to accept smaller orders can provide opportunities to increase a firm's competitiveness. By reducing minimums, a firm enables their customers to become more

flexible, and thus more responsive, to meeting fluctuations in market demand. In today's economy, nobody wants to hold inventory. If a textile manufacturing firm is able to produce small batches with shorter lead-times, they can distinguish themselves from their competitors. When merchandise does not sell, manufacturers will not have large inventories of products with little to no demand. On the other hand, if an item oversells (sales exceed forecast) a manufacturer can respond quickly to meet this market demand. U.S. manufacturers are physically closer to U.S. retailers than firms in any other country. This greatly reduces transportation times and cost. U.S. manufacturers could benefit from examining the advantages of claiming this opportunity.

4. There appears to be a great chasm in the relationship between U.S. manufacturers and U.S. retailers. In many cases, retailers have no relationship with manufacturers beyond fabric formation. Even more, many retailers have no relationship with manufacturers other than a full-package supplier. This is true for both the apparel and home furnishings industries. Therefore, retailers are often only exposed to upstream components (i.e. yarn, fabric) through the eyes of their direct supplier. For example, when an upholstery fabric manufacturer sells their product to a furniture manufacturer, the only representation a retailer has of the fabric manufacturer is that as seen from the furniture manufacturer's perspective or perception of the fabric manufacturer. However, if the upholstery manufacturer approaches a retailer directly, this research shows that demand can be created for their product, thus moving into a pull strategy with the furniture manufacturer. When manufacturers rely on other firms downstream to sell their goods, they foster this disconnect between manufacturers and retailers by allowing firms other than themselves

to represent their product. It is of little benefit for a U.S. textile firm to produce high quality goods if the subsequent firms do not respect that value and protect its reputation.

5. U.S. textile firms have the opportunity to establish a reputation of reliability. By consistently meeting quoted delivery times, manufacturers can strengthen their customer loyalty. After a commitment is made, it is important that firms make it a priority to deliver goods on time. In today's business climate, this most likely means being prepared for unexpected occurrences by having a back-up plan. Balsmeier and Voisin (1996) list a lack of urgency as a potential obstacle for strategic partnerships. This could be displayed when delivery times are not met. U.S. manufacturing companies have the opportunity to make their customers trust them so deeply that they become indispensable.
6. U.S. textile manufacturers have the opportunity to establish relationships with companies outside of the textile industry. They should examine other healthy industries in the U.S. that are growing and find ways to form alliances with them. Some examples may include healthcare and the U.S. military. Healthcare is expected to continue experiencing growth as life expectancies become longer. There could be opportunities to develop more functional hospital gowns, antimicrobial properties encapsulated in textiles, and attractive contract fabrics for assisted living facilities. There is an opportunity for US textile manufacturers to develop innovation solutions, present them to an outside industry, and then work hard to grow and evolve with these valuable customers. Expanding their networks to form linkages outside of the textile industry can certainly help strengthen US manufacturers.

7. Trade legislation can present opportunities for supply chain linkages. There are many US textile manufacturers who produce yarn and fabric quite efficiently. If these production capabilities are combined with affordable labor in Central America, utilizing the DR-CAFTA agreement for duty-free exchange of goods, then apparel can be manufactured at a competitive cost with that of Asian production. Furthermore, there are significant lead-time advantages which help retailers meet replenishment needs based on actual market sales instead of forecasting. Some manufacturers have chosen to invest in their own production facilities in free trade zones in order to be close to the cut and sew mills used by large national brands and retailers. Using trade agreements with other countries can serve to improve the total cost of producing a garment.
8. U.S. textile manufacturers have the opportunity to utilize retailers' insight to actual customer demand. Feller, Shunk, and Callarman (2006) explain that value chains recognize that value flows from the consumer and structure their operations in such a way as to deliver products for this demand. This research supports that it is of great value to manufacturers and retailers alike to seek to understand the customer's perception of value and find ways to deliver goods that meet these expectations. Retailers are often the venue through which consumers purchase goods. Therefore, they are the closest link to understanding actual demand. By improving their relationships with retailers, U.S. textile manufacturers can work together with retailers to produce value-added goods. Both manufacturers and retailers have design capabilities. However, by communicating from the beginning of concept development, manufacturers can offer insights to retailers about what they are technically capable of producing. Furthermore, manufacturers know

what their own current and future capabilities are better than retailers do and can help retailers understand the possibilities of value-added processes. Finally, when U.S. retailers have a clear vision and U.S. manufacturers align their capabilities to this vision an opportunity for a successful partnership is created.

9. In order to compete in the global marketplace, it is crucial for U.S. textile manufacturers to form strong relationships among themselves. This research indicates that U.S. textile firms have an opportunity to stop viewing other US textile firms only as competitors, and begin to see them as partners. When a textile a company has a clear understanding of their own core competencies they are then able understand what competencies in other firms would best complement their own. It is not always necessary to share proprietary information, but it is necessary to be willing to talk about skill sets, capacity levels, lead-times, and business strategy. In this way, U.S. textile manufacturers can discover complementary processes that can work together to produce a valuable end product. Even more, companies can work together to develop products that highlight multiple firms' core competencies, resulting in a final product of the highest quality and innovation. When these partnerships bring success, they can help ensure the health of two textile companies instead of just one, further strengthening the textile industry in the U.S. Partnerships can also help spread the risk of investment in a new innovation. Product development is expensive and can be taxing if one firm attempts to support this on their own, especially if the product is not well-received in the marketplace. However, if the risk is spread across multiple companies, there is a great likelihood that the initial investment will be attainable and that, in case of failure, a firm can recover.

10. There are many retailers who are looking for full-package suppliers. It is common for them to design a garment, define its specifications, and give it to one supplier who is then responsible for sourcing all the components necessary to deliver a finished good at a pre-determined level of quality and price. If U.S. textile manufacturers could form networks that were able to provide all the necessary components and work together to ensure competitive prices and lead-times, then they would have something of great value to offer U.S. retailers. Some retailers believe that “virtual vertical integration”, the idea of strong alliances wherein companies operate as if they were vertically integrated, but are actually individual business entities, is more efficient because each individual firm contributes their specialized process in the most efficient manner possible. Joining together a group of specialized U.S. manufacturers can enable the delivery of competitive goods. More specifically, if U.S. manufacturers form these networks for specialty items, such as customized garments and upholstered furniture, then they can compete with foreign firms who are not as willing to accept these orders. Finally, it may be necessary for individual firms to communicate openly, collaborate to determine where lead-times can be shortened, utilize more affordable labor in free trade zones, and/or relinquish a small portion of margins across the network to ensure competitiveness.

Results in Relation to Conceptual Framework

Figure 4.22 re-illustrates the conceptual framework used in this study. The research focused on the competitive advantages of the U.S. textile industry and how they can be utilized to better meet the needs of the U.S. retail industry. As the figure shows, there are

internal and external improvements that can be made by textile manufacturers to improve their competitiveness.

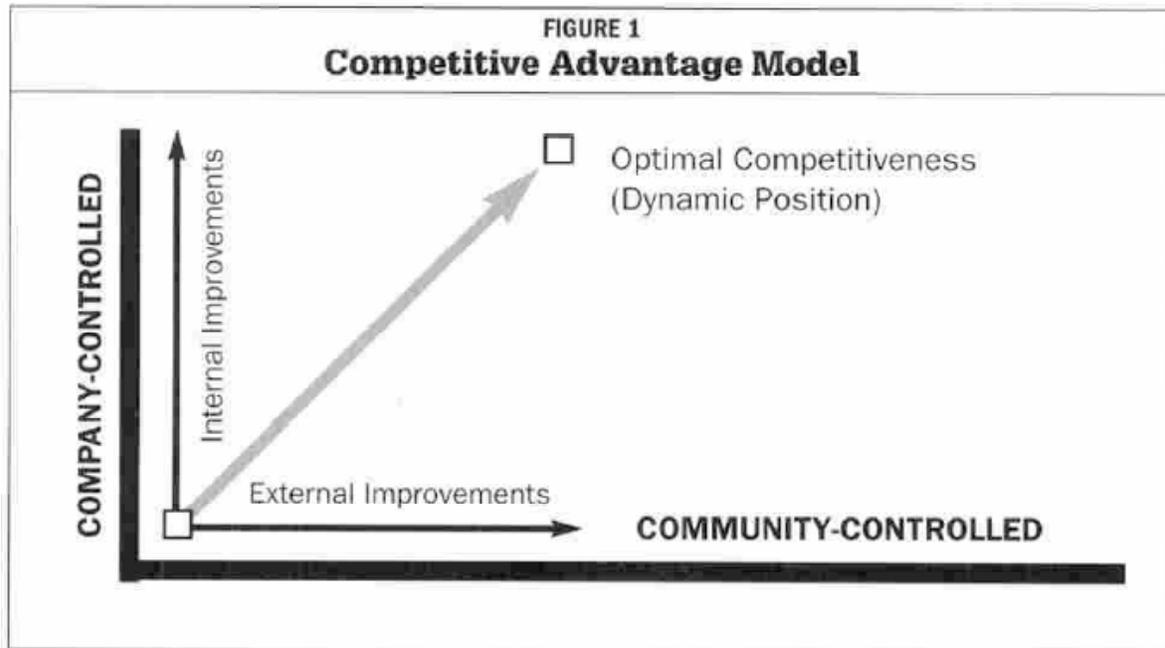


Figure 4.22: Competitive Advantage Model

Source: Hines, B. & Clark, S. (1997). The competitive advantage model: The case of business retention and expansion in Bowling Green, Ohio. *Economic Development Review*, 15(1), 18-22.

The company-controlled drivers that were examined included efficiencies of production, branding and marketing, and customer service. Efficiencies of production and customer service proved to be vital to a company's competitiveness. However, branding and marketing were not always of high importance. The community-controlled drivers that were examined included energy prices, trade legislation, and labor force. All of these drivers play

a critical role in the success of U.S. textile manufacturers. By continually making internal improvements and seeing external drivers as opportunities, U.S. textile manufacturers can position themselves for optimal competitiveness in today's global market.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

The purpose of this research was to examine the current relationships between all members of the U.S. textile supply chain, from fiber to retail, in order to identify opportunities for further integration in the global marketplace. For this research, two information interview questionnaires were developed. One was targeted to textile manufacturers while the other was targeted to U.S. retailers (see Appendix A). The questions were derived as a result of secondary research and covered three areas: existing supply chain configurations, the role of partnerships in current supply chains, and the effects of six internal and external drivers on the competitiveness of U.S. textile supply chains.

In order to understand existing supply chain structures, respondents were asked to describe their suppliers and customers, and locations of each. Manufacturers were asked to describe their production capabilities and locations as well. Understanding these components helps build a visual depiction of how supply chains are currently operating.

The role of partnerships and importance of long-term relationships were discussed at great length with respondents. It was vital to this research to not only understand how sourcing decisions are made initially, but also how and why they are maintained over time. Manufacturers were asked to share their criteria for selecting suppliers as well as their perceptions of retailers' criteria for selecting suppliers. This was examined against retailers' actual responses regarding selection criteria for suppliers.

Drivers of supply chain competitiveness were also examined in order to identify opportunities for U.S. textile supply chains. Company-controlled drivers included efficiencies of production (price, quality, delivery), branding and marketing, and customer services offered. Community-controlled drivers included energy prices, trade legislation, and labor force availability. Understanding the potential of these drivers can help firms position themselves for optimal competitiveness.

Companies in the sample were chosen based on their 2007 sales, growth rate, product mix, and/or their relationship to the Institute of Textile Technology. A total of 26 firms were interviewed either in person or via phone, and the aggregate response data is made available in Appendix B.

Summary of Results

RO1. Determine the supply chain structures that are being used by:

Discount Retailers

Due to their large volumes, discount retailers have strong influence throughout the supply chain. They often own sourcing offices and will interact with every level of the supply chain, from fiber forward, in order to achieve lower prices through economies of scale. Apparel and home furnishings production is generally completed in Asia, and there is little to no customization available to the consumer.

Specialty Retailers

For apparel, many retailers utilize sourcing agents or their own offices to locate low-cost labor that can produce quality fashion-forward products. There is significant production of specialty denim jeans using U.S.-manufactured denim and either U.S. or Central American

cut and sew facilities. For upholstered furniture, there is still a strong presence of U.S.-manufactured upholstery and U.S. furniture assembly that serves specialty stores. This enables customization and shorter lead-times.

Department Stores

Department stores often utilize sourcing agents or direct importers to aid in garment production. These agents locate appropriate suppliers and help with quality assurance, social compliance, and communication during production. Retailers are seldom involved in the supply chain beyond the garment manufacturing firm, but may sometimes specify fabric mills. Lead-times for apparel items are often 25-35 weeks from initial order, and lead-times for upholstered furniture are often one year from initial order. Therefore, these retailers rely heavily on forecasting.

RO2. Identify what supply chain linkages exist between U.S. textile manufacturers and what linkages are missing.

Apparel

Some collaboration can be seen among U.S. textile manufacturers where yarn manufacturers are building relationships with fabric mills and garment manufacturers to ensure that their product is processed to acceptable quality standards. However, U.S. manufacturers in general do not communicate with other firms about their competitive advantages and production strengths, what goods they produce, or who their customers are. These missing linkages could provide future opportunities for U.S. textile manufacturers.

Home Furnishings

There is a strong linkage between upholstery fabric manufacturers and their yarn suppliers. This is due, in part, to the decreasing number of domestic yarn manufacturers. Upholstery manufacturers must communicate openly with new yarn suppliers so that they can understand their customers' needs. Furthermore, upholstery manufacturers have strong relationships with furniture manufacturers. Many of these companies have been doing business together for many years and work hard to be flexible and maintain benefits for both parties.

Manufacturer to Retailer

In general, manufacturers and retailers do not have strong linkages. Retailers often employ a sourcing agency in order to locate new vendors and often have no supply chain relationships beyond full-package suppliers. Some U.S. manufacturers are becoming bolder and approaching U.S. retailers directly and report positive responses.

RO3. Identify the effects of specific drivers on textile supply chains:

Efficiencies of production

U.S. manufacturers believe quality and lead-times are the most important factors of production while U.S. retailers are focused on price and quality. Retailers are often careful to be mindful of existing supply chain's capabilities when developing new products.

Branding and marketing

Brand development is not a priority to U.S. manufacturers. Many have attempted to develop branded products, with little to no success. Furthermore, many manufacturers believe that existing brands do not want to be diluted by additional fiber, yarn, or fabric

brands. Retailers consider their brands as critical to success and seek to protect them at all costs.

Services offered to customer

U.S. manufacturers see customer service as an opportunity to build customer loyalty. Some services include flexibility, accepting smaller batches, design, and inventory management. Retailers also place high value on customer service. They believe having the right product at the right price at the right time is the best service they can offer.

Energy prices

Regarding crude oil prices, U.S. manufacturers are concerned with fluctuations in raw material prices and U.S. retailers are most concerned about increased transportation costs. Irregularity and high cost of electricity cause many concerns in global production. Many retailers are trying to make changes in their stores so that they consume less energy.

Trade legislation

U.S. retailers see free trade agreements as opportunities and are constantly aware of current legislation. Some U.S. manufacturers utilize NAFTA and DR-CAFTA to combine U.S. yarn and fabric efficiencies with lower labor costs in Mexico and Central America.

Labor force availability

There is an abundance of skilled labor available in the United States today. However, retailers are experiencing some difficulties in outsourced labor due to increasing expectations of higher wages in both Central America and Asia.

