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Quick Response and Global Sourcing:
Organizational and Performance Implications
for U.S. Retailers

presented by

Lisa Phillips Fairbairn

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Marketing and Supply Chain Management

C. Droge
Major professor

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QUICK RESPONSE AND GLOBAL SOURCING: ORGANIZATIONAL AND PERFORMANCE IMPLICATIONS FOR U.S. RETAILERS

By

Lisa Phillips Fairbairn

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Marketing and Supply Chain Management

1997

ABSTRACT

QUICK RESPONSE AND GLOBAL SOURCING:
ORGANIZATIONAL AND PERFORMANCE IMPLICATIONS
FOR U.S. RETAILERS

By

Lisa Phillips Fairbairn

A retailer's competitive strategy is to a large extent realized through the deployment of its overall assortment. And while the consumer of "today" and "tomorrow" wants it all -- price, quality, timely delivery -- quick response (QR) and global sourcing each provide different facets of the overall assortment. Global sourcing offers a low-cost alternative to domestic sourcing and QR yields timely domestic merchandise. These two strategies are among the most visible advances in retail sourcing practices in recent years. Because of their substantial impact on the retailer's competitive position, these practices have changed the way firms view sourcing -- elevating sourcing to a position of strategic importance.

Part I of this dissertation looks at factors that cause and accompany QR implementation and the implications on retailer performance. A theoretical framework is developed and several propositions are tested regarding the environment-strategy-structure-performance framework as it pertains to QR in the U.S. retailing industry.

Part II examines both the environmental antecedents and the effectiveness of QR and global sourcing. Based on the well-accepted premise that QR emerged in response to offshore competition, global sourcing is typically viewed as an alternative strategy. However, because developing a better understanding of the strategy-performance

relationship is an incremental process, two scenarios and their performance implications are considered. First, QR and global sourcing will be viewed as strategic alternatives. Then, the two strategies will be assumed to coexist.

To test the model (and variations of), a retail industry field study of large, diverse non-food retailers was conducted. A multi-stage methodology was employed. Hypothesis testing was conducted through regression analysis, structural equations modelling, and analysis of covariance.

The research proposed and executed in the dissertation contributes to the theory, method, and application of QR in particular, and also global sourcing. This was achieved by conceptually and methodologically integrating several core concepts of strategic management, retailing, and marketing. Conclusions from this research offer a number of important insights and help to fill a void in both academic research and managerial application regarding retailer strategy implementation.

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1997

Dedicated with love
to
Mom, Dad, and Paul

ACKN

I wish to acknowledge the gu
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Dr. Droge, my dissertation
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e exemplary role model.

Dr. Calantone for opening th
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Dr. Cavusgil for his idea of in
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Dr. Cooper for his attention
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Dr. Sternquist for being the c

Most of all, my Mom and D
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Gay, for his encouragement through
believing in me and for making this p

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Most of all, my Mom and Dad for their continued love, support, and patience throughout all of my academic endeavors. My wonderful husband, Paul, for making my life more complete and for accepting my career aspirations. My very special friend, Cary, for his encouragement throughout my graduate studies. Thanks to all of you for believing in me and for making this process more bearable.

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CHAPTER 1
Introduction, Logic, Research Themes and Expected Contributions

THE U.S. RETAIL INDUSTRY

Over the past five years, retail sales in the U.S. have been growing at an average annual rate, adjusted for inflation, of approximately 3 percent (U.S. Bureau of the Census 1995). The Walmarts and the Gaps are exceptions to the rule, but the average is under 3 percent annually. This problem of relatively stagnant growth is not due to a lack of stores or shopping opportunities: competitive "sameness" is perhaps the most encompassing problem throughout the industry. While no retail industry is excluded from the problem of competitive "sameness" or other problems (e.g., saturation), each industry is faced with its own unique challenges. The following paragraphs, compiled from the Chain Store Age Executive (1995) issue on the "State of the Retail Industry", provide an overview of trends occurring in specific retailing industries (see Pollack 1995). Retailers from each industry discussed below will comprise the sampling frame for this dissertation.

The apparel specialty store industry, led in sales by The Limited and The Gap, is experiencing stagnant growth rates. The industry as a whole is currently challenged by value-conscious consumers and is under siege from department stores, off-pricers and discount department stores. Expected future developments include continued industry consolidation and a more favorable long-term outlook due to an anticipated shift in consumer spending away from larger ticket durables.

The department store industry, lead by Sears and JCPenney, is characterized by

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modest growth. Consolidation and smaller stores going out-of-business has left the industry with fewer, stronger players. Also challenged by off-pricers and discount department stores, traditional department stores are streamlining operations to eliminate cost-redundancies and most have converged on moderate price points as their best value statement. The industry has witnessed an emphasis on private labels to retaliate against competitive "sameness". Future growth is expected to be modest.

In comparison to the stagnant growth rates experienced by apparel specialty stores and department stores, the discount department store industry boasts 5 consecutive years of double-digit growth. Walmart, the industry leader, is experiencing a growth rate three times as much as its closest competitor in the industry, Kmart. Despite its growth, the industry is characterized as mature with limited geographic expansion potential and is threatened by category killers. Given the value-consciousness of consumers, the outlook for this industry is increasingly bright.