RO4. Perform an analysis of existing U.S. textile supply chains for:

Apparel

Supply chains for specialty apparel goods are establishing strong linkages. Yarn, fabric, and cut and sew firms are working together to ensure the delivery of high quality garments. By collaborating, firms are able to reduce total lead-times and deliver quality goods at competitive prices. U.S. textile supply chains for apparel do not experience strong linkages with U.S. retailers because retailers generally interact with garment manufacturers in low-wage countries. Forming networks that focus on each firm's competitive advantages and use free trade agreements to achieve lower labor costs may present opportunities for U.S. textile supply chains.

Home furnishings

The U.S. textile supply chains for upholstered furniture experience strong linkages. Yarn mills and upholstery mills work together closely and communicate needs openly. As the number of U.S. yarn manufacturers decreases there is an opportunity for existing yarn mills to produce specialty yarns for upholstery manufacturers. Traditionally, specialty yarns were sourced in the U.S., but today many must be sourced from Asia. Upholstery mills would like to purchase domestic yarns, but they are not available. There is also a strong linkage between U.S. upholstery manufacturers and U.S. furniture manufacturers. Many of these relationships have existed for many years and have accrued extensive trust and willingness to be flexible for the long-term benefit of both parties. Accepting small, customized batches has helped the upholstered furniture industry maintain a presence in the United States.

Conclusions

1. The conceptual framework by Hines and Clark (1997) was proven to be beneficial to the study as it identified that both company-controlled (internal) drivers and community-controlled (external) drivers influence a firm's competitiveness. In today's marketplace, firms may not always have a strong influence over community-controlled drivers, but they can implement changes to their company-controlled drivers in order to achieve optimal competitiveness.
2. Retail Supply Chain Linkages: There are some similarities and differences in supply chain configurations across three retail channels.
 - a. Discount stores: Due to their large volumes, discount retailers have strong influence throughout the supply chain. They often own sourcing offices and will interact with every level of the supply chain, from fiber forward, in order to achieve lower prices through economies of scale. There is an opportunity to utilize U.S. production efficiencies and innovative design partnered with lower wages in Mexico and Central America to produce goods at competitive prices for discount stores.
 - b. Specialty stores: For apparel, many retailers utilize sourcing agents or their own offices to locate low-cost labor that can produce quality fashion-forward products. There is significant production of specialty denim jeans using U.S.-manufactured denim and either U.S. or Central American cut and sew facilities. For upholstered furniture, there is still a strong presence of U.S.-manufactured upholstery and U.S. furniture assembly that serves specialty

stores. This enables customization and shorter lead-times. There are opportunities for U.S. manufacturers to create networks that can deliver full-package garments as well as to collaborate with retailers on product development from conception of the design.

c. Department stores: Department stores often utilize sourcing agents or direct importers to aid in garment production. These agents locate appropriate suppliers and help with quality assurance, social compliance, and communication during production. Retailers are seldom involved in the supply chain beyond the garment manufacturing firm, but may sometimes specify fabric mills. There is an opportunity for U.S. manufacturers to study existing private labels to find “white space” and develop products that meet needs and can be sourced in Western hemisphere.

3. Apparel Supply Chain Linkages: Supply chains for apparel goods are diverse and their members value long-term relationships. However, open communication is not practiced and supply chains do not hold a shared vision. Furthermore, U.S. textile manufacturers of apparel do not experience strong linkages with U.S. retailers. Forming networks that focus on each firm’s competitive advantages and use free trade agreements to achieve lower labor costs may present opportunities for U.S. textile supply chains, especially for the production of specialty garments.
4. Home Furnishing Supply Chain Linkages: The U.S. textile supply chains for upholstered furniture currently experience strong linkages. Yarn mills and upholstery mills work together closely and communicate needs openly. Furthermore, these

strong linkages extend from upholstery mills to furniture manufacturers, even enabling upholstery fabrics to be designed with a specific furniture brand in mind. As the number of U.S. yarn manufacturers decreases there is an opportunity for existing yarn mills to produce specialty yarns for upholstery manufacturers. As an alternative, upholstery manufacturers may benefit from investments in yarn dyeing and texturizing equipment. Accepting small, customized orders has helped the upholstered furniture industry maintain a presence in the United States.

5. Effects of Company-controlled Drivers

- a. Efficiencies of production: U.S. manufacturers believe quality and lead-times are the most important factors of production while U.S. retailers are focused on price and quality. Retailers are often careful to be mindful of existing supply chain's capabilities when developing new products.
- b. Branding and marketing: Brand development is not a priority to U.S. manufacturers. Many have attempted to develop branded products, with little to no success. Furthermore, many manufacturers believe that existing brands do not want to be diluted by additional fiber, yarn, or fabric brands. Retailers consider their brands as critical to success and seek to protect them at all costs.
- c. Services offered to customer: U.S. manufacturers see customer service as an opportunity to build customer loyalty. Some services include flexibility, accepting smaller batches, design, and inventory management. Retailers also

place high value on customer service. They believe having the right product at the right price at the right time is the best service they can offer.

6. Effects of Community-controlled Drivers

- a. Energy prices: Regarding crude oil prices, U.S. manufacturers are concerned with fluctuations in raw material prices and U.S. retailers are most concerned about increased transportation costs. Irregularity and high cost of electricity cause many concerns in global production. Many retailers are trying to make changes in their stores so that they consume less energy.
- b. Trade legislation: U.S. retailers see free trade agreements as opportunities and are constantly aware of current legislation. Some U.S. manufacturers utilize NAFTA and DR-CAFTA to combine U.S. yarn and fabric efficiencies with lower labor costs in Mexico and Central America.
- c. Labor force availability: There is an abundance of skilled labor available in the United States today. However, retailers are experiencing some difficulties in outsourced labor due to increasing expectations of higher wages in both Central America and Asia.

Limitations

1. This research was focused on three product categories: Denim jeans, activewear, and upholstered furniture. Though the sample possessed great strength, the results are limited to the small sample size and may not be generalized to include the entire U.S. textile industry.
2. The sample size for discount retailers was one. Therefore, it is difficult to make generalizations about this type of retail store.
3. Results are based on interview responses. Therefore, they are subject to certain biases or limited access to information by respondents.

Recommendations

Industry

1. There is an opportunity for U.S. manufacturers to develop networks among themselves that are capable of performing as full-package suppliers for retailers.
2. U.S. yarn mills have the opportunity to produce specialty yarns that can better meet the needs of U.S. upholstery manufacturers.
3. Another opportunity for U.S. manufacturers is to continue to offer excellent customer service. This can include product development, inventory management, design, technical support, and the flexibility to smaller batches.
4. An opportunity exists to utilize U.S. production efficiencies and innovative design partnered with trade legislations that enables duty-free access to lower wages in Mexico and Central America in order to produce goods at competitive prices.

5. There is an opportunity for U.S. manufacturers to study existing private labels to find “white space” (unmet market demand) and develop products that meet needs and can be sourced in Western hemisphere.

Future Research

6. Future research could include replication of this study for commodity products to understand the difference of drivers of competitiveness for commodity versus specialty products.
7. One retailer discussed the importance of a 52-week replenishment system as opposed to a monthly reordering strategy. It would be beneficial to discuss this idea with retailers to determine if opportunities exist for textile supply chains in the Western hemisphere, as they can provide quality products with shorter lead-times.
8. The development of a network of U.S. textile manufacturers that is made accessible to U.S. retailers could help retailers understand the feasibility and potential benefits of utilizing U.S. textile supply chains.

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APPENDICES

APPENDIX A: RESEARCH DOCUMENTS

Appendix A1: IRB Exemption Letter

From: Joseph Rabiega, IRB Coordinator
North Carolina State University
Institutional Review Board

Date: December 9, 2008

Project Title: Supply Chain Linkages: Opportunities for the US Textile Supply Chain

IRB#: 619-08-12

Dear Susan:

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemption: 46.101.b.2). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review.

NOTE:

1. This committee complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU projects, the Assurance Number is: FWA00003429.
2. Any changes to the research must be submitted and approved by the IRB prior to implementation.
3. If any unanticipated problems occur, they must be reported to the IRB office within 5 business days.

Please provide a copy of this letter to your faculty sponsor.

Sincerely,

Joseph Rabiega
NCSU IRB

Appendix A2: Initial Contact Letter

Date

Contact Name
Company
Address
City, State Zip

Dear Contact Name:

<Reference name, company> suggested that we contact you regarding our research study. Our study focuses on the textile supply chain and examines the issues of supply chain structures, supply chain linkages, and drivers of competitiveness. Your company has been selected to participate in this study, and your confidentiality will be secured.

I will be conducting information interviews in your area the week _____. I would like to set up a time to meet with members of your company in the given areas during this week, if possible. If an on-site visit is not possible during this week, I would like to arrange a conference call when convenient for you. The questionnaire to be administered during the informational interview is attached for your review. I will follow-up with you via email or phone to discuss a possible meeting time. Please let me know when you will be available during this time, or if there is someone else I should contact.

Your cooperation is greatly appreciated. If you have any questions concerning the study, please contact me via email.

Sincerely,

Susan Ada Sheek
Graduate Student
NCSU/ITT
sasheek@ncsu.edu

Nancy Cassill, Ph.D.
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RETAILER INTERVIEW QUESTIONNAIRE

Respondent Information

Title:
Years in position:
Years with company:
Years in industry:

Company Information

1. What types of products does your company sell?
2. Where are your stores located? Do you have any stores outside of the United States?
3. Would you classify your store as: Department, Specialty, Discount/Mass, or Other?
4. Do you have a private brand(s)?
 - a. What products are manufactured under this label?
 - b. What percentage of total merchandise does your private label entail?

Supply Chain Linkages

5. Describe your supply chain structure.
 - a. Who are your suppliers?
 - b. Where are your suppliers located? How is location of suppliers located?
 - c. What stages of the supply chain are located domestically, and what stages are in other countries?
 - d. Do you own any manufacturing facilities?
 - e. Give a geographical depiction/summary of your supply chain.
6. What levels of the supply chain do you interact with? Fiber → Yarn → Fabric → Finishing?
7. What criteria are used when selecting a supplier? How do you locate new suppliers?
8. Do you use a full package supplier? If so:
 - a. What duties are they responsible for? Design? Marketing? Inventory
 - b. Does supplier have a fixed or flexible network?
9. Do you tend to use the same supplier over time or choose new ones for each product?

10. Describe the importance of partnerships with your suppliers.
11. Describe an existing successful supplier relationship.
12. What are some challenges you currently face in your supply chain?
13. How do you address these challenges?
14. Is there a free exchange of information across your entire supply chain?
15. How has technology improved your supply chain linkages?
16. Does your supply chain hold a shared vision that all individual firms are working to fulfill?
If yes, what is it and how was it developed?

Specific Drivers Influencing Supply Chain Performance

17. What are some major factors/drivers that contribute to the success of your supply chain?
18. How do the following company-controlled factors influence your supply chain?
 - a. Efficiencies of production (price, quality, delivery)
 - b. Branding and marketing
 - c. Services offered to customer
19. How do the following community-controlled factors influence your supply chain?
 - a. Energy prices
 - b. Trade legislation
 - c. Labor force

MANUFACTURER INTERVIEW QUESTIONNAIRE

Respondent Information

Title:
Years in position:
Years with company:
Years in industry:

Company Information

1. What products does your company manufacture?
2. Where are your facilities located? Do you have any facilities outside of the United States?

Supply Chain Linkages

3. Describe your supply chain structure.
 - a. Who are your suppliers?
 - b. Where are your suppliers located?
 - c. Who are your customers?
 - d. Where are your customers located?
4. What criteria do retailers have when selecting a supplier?
5. What criteria do you use when selecting a supplier?
6. Do you tend to use the same suppliers over time or choose new ones for each product?
7. Describe the importance of partnerships with your suppliers.
8. Describe an existing successful relationship you have with a retailer.
9. Is there a free exchange of information across your entire supply chain?
10. Does your supply chain hold a shared vision that all individual firms are working to fulfill?

Specific Drivers Influencing Supply Chain Performance

11. What are some major factors/drivers that contribute to the success of your supply chain?
12. What are some challenges in your current supply chain?

13. How do the following company-controlled factors influence your supply chain?
 - a. Efficiencies of production (price, quality, delivery)
 - b. Branding and marketing
 - c. Services offered to customer

14. How do the following community-controlled factors influence your supply chain?
 - a. Energy prices
 - b. Trade legislation
 - c. Labor force

Appendix A5: Activewear Retailer Population

ACTIVEWEAR RETAILER POPULATION (2007)							
Company	Headquarters	07 Revenues (in \$1000)	Y-to-Y Change	2007 Earnings (in \$1000)	Y-to-Y Change	# Stores 2007	Y-to-Y Change
Wal-Mart	Bentonville, AK	378,799,000	8.60%	\$12,731,000	12.80%	7,262	7.10%
Costco	Issaquah, WA	64,400,155	7.1	1,082,772	-1.9	520	6.6
Target	Minneapolis, MN	63,367,000	6.5	2,849,000	2.2	1,591	7
Sears	Hoffman Estates, IL	50,703,000	-4.4	826,000	-44.6	3,800	0
Macy's	Cincinnati, OH	26,313,000	-2.4	893,000	-10.3	853	-37.3
JCPenney	Plano, TX	19,860,000	-0.2	1,111,000	-3.6	1,067	3.3
TJX	Framingham, MA	18,647,126	7.1	771,750	4.6	2,563	3.9
Kohl's	Menomonee Falls, WI	16,473,700	5.6	1,083,900	-2.2	929	13.7
Gap	San Francisco, CA	15,763,000	-1	833,000	7.1	3,167	1.1
Nike	Beaverton, OR	14,954,900	8.84	1,392,000	14.89		
Amazon.com	Seattle, WA	14,835,000	38.5	476,000	150.5	0	N/A
Nordstrom	Seattle, WA	8,828,000	3.1	715,000	5.5	157	-17.8
Dillard's	Little Rock, AR	7,370,800	-5.6	53,800	-78.1	326	-0.6
VF Corp	Greensboro, NC	6,215,800	9.93	533,500	5.29		
Neiman Marcus Group	Dallas, TX	4,390,076	8.9	111,932	97.7	62	5.1
Belks	Charlotte, NC	3,824,800	3.8	95,700	-47.4	307	-0.6
The Bon-Ton Stores	York, PA	3,467,659	0.3	11,562	-75.3	279	-0.4
Saks	New York, NY	3,282,640	11.7	47,473	-11.7	102	-38.2
Cabela's	Sidney, NE	2,349,599	13.9	87,879	2.4	27	50
Recreational Equipment Inc. (REI)	Seattle, WA	1,342,024	13.6	41,427	2.9	96	7.9
Columbia Sportswear	Portland, OR	1,287,700	11.41				
bebe Stores	Brisbane, CA	670,912	15.9	77,278	4.7	273	11.9
Under Armour	Baltimore, MD	430,700	53.22	39,000	97.97		
American Apparel	Los Angeles, CA	387,044	35.8	15,478	N/A	182	23.8