Toys "R" Us and Circuit City Stores are the leaders in the hard line specialty store industry. Hard line specialty retailers include retailers of office supplies, books, sporting goods, consumer electronics, furniture and toys. For three consecutive years, this industry has experienced strong growth. In general, consumer electronics and sporting goods stores are the best performers and book stores performed poorest. The industry outlook is for slower, but sustained growth.

The convenience store industry is another strong performer, led by Southland Corporation (*7-Eleven)* and Circle K Corporation. Trends behind this industry's growth include small grocery stores going out-of-business, consumers increasingly seeking convenience, and strategic differentiation. Regarding differentiation, convenience stores

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are increasingly teaming up with fast-food operators, are preparing their own fresh-prepared store-brand products and are locating in nontraditional sites. The future outlook for this industry is very bright due to changing markets and consumers.

To meet the challenges posed by the competitive and dynamic U.S. retailing environment, many strategies are consistently being implemented across retailing industries. Most notably, these strategies include: downsizing, consolidation, cost-cutting reorganization, internationalization, technological sophistication, retailer-supplier partnerships, among others. Many retailers today are seeking competitive advantages through *efficiencies* (e.g., cost efficiencies, time efficiencies, inventory efficiencies). Due largely to increasing technological sophistication, most top U.S. retailers believe that strategic retailer-supplier partnerships are the key source of competitive advantage (Chain Store Age Executive 1992c). That is, partnerships are a critical means of obtaining efficiency-driven competitive advantage.

In their annual review of the "State of the Retail Industry", Chain Store Age Executive (1995) *featured* retailer-supplier partnerships as their keynote article (see Pollack 1995). The article stresses that in retail sourcing, there is a trend toward long-term relationships or partnerships between retailers and their suppliers and that these partnerships are both critical and mutually beneficial. In sum, "more and more retailers are recognizing they can gain better *efficiency* when they look at the whole supply chain, without boundaries, from the production line to the checkout line" (Pollack 1995, p.11A). This trend is extremely interesting and important given its radical departure from the traditional, adversarial relationship.

Most partnerships fall into two basic categories: those that focus on efficiencies

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and those that focus on creating value (Pollack 1995). In use, retailer-supplier partnerships can be of a domestic or international nature. The seminal article in Harvard Business Review, "Collaborative Advantage: The Art of Alliances", suggests that partnerships between companies, whether they are from different parts of the world or different ends of the supply chain, are extremely important for business survival today (see Kanter 1994). In the domestic retailing arena, these partnerships may include quick response (QR), efficient consumer response (ECR), category management, or vendor-managed inventory (VMI). In the international arena, retailers may develop global sourcing partnerships. Retailers have two basic options for long-term relationships with foreign suppliers. First, they may look for local suppliers and help them build an export capability. Second, buyers may opt to work with foreign firms that are already exporting (Dominguez and Zinn 1994).

As U.S. retailers strive to compete in the most efficient manner possible, effective management of the supply function is becoming increasingly important. It is widely acknowledged by sourcing experts that supply management will play a major role in the restructuring and restoration of American industry (Leenders and Blenkhorn 1988), including the retailing industry. One aspect of supply management is finding and selecting world-class suppliers. However, depending on the nature of the competitive advantage being sought, "world-class suppliers cannot always be found in the U.S." (Vickery, Carter and D'Itri 1993, p.38). Two contemporary retail sourcing strategies, based on partnerships, are quick response (QR) and global sourcing. The former seeks efficiencies mostly in terms of time and inventory (e.g., Fiorito, May and Straughn 1995; Phillips and Droge 1995a,b), the latter seeks efficiencies mostly in terms of costs (e.g.,

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INTRODUCTION AND OVERVIEW

Quick Response (QR), one form of time-based competition, is revolutionizing the U.S. retail industry. As in other industries, the catalyst for a time-based movement was competition from offshore.

> "In the late 1980s, approximately 50 percent of the apparel and textiles purchased in the U.S. were sourced from the Orient. Drowning in a flood of imports, domestic producers and retailers realized that the future of their business depended on a healthy domestic business. Seeking competitive advantage, industry leaders perceived that nationalistic slogans would not be their salvation. For today's sophisticated worldly consumer, an appeal to the emotions and patriotism of the consumer is less likely to succeed than one based on time, quality, and price. The outcome of the debate over this issue within the apparel industry group called the Crafted with Pride in the U.S.A. Council was the formation of the Quick Response (QR) movement. The thinking of the Council was as follows: "There must be a competitive advantage based on our proximity to customers. We must be able to seize that advantage and to satisfy U.S. consumers' needs more quickly than firms overseas." In the 1990s, American retailers have found an opportunity to change the rules of the game by focusing on time with QR. Thus, foreign competition has compelled U.S. firms to reorient their corporate strategies toward time (Blackburn 1991, p. 246,7)".

The above excerpt from Blackburn's (1991) book, Time-Based Competition, suggests that a domestic strategy with quick response is the key differentiator for retailers (and producers who sell to them) seeking competitive advantage in the 1990s. It also implies that QR, a time-based strategy, and global sourcing, usually a cost-based strategy, are strategic alternatives in retail sourcing. Aside from this more "traditional" view, however, there is evidence in the literature to entertain the notion that these two strategies coexist quite successfully. In Part I of this dissertation, the main focus is QR

nd its implications for management

Part II examines both the environm

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COMPETITIVE

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and its implications for management practice, both internally and with major suppliers. Part II examines both the environmental antecedents of and the effectiveness of QR and another major strategy in retailing, global sourcing.