Appendix A6: Denim Jeans Retail Population

DENIM JEANS RETAIL POPULATION (2007)							
Company	Headquarters	07 Revenues (in \$1000)	Y-to-Y Change	2007 Earnings (in \$1000)	Y-to-Y Change	# Stores 2007	Y-to-Y Change
Wal-Mart	Bentonville, AK	378,799,000	8.60%	\$12,731,000	12.80%	7,262	7.10%
Costco	Issaquah, WA	64,400,155	7.1	1,082,772	-1.9	520	6.6
Target	Minneapolis, MN	63,367,000	6.5	2,849,000	2.2	1,591	7
Sears	Hoffman Estates, IL	50,703,000	-4.4	826,000	-44.6	3,800	0
Macy's	Cincinnati, OH	26,313,000	-2.4	893,000	-10.3	853	-37.3
JCPenney	Plano, TX	19,860,000	-0.2	1,111,000	-3.6	1,067	3.3
TJX	Framingham, MA	18,647,126	7.1	771,750	4.6	2,563	3.9
Kohl's	Menomonee Falls, WI	16,473,700	5.6	1,083,900	-2.2	929	13.7
Gap	San Francisco, CA	15,763,000	-1	833,000	7.1	3,167	1.1
Amazon.com	Seattle, WA	14,835,000	38.5	476,000	150.5	0	N/A
Limited Brands	Columbus, OH	10,134,205	-5	717,972	6.4	2,926	-23
BJ's Wholesale Club	Natick, MA	9,005,002	6.2	122,861	70.6	177	2.9
Nordstrom	Seattle, WA	8,828,000	3.1	715,000	5.5	157	-17.8
Dillard's	Little Rock, AR	7,370,800	-5.6	53,800	-78.1	326	-0.6
VF Corp	Greensboro, NC	6,215,800	9.93	533,500	5.29		
Liz Claiborne	New York, NY	4,994,300	4.02	254,700	-19.75		
Neiman Marcus Group	Dallas, TX	4,390,076	8.9	111,932	97.7	62	5.1
Levi Strauss & Co.	San Francisco, CA	4,193,000	-0.75	239,000	53.3		
Belks	Charlotte, NC	3,824,800	3.8	95,700	-47.4	307	-0.6
Abercrombie & Fitch	New Albany, OH	3,749,847	13	475,697	12.7	1,028	8.9
The Bon-Ton Stores	York, PA	3,467,659	0.3	11,562	-75.3	279	-0.4
Saks	New York, NY	3,282,640	11.7	47,473	-11.7	102	-38.2
American Eagle Outfitters		3,055,419					
Charming Shoppes		3,009,953					
AnnTaylor		2,396,510					
Cabela's	Sidney, NE	2,349,599	13.9	87,879	2.4	27	50
Talbots		2,289,296					
Phillips-Van Heusen Corp.	New York, NY	2,090,600	9.52	155,200	38.94		
Polo Ralph Lauren Stores		1,912,600					
Chico's FAS		1,714,326					
L.L. Bean		1,620,000					
Aerostale		1,590,883					
Urban Outfitters	Philadelphia, PA	1,507,724	23.1	160,231	37.9	245	18.4
J.Crew	New York, NY	1,334,723	15.9	97,075	35.5	260	14.5
Columbia Sportswear	Portland, OR	1,287,700	11.41				
Guess? Inc.		1,185,200	26.61				
Coldwater Creek	Sandpoint, ID	1,151,472	9.2	-2,488	N/A	306	28
bebe Stores	Brisbane, CA	670,912	15.9	77,278	4.7	273	11.9
American Apparel	Los Angeles, CA	387,044	35.8	15,478	N/A	182	23.8

Appendix A7: Upholstered Furniture Retail Population

FURNITURE RETAILER POPULATION (2005)						
Company	Headquarters	05 Revenues (in \$ 1000)	Y-to-Y Change	# Stores 2004	# Stores 2005	Y-to-Y Change
Walmart	Bentonville, AR	\$2,005,000	5.50%	3066	\$3,189	4.01
Rooms to Go	Seffner, FL	1,520,000	12.7	98	102	4.08
Ashley Furniture	Arcadia, WI	1,470,000	69.6	153	219	43.14
Target	Minneapolis, MN	1,365,000	4.2	1308	1397	6.80
Berkshire Hathaway	Omaha, NE	1,160,000	11.5	31	32	3.23
Federated Dept. Stores	Cincinnati, OH	1,095,000	25.1	459	861	87.58
Sam's Club	Bentonville, AR	1,045,000	5.6	551	567	2.90
La-Z-Boy Furniture	Monroe, MI	1,025,800	-1	304	308	1.32
Costco	Issaquah, WA	1,020,000	12.7	330	346	4.85
Ethan Allen	Danbury, CT	1,010,000	0.9	282	279	-1.06
Office Depot	Delray Beach, FL	1,005,000	2.1	951	1016	6.83
Staples	Framingham, MA	989,000	5.2	1188	1260	6.06
Ikea	Plymouth Meeting, PA	965,000	17	21	24	14.29
American Signature	Columbus, OH	800,000	3.2	100	111	11.00
Havertys	Atlanta, GA	797,000	4.9	117	118	0.85
JCPenney	Plano, TX	760,000	3.5	1017	1019	0.20
Pottery Barn	San Francisco, CA	720,000	12.5	263	268	1.90
Pier 1 Imports	Fort Worth, TX	694,000	0.6	1122	1150	2.50
Big Lots	Columbus, OH	650,000	20.1	1502	1401	-6.72
Raymour & Flanigan	Liverpool, NY	649,000	23.4	53	59	11.32
Select Comfort	Minneapolis, MN	588,000	20.7	370	396	7.03
Levitz Furniture	Woodbury, NY	580,000	-35.1	136	80	-41.18
Art Van	Warren, MI	525,000	-1.7	30	29	-3.33
Thomasville Home	Thomasville, NC	515,000	5.5	144	150	4.17
W.S. Badcock	Mulberry, FL	474,000	7.2	332	329	-0.90

APPENDIX B: INTERVIEW RESPONSES

Appendix B1: Apparel Manufacturer Interview Responses

Respondent G – Global Manufacturer (Apparel)

Title: Production Manager (2 interviews - US Facility & Nicaragua Facility)

Years in position: 9 & 2, respectively

Years in industry: 23 & 14, respectively

Company Information	<p>-Denim manufacturer</p> <p>-5 facilities: 1 in US, 2 in Mexico, 1 in Nicaragua, 1 in China</p> <p>-US: specialty denim fabric for premium brands/retailers; Mexico: some specialty, mostly middle market, serving large national brands; China: low style, commodity denim serving mass markets</p> <p>-Design team located in NYC. Works with retailers and national brands to develop new denim styles and finishes.</p>
Supply Chain Linkages	<p>-Suppliers include cotton, yarn, and chemicals. US plant purchases yarn, Nicaragua spins their own yarn. Both facilities dye yarn.</p> <p>-Most of cotton comes from US, even for China facility</p> <p>-Yarn and chemicals are largely from US and China. Commodity chemicals are often sourced local to plant</p> <p>-Denim manufactured in US often stays in US or Central America for cut & sew. Denim manufactured in Central America is almost exclusively cut & sewn in Central America.</p> <p>-Customers include: large national brands, department stores (for private label), specialty retailers, mass retailers, cut & sew firms (not as often)</p>
Supplier Relationships	<p>-Criteria retailers use when selecting suppliers: quality, repeatability, and quick turn around. The biggest way US/Central American manufacturers can compete with Asia is on lead-times. If these firms can't respond quickly, then product will be shifted to Asia.</p> <p>-Criteria for selecting a supplier include: credibility, cost, reputable company, stability, pay terms (90 days vs. 30 days), consignment (Supplier will store product in plant and still own it. Company G uses what they need and are billed for those goods. Greatly reduces inventory risks.), response time (How close is their warehouse to Company G? Do they keep needed inventory?), guarantees for product performance, training/support offered for product (Do they come visit Company G and offer process/quality audits and further training?)</p> <p>-Attempt to build long-term relationships with suppliers. Some suppliers for Nicaragua facility were previous suppliers in other locations and adapted their products/services to meet the changing needs of Company G. If suppliers are willing to evolve and change with Company G, then new suppliers must be utilized.</p> <p>-Trust is the most important factor in SC relationships. Long-term</p>

	<p>suppliers are more likely to give volume discounts, consignment options, and longer pay terms. If a problem does occur, they are more likely to work through it with Company G.</p> <p>-For new product development, Company G often has to add new suppliers that are capable of producing innovations or working with a different fiber.</p> <p>-Communication about running schedules is very open. Suppliers provide updates on raw material availability and prices. Company G is open about orders and inventory issues. Technical processes (ie dye formulas) are not shared. Suppliers often share too much information between their customers.</p> <p>-Shared vision: No. Large retailers will drop a manufacturer over pennies despite any relationship that may exist. Believes there is no concerted effort to protect upstream members of SC. No convergence of vision that is communicated to members of SC. Believes retailers are only concerned with their profitability, and not how that affects other members of the SC.</p>
Performance Drivers	<p>Major drivers of SC success: 1.) CAFTA – the ability to take advantage of lower labor costs in Central America keeps Company G competitive with Asia. Same is true for NAFTA and the Mexico facilities. 2.) SC must be responsive to market. If an item isn't selling well at retail, stop production. If high sales, increase production. Must be flexible.</p> <p>-Current challenges: volatility of governmental agencies – ie, discussions of ending/dramatically changing NAFTA and/or CAFTA, large wage increases in Central America (don't always think about long-term implications – have seen many cutters move operations to Vietnam after wages increase), changing costs of cotton, chemical costs directly reflect crude oil prices – also volatile</p>
Company-controlled Drivers	<p>1. Efficiencies of production: Lead-time is most important. Without this, customers are not competitive with Asia.</p> <p>2. Branding/mkting: does have a strong impact on SC. Company G has a good reputation within industry, but that doesn't translate to end consumer – they are focused on national or store brands.</p> <p>3. Services offered: What can we do to add value to our products? For suppliers – What training or technical support will we receive?</p>
Community-controlled Drivers	<p>1. Energy prices: In Nicaragua, huge electricity costs (2x US, 25-30% higher than Mexico). Electricity prices depend on oil prices. Shipping costs not only affect sending goods out, but also costs of goods purchased.</p> <p>2. Trade legislation: Must have CAFTA and NAFTA to survive.</p> <p>3. Labor force: In Nicaragua, sometimes struggle with turnover because employees will leave Company G to take a short-term, higher paying job. Hard to find electrical technicians. In US, abundant skilled labor available currently.</p>

Respondent H – Global Manufacturer (Apparel)
 Title: VP International Sales & Textile Engineer Sales & Customer Support
 Years in position: 8 & 3, respectively
 Years in industry: 26 & 36, respectively

Company Information	<ul style="list-style-type: none"> -Yarn manufacturer specializing in spinning long staple fibers. -1 spinning facility in US, 1 in Europe
Supply Chain Linkages	<ul style="list-style-type: none"> -80% yarns end up in California for cut & sew – many in specialty jeans -Believes that making good products that the market wants will result in no returned merchandise. No returns filters out some SC costs. -Company H yarn distribution: 50% stays in US, 40% goes to Central/South America, 10% other locations (including Asia)
Supplier Relationships	<ul style="list-style-type: none"> -Criteria for selecting suppliers: innovation, financial strength -Receive raw materials from two main suppliers. All cotton comes from one farmer. Built relationship over time and continue to support him through advertising. This is beneficial because Company H is guaranteed consistent, high quality cotton. 17% of this farmer’s cotton goes to Company H. -Company H knows who can process their yarns in the best way, aka in a way that will best accentuate their features. Therefore, they link themselves with fabric formation mills and even cut & sew facilities that will best enhance their yarns, and they suggest these firms to their customers. They are proud of these relationships and advertise them openly. -Criteria retailers use when selecting a supplier: price, capacity, reliability, ideas/innovation -In their opinion, “Retailers are only interested back to fabric.”. . .they don’t always understand that the performance of fiber and yarns impact performance of end products Leaves the responsibility with yarn manufacturers to ensure their product is of superb quality and to connect with retailers. -Existing success story: Specialty retail customer, when faced with current economic condition, brought together representatives of all parts of the SC. They openly discussed economic issues for each and many firms gave up some of their margins in order to keep this retailer as a customer. -Supima is a fiber producer that connects directly with end consumer. -Company H would like to connect with the end consumer -Company H supports their yarn throughout the entire manufacturing process (ie technical support) because they want to maintain their reputation of highest quality available.
Performance	<ul style="list-style-type: none"> -Major factors of success: specialized product, support services offered

Drivers	<p>throughout SC, high quality product, delivery times</p> <p>-Current challenges: mark-downs and low cash flow (credit availability). Access to capital is less than before, resulting in smaller orders that will reduce inventory risks.</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: Focus on delivering high quality yarns with short lead times. Do not always have the lowest price, but have been able develop some products that compete directly with goods that have been outsourced. 2. Branding/mkting: actively promote yarns. Shifted advertising from manufacturers to brands that may be looking to add specialty yarns. This allows them to sell their product themselves instead of relying on their customers to do it for them. Company H offers hang tags as an incentive for brands to further develop the “story” of their products. 3. Services offered: Offer extensive services to their customers because they want their yarns to be represented in the best way possible. By providing technical support services and partnering with mills downstream in the SC, they can help ensure their reputation of high quality will continue to grow.
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: As energy prices rise, pass on higher prices whenever possible. These costs are spread across the entire supply chain. 2. Trade legislation: gives competitive edge to Asia. If 18-20% duties were ever removed, West would lose its advantage. 3. Labor force: bad economy = good labor pool

Respondent J – Global Manufacturer (Apparel)

Title: Strategic Executive VP Product Development & Product Development Manager

Years in position: 13 & 10, respectively

Years in industry: 29 & 12, respectively

Company Information	<ul style="list-style-type: none"> -Woven manufacturer of apparel fabrics made of worsted wool, cotton, polyester, and nylon -Produces apparel products for womens, mens, activewear, uniform, medical, cleanroom, and military -Owns and operated facilities in US, Mexico, Central America, India, China, and Vietnam
Supply Chain Linkages	<ul style="list-style-type: none"> -Purchase yarn, dyes, and chemicals from suppliers located in US, Europe, China, and Japan -Customers include garment manufacturers for large national brands and retailers located in the US, Europe, and Asia
Supplier Relationships	<ul style="list-style-type: none"> -Criteria retailers use when selecting suppliers: proximity of firm to retailer, end use, volume (capacity), price, value-added activities offered, lead-times, quality, innovation, payment terms -Criteria for selecting a supplier: quality, delivery, lead-times, technical support, price, innovation -Try to use same suppliers over time because of history and relationship. Seek new vendors when innovation is important. -Relationships with suppliers are important because they are key to creating confidence level in all discussions of cost, quality, innovation, and protection of intellectual property. Suppliers can come to you in confidence and in development of new products and in handling any quality issues. Credibility is also very important to the relationship -Existing success story: 1.) Large outdoor retailer purchases millions of yards from Company J. The fabric has a value-added proprietary finish that provides moisture control and provides 50+ UV protection. 2.) Large specialty apparel retailer is open to meeting and discussing new products and designs for the next 2-3 years so that all parties can prepare. Open sharing of ideas and concepts. . .give and take. -Information is exchanged somewhat freely throughout SC. However, Company J does not share any trade secrets with other firms. -All members of SC work hard to be the best at what they do that they can stay in business.
Performance Drivers	<ul style="list-style-type: none"> -Major factors of success: Certification of quality and consistency from each vendor is key. Company J depends on suppliers to make and ship orders that meet the specifications given. They do not have time and money to check every supplier order. Having a global manufacturer and customer service footprint allows them to supply their customers

	<p>wherever they are.</p> <p>-Current challenges: As more manufacturing moves out of US lead-times, logistics, and quality issues are growing concerns. It is difficult to challenge off-shore companies with quality issues. Also, dealing with the complexity of customs, tariffs, and duties.</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: some customers penalize heavily for late deliveries. You could lose programs if a customer misses their season. 2. Branding/mkting: customers look for help in marketing manufacturer's value-added technologies. As a manufacturer, you must conduct all the testing before the product is released to ensure its performance and limitations. 3. Services offered: Company J provides hangtags, marketing literature, and styling tips for the technologies in their products. Payment terms are dictated by corporate finance office and are often different from what customer would prefer. May no longer offer "free" technical support.
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: effects plant operating costs and determining the best work schedule for your operation. Yearly budgets are set and as energy prices increase, margins decrease. 2. Trade legislation: need more lobbyists looking out for the domestic textile industry. So many businesses have dissolved in the past ten years, and there have been no replacements. Must be careful not to make planning decisions based on "what may happen." 3. Labor force: it's important to hire individuals who don't mind working in a manufacturing environment. When manufacturing is located in more metropolitan areas younger individuals don't favor working in a factory, and usually prefer not to work off-shifts.

Respondent O – U.S. Manufacturer (Apparel)

Title: Owner

Years in position: 13

Years in industry: 40

Company Information	-Owns and operates one facility in the US that manufactures polyester air-jet textured yarns for apparel
Supply Chain Linkages	-Purchases fiber from suppliers in US -Customers include retailers and US military
Supplier Relationships	-Works very closely with customers during product develop. Is often given a current product by a customer and asked to improve it. Also works with research companies to develop yarns that have desirable performance properties. -Spins some yarn for other yarn suppliers because they have technical capabilities not held by customer -Believes that you must protect yourself from competition by keeping a low profile in the industry. Does not share information openly with other firms. -Prefers open-minded, progressive customers. Recognizes that product development is something that sets them apart and enjoys the challenge of creating yarns with new properties. -“Work hard and listen.” Show customer that you care about keeping their business and that you are willing to help them achieve their goals. Customer profitability is important to Company O. -Believes retail SC interaction only goes back to fabric formation, thus making it difficult for a yarn supplier to connect with retailers. -Criteria retailers use when selecting a supplier: Price. They do not appreciate value-added products.
Performance Drivers	-Major factors of success: innovation, customer service -Current challenges: access to capital, increase in fiber prices
Company-controlled Drivers	1. Efficiencies of production: Delivers quality products with short lead-times. By focusing on a specific technology, Company O is able to offer a specialized product, and continues to develop new yarn properties that are suitable for a variety of applications. 2. Branding/mkting: does not brand yarns. Has worked with branded products to support them, and has exclusive production rights for some brands. Does not believe in marketing in his business 3. Services offered: Works closely with customers in the product development phase.
Community-controlled Drivers	1. Energy prices: fluctuations in costs create fluctuations in raw material costs. These price increases affect Company O more severely because they are a small business.

	<ol style="list-style-type: none">2. Trade legislation: doesn't have a large impact on business3. Labor force: 100 employees with very little turnover. Believes in treating employees well (ie exceptional benefits, etc)
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Respondent Q – U.S. Manufacturer (Apparel)
 Title: Executive VP
 Years in position: 1
 Years in industry: 16

Company Information	<ul style="list-style-type: none"> -Manufactures yarn for the apparel (t-shirts, underwear, hosiery, denim) and home furnishings (sheets, towels, carpet) markets -Owns facilities in Southeast U.S., Mexico, Honduras, and Colombia
Supply Chain Linkages	<ul style="list-style-type: none"> -Purchase 95% total cotton fiber from U.S. merchants -Sell yarn to large national brands and some retailers producing goods ranging from commodity items to specialty denim
Supplier Relationships	<ul style="list-style-type: none"> -Criteria retailers use when selecting suppliers: What are they trying to sell? What story does their brand represent? What is the price? Reliability, quality, and service are given – expected by all retailers -Criteria used when selecting suppliers: for cotton – need a merchant who has specified qualities of cotton for a given price. Not as concerned that it comes from the same merchant over time. Quality is most import, followed by price and availability. -Traditionally, used same supplier over time, but have been more aggressive in selecting suppliers in the past 6-8 months -Partnerships are critical to some areas: tubes – partners help cut costs, machine companies – deliver quality technology and offer customer service, power companies – help make production more affordable -Has been serving one national brand for 53 years -Believes retailers are interested in production capabilities in the Western hemisphere and pricing stability -Shared vision for supply chain = money.
Performance Drivers	<ul style="list-style-type: none"> -Major factors of success: availability of funds (Do members of supply chain have cash to support inventory?), function of relationships/partnerships in supply chain (flexibility, give and take, TRUST, comfort of not leaving over pennies – drive to purchase cheaper breaks down supply chain), control (can be instability when big brands hire young buyers – cause shifts when they switch jobs) -Current challenges: financial, push to globalization OR back from globalization. . .sees need to return to a sustainable and responsible business model
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: look for extremely efficient, low overhead supplier partners 2. Branding/marketing: most important part of purchasing behavior, have some branded yarns for commodity products but brand does not hold importance. Company Q name well-known in Asia – gains entry and helps build reputation

	3. Services offered: Credit availability – making an effort to provide financing
Community-controlled Drivers	<p>1. Energy prices: For Company Q, more money spent on energy than on labor. Must build relationships with power companies.</p> <p>2. Trade legislation: Single factor that allows Company Q to exist and thrive in Western hemisphere. 85% business relies on NAFTA and DR-CAFTA. Attention to HTS could greatly increase business.</p> <p>3. Labor force: it is important to respect employees and provide safe places for them to work.</p>

Respondent Z – U.S. Manufacturer (Apparel)
 Title: Owner
 Years in position: 2
 Years in industry: 2

Company Information	-Designs and manufactures denim jeans in Southeast U.S. -Sells sustainable story
Supply Chain Linkages	-Purchases all raw materials from within 200 mile radius of cut and sew facility -All manufacturing completed in one facility in Southeast U.S. -Sells denim jeans directly to customer and to high-end department stores and specialty retailers
Supplier Relationships	-Criteria for selecting suppliers: location and quality of goods -Builds a story on sustainable production of apparel. Does not see the need to ship garments all over the world for production when everything needed to produce denim jeans is available locally. -Selective about retail stores where garments are sold. Want to ensure that they value the product and its manufacturing process
Performance Drivers	-Major factors of success: sells high-quality, hand-sewn, denim jeans that tell a sustainable story -Current challenges: access to capital, long-term viability of some suppliers
Company-controlled Drivers	1. Efficiencies of production: High-quality goods are produced through specialized techniques. Price is not most important variable. 2. Branding/mkting: Brands denim jeans, does not market products. Spreads through word of mouth. Have an attractive, informative website where customers can learn about products. 3. Services offered: All pants can be tailored to customer’s needs. Ie, customer purchases directly from manufacturer, will hem free of charge
Community-controlled Drivers	1. Energy prices: does not have significant impact on business because products do not have far to travel 2. Trade legislation: Does not impact Company Z in any way currently because all raw materials are sourced in U.S. and goods remain in U.S. for sale. Is pursuing European market, may experience trade issues at that time. 3. Labor force: Currently employees 2 individuals who are responsible for manufacturing all denim jeans – owner and partner. New business, and are not yet able to take full salary. Do not plan to expand operations into locations outside current facility.

Appendix B2: Home Furnishings Manufacturer Interview Responses

Respondent E – Upholstered Furniture Manufacturer

Title: Cover Purchasing Manager

Years in position: 14

Years in industry: 17

Company Information	<ul style="list-style-type: none"> -Manufactures upholstery and case goods for residential and contract markets -Upholstered furniture manufactured in Southeast U.S. -Finished goods sold in upscale specialty stores and department stores
Supply Chain Linkages	<ul style="list-style-type: none"> -Upholstery fabrics are purchased from mills, usually at Showtime (upholstery fabric trade show in High Point, NC twice a year – January and July) -Look for fashion-oriented fabrics (bold colors, interesting textures, etc.) -35-40% upholstery purchased from U.S. manufacturers, remainder comes largely from China and India -Also purchase upholstery fabrics from jobbers (U.S.-based company that purchases textiles from a wide variety of sources). This is helpful when Company E has small orders that may not be accepted directly from upholstery manufacturers. -Sometimes have exclusives (agreement that a specific upholstery fabric will only be sold to one customer). These are easiest with domestic manufacturers. -Currently have 275 vendors, including leather suppliers. -Long-standing vendors understand Company E’s style/focus and will design certain fabrics with them in mind. -Customers include: furniture retailers, small specialty retailers, and interior designers -Upholstered furniture manufacturing remained in the U.S. because of high shippings costs, long lead times, and customized orders. Company E has a high-end customer that is not usually tolerant of long lead times. Product needs to be manufactured domestically in order to meet customer demand. Also, it is difficult to find a manufacturing facility in Asia that is willing to take a small, customized order. -For SC: Company E seeks to be looking for the next step/trend/innovation instead of chasing today’s lowest cost
Supplier Relationships	<ul style="list-style-type: none"> -Criteria retailers have for selecting a supplier include: stability of manufacturer, value-oriented (what are they doing that adds value that matches high cost? Customer support, services, etc), brand identity to consumer, viability of long-term relationship -Company E aggressively seeks new customers/venues in which to sell

	<p>their products. There will always be new opportunities if you are looking for them. Traditionally, furniture industry was a cottage industry – they only focused on selling product to retailers. Today, they seek to connect with end customer to better understand their demand and then develop products to meet that demand. They also invest in educating retailers about the benefits of their product.</p> <p>-Criteria for selecting a new supplier, include: product they are selling, value of product, are they are good fit? (Will they help the company as a whole?), stability of the supplier (where they manufacture, infrastructure, legislation, how often do they ship, exchange rates, financial arrangements – FOB, etc), What is the cost to set up a new vendor vs. cost of product?, financial strength</p> <p>-Ideally want to be 50-60% of a vendor’s production. This helps prevent any stifling of creativity. Must keep vendor base wide to ensure product mix.</p> <p>-Tend to use a core group of suppliers over time.</p> <p>-Relationships with suppliers are important because the quality of service improves as does level of service received. Cost is not a major factor. Suppliers want to sell to Company E because they know their product will be presented in a way that “shows it off.”</p> <p>-Company E develops a strong vision/concept. They know which mills can produce the desired effects. Then logistics/SC work together to make sure vision is translated to end product line.</p>
<p>Performance Drivers</p>	<p>Major drivers of SC success: 1.) Is mill meeting their commitment? 2.) Is creative dept at Company E delivering a clear vision? 3.) Mill must want to meet needs of furniture company. Do they understand the long-term strategy? 4.) Company E must order the correct amount at the correct time – this is possible through open communication within company. 5.) Company E must understand how different vendors work – possible through long-term relationships 6.) Mill understands volume concession 7.) Company E must follow-up as production is carried out. 8.) Is usable material ordered by Company E arriving in manufacturing facility? 9.) Understanding the “real cost” of production.</p>
<p>Current SC Challenges</p>	<p>-Everything is driven by customer demand. Company E has 2500-3000 SKU’s. Must know which stock to carry in inventory. Want to have the right product when customer places an order, but don’t want to carry excessive inventory. Must guess consumer’s buying decisions for made-to-order goods which include irregularities in demand that cannot be predicted.</p> <p>-Utilize vendor managed inventory (VMI) – Vendor holds upholstery fabric inventory. Company E purchases cut yardage when customer places order. This usually includes an upcharge for small order, which is passed onto</p>

	customer. This method can reduce end cost per yard.
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Respondent K – Global Manufacturer (Home furnishings)
 Title: Director Product Development
 Years in position: 2
 Years in industry: 14

Company Information	<p>-Manufacture jacquard and dobby fabrics, piece and yarn-dyed, for residential and contract markets</p> <p>-Facilities located in US and China</p> <p>-Operations in China – purchase greige fabrics locally and dye/finish as value-added process. Also, purchase jacquard fabrics made in China to sell to US customers. Company K can facilitate transaction including quality inspection, design, and finishing.</p>
Supply Chain Linkages	<p>-Purchase dyed yarns from mills local to facility. Have capabilities to texturize yarn to give variety to a smaller number of SKUs. Warp, Slash, Weave, Finish (desize, heat set, tumble, needlepunch) at Company K.</p> <p>-Customers include furniture manufacturers, furniture retailers, and decorative jobbers.</p> <p>-Design completed by Company K. Some patterns are standard and are re-colored each season.</p>
Supplier Relationships	<p>-Criteria for selecting a supplier: surviveability (long-term health). Changing suppliers incurs a huge cost. Recently lost major yarn supplier and had to work very hard to transfer their business to another supplier. Sees shrinking number of domestic yarn suppliers as a huge obstacle to successful operations.</p> <p>-Do not have relationships with retail.</p> <p>-Communication is quite open across SC. Company K may not be able to achieve a minimum placed by yarn supplier. Consolidation of products from design forward allows them to limit SKUs and increase minimums they are able to order. This same practiced is passed to customers to ensure they meet minimums. Must have trust and open communication to be successful.</p>
Performance Drivers	<p>-Major factors of success: strength of parent company (diversification), favorable exchange rates, flexibility to manufacture in both US and China (global service offered to customer, cultural development, some profit optimization, most customers don't have a preference where goods are manufactured)</p> <p>-Current challenges: Inventory – custom jobs for contract market are unpredictable making it difficult to understand how much inventory to hold. Company K is willing to hold 4-5 weeks for good customers. Also lead-times from China (must develop synergies in operational planning), working capital (when developing new products, find ways to use existing SKUs in creative/new applications). “How do you simplify product,</p>

	reduce lead-times, and offer compelling products?”
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: Lead-times and inventory costs are most critical components. Price is not always the most important. 2. Branding/mkting: currently do not brand any products or finishes. See some opportunity for this in green technologies that are being developed. 3. Services offered: provide customer service representative to manage inventory control. This prevents customers from having to hold as much inventory. Don't seem to receive customer service from suppliers – because of smaller supplier base in US, yarn manufacturers are bending over backwards just to provide sufficient products and they don't have time/means to provide additional support.
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: Summer 2008 costs increased rapidly and corporate office did not respond quickly enough in price increases. Need to have more flexible budgets that are revised more frequently. Must pass these costs on to customer as quickly as possible. 2. Trade legislation: this does not play a major role in SC decisions. Seems more applicable to apparel industry. Furniture customers are not as global. There are very high penalties to export greige goods into China. 3. Labor force: plentiful right now. Somewhat of an issue in China.