COMPETITIVE STRATEGIES IN RETAILING

A retailer's competitive strategy is to a large extent realized through the deployment of its overall assortment. And while the consumer of "today" and "tomorrow" wants it all -- price, quality, and timely delivery -- quick response and global sourcing each provide different facets of the overall assortment. Global sourcing offers a low-cost alternative to domestic sourcing and QR yields timely domestic merchandise. These two strategies are among the most visible advances in retail sourcing practices in recent years. Because of their substantial impact on the retailer's competitive position, these practices have changed the way firms view sourcing activities -- elevating sourcing to a position of strategic importance.

While it seems logical for companies to desire integrating these two strategies to gain the benefits from each, these two approaches to strategic purchasing are often considered to be inherently incompatible -- one suggests movement towards zero-inventories and one does not. For example, Fawcett and Birou (1992) found that nearly 2/3 of purchasing and material managers studied reported that they believed JIT, a time-based strategy in manufacturing, and global sourcing to be incompatible. The most basic conflict is that of buyer-supplier proximity (Fawcett and Birou 1992).

For the purpose of this dissertation, the scope of quick response is limited to domestic operations and the scope of global sourcing refers only to sourcing from foreign

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Quick Response (QR) is a ...
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...tailers the merchandise needed to ...
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...associating perfectly to product flow ...
...Daugherty 1994). Therefore, "QR h...
...artificially stimulate demand by t...
...trategies (where consumer demand ...
...1988/89). Since its conception nea...

countries. In other words, the case wherein quick response is practiced in an international context is excluded from consideration. Similarly, global sourcing does not include the instances wherein the source of foreign supply produces and distributes domestically.

Logic of the Thesis: What is Quick Response?

Quick Response (QR) is a time-based strategy in the retailing industry and is becoming the industry's standard system for automatic reordering and replenishment. It incorporates the providers of raw materials (e.g., textile suppliers), the producers of finished goods (e.g., apparel manufacturers) and the marketers of the finished product (e.g., department stores) into one system that is driven by market information (Maltz and Srivastava 1994). It is designed to reduce turnaround time from wholesaler to retailer (e.g., in apparel). QR in total application involves "on-line electronic communication of sales data from retailers to merchandise vendors, with the vendors promptly supplying retailers the merchandise needed to return the inventory in stores to levels previously determined cooperatively by the retailer and the vendor" (Fiorito, May, and Straughn 1995, p.12). In other words, the ultimate QR system connects supplier, manufacturer, warehouser, retailer and consumer by (1) matching product flows to consumption and (2) associating perfectly to product flows a timely information flow (Germain, Droge and Daugherty 1994). Therefore, "QR hinges upon moving from push strategies (attempting to artificially stimulate demand by trying to push inventory down the pipeline), to pull strategies (where consumer demand is the driver)" (Chain Store Age Executive 1994, p.18MH). Since its conception nearly ten years ago, this revolutionary movement has

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Malz & Srivastava 1994

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system are presented in Table

e 1-1. Benefits of Quick Respo

Retailers	Suppliers
Increased sales & profits Fewer markdowns Lower operating expenses Improved customer service Higher turns	produce-to-ord less resources improved retur assets

Source: Phillips and Droge (1995

produced dramatic results, making U.S. manufacturing more competitive and contributing to the success of U.S. retailing giants like Walmart, Kmart and JCPenney. Some industry experts refer to QR as the biggest non-price advantage a competitor in the retailing industry enjoys (McNamara 1993).

The benefits of quick response have been estimated in quantifiable terms (Salmon 1987; in Maltz & Srivastava 1994): [1] lowers safety stock requirements for retailers, thereby increasing merchandise turnover, [2] fewer out-of-stock situations results in a reduction in missed sales, [3] increases in sales for manufacturers and suppliers due to increases in sales at the retail level, [4] allows manufacturers and raw material suppliers to increase efficiency due to more predictable scheduling. In more general terms, benefits of quick response typically realized by retailers, suppliers, consumers and the total system are presented in Table 1-1.

Table 1-1. Benefits of Quick Response

Retailers	Suppliers	Consumers	Total System
increased sales & profits fewer markdowns lower operating expenses improved customer service higher turns	produce-to-order less resources used improved return on assets	improved quality lower prices improved variety fewer stock-outs (timely response) satisfaction	efficiency

source: Phillips and Droge (1995a)

QR in Practice

Fiorito, May and Straughn (

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QR in Practice

Fiorito, May and Straughn (1995) describe the typical flow of merchandise, data, and finances in a QR partnership between a retailer and supplier. Consumers initiate the QR process as they communicate their needs and wants to the store through their purchases. Merchandise information (e.g., size, color) is collected through scanning bar-codes, and is sent to the supplier via electronic data interchange (EDI) rather than the typical process of remitting a purchase order. These sales data are compared with the store's inventory model. Production is ordered for the specific items needed to restore the inventory to the model's requirements. Notification of the expected shipping data is transmitted to the shipper and the retailer. Production orders are transmitted to the plant where the goods are produced. The merchandise is packed and shipped to the retailer. The cycle is complete when floor-ready merchandise arrives at the store. In terms of channel structure, QR requires extensive changes in working relationships between retailers and vendors (Fiorito, Day, and Straughn 1995).

Kurt Salmon Associates (1993) depicted the dramatic effect of QR on a typical retailer replenishment cycle by comparing replenishment stages under QR to pre-QR techniques -- the former yielding a 75 percent typical reduction in lead-time (Figure 1-1).

The tendency by retailers is to implement QR in the basic areas first. Basics are more profitable, demand forecasting is easier because of year round demand and shorter pipelines, and QR for basics requires less vendor participation (Chain Store Age Executive 1991). QR also promises significant benefits for non-basic and fashion merchandise. Many firms are moving away from the dominant use of pre-distribution due to the realization that various segments of their business are too unique to be served

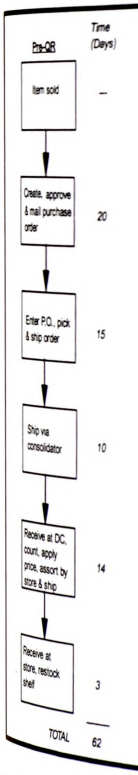

Figure 1-1. Replenishment Cycle C

Source: Kurt Salmon As

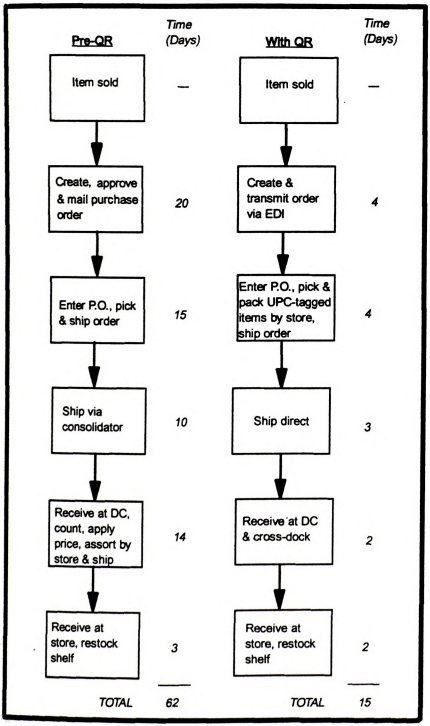

Figure 1-1. Replenishment Cycle Comparison

source: Kurt Salmon Associates (1993)

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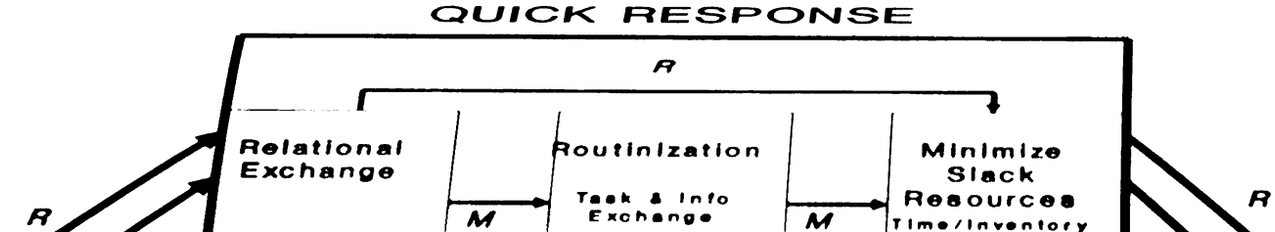
monolithically (deRoulet 1992). In the fashion area, the approach is to place smaller pre-season orders to closely monitor initial sales and to quickly re-order fast sellers (Chain Store Age Executive 1991).

QR in Theory

Phillips and Droge (1995a) have developed a model that endeavors to explain the successive types of cooperative relationships between retailers and manufacturers necessary for successful quick response implementation. The model (see Figure 1-2) posits that the three key dimensions of a QR alliance are: [1] relational exchange, a cooperative arrangement between channel dyads; [2] routinization, of task and real time information exchange; and [3] minimization of slack resources, mainly time and inventory. The focus of their model is QR alliances as delimited by resource dependence (RD) theory. Assuming uncertainty in the environment, RD theory provides a rich predictive framework for explaining how organizations operate on their supply environments to make them more stable (Handfield 1993). QR is posited as a means of reducing uncertainty by both retailers and manufacturers.