Respondent L – U.S. Manufacturer (Home furnishings)
 Title: Creative Director, R&D Technical Manager (Yarn), & VP Customer Relations
 Years in position: 6, 33, & 1 respectively
 Years in industry: 15, 33, & 1 respectively

Company Information	<ul style="list-style-type: none"> -Manufacture jacquard upholstery for residential, contract, and hospitality markets. Also, produce some panel wall coverings. -3 mills in US – capabilities include: design, dyeing, weaving, finishing, and distribution -Partner facility located in China (comprises about 10% product mix). Designed in US, manufactured in China. -Serve 4 main markets: Jobbing/Residential, Contract, High-end Design, Licensed program – each of these markets have individual needs
Supply Chain Linkages	<ul style="list-style-type: none"> -Purchase yarn and dyes, mostly from US suppliers. Some from Europe and Asia. Seeing an increase in imports as domestic suppliers become scarcer. -Dye yarn, weave, and finish fabrics in Company L. Very few weavers have dyeing/finishing operations – this is a competitive advantage today because it portrays stability to customers. Aka Company L has more control over their SC and won't experience major upheavals from losing suppliers. This also translates to higher quality control. -Customers include converters, fabric distributors (decorative jobbers), furniture manufacturers, and retailers.
Supplier Relationships	<ul style="list-style-type: none"> -Criteria retailers use when selecting a supplier: Value. Orders are significantly lower than previous years (less than half). Product doesn't have to be cheap, but it must be distinctive and worth the price. Retailers also seek customization availability. -As domestic yarn suppliers go out of business, it becomes increasingly difficult to find suppliers who can meet all their needs. Prefer not to import yarn, due to quality issues and high costs (sample costs and costs to transfer if business fails) -In some cases, Company L is able to work with domestic yarn manufacturer to develop a new yarn that they need. This can achieve lower costs, shorter lead-times, and lower inventory levels -Tend to use the same suppliers over time. Look for new yarn vendors, but they aren't available. Must learn how to make a variety of products from one SKU. -Company L develops thousands of design SKUs each year. However, when furniture manufacturers make selections they tend to significantly narrow the product base to fit a certain story they are trying to portray – this is the only way that a retailer is exposed to Company L, through the eyes/viewpoint of a specific furniture manufacturer. Because of this

	<p>selection process, there are numerous designs that retail may never see. Therefore, Company L is starting to go directly to retailers to show their line and product offerings and tell the story of their SC strength and stability. If retail shows interest, Company L has created a pull strategy in the SC which helps them gain influence and strength in furniture manufacturer decisions. This does not hurt furniture manufacturers because they still must produce furniture. It just helps to ensure Company L's products are purchased.</p> <p>-Another benefit of working closely with retailer is that it moves Company L closer to end consumer. Then, they are able to better understand market demand</p> <p>-In furniture industry, buying decisions are largely made based on relationships. Textiles can learn from this model and use it to their advantage.</p> <p>-Existing success story: Company L is a custom mill that is willing to work hard to meet customers' needs, can transfer patterns from other mills (in cases of mill closings), can match colors (dyeing capabilities in-house), work hard to build relationships with all customers.</p>
Performance Drivers	<p>-Major factors of success: strong relationships with customers, good delivery times (especially as compared to Asia), quick shipment program (certain SKUs kept in stock and can arrive at customer in 72 hours), ability to anticipate needs of customer, great design, availability of goods/raw materials, environmental issues, valor (consciousness of processes)</p> <p>-Current challenges: Economy – everyone experiencing this together. Need to educate consumers on the value of quality furniture and find ways to get consumers into retail stores to increase likelihood of purchases.</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: Price is not as important as lead-time and quality. If they can't receive yarn on-time, they can't fulfill customer orders on-time. 2. Branding/mkting: not important for upholstery fabrics to be branded. Furniture companies have responsibility to select upholstery fabrics that represent the quality of finished product they are trying to achieve. Branding is not always accepted by furniture manufacturers for fear of "brand infringement" – there is not strong brand recognition in furniture, and they want to remain the recognized name. Also some concerns about overselling one specific item and not being able to sell remaining (unbranded) products. 3. Services offered: Customization.
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: When oil prices went up, costs went up. When oil prices came down, costs never did. Sees this translated in higher polyester and rayon costs. Having a shorter SC helps avoid many energy costs.

	<p>2. Trade legislation: feels that it is biased against textiles, apparel, and furniture industries. Must learn how to take advantage of these regulations.</p> <p>3. Labor force: very low turnover. Many skilled employees who have working with Company L for many years.</p>
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Respondent M – Global Manufacturer (Home furnishings)
 Title: Strategic Executive VP Product Development
 Years in position: 9
 Years in industry: 37

Company Information	<p>-Founded in 1972 as a converter, sourced US fabric. Began purchasing US fabric mills in 1980, continued through mid-90's. In 2000, began shifting operations to Taiwan and Korea. In 2003, purchased weaving facility in China. Today, owns one manufacturing facility in China, and one facility in the US.</p> <p>-Manufactures mattress ticking and upholstery fabric for residential and contract markets.</p>
Supply Chain Linkages	<p>-For China: Company M provides design (colors and artwork), but works with a group of partner mills to create yarns and fabric constructions. Also have a group of accent mills that may produce a specialty fabric for Company M. May or may not provide design, but Company M controls color and finish. All incoming and outgoing goods must be inspected. Goods are either packaged for cut & sew in China or shipped as a roll to US furniture manufacturer.</p> <p>-Customers include furniture manufacturers, furniture retailers, jobbers, and some recreational vehicle manufacturers</p>
Supplier Relationships	<p>-Criteria retailers use when selecting a supplier: looking for a color story at a specific price, quality (assumed), lead-times</p> <p>-Company M has an express shipment program to help with replenishment orders from China.</p> <p>-Criteria for selecting a supplier: capability, financial strength, quality that they demonstrate in facility management (Simply having the newest machines doesn't mean quality will be good. Sometimes older machines that are well managed produce much better quality.)</p> <p>-When selecting a new supplier, Company M will give the mill 1 or 2 fabrics for the initial order to see their capabilities and how they operate in business.</p> <p>-Has a core group of 4-5 partner firms that cover a broad spectrum of product capabilities. Each mill focuses on one area to ensure expertise (ie chenille, knit, print). They will be involved with yarn development, control quality and chemicals, and always meet legal requirements.</p> <p>-Why don't Chinese mills sell directly to US customers? They don't want to sell directly because US customers are so demanding. They prefer to work through a firm such as Company M who has established relationships with customer and can service their needs appropriately, including quality assurance in China before shipment.</p> <p>-There is a free exchange of information with partner mills. This involves</p>

	<p>day-to-day communication, Company M always has a US employee in China that is available to partner mills, Chinese staff to translate, design CAD files are transferred via internet</p> <p>-Vision is developed through partner relationships</p>
Performance Drivers	<p>-Major factors of success: physical presence in China (relationships with mills, known as a Chinese company in China, 1 American employee and 600 Chinese employees, high executives frequently travel to Asia), relationships with partner mills (Chinese are more interested in personal relationships than legalities, and this has begun to transfer into Company M's culture), design (initiates direction of production, artwork and color come from US and constructions developed in China)</p> <p>-Current challenges: huge drop in customer orders – must have customer orders to keep functioning. Currently focused on delivering the right product for their customers at an attractive entry price. Has seen a small rebound in past few months, and promotional goods are selling better than higher priced items. “How can we offer a better product at the same price?”</p>
Company-controlled Drivers	<p>1. Efficiencies of production: Lead-time and cost are most important factors right now. Customers already expect quality – inspections in China keeps problems from arriving in US. Standard warps and yarns shorten lead-times, new machinery adds speed, simplify chemicals used and process steps, consolidation on freight routes</p> <p>2. Branding/mkting: Have brand identity with customer, not with retail. Company M's products are associated with certain products and price points. Formerly attempted branding in US, with no success.</p> <p>3. Services offered: To customer – variety of product mix (ie chenille, jacquard, vinyl, velvet), many different configurations to produce goods, cut & sew facility that makes kits (made in China, sold in US), and express shipment program. From customer – honorable customer, honest feedback regarding design needs, share color trends and furniture specs, able to pay for goods.</p>
Community-controlled Drivers	<p>1. Energy prices: Less impact on domestic operations. Higher oil prices translated into higher transportation costs – couldn't pass these on in fabric prices. Large increase in rayon prices 2 years ago caused fabric prices to rise – this was an effort to “clean-up” for the Olympics. Higher costs to make rayon in an environmentally sound procedure. Have had some trouble with the availability of electricity.</p> <p>2. Trade legislation: some products are impacted by quotas. When quotas were removed for chenille in 2003, imports almost doubled. This forced weaving production overseas. Re-valuation of currency is a big concern because it may make China less competitive. Results – a.) US infrastructure for production is no longer sufficient to meet market</p>

	<p>demands, or to accept Chinese-sized orders. b.) Production would shift somewhere else, most likely in Asia. Company M has not had success in Vietnam or India. Sees potential in South America.</p> <p>3. Labor force: see changes with new US Administration. Well-trained abundance of labor available in NC. For China – government dictates labor practices which limits strikes. Had zero losses after Chinese New Year. Offer at or above government wages, clean work environment, and strive to meet family needs.</p>
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Respondent N – Global Manufacturer (Home furnishings)

Title: Market Manager, Residential Fabrics

Years in position: 2

Years in industry: 20

Company Information	<ul style="list-style-type: none"> -Manufactures solution-dyed acrylic fabrics for awning, marine (interior and exterior), automobile top, contract, casual furniture, and residential furniture markets -Owns facilities in US, France, and China
Supply Chain Linkages	<ul style="list-style-type: none"> -Vertically integrated from fiber to finished, woven fabrics -Very few fiber supplier sources. Maintains a very close relationships for proprietary purposes. -Purchases some yarns from spinning partner mills. These are located in close proximity to Company N’s facilities. -Customers include: fabric distributors, decorative jobbers, OEMs (original equipment manufacturers – often used for awning, marine, and casual furniture applications), furniture manufacturers, specialty retailers (ie catalogs and home décor/fabric stores), and mass retailers
Supplier Relationships	<ul style="list-style-type: none"> -Criteria retailers use when selecting suppliers: Retail stores have specific demographics that they service. Therefore, suppliers must also fit into a business model that serves these customers well. Also – design, price, terms (early buying opportunities – before remaining market sees product line), and appropriate inventory levels -Criteria used for selecting suppliers: limited resource = who is available? Work closely with suppliers to ensure a quality product is delivered. -Existing success story: High-end specialty furniture retailer that sells residential and outdoor furniture. Recently partnered with Company N in a training event that promoted their branded upholstery products. Held 4 training sessions for employees educating them about the product features and applications. There were also 2 open-to-public events that had about 200 visitors for each. This helps raise brand awareness for Company N and bring new customers to the retail store, so both parties benefit.

	<p>Company N continues to hold events like this with other retailers.</p> <p>-Company N also has a partnership with a well-known designer in the home furnishings industry. When Company N hosts “awareness events” this partner attends and helps market the products.</p>
Performance Drivers	<p>-Major factors of success: unique product, great designs, strong brand, vertical integration</p> <p>-Current challenges: lower orders due to economy, knowing how to use brand most effectively</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: Deliver a quality product. Price is not always the most important issue. 2. Branding/mkting: Crucial to Company N’s success. Having a strong brand creates pull in retail relationships, helps customers sell more product, and develops an association with performance in consumers’ minds. Recently updated their website to be more consumer-friendly and to employ lifestyle marketing. One challenge of having a branded upholstery product is when the brand becomes a descriptor for a general type of good instead of only being associated with one specific product. 3. Services offered: design, education for customers about product, marketing (provide hang-tags, labels and can customize these for customer needs), consistency in quality, adherence to quoted lead-times
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: directly affects fiber prices. Seek to reduce energy consumption at plants. Practice environmental stewardship (this is not a new development to meet market demands): do not have wastewater from dyeing processes, produce durable products that do not need to be replaced often, recycle fabric scraps into rugs 2. Trade legislation: does not have a strong impact on Company N 3. Labor force: experience consistent, long-term employee relationships with low turnover

Respondent P – U.S. Manufacturer (Home furnishings)
 Title: President
 Years in position:
 Years in industry:

Company Information	<ul style="list-style-type: none"> -Manufacture yarn and woven fabrics for industrial applications. -Products include: belting, home furnishings, military, casual apparel, naperies -All manufacturing facilities located in Southeast U.S.
Supply Chain Linkages	<ul style="list-style-type: none"> -Very flexible operations. For some products, operate as vertically integrated – arrange production for entire process, from fiber to finished good. For other products, only manufacture one component, i.e. yarn -Customers include retailers, U.S. military. None of their top-10 customers in 1999 are customers today. Rapidly changing to meet changing market needs.
Supplier Relationships	<ul style="list-style-type: none"> -Develop products/technologies with specific customers in mind. Also, customers make requests for specific products they would like to see. -Some goods are shipped to Asia for further processing. This raises some concern with intellectual property (ie, patent protection) -Important to have hands-on involvement throughout supply chain to ensure quality standards are carried out properly -All suppliers are linked through technology/computer systems -Open communication across supply chain. Must meet together to talk and understand total issues involved in production. -Attempted to set up scenarios wherein they manage an entire supply chain (i.e. virtual vertical integration), but has only been successful in one situation -Have some relationships where they are part of a “managed” supply chain – don’t even purchase fiber, just spin yarn for customer -Access to capital is crucial today because it allows you to hold necessary inventory and make some risks -Always looking for new challenges. Want to be known as specialty retailers, be exclusive, find niche markets. Willing to invest money when they see opportunities for strategic value. Workforce is highly experienced and flexible – open to new ideas -Some current products being manufactured have poor efficiencies of production, but offer high value-added activities.
Performance Drivers	<ul style="list-style-type: none"> -Major factors of success: ability to be flexible and accept smaller orders to meet different needs, work with 13-14 different fibers and focus on value-added activities, speed to market, kept up with machinery technology, access to capital -Current challenges: access to capital, shortage of technical support for

	machinery
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: focus on short lead-times and quality products. 2. Branding/mkting: Have branded yarns, but they aren't widely recognized. Developed a wrinkle-resistant technology that is sold to some retailers, but national brands are concerned about "brand infringement" and aren't as open to having other brands associated with their products. Paying for branded fiber does not add enough value to make up for added cost. 3. Services offered: Flexibility and willingness to accept small batches in combination with access to capital to support inventory are invaluable services in today's market
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: Doesn't have a huge impact on day-to-day operations. Sees differences in fiber prices, though. 2. Trade legislation: Kissel Amendment – extends Berry Amendment to require that all TSA uniforms be made with 100% U.S. components. Very beneficial to Company P. 3. Labor force: Very low turnover today. Abundant, willing labor available.