More specifically, *demand uncertainty* is a common obstacle for both retailers and manufacturers. Resource dependence (RD) theory suggests that organizations tend to implement certain strategic operations or mechanisms in response to uncertainty as a means of achieving organizational stability (i.e., transaction certainty). Quick response answers this call. *QR* is proposed to constitute a three-dimensional response to uncertainty on the part of both retailers and manufacturers. More specifically, the first


QUICK RESPONSE
R
Relational Exchange
M
Routinization
Task & Info Exchange
M
Minimize Slack Resources
Time/Inventory
R
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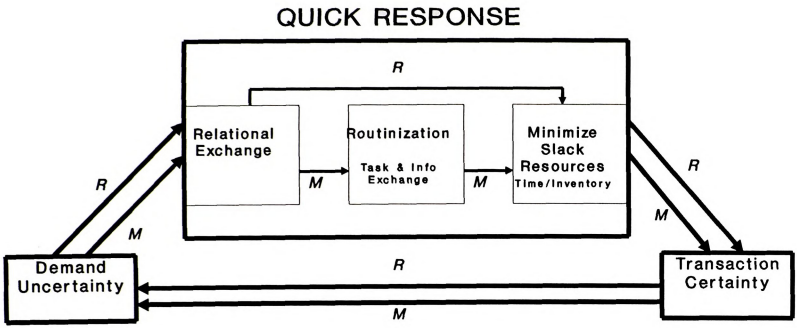

R=Retailer
M=Manufacturer

** Note: The authors emphasize that the model is discussed in terms of *degree* of relational commitment. Therefore, the model is generalizable to QR alliances of varying degrees of commitment. The more committed the dyads are to relational exchange, the greater the potential for manufacturer routinization. Likewise, the greater the routinization, the greater the maximization of slack resources.

Figure 1-2. Quick Response in Theory

source: Phillips and Droge (1995a)

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Parallels between QR and JIT

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phase of a QR alliance is *relational exchange,* or some degree of cooperative arrangement between the two parties. *Routinization*, the second phase in QR, results when a degree of relational exchange already exists and there is standardization of information exchange and operating tasks. Routinization enables the substitution of task variability and lack of information for two of the retailer's most valuable assets, time and inventory. This results in the third phase in QR; i.e., *slack resource minimization*. The model then proposes that the successful implementation of a QR results in future *transaction certainty*, or stability, for both retailers and manufacturers.

Parallels between QR and JIT

The similarities and differences between QR and JIT have been noted (e.g., Fiorito, Day, and Straughn 1995; Blackburn 1991) and are important to this thesis. According to Germain, Droge and Daugherty (1994), QR is essentially an industry-tailored JIT system. The most fundamental similarity among JIT and QR is time. Due to an inherent lack of literature on quick response outside of the trade journals, there is a need to base this research on preexisting time-based theory. By far, the most researched issue of time-based competition is JIT in manufacturing and purchasing. As will be discussed here and assumed throughout this dissertation, the differences between these two time-based, supply chain strategies are few.

Differences between JIT and QR are mostly in practice, not theory. Simply, three major differences can be identified: [1] different locations in the supply chain; [2] different inputs, and therefore, different outputs; and [3] the different direction of information flows (Blackburn 1991). While the first two points are obvious, the last

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point is in need of clarification. "Conventional approaches to time reduction in manufacturing are one-dimensional: The objective is to move product faster through the pipeline; that is, speed is attained by moving forward faster. However, in the retailing supply chain (i.e., QR), there is flow in two directions: Product flows forward in value-added stages and information flows backward from consumers as demand is translated into replenishment orders. The innovative feature of QR is that actions are taken to increase the velocity of flows in both directions. The QR campaign involves steps to move goods forward faster; that is, to shrink cycle times at each stage of manufacture and the shipment times between stages. However, the unique features were those taken to improve the responsiveness of the system through improved, faster communication of consumer preferences back to all members of the chain. In sum, the conceptual breakthrough made in the QR movement was recognizing that the supply chain is a system of bidirectional flows" (Blackburn 1991, p.253,4).

Logic of the thesis: What is Global Sourcing?

With the globalization of markets, global sourcing is increasingly becoming a precondition for an *international* firm's success in the 1990s (Monczka and Trent 1991a; Fagan 1991). Many retailing firms find a better combination between price and quality from manufacturers in developing countries. In fact, increasing numbers of retail firms from developed countries have been setting up buying offices in developing countries (United Nations 1985).

More specifically, the ever-changing business environment necessitates that corporations maximize the use of organizational buying overseas in order to :[1] maintain

competitiveness. [2] cut costs.

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competitiveness, [2] cut costs, [3] establish a quality product, and [4] maintain a technological edge (Herbig and O'Hara 1993). While global sourcing has traditionally been used as a reactive response to global competitive pressures, more recently, global sourcing is increasingly being used as a proactive strategy to gain competitive advantages (Cavusgil, Yaprak and Yeoh 1993).

Compared to traditional importing, international sourcing implies that retailers tend to be more proactive in the acquisition of sources of supply and their own strategies dominate in the decision-making as to where, when, what, how much and from whom to buy (Liu and McGoldrick 1995). With traditional importing, retailers often play a passive role in obtaining merchandise, with suppliers taking the initiative in providing goods.

Liu and McGoldrick (1995) summarized the benefits and costs that have driven and constrained the growth of global sourcing (Figure 1-3).