Respondent R – U.S. Manufacturer (Home Furnishings)
 Title: VP Global Logistics
 Years in position: 9
 Years in industry: 35

Company Information	<ul style="list-style-type: none"> -U.S. manufacturer of higher end case goods and upholstered furniture -Designs frames and purchases upholstery fabrics -Focuses on selling a high-end customized product. Aims to sell high quality products, not high volume.
Supply Chain Linkages	<ul style="list-style-type: none"> -Prefer to purchase upholstery fabrics straight from mills, but will utilize a fabric distributor in order to receive lower minimum order quantities -Furniture sold in premier retailers around the world: Japan, China, Russia, Middle East -Customer focus has shifted from retail to designers due to highly customized product offering -As customer focus shifts, delivery becomes increasingly important because new customer wants furniture as quickly as possible. Current lead-time average = 2 weeks.
Supplier Relationships	<ul style="list-style-type: none"> -Criteria for selecting suppliers: 1.) Must fit a need – styling, construction, price point, quality 2.) Lead-time to furniture plant 3.) Minimum order quantity – even if a supplier is willing to accept a smaller order from Company R, logistics may not run smoothly if supplier is accustomed to selling much larger quantities. Vendors who are able to handle small orders well are highly valued by Company R. 4.) How sophisticated is their operation? Can they utilize website to keep up with orders? How predictable are they? -It is important to Company R to have fewer vendors, knowing they will keep their promises. -Criteria retailers use when selecting suppliers: Looking for a bundle of goods/services that meet a need. Sees retail incentives as a factor in buyers’ decision-making processes. Want a relationship with supplier – some feeling of obligation. -Benefits of focusing on designer customer vs. retail customer: 1.) Retail is pounding numbers – How do I crush the vendor? 2.) In order to be a long-term, viable vendor to retail, you must have considerable volume. Company R does not seek to sell volume. 3.) Designers place higher value on specialized services. 4.) Retail does offer great exposure, but Company R maintains 13 showrooms (ie New York, Chicago, Atlanta, Miami) to help gain market exposure. 5.) Retailers don’t hold inventory -2 years ago, Company R received upholstery fabrics from 200+ vendors. Today, they have fewer than 100 vendors. Narrowing vendor base improves customer service received from suppliers. Marketing must

	<p>make an effort to choose more fabrics from a smaller number of firms. However, closer relationships with upholstery manufacturers enable a more tailored fabric to be designed and delivered.</p> <p>-Existing success story: Retailer that has multiple stores, and has committed to have Company R's product in all of them. Sell product off floor as is, but will also specialize. Designers work with customers and emphasize the quality and value of Company R's product. Also helps Company R understand future directions and provides feedback from customer.</p>
Drivers of Performance	<p>-Major factors of success: marketing team that understands the value of having strong relationships with fewer vendors, technology support – network program developed that provides all the product specifications, orders, and expected delivery times to all suppliers, and a strategic perspective of the entire supply chain – ensure new vendors are a good fit and will work together for many years</p> <p>-Current challenges: 1.) Economy – downturn in business, must work closely with suppliers to understand their company health 2.) Marketing must make purchasing decisions based on current vendors – can narrow scope of available upholstery fabrics 3.) Some argument being made for Company R to open operations in Mexico and/or Central America – not currently pursuing, but trying to understand implications</p>
Company-controlled Drivers	<p>1. Efficiencies of production: Quality is assumed. Delivery is crucial. A major competitive advantage of Company R is delivering specialized goods to customer in as little as 2 weeks from order. This is not possible for furniture coming from Asia.</p> <p>2. Branding/marketing: Company R's name is strongly associated with high-end quality and specialty goods within the furniture industry. Provide marketing materials to retailers and designers to help sell benefits of products.</p> <p>3. Services offered: Offer exceptional customer service. The ability to choose from approx 3000 fabrics on 1000 frames in addition to many finish options give customer the ability to purchase a piece of quality furniture that meets their specific needs. Short lead-times are also seen as good customer service.</p>
Community-controlled Drivers	<p>1. Energy prices: Creates shift in supply chain, especially with cost of transportation. Can create opportunities for manufacturers in Western hemisphere. Cannot make rash supply chain decisions based on energy prices. Must focus on long-term viability of supply chain.</p> <p>2. Trade legislation: Anti-dumping regulation for bedroom furniture in China causes some concern, but can be paid off legally. Regulations on lead in children's furniture. Company R does not currently use lead in manufacturing process, but must pay money to receive certification that</p>

	<p>they do not. This is money spent for non value-added process. Also, new regulations requiring documentation that wood is not forested from protected areas.</p> <p>3. Labor force: Has no trouble finding qualified, willing labor. Want to keep manufacturing local to provide jobs to loyal employees.</p>
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Respondent T – U.S. Manufacturer (Home Furnishings)
 Title: Manager, Supply Chain
 Years in position: 1
 Years in industry: 6

Company Information	<ul style="list-style-type: none"> -Weave upholstery fabrics for furniture applications (75% product mix) -Also produce contract seating and textile wall panels -Own facilities in US and Canada
Supply Chain Linkages	<ul style="list-style-type: none"> -Suppliers include yarn manufacturers. Most are domestic and have seen great consolidation of late. Utilize 8 primary suppliers, with 1 supplier providing 60% of total yarn. Source some commodity yarns overseas. Primarily purchase polyester yarns, but also buy acrylic, rayon, cotton, polyethylene, and polypropylene. -Customers include furniture manufacturers, fabric distributors (decorative jobbers), contract customers, and furniture retailers. -Customers are primarily domestic, but are trying to increase presence in Europe. -Partnership with fabric weaver in China. Design in U.S., produced in China, and Company T determines where finished fabric will be shipped.
Supplier Relationships	<ul style="list-style-type: none"> -Criteria when selecting suppliers: capability to make yarn, price, quality, delivery (must meet Company T’s lead-times so that they can meet their customers’ lead-times), willingness to help Company T (ie, inventory options) -Criteria retailers have when selecting suppliers: price, quality, delivery, and design. Company T has an advantage in quality, logistics, and delivery, but a disadvantage in price. Retailers have very high expectations for quality of design. -Partnerships are limited by availability of suppliers. Currently looking for alternates to support existing base. -If a supplier isn’t a strategic fit, Company T finds a new source. Lost 7 yarn suppliers in the past year. -Believes suppliers need to have a better understanding about Company T’s needs. Wants them to be more engaged and be flexible with order sizes so that Company T doesn’t have to purchase more inventory than they need. -Existing success story: A furniture retailer where 60% of fabrics come from Company T. Experience a close sales relationship, and recognize the need to deliver quality. Retailer offers customer feedback to Company T. -Company T tries to convey all necessary information to suppliers that will help them meet their needs more efficiently – open communication. -Regularly receives requests for 2-4 programs that would be able to

	respond to fluctuations in market demand.
Performance Drivers	<p>-Major factors of success: developing programs with vendor that better meet the needs of customer, information management – having information available to enable good decisions, understanding customer requirements and specific needs</p> <p>-Current challenges: change/loss in vendors – lose versatility, logistics and cost of goods being produced in China – long transportation times is an issue</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: Price is very important. Seeking alternatives to meet pricing needs of customer. Logistics is also crucial to supply chain success. Quality disruptions can cause even more supply problems. It is in everybody’s interest to produce quality goods. Delivery can set them apart from other vendors. Measure supplier performance based on the ability to meet promised delivery times. 2. Branding/mkting: offers a quick ship program to help ensure delivery times for specific products. Currently developing a ‘green’ brand/story. 3. Services offered: Inventory management is one of the most helpful services that suppliers can offer.
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy costs: Results in surcharges on transportation costs. Creates need for alternate transportation methods in some situations. Raw material costs are affected directly by oil costs – volatility is a problem 2. Trade legislation: regulation on imports from China – must provide tracking information which can make shipping process take even longer. 3. Labor force: Currently experiencing low turnover, but sees employee temptation to switch to more stable industries. Today’s market provides great job candidates.

Appendix B3: Discount Retailer Interview Responses

Respondent A – Mass Retailer (Apparel and Home Furnishings)

Title: Senior Technical Director – Home Division

Years in position: 2

Years in industry: 5

Company Information	-Stores located in all U.S. states -1/3 total business is overseas: China, India, Central America, Mexico, Puerto Rico, Brazil, Argentina, England, Japan
Supply Chain Linkages	-Apparel: 5 distribution centers in U.S. -Homegoods: 100 distribution centers in U.S. -Products come from 3 sources: domestic supplier, domestic importer, direct from manufacturer
Supplier Relationships	-Supplier criteria include: Is supplier capable?, What brands do they already make?, Do they have product development?, Quality, Value (price vs. quality) -Attempt to build long-term relationships. . .this requires investment from both parties. Hold annual meetings where top 50% suppliers attend to discussion corporate direction/vision, current products, new products, regulations, current issues, goals, how to grow -Most important part of successful partnership is consistent quality – this reduces costs in the SC. When a new product is introduced, using an existing supplier smooths development. When trust has been established, suppliers are more likely to bring innovations to a loyal retailer instead of other retailers they are supplying. This also creates opportunities for collaboration in developing new products or brands -Successful supplier attributes: both parties transparent about their needs, they help run retail business, no surprises, work together to solve problems, open communication, no ‘punishment’ when something goes wrong, both are satisfied, both meet goals (sales, profit, ROI) -There is a free exchange of information across entire SC -For apparel, there is shared vision that all firms are working to fulfill. Firms develop a common vision together, but different suppliers still have different needs.
Company-controlled Drivers	1. Efficiencies of production – if production is inefficient, then costs increase 2. Branding/mkting – packaging can be a slow point in the SC, must mee regulations 3. Services offered – if item isn’t on shelf, customer can’t purchase
Community-controlled	1. Energy prices – Company A can’t control energy prices, so as prices rise, Company A is doing everything they can to decrease energy

Drivers	<p>consumption. Goal of being 30% more energy efficient by 2012. How? Exploring natural gas and hydrogen developments, working with truck manufacturers on innovations for trucks that require less oil, as industry develops new technologies Company A commits to purchase these efficient products/services. Pursuing both short-term and long-term initiatives.</p> <p>2. Trade legislation – Have a large impact on production of goods. 2 examples: a.) In California, CARB legislation (2009) places much stricter regulations on formaldehyde levels in furniture. U.S. factories are compliant, offshore factories aren't – causes disruption in SC. Company A claims that this legislation did not give them sufficient time to adjust production to meet new guidelines. b.) Lead content in toys – 10 items must be totally removed from shelves and destroyed. Results in Company A having to find new products that are compliant to fill this space. Partner suppliers understand that this is mandated by U.S. government and that it is beyond Company A's control – this is a direct benefit of long-term relationships.</p> <p>3. Labor force – have a great workforce in their trucking division. Finding labor is not usually a problem for Company A.</p>
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Appendix B4: Specialty Retailer Interview Responses

Respondent B – Specialty Retailer (Apparel)

Title: DVP Social Compliance

Years in position: 15

Years in industry: 22

Company Information	<ul style="list-style-type: none"> -Sell apparel, footwear, accessories -169 stores in 28 U.S. states -\$8 billion company – 85% purchasing, 15% private label
Supply Chain Linkages	<ul style="list-style-type: none"> -Distribution centers in OR, IA, NC, SC, MD, FL, HI -2 main SC structures: retail garments produced by a branded supplier (usually purchased in NY), and private label items which are manufactured in 34 countries (including U.S., Asia, and Europe) – higher price points allow flexibility for manufacturing locations. More focused on firm’s ability to produce goods and that they meet social compliance standards. -Do not own any manufacturing facilities
Supplier Relationships	<ul style="list-style-type: none"> -Criteria for selecting supplier include: capability, must meet partnership guidelines (social compliance), quality, design abilities. Company B visits all new firms and requires a 3rd party audit -Always seeking to form long-term relationships. Especially drawn to suppliers who develop innovative products themselves. When the relationship is strong/healthy, firms work together and both sides benefit. -Successful relationship would consist of firms constantly working together, exchanging ideas, great design capabilities, investment in infrastructure -There is a free exchange of information across entire SC – vendors must share information as soon as they are of it, especially in “crisis” situations. Sometimes there are cultural communication hurdles, and diff styles of communication must be overcome. Over time, trust increases in partnerships and information-sharing continually increases. -SC holds a shared vision. Company B insists that supplier be aware that end customer is the most important asset they have and always try to keep end customer in suppliers’ minds. There are some cultural differences regarding corporate vision.
Performance Drivers	<ul style="list-style-type: none"> -Major drivers of SC success: flexibility, quality, ethics, shared vision, teamwork, on-time delivery, price -Challenges in current SC: keep up with/staying ahead of trends, denim (environmentally unfriendly – waste water, energy, dyes, chemicals), price, flexibility, holding to values as Company B continues to grow
Company-	<ol style="list-style-type: none"> 1. Efficiencies of production – drives SC decisions as these are the first

<p>controlled Drivers</p>	<p>things to consider</p> <ol style="list-style-type: none"> 2. Branding/mkting – Company B has its own branding team. Work with weaving mills to obtain exclusive weaves which gives exclusivity to their private label 3. Services offered – return policy (bring back anything at any time), free alterations on full-price purchases, reward programs. Company B considers themselves to be customer-centric and works hard to meet their customers’ needs/high expectations
<p>Community-controlled Drivers</p>	<ol style="list-style-type: none"> 1. Energy prices – no influence on current sourcing decisions. However, Company B is educating members of its SC on how they can reduce energy. Must examine the entire cost of project. For example, NAFTA entails higher labor costs but lower transportation costs. Energy prices are just one factor of entire cost model. Costing engineers price out all the factors before making sourcing decisions. 2. Trade legislation – opens AND closes doors. Currently no strong influence on sourcing decisions 3. Labor force – most products require highly skilled labor force. Company B is very committed to socially compliant workplaces.

Respondent D - Specialty Retailer (Apparel)

Title: VP Sourcing

Years in position: 3

Years in industry: 30

<p>Company Information</p>	<ul style="list-style-type: none"> -1100 stores in 32 U.S. states, adding 40-50 new stores annually -Sell mostly women’s clothing (58% missy, 42% plus sizes), some children’s and men’s, and some home goods -New goods in all stores every week, a “true” specialty store -Employee 25 sourcers and have no product development employees -\$850 million sales -Currently have good credit which helps contracted manufacturers get credit to process orders
<p>Supply Chain Linkages</p>	<ul style="list-style-type: none"> -55% product mix is purchased in domestic market, remaining 45% is sourced through Li & Fung -1 distribution center in Charlotte, NC -Currently arranging to import directly from factories overseas. This omits commission to L&F (who adds 8-14% to cost) or omits domestic importer (who adds 10% to cost). Expect an immediate increase in margin. -Initially (3 yrs ago ?) employed over 70 vendors. Today they have 42 active apparel makers and would like to see this number in the 30’s. Don’t want to be more than 25% of any one factory’s total production, ideally <20%. -94% Company D’s manufacturing occurs in: Indonesia, Vietnam, Cambodia, India, and China (collectively). 16% of production is in China, then Cambodia, then Indonesia. -Nominate specific vendors for thread, labels, and linings. This ensures quality and promotes consistency.
<p>Supplier Relationships</p>	<ul style="list-style-type: none"> -Criteria for selecting suppliers: Quality – needlework, production capability. Also listed price, on-time delivery, and construction. -Offer very few sales/discounts. Understands their demographic: customer cannot afford new clothes often, product needs to last for lower income customer. -Relationships are KEY in Asia. Important that Asian manufacturers feel respected by Americans – makes a big difference in getting mills to accept your orders. -Goal is to keep suppliers over time. However, if suppliers aren’t delivering quality on-time, relationships may end. -Existing success story: Based in Singapore, manf in Cambodia. Working together for 10 years. “Produce 10% of Company D’s total product mix, and require 1% of their time.” This reduces need for

	<p>inspection, increased peace of mind.</p> <p>-Sourcing agent aids in training. Secure website lists all measurements, categories of merchandisers, suppliers for thread/labels/linings, business policies – all this info is available to mill at all times.</p> <p>-Company D also provided dress forms to act as fit models for all their suppliers. This saves time in approvals and helps prevent draping issues before garment is shipped.</p>
Performance Drivers	<p>Major drivers of SC success: relationships, understanding financial aspects of manufacturing, understanding retailer’s needs and specs, understanding makers real production capacity – “stick with what you know”</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production – up to the factory to determine. Make the first run, determine pitfalls, and fix them. For a large order, this is much more important. Company D tries to “bundle” orders – keep pants with same fabric in the same mill/run. Technologies used to communication all product specs save expensive labor time in the U.S. 2. Branding/mkting – very little advertising, seasonal television ads 3. Services offered – see Company D’s buyers as customer. Duty as Company D’s sourcer is to fulfill buyers’ needs. 3500-3600 styles developed and 3000 make it to production.
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices – increase in petroleum prices made material prices increase, however now material prices have stabilized. Ocean containers have dropped dramatically. Arrive in USA full, return to China empty. 2. Trade legislation – manufacturer seeks cheap labor, and retailer seeks duty free countries. Duty free agreement saves 16.5% on cost of goods 3. Labor force – sees some shortage in labor. Cheapest cost are currently in Vietnam, but there is a shortage. As workers realize what other countries pay, they are demanding higher wages. Triangle businesses: garment is sourced in Hong Kong, produced in Indonesia because of cheaper labor, shipped to USA

Respondent F – National Brand and Specialty Retailer (Apparel)