More specifically, there appears to be a consistent perspective of the benefits of global sourcing. Kotabe (1989,1992) argued that global sourcing is being increasingly used to acquire and sustain cost competitiveness. Similarly, better/lower price is typically credited as the most important benefit (Fawcett and Birou 1992; Dowst 1987; Monczka and Trent 1991a). Min and Galle (1991), however, report that quality is becoming the most important factor in global sourcing. Other benefits include: accessibility, enhanced customer service, increases in supply options, and assistance in developing a global market presence (Fawcett and Birou 1992). Hayes, Wheelwright and Clark (1988) eloquently summarize that global sourcing's competitive impact extends beyond "traditional" cost containment and includes competitive dimensions of quality,

Figure 1-3. Global Sourcing: Co

source: Liu and McC

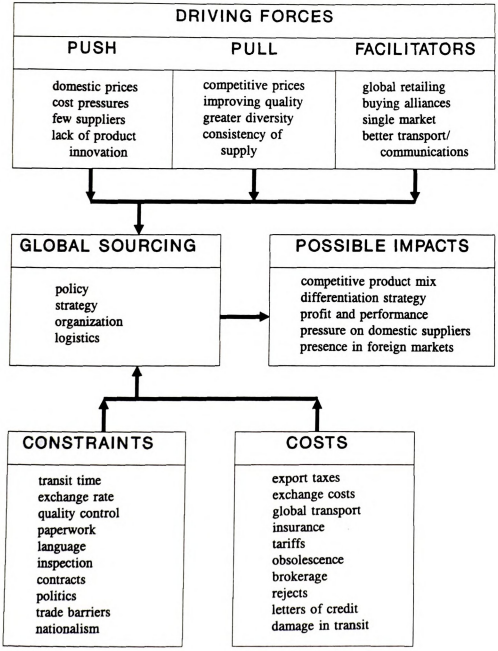

Figure 1-3. Global Sourcing: Costs and Benefits

source: Liu and McGoldrick (1995)

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entail 'softer' obstacles: an inad

purchasing practices; human and

nationalism; an insufficient worki

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dependability, flexibility and innovation as well.

Reasons for sourcing globally are many. Liu and McGoldrick (1995) identified four major *driving forces*: cost reduction; competitive products from overseas; availability, and the internationalization of retailing. Regarding cost reduction, the trends of retailer concentration *and* increasing competition, means little opportunity for retailers to raise prices in an effort to increase profits. Many are pursuing an alternative strategy of reducing supplier costs with global sourcing. Regarding overseas competition, developing countries have become, and are becoming increasingly competitive in the area of manufactured products. Retailers are finding that many items with higher quality or a combination of low price and quality can be found in developing countries (Fagan 1991; Monczka and Trent 1991b). Some retailers opt to source globally to enhance the reliability of their supply, to supplement their domestic sources, or to meet increased demand (Liu and McGoldrick 1995). In many cases, certain products can only be found overseas.

The five most important *constraints* of global sourcing include: [1] transportation delays; [2] foreign exchange rate fluctuations; [3] travel costs; [4] quality assurance uncertainties; and [5] language (Min and Galle 1991). International sourcing can also entail 'softer' obstacles: an inadequate understanding of international business and purchasing practices; human and organizational resistance to change; domestic market nationalism; an insufficient working knowledge of international sources, language and cultural differences (Monczka and Trent 1991b).

Domestic Sourcing

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The Global Sourcing Process

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Domestic Sourcing

Compared to global sourcing, the benefits of domestic sourcing (e.g., QR) include the shorter lead and transit times, the ability to monitor closely the total production process and the lower costs in terms of management time and communications. In general, a retailer may accept higher prices in exchange for the lower risk and cost usually associated with domestic sourcing.

The Global Sourcing Process

Because of the diversity of approaches and contexts available for international sourcing, a model of the sourcing process can offer only a simple abstraction (Figure 1-4).

Many firms have adopted a policy of sourcing from multiple countries. For example, Nike sources it shoes from South Korea, Taiwan, Thailand and Hong Kong. For different target markets, a firm may source the same product from different countries. An empirical study of international apparel sourcing has found that Italy dominates the designer label field, while Hong Kong is the leading choice for retailers' own labels (Harris and Heppel 1991).

Selection of suppliers is one of the retailer's most important decisions in international sourcing. The principle of purchasing used by both industrial and retail buyers is "making the goods available at the right price at the right time" (Webster 1984). Retailers must also decide whether to source a product from a single supplier or from multiple suppliers. Considering the two options, the firms needs to balance the trade-off between operating costs and risks, particularly in the international context.

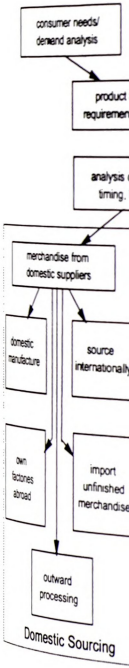

Figure 1-4. The Global Sourcing

source: Liu and Mc

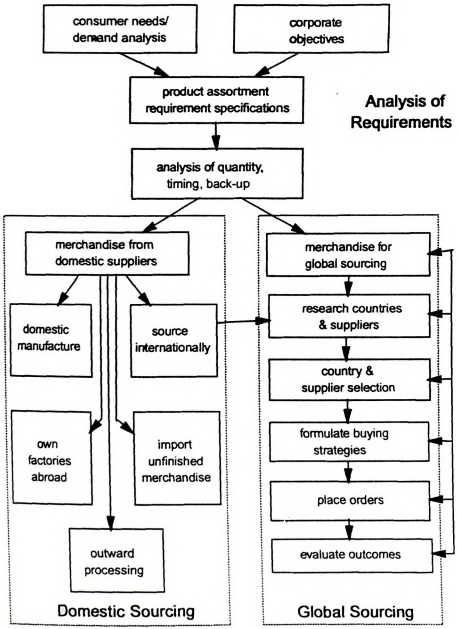

Figure 1-4. The Global Sourcing Process

source: Liu and McGoldrick (1995)

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Once a supplier is selecte

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DISSER

A Call for Research

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Single sourcing has the benefit of cost reduction, but bears the risk of 'putting all the eggs in one basket'.

Once a supplier is selected, purchasing strategy is developed concerning the volume, frequency, target price, time of delivery and trade channels. A number of alternative trade channels to organize the transaction exist--an international trading firm, overseas buying office, internal buyers and/or buying group. Many retailers prefer overseas buying offices because direct contact with suppliers can reduce the possibility of misunderstanding or poor communication between the two parties. The choice of trade channels also depends on the expected volume and frequency of purchase. The retailer also negotiates prices and terms with the foreign supplier. In addition, the management of the retailer-supplier relationship is fundamental. A healthy and harmonious long-term business relationship is beneficial to both retailers and their suppliers.

DISSERTATION JUSTIFICATION

A Call for Research

While research in the area of JIT, as applied to purchasing and manufacturing, has been ongoing for 15 some years (Hage 1980), research on QR is in its infancy. This oversight is curious, as the desire to eradicate "waste" and ensure a rapid throughput of goods *should* be greatest at the retail level, where finished goods represent the highest value stocks in the whole system (Delbridge and Oliver 1991, p.20).

Similarly, with the globalization of business and markets, one dimension of the internationalization of retail operations that has been largely overlooked is sourcing.

Most empirical research on inter

manufacturing firms or European

Murray 1990; Kotabe and Omura

1992). Although it is evident that

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MAJOR RESEARCH THEMES

Part I - Quick Response: Antec

Part I of this dissertation looks at

retailing industry and their im

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The three general research questi

and then briefly outlined. Each

Most empirical research on international sourcing has largely concentrated on U.S. manufacturing firms or European and Japanese multinationals in the U.S. (Kotabe and Murray 1990; Kotabe and Omura 1989; Monczka and Trent 1991a, 1991b; Davidson 1982). Although it is evident that many international retailers actively engage in global sourcing operations, both conceptual and empirical work on international retail sourcing has been very limited (Liu and McGoldrick 1995).

MAJOR RESEARCH THEMES/EXPECTED THEORETICAL CONTRIBUTIONS

Part I - Quick Response: Antecedents and Consequences

Part I of this dissertation looks at factors that cause and accompany quick response in the retailing industry and their implications on retailer performance. A theoretical framework is developed and several propositions are tested regarding the environment-strategy-structure-performance relationship as it pertains to quick response (QR) in the U.S. retailing industry.

The three general research questions to be addressed in Part I are presented in Table 1-2 and then briefly outlined. Each question will be thoroughly addressed in Chapter 3.

Table 1-2 Research Questions - H

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Table 1-2. Research Questions - Part I

Research Question 1	What, if any, changes in management practice (i.e., organizational structure) and channel relationships (i.e., relationship structure) occur as the extent of involvement with QR increases?
Research Question 2	What, if any, changes in the extent of involvement with QR strategy and structure (i.e., organizational and relationship) occur as the extent of environmental uncertainty increases?
Research Question 3	What, if any, implications does extent of QR strategy implementation, environment uncertainty, and structure (i.e., both organizational and relationship) have on retailer performance?

[1] What, if any, changes in management practice (i.e., organizational structure) and channel relationships (i.e., relationship structure) occur as the extent of involvement with QR increases?

The first theme is that QR strategy has a large influence on both organizational and relationship *structure*. This is consistent with the dominant theme in strategic management that structure follows strategy. Chandler (1962) observed that major changes in organizational strategy were followed by changes in structural form. Since that time, the proposition that "structure follows strategy" became widely accepted.

Selection of the *organizational* structure variables was guided by literature reviews that have consistently identified integration, formalization, and decentralization as major interrelated dimensions of organizational structure. It

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will be argued that the implementation of quick response results in increased integration, formalization, and decentralization of operations. This relationship has been confirmed in a variety of contexts, including JIT exchange and cost vs. differentiation.

Relational norms (the higher-order construct comprised of flexibility, information exchange, solidarity) was chosen to represent the *relationship* or boundary-spanning structure. This selection was guided by literature on channel relationships (i.e., behavioral-orientation) and the relevance of the construct to QR partnerships. It will be argued that the implementation of quick response results in an increase in flexibility, information exchange and solidarity between the retailer and its suppliers. This relationship has also been confirmed in a variety of contexts.

[2] What, if any, changes in the extent of involvement with QR strategy and structure (i.e., organizational and relationship) occur as the extent of environmental uncertainty increases?

Models of the relationships between strategy and structure often include uncertainty as antecedent to strategy, structure or both. In this dissertation, environmental uncertainty is posited to directly affect QR strategy implementation and structure (both organizational and relationship). Each of these arguments are well-supported in the literature.