Title: Director, Material Innovation

Years in position: 1

Years in industry: 16

<p>Company Information</p>	<p>-Sells performance apparel, footwear, and accessories (hats, bags, gloves, socks, etc) -“Pillars of Performance”: 1.) Stretch 2.) Moisture management 3.) Odor control 4.) Sun protection 5.) Quiet (soft hand, good drape) -Owns 4 retail stores in U.S. -Bulk of business is wholesale with distribution in U.S., Western Europe, and Japan -Retail stores have higher margins, but you have to pay overhead and employees. Selling wholesale to big box stores achieves lower margins, but it’s a good way to gain wide market exposure. Plan to expand retail stores and continue to build online business – currently “healthy and growing”</p>
<p>Supply Chain Linkages</p>	<p>-Production steps: 1.) Product marketing – assess current market needs 2.) Design – visual interpretation of these needs 3.) Materials development –create technologies that meet these needs 4.) Product Development – build a style kit (Steps 1-4 completed at Company F corporate headquarters) 5.) Style kit sent to cut&sew. Therefore, strongest SC relationship is with cut&sew. -Suppliers are finished product manufacturers and are located in US, Mexico, South America, Central America, SE Asia, and China -Some fabric mills are domestic and materials are CBI or NAFTA compliant -Supply chain locations: 3% USA, 42% Americas, 55% Far East -Heavily embellished items, customized products (ie team uniforms), and small batches are sourced in US. Aka material-intensive. Core products with consistent demand sourced in Far East. Aka labor-intensive. -Do not own any manufacturing facilities -Interact with fiber, yarn, fabric, and finishing firms – but primary involvement is with fabric and finishing -Company F has licensed business units which operate somewhat like traditional full package supplier. Supplier handles design, marketing, inventory, sales, and distribution. Company F is intimately involved in creative direction, compliance, packaging, and in-store merchandising -Generally speaking, there is a free exchange of information across entire SC. However, some are much better at communication than others. -There has been a dramatic improvement in speed and accuracy as Company F has matured and implemented new technologies/systems.</p>

	They have an online material database that they “share” with their mills, a PLM system to track projects and style kits, and purchasing and logistics partners/programs that are robust and real-time.
Supplier Relationships	<p>-Criteria for selecting a supplier include: quality, capabilities, flexibility, lead times, cost, logistics (political stability, port structures, etc.), efficiencies, planning (can create lower cost), constant productivity</p> <p>-Maintain a supply base for core categories. When a new product or technology is launched, Company F seeks expertise and brings in new partners.</p> <p>-Believes partnerships are critical to maintain their product standards (as outlined in Pillars of Performance)</p> <p>-Existing success story: A factory partner who is “virtually vertical” – They only produce garments, but they manage raw materials partners as if they are all part of the parent company (without carrying the financial burden). Factory and mill or trim supplier function as one unit and they are together for all strategic conversations with Company F. communication is great, flexibility is better than a traditional vertical partner. Quality, price, and customer service are very competitive.</p> <p>- Partnerships are created and grown or dissolved based on how well the factory partner manages the business and mitigates risk for Company F.</p> <p>-Shared vision: Manufacturers agreement is the tie that binds Company F to their key suppliers. These are well-practiced industry standards that have been modified to meet Company F’s specific culture, needs, and product mix. These operating principles cover quality, construction, transportation, and compliance (human rights and environmental standards).</p>
Performance Drivers	<p>-Major drivers of SC success: Communication, discipline (know when to say “no” or challenge a directive), creativity (anticipating needs and constantly bringing fresh new solutions to the table)</p> <p>-Current SC Challenges include: visibility/transparency can be difficult in the Far East. Changes in yarn supply, dyestuff, or auxiliary chemicals/finishes suppliers can create unanticipated problems and significantly slow down tracing and resolving issues. These issues are addressed by improved requirements for documentation and certification for all components.</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: this is what shapes the sourcing plan. Business volume is a direct result of managing these three elements. Lead time and cost are most important. 2. Branding/mkting: branding is very important to Company F, and all elements are managed in-house. Lifestyle market is growing – must stay true to brand identity and create a strong story. 3. Services offered: based on knowledge of customer needs/expectations

Community-controlled Drivers	<ol style="list-style-type: none">1. Energy prices: price increases are real, but have affected everyone – evens out among market2. Trade legislation: this is a big factor. It can change SC thought processes very quickly3. Labor force: fairly well-understood and easier to plan for
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Respondent V – Specialty Store (Home Furnishings)
 Title: Manager, Supply Chain
 Years in position: 3
 Years in industry: 3

Company Information	-Sells middle to upper-middle priced case goods and upholstered furniture -Owns 118 stores in 17 states
Supply Chain Linkages	-80-85% of total product mix is private label -Utilize 20 vendors for upholstery, case goods, and accent pieces -Upholstery and case good supply chains are becoming more similar -Triangle trade model: buy from direct importer in U.S. who purchases goods manufactured overseas
Supplier Relationships	-Criteria for selecting suppliers: viability of long-term partnership (share both risks and ideas), sustainability, established supply chain infrastructure that is able to deliver quality products on-time (understanding of logistics), desire to understand needs of retailer, flexibility, customer service (timely response, partner site, desire to form relationship with retailer) -Seeing a shift in production from China to other countries in Southeast Asia -When a specific furniture group sells well, there tends to become a dependency on that group -Vendors can often produce multiple product lines (i.e. bedroom and dining room) -Partnerships require being flexible in situations involving production delays and excess inventory -Extensive technology system to promote communication with vendors
Performance Drivers	-Major drivers of success: creative solutions and being flexible to work with various suppliers -Current challenges: 1.) Internal tension between traditional strategy and emerging strategy 2.) Foreign manufacturing/importing – cross-cultural challenges 3.) Variables in economy – labor shortage, factories closing, rising oil prices
Company-controlled Drivers	1. Efficiencies of production: If products are not costed properly, then margins will not be sufficient. Have struggled with factories missing delivery times. When quoted times are missed, cost of production increases and margins decrease. 2. Branding/mkting: Brand isn't as important to Company V's customer – more price conscious. Company V utilizes a television marketing campaign that focuses on selling a lifestyle. Also utilize newspaper inserts, catalogs, and website. Working on redefining target customer to be more accurate. 3. Services offered: associates in stores will visit customers' homes and

	provide design consultation specifying Company V's furniture.
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: Working to develop green initiatives, volatility of oil prices is challenging 2. Trade legislation: C-TPAT forces compliance for factories and helps to ensure security in transit. New regulations regarding bunk bed rail heights which affect product specs, and new lead requirements for hardware 3. Labor force: seeing more demands from Chinese workers for higher wages, resulting in high turnovers

Respondent W – National Brand and Specialty Retailer (Apparel)
 Title: Manager, Fabric Manager, Americas Sourcing
 Years in position: 4
 Years in industry: 24

Company Information	<ul style="list-style-type: none"> -Produces and sells denim jeans worldwide -Operates free-standing stores throughout globe as well as online purchasing capabilities
Supply Chain Linkages	<ul style="list-style-type: none"> -Company W performs research, fabric development, and specifies sundry items to be used – specify mills to be used by garment contractors -Suppliers include garment contractors, CRTW (controlled, ready-to-wear) -Suppliers located in all parts of the world: Southeast Asia, Africa, and Middle East – whoever has the lowest price -Examine ‘total cost’ – duties, fees, political risks, weather -Some contracting for high-end pants completed in U.S. -Own two manufacturing facilities in Europe – used mainly for product development -Fabric is largely sourced from China and Pakistan (some from Mexico, U.S., Nicaragua, Bangladesh, Turkey, Italy, and Africa) -Assembly tends to be located close to fabric mills -U.S. distribution centers in Nevada, Mississippi, and Kentucky
Supplier Relationships	<ul style="list-style-type: none"> -Interacts with entire supply chain, including fiber. Want to be aware of new developments in fiber and yarn. Fabric involvement is usually in order to better understand trade agreements. Work very closely with finishing mills. -Criteria used when selecting suppliers: quality, ability to deliver on-time, innovation, price. Will also make sourcing decisions based on the availability of free trade agreements (ie Bahrain, Jordan, Madagascar) -Tend to form relationships over time, but as prices continue to fall Company W is always looking for the next opportunity. -Ideally, Company W would like to show prototype with critical aesthetics outlined to supplier and have them find the components that will enable production to meet necessary price. -Sourcing in Americas is too expensive -Technology is important to communication between firms in supply chain. Company W makes component-specific information available on company network. Can track shipping palette from garment supplier to local port to U.S. port. -Have a strong company culture. Impose vision upon contractors – they must agree to compliance (health and safety) and audits. Vendors are not always 100% compliant, but Company W works with them over time.

	<p>-Does not have specific percentage for composition of one supplier's total production. Some suppliers are very dependent, but it can't always be avoided.</p> <p>-Company W maintains their own environmental standards, but manufacturers must meet local regulations – in process of requiring mills to meet local minimum government regulations.</p>
Performance Drivers	<p>-Major factors of success: Engagement of supply chain, business relationship with contractors is above average (i.e. pay bills on time – Company W has hard terms, but live up to their commitments), level of trust, very picky – Company W wants products a certain way (approached as partnership so if problem arises, technical support can be sent to help)</p> <p>-Current challenges: Finding economically stable, low-cost suppliers – must continually monitor financial standings of vendors. Also concerned with political stability of countries where suppliers are located.</p> <p>Everybody is cutting cost today – cannot cut so far that you sacrifice service. Orders need 6 month lead-time – challenge to hit forecasts. Hard to grasp true cost of undersells/oversells.</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: price is most important component, delivery and quality follow 2. Branding/mkting: Company W has 3 assets – their 3 brands. Must protect this at all costs. People know and trust products. Brand equity also translates to manufacturers – gives confidence to other customers when they see a manufacturer is producing for Company W. 3. Services offered: Asian suppliers are customer-oriented. They offer design development, inventory management, direct shipping, full package (source fabric, perform testing, package garments). In Americas, you are buying labor. Company W finds all the components and pay someone to put it together. Would be very interested to have full package suppliers in Western hemisphere.
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: huge variable in production. If high, then directly reflected in total cost. Ex, Nicaragua has subsidized electricity – directly affects product prices. In India and China, not regular – some manufacturers in China generate their own power to ensure consistent supply. 2. Trade legislation: Company W wants to know where free trade agreements are, when they're coming, and how long they will last 3. Labor force: interest in skill level and labor costs. African manufacturing requires significant investment in training.

Respondent X – National Brand and Specialty Retailer (Apparel)
 Title: VP Supply Chain Development
 Years in position: 3
 Years in industry: 10

Company Information	<ul style="list-style-type: none"> -Lifestyle brand that sells apparel. -Licenses brand to many different markets -Retail stores located globally
Supply Chain Linkages	<ul style="list-style-type: none"> -Suppliers include garment manufacturers -Customers are retailers and end-consumers in specialty stores -Practice owned model and licensed model. Owned model entails arranging production for goods. Licensed model grants other entities the right to manufacture goods under Company X’ brand. -Utilize 400 vendors in 40 countries
Supplier Relationships	<ul style="list-style-type: none"> -Criteria for selecting suppliers: quality, adaptability to produce specific designs (prototype provided by Company X – critical for supplier to produce exact garment and deliver on time), price (not the most important factor) -Produce mostly high fashion goods – one production run and then product is never manufactured again. No replenishment orders. Must meet delivery times. Less than 20% product mix are ‘commodity’ goods. -Utilize a combination of sourcing agent and owned sourcing offices to locate suppliers. -Use full-package suppliers -Company X owns R&D facility that studies color and fabric development. Use this data to specify garments. Often specify fabric and mill to be used by garment manufacturers, sometimes specify trims -Believe in building long-term relationships with suppliers -Suppliers must learn how to work with Company X. Important to have consistency in product and meet design calendar. Inventory turns 4 times/year. -Existing success story: supplier produces a ‘commodity’ item (knit shirts). Works with Company X in collaborating, forecasting, and planning. They manage the manufacturing plan and keep inventory in stock. Know product well and can anticipate the needs of Company X. -Successful fashion garment manufacturer must be willing to do whatever it takes to meet calendar challenges. -Technology isn’t as crucial to supply chains because there are no replenishments. Regardless, Company X is working to improve communication via technology – currently under utilize web -Distribution is a big challenge for Company X. Retail needs a balance of cross-stock (pre-selected general product mixes) and post-distribution

	<p>(garments shipped in bulk to distribution centers, then divided to meet store-specific needs) model. Very difficult to get retailers to understand this need.</p> <p>-Retailers seem to be supported solely by dollars/month. Therefore, stores demand monthly deliveries – results in many orders/deliveries at one point in the month, but there is no replenishment model that supports fluctuations in actual market demand. Some retailers switching to 52-week delivery calendar which allows them to be more responsive to actual consumer demand. Sees some success for retailers when they switch to this model.</p>
Performance Drivers	<p>-Major factors of success: Finding the right partners, internal capabilities to align costs with market needs (Supply chain for different retail channels looks different – combination of using own distribution systems or a 3rd party distribution scenario. To mass: sell pre-packaged size/color sets. To department store: use own distribution system to meet each store’s specific needs.) Retail constantly trying to push price, but Company X wants to remain exclusive (aka Don’t want to be \$50 denim jeans)</p> <p>-Current challenges: Global differences in calendar – different parts of the world like to purchase at different times of year, Global product – countries have different standards and different body types (no “global fit”), Consumer product safety laws – challenges of regulatory environment, Managing products across the globe – some countries don’t like to work with/receive goods from specific countries, Lead-time compression – always trying to get quality products quicker, Getting the right size/product mix to the right door</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: Quality is assumed. Delivery is key. Stable vendor base allows supply chain success – calendar is biggest variable. 2. Branding/mkting: Crucial. Some operations that are currently pursued would make no sense without brand equity behind them. 3. Services offered: Collaborative planning with vendors. To customers – brand presentation, merchandising, forecasting provided, presentation associates travel to retail stores to maintain brand
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: Big problem last year. Influences commodity prices. A \$1 increase in price of gallon of gas = \$500,000 increase in transportation expenses (approx.). When oil prices were high, other manufacturers left manmade fibers for cotton which caused cotton prices to rise. 2. Trade legislation: Utilize global trade. Look for opportunities created by free trade agreements. Currently pursuing Vietnam and Jordan. New legislation: Consumer Product Safety Improvement Act (2009) – enforcement timing not appropriate. Does not give retailers enough time

	to plan and respond. 3. Labor force: Need tremendous flexibility and skilled labor.
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Respondent Y – Specialty Store (Home Furnishings)
 Title: Manager, Textile Development
 Years in position: 2
 Years in industry: 25

Company Information	<ul style="list-style-type: none"> -Manufactures and sells residential furniture (upholstery, case goods, and accessories) -Approximately 200 stores in the U.S. and Canada
Supply Chain Linkages	<ul style="list-style-type: none"> -Purchase finished upholstery fabrics and then complete furniture assembly process, including cut and sew -Also manufacture some upholstery fabrics -Manufacturing facilities are almost entirely located in the U.S. -Customers include end-consumer in retail stores
Supplier Relationships	<ul style="list-style-type: none"> -Criteria used when selecting suppliers: flexibility, financial stability, ability to hold greige fabrics (even across seasons), ability to react to quick orders in response to high sales, ability to react to last-minute changes, anticipation of Company Y’s needs, price flexibility (ie hold price on a solid, but raise price on print in order to maintain margins) -Locate new mills through networking, Showtime, word of mouth, talking with vendors, agent research overseas. Cut and sew vendor market is small – not many to choose from and they are all represented at Furniture Market in High Point -Use same cut and sew upholstery vendors over time in order to avoid teaching new vendors the “rules” of doing business with Company Y (ie labeling, shipping, order quantities) -Works closely with vendors and mills giving them projections/estimates so that they can plan capacities and volumes. Company Y shares quantities with mills so they can have sufficient greige fabric ready to support upcoming needs. In cases of special greige, Company Y makes production commitment to make sure that there is enough to fulfill end customer orders.
Performance Drivers	<ul style="list-style-type: none"> -Major factors of success: Hire experienced individuals to be a part of supply chain. They understand the product and quality they are dealing with. Are experts in their fields, ie expert in building upholstery, expert in fabric, and know how to fix quality issues and achieve colors necessary for business. Also understand finishing and shrinkage issues. -Current challenges: Fabric quality issues – never know when they will happen or what the issue will be. Need strong mills who can troubleshoot and know how to resolve issues that arise. Another challenge – if a fabric sells better than planned, Company Y works with mills to shorten lead-time in order to prioritize a reorder, ie Normal delivery is 8 weeks, but may need 3 week delivery for reorder. Many customers won’t wait to get

	<p>what they want. They will go to another retailer in order to get something faster.</p> <p>-Address challenges by trying to have accurate planning and only working with mills that are technically strong, ie good understanding of dyeing and its relationship to colorfastness, also abrasion needs for upholstery fabrics</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: Place highest importance on quality. Utilizing domestic manufacturing enables very short lead-times which is used as a competitive advantage. 2. Branding/mkting: Furniture brand is well-recognized with customer. Have built a cohesive story that sells a lifestyle. 3. Services offered: Expect flexibility from suppliers. Ability to adjust orders to meet actual market demand
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: Sees prices rising 2. Trade legislation: Impacts duties and quotas on imported fabrics. Have been lifted for textiles, but still exist somewhat for furniture. 3. Labor force: must be experienced or quality of final product will not be up to standards. If labor wages are too cheap, won't attract qualified employees.

Appendix B5: Department Store Interview Responses

Respondent C – Department Store (Apparel)

Title: SVP Brand Management

Years in position: 4

Years in industry: 36

Company Information	<p>-Sells family apparel, shoes, soft & hard home, guild, fine & fashion jewelry, accessories, and gifts -Stores in 18 states, primarily in SE USA</p>
Supply Chain Linkages	<p>-Utilize a combination of suppliers based in the USA and overseas. For suppliers located overseas, they utilize an agent to conduct business (Li & Fung Trading). Nearly all the production is completed overseas. They only work with the factory (i.e. cut & sew). -Do not own any manufacturing facilities -Company C establishes standards for fabric and colors. Suppliers are then free to source from anywhere capable of meeting these standards. Company C does not have high enough volume to dictate location and price for yarn, fabric. Allowing this flexibility in SC creates cost advantages for Company C. -Production shifts are occurring. . for ex, Chinese manufacturers often outsource some of their production to lower wage countries such as Vietnam, Bangladesh, or Cambodia -Products that are not procured through a sourcing agent are developed through a direct importer. This is usually an office that has a unique specialty and the means (factories overseas) to produce a specialized good. They then have offices in a hub city, i.e. NYC, which eases communication with U.S. retailers.</p>
Supplier Relationships	<p>-Criteria for selecting suppliers: costing, quality, social compliance, compatibility in doing department store business, lead times, reputation/past performance, product category specialty, product tier (moderate/better) specialty, country of origin, logistic routing -Aspects of current suppliers: honest about expectations/needs for profit, talk through issues (i.e. costs), look at different procedures to achieve higher proficiency – do not compromise quality -Company C is continually building relationships and narrowing vendor base -Based on performance, likely to build volume and relationship with a supplier over time -Successful supplier relationship implies that as business grows, supplier begins assuming approval and anticipating responsibilities that expedite cycle time</p>

	-Ideally, Company C wants to have 10-20% of their suppliers' factory volume – this implies a mutual dependency
Sourcing Agent	-Utilize Li & Fung when locating new suppliers, usually necessary for new brand or new product classification. -Company C determines the attributes they want in a certain garment, take this info to L&F who then compiles a list of vendors they think would be most suitable. Company C then travels to meet the factories for interviews and negotiations. After contract is set, L&F helps coordinate quality testing, inspections, freight and forward that information to Company C – act as a “production arm extension” and aid with approx. 90% of production
Private Label	-Company C introduced their first private label approx 8 yrs ago. Why? All dept stores had the same product mix so retailers began developing their own line to differentiate themselves from other stores in hopes of gaining customer loyalty and increase profits. -Private labels imply competitive prices for consumer and higher margins for retailer -Often use licenses to create brand identity that connects with consumer. Helps expedite “adoption” time. -Company C has increased private label from 12% of product mix in 2005 to 26% in 2009. Expects this increase to continue.
Performance Drivers	Major drivers of SC success: communications, clear expectations, time and action deadlines, openness, flexibility in resolving conflicts and production issues
Company-controlled Drivers	1. Efficiencies of production – important in selecting key vendors 2. Branding/mkting - minimal 3. Services offered – from manufacturers: price, quality, design (graphic artist). This is important for private branded businesses
Community-controlled Drivers	1. Energy prices – impacts cost of goods through production and logistics 2. Trade legislation – impacts country of origin or where a supplier opens a new factory 3. Labor force – based on targeted production costs, it has impact for moderately priced products

Respondent I – Department Store (Apparel)
 Title: Strategic Sourcing Manager, Knits
 Years in position: 3
 Years in industry: 20

Company Information	<ul style="list-style-type: none"> -Sells apparel, soft home (ie bedding, towels), hard home (ie cookware, small appliances) -All stores located in US -Private and exclusive brands comprise 40% of total product mix
Supply Chain Linkages	<ul style="list-style-type: none"> -Use strategic sourcing to manage vendor matrix. Need to understand size, global footprint, sales, organization, and resources in order to manage properly. -67% products are sourced directly through an agent -No sourcing offices overseas -Over 500 factories currently registered as suppliers -90% business is in 10 countries -Range 25-30% of any one vendor’s capacity -When full package supplier is used this includes domestic, landed, duties paid. Supplier is responsible for design and work with production team. Company I assumes marketing and inventory responsibilities.
Supplier Relationships	<ul style="list-style-type: none"> -Criteria for selecting suppliers: financial stability, ability to provide high-quality, cost-competitive goods, proven success in marketplace, understanding of Company I’s mission and business practices, global footprint, pre-production services (ie design), allocated staff to Company I’s account, sustainability, ability to be flexible and grow into additional brands -Do not have to seek new suppliers. New vendors are continually contacting Company I to offer their services. There is a link on the corporate website for new vendors to submit applications. -Know fabric suppliers, but do not limit vendors by specifying -Very important that vendors have a global footprint (presence in 3-7 countries). Product might initially be produced in Asia, but then replenishment orders may come from Central America for quicker response times. Because firms are operated by same vendor, there is an efficient transfer of information and more consistency in product. -Once suppliers understand a brand (private label), they are able to develop and introduce effective products. -70% of new products introduced are produced by an existing supplier. 97% product design is done by Company I. -Importance of partnerships: Long-term relationships have been growing over the past 3 years due to strategic sourcing. Meetings with top management discuss issues about why they haven’t pursued opportunities

	<p>in specific countries, positive and negative quality issues, and responsibility/authority in production of goods.</p> <p>-Existing success story: Top vendor has global footprint, allocated resources and 45 employees to this account, can produce goods for multiple brands, operate like a small company (but are actually very large), always evolving and looking for new opportunities</p> <p>-There is open communication in SC, but not always through internet due to suppliers' lack thereof. Products are organized by category and by gender. Must meet with suppliers to talk about how to continually improve quality and consistency.</p> <p>-SC holds shared vision, but Company I wants suppliers to accept new responsibilities: manage their own quality, develop more designs, complete their own color and fit approvals.</p>
Performance Drivers	<p>-Major factors of success: extremely qualified vendor base – effective, global footprint, financial resources. As retailer, you can become dependent on the competency of suppliers.</p> <p>-Current challenges: Lacking visibility in SC – facing challenges in software, need to know what other vendors are doing so appropriate adjustments can be made, negative effect in negotiating, more intricate components create an ever bigger need for transparency in SC. Currently working to develop software that will increase internal and partner communications.</p>
Company-controlled Drivers	<p>1. Efficiencies of production: These start in the approval stage. Product development/designers understand suppliers capabilities and incorporate those from the beginning of a concept. Vendors are flexible and able to shift in order to meet deadlines.</p> <p>2. Branding/mkting: Strong commitment to brand development and communication of cohesive stories. Design and marketing work together to build a strong concept. These operations controlled entirely by Company I.</p> <p>3. Services offered: Domestic suppliers and importers work very hard to provide market intelligence and raise awareness of new opportunities. Company I provides product ideas, vendor provide the “how.” Ultimate service to customer is offering the right product at the right price at the right time.</p>
Community-controlled Drivers	<p>1. Energy prices: Revamping stores on west coast to be more environmentally friendly. Shared purchasing power helps provide serious negotiations in transportation – multiple goods can be shipped together. Must offset oil prices in order to maintain margins. Continually track fiber costs (cotton, polyester, spandex), exchange rates, and inflation – educate production managers on how to utilize this information.</p> <p>2. Trade legislation: Employ lawyers to help understand the many</p>

	<p>regulations. CAFTA does not provide a strong advantage – sewing efficiencies in Asia outweigh shorter lead times in Central America. Jordan was formerly producing many goods for Company I, but has now shifted to Vietnam and Indonesia (had former manufacturing experience to draw from). 50% of sewing is completed in Bangladesh, China, Vietnam, and Sri Lanka.</p> <p>3. Labor force: India has the largest population, China second. China seems to want more electronics and auto production, shifting away from textiles. India has experienced problems with effective costing. Indonesia is fastest growing country of production for Company I. Central America is able to source quickly, but labor costs are \$500 more per month than similar products sourced in Asia.</p>
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Respondent U – Department Store (Apparel and Home Furnishings)
Title: VP Director of Sourcing
Years in position:
Years in industry:

Company Information	<ul style="list-style-type: none"> - Sells family apparel, footwear, soft & hard home, fine jewelry, accessories, beauty, and gifts -Has 1,074 stores in the U.S. and Puerto Rico -155,000 employees
Supply Chain Linkages	<ul style="list-style-type: none"> -Private labels compose 48% of total product mix. Currently maintain 20-30 private labels -Private label goods are produced in 44 countries -Operates 9 full sourcing offices: U.S., China, Hong Kong, Taiwan, Korea, Turkey, India, Bangladesh, Pakistan. These offices are responsible for finding sustainable facilities to produce goods.
Supplier Relationships	<ul style="list-style-type: none"> -Criteria for selecting suppliers: must offer a new value-added product that fits a niche, must have multiple countries of production, strong finances, advanced technology, management with succession plan, design-driven, manufacturing expertise, compliant with local laws, operate in socially responsible manner (including environmental regulations) -Company U will specify fabric, trims, and sometimes cotton suppliers. “Knowledge is power.” The more you know, the better you can negotiate. Having relationships with upstream members in supply chains can help gain an understanding of true costs of production. -Company U is large enough that it can leverage its power with suppliers. -Company U does not want to be more than 30% of any one supplier’s total business -Very important to communicate openly throughout supply chain -The biggest difference between supply chains for apparel and furniture is

	<p>lead-times. Denim jean normal lead-time = 25-35 weeks or fast = 17 weeks (from Asia). Upholstered furniture lead-time = 1 year from initial order. Sees very few feasible options for furniture – utilize both Asian and U.S. manufacturers for this product.</p> <p>-Sourcing distribution: 2% products in Western hemisphere, 80% from North Asia, 18% from Southeast Asia and Indian subcontinent</p> <p>-Takes 12 days for goods to travel from southern China to U.S. West coast</p>
Performance Drivers	<p>-Major factors of success: Communication, strong long-term strategies (with willingness to be flexible when necessary), and partnerships – both sides must benefit</p> <p>-Current challenges: economic conditions – supply base and other U.S. retailers going out of business, U.S. consumer not entering store (Company U's target customer is middle class Americans – they have been hit hardest by economic struggles and are not shopping due to a lack of confidence. Believes customers do not need products in the store – discretionary spending.), technology (low level of technological capabilities prevents visibility throughout supply chain) – working to implement new system that will greatly expand communication between Company U and suppliers</p>
Company-controlled Drivers	<ol style="list-style-type: none"> 1. Efficiencies of production: Price is most important factor because it affects countries of origin. China is the most efficient production country, but not always the cheapest. Has logistics and infrastructure to support large quantities. Must look at 'total cost' of production. Quality is important regardless of where an item is produced. 2. Branding/mkting: Employ a brand department that is responsible for brand integrity. Work to protect brand identity worldwide and uphold compliance issues – do not want brand tainted by irresponsible production. As for adding new brands, Company U looks for 'white space' – voids in product offering where there is consumer demand. 3. Services offered: Offer exceptional quality/value products at exceptional prices. Expectations from suppliers – on-time delivery, right product at right time for the right price. . .this is the same thing that Company U's customer expects. Company U seeks to build strong relationship with customers
Community-controlled Drivers	<ol style="list-style-type: none"> 1. Energy prices: 6 months ago, major issue because these prices are a big factor in production costs. Fluctuations in energy costs make it difficult to price merchandise accurately. General retail prices haven't raised in 10 years due to stringent competition. 2. Trade legislation: constantly reviewing trade legislation so that they can find opportunities to source goods at lower prices (ie source sweaters from Jordan due to free trade regulation). Trade regulation in Western hemisphere are too complicated to be valuable – yarn forward clause

	<p>means fabric must be manufactured in Western hemisphere, but believes fabric quality here is poor. Textile monitoring programs cause great concern, anti-dumping regulations cause concern – these damage U.S. consumer more than anyone because prices are passed on to them. Sees these regulations as an “added tax.” Retailers are the number one employer in U.S. (25 million employees) next to U.S. government. 589,000 jobs have been lost in retail. Therefore, Company U lobbies in Washington, D.C. against protectionism.</p> <p>3. Labor force: has seen many changes, especially in China. 1 year ago there were labor shortages in China because they were forcing businesses to move south, and there weren’t enough workers. Labor is not an overwhelming cost in production – fabric is biggest cost. Must examine factory efficiencies.</p>
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Appendix B6: Auxiliary Firm Interview Responses

Respondent S – Auxiliary Firm (Apparel and Home Furnishings)

Title: Retail Account Manager

Years in position: 2

Years in industry: 2

Company Information	<ul style="list-style-type: none"> -Seeks to increase and enhance the sales and performance of a natural fiber -Works with all levels of supply chain production
Methods for Increasing Sales	<ul style="list-style-type: none"> -Company S develops innovative finishes that add desired performance qualities of synthetic fibers to natural fibers, while maintaining their inherent pleasing aesthetic qualities -Offer trend services to customers. 8 employees who travel all over the world in order to accurately predict future trends: color, fabric, silhouette. These are presented to retailers, free of charge in order to increase demand for natural fibers.
Services Offered	<ul style="list-style-type: none"> -Twice a year, Company S develops a line of knit and woven fabrics that showcase natural fiber’s properties. They will then provide training necessary to teach customer how to produce these fabrics, providing they purchase natural fiber. -Technical services: Retailers can send defective products to Company S to determine what the problem is. -Have been promoting sustainability for 30+ years. -Offer support services for importers of natural fiber products
Brand Support	<ul style="list-style-type: none"> -Color services are highly valuable -Help explain technical processes to retailers, ie differences in yarn spinning techniques. Will send educational materials when appropriate. -Help manufacturers develops ways to lower price of production, but keep a similar hand in final product. -Answer economic questions: prices of natural fiber, reliability of specific suppliers, trustworthy importers -Offer extensive information on website that is accessible by all. Database of suppliers and manufacturers of natural fiber which works to help link members of supply chain from fiber to retail. -Try hard to answer any questions that would help promote natural fiber sales