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This first contention is consistent with the traditional contingency literature that suggests environment can and should influence strategy. The argument has long been made that changes in ways of conducting business are unlikely to be considered in placid environments. The current status of the retail environment is far from placid. Literature suggests that radical strategic initiatives become more likely overall as environmental uncertainty increases. It will be argued that as environment uncertainty increases, the extent of QR implementation also increases.

Environment uncertainty has also been found to have important implications for the structures of organizations. Regarding organizational structure, several studies have found that uncertainty in the environment creates the need for more organic structures, typically characterized as more integrated, specialized, formalized and decentralized than bureaucratic ones. Therefore, it will be argued that as uncertainty increases, organizational structures become more organic.

A more recent trend in the literature is the establishment of the existence of a relationship between environment uncertainty and relationship structure. In general, relational norms (i.e., information exchange, solidarity, flexibility) buffer uncertainty by serving as a general protective device against deviant behavior. Therefore, the argument will be made that exchange relationships that typically emerge in the face of uncertainty will tend to be more relational (vs. discrete) in orientation.

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[3] What, if any, implications does extent of QR strategy implementation, environment uncertainty, and structure (i.e., both organizational and relationship) have on retailer performance?

The traditional stance in the literature is that strategy influences performance. QR strategy implementation is expected to enhance retailer performance for several reasons, including: fewer markdowns, lower operating expenses, higher turns, increased selling space and improved customer service. Thus, it will be argued that as QR strategy implementation increases, performance can be expected to increase as well.

The environment has been found to influence organizational performance in a variety of contexts. Specific to this dissertation, in any environment characterized by uncertainty, if no adaptation mechanism is cultivated, the costs of making changes in response to unanticipated events will eventually undermine the returns an organization derives. For this reason, the argument will be made that as environment uncertainty increases, retailer performance decreases.

The influence of organizational structure on performance has been demonstrated in the literature. Specific to this dissertation, several studies have found organizational performance to be significantly linked to organic structures. Retailer performance, it will be argued, increases as organizations become more integrated, formalized and decentralized in their structure.

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Part II - QR and Global Sourci

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Regarding the influence of relationship structure on performance, retailers with long-term relationships can achieve competitive advantage by receiving merchandise in short-supply, information on new and best-selling products and competitive activity, best allowable prices, and advertising and markdown allowances. Relational norms, in turn, are considered to be important mechanisms for regulating long-term relational exchanges. In this case, retailer performance will be argued to increase as the norms of informational exchange, flexibility and solidarity increase.

These general themes will be formally discussed in Chapter 3 of this dissertation and tested in Chapter 5.

Part II - QR and Global Sourcing: Drivers and Performance Implications

Part II of this dissertation examines both the environmental antecedents of and the effectiveness of QR and another major strategy in retailing, global sourcing. Based on the well-accepted premise that QR emerged in response to offshore competition, global sourcing is typically viewed as an alternative strategy. The former offers the retailer a low-cost alternative to domestic sourcing and the latter yields a strategy based on the cutting-edge concept of information replacing inventory in the supply chain. Three research themes are associated with Part II of this research (see Table 1-3).

Table 1-3: Research Questions -

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Research Question 5	
Research Question 6	

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Table 1-3. Research Questions - Part II

Research Question 4	What environmental factors, if any, are catalysts of QR and/or global sourcing implementation?
Research Question 5	Comparing QR and global sourcing as strategic alternatives, which strategy has the largest influence on performance?
Research Question 6	Will retailers implementing both QR and global sourcing outperform retailers implementing only one strategy?

[4] What environmental factors, if any, are catalysts of quick response and/or global sourcing implementation?

The intent of this research theme is simply to gain a better understanding of these two strategies by examining the effects of a variety of facets in the retailer's environment on strategy implementation. Factors identified in the literature as potential external drivers of QR and/or global sourcing implementation include, but are not limited to: environment uncertainty, competition (domestic and foreign), and the internationalization of retailing. Factors in the retailer's internal organizational environment include, but are not limited to: degree of retailer internationalization, retailer power, technological sophistication, corporate goals, innovativeness, and marketing orientation.

Performance implications of the two strategies are now discussed. Because developing a better understanding of the strategy-performance relationship in service industry

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rategies will be assumed to coex

5. Comparing quick response
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environments is an "incremental process" (Cappel, Wright, Wyld and Miller 1994, p.211), two scenarios and their performance implications are considered. First, quick response and global sourcing will be viewed as strategic alternatives. Second, the two strategies will be assumed to coexist.

[5] Comparing quick response and global sourcing as strategic alternatives, which strategy has the largest influence on performance?

Given the traditional notion, that QR and global sourcing are strategic alternatives, it will be argued that the performance of retailers competing with a QR strategy will exceed the performance of retailers competing on the basis of a global sourcing strategy. Literature based on Porter's generic strategies provides support for this performance contention. In Porter's terminology, QR is characteristic of a differentiation strategy and global sourcing is characteristic of a cost-leadership strategy.

[6] Will retailers implementing both quick response and global sourcing strategies outperform retailers implementing only one strategy?

Extending the more traditional notion that QR strategy and global sourcing are strategic alternatives, there is some recent evidence to suggest that the two strategies may coexist much to the benefit of the retailer. Several recent studies suggest that competing with a combination of strategic approaches may be associated with higher profitability and larger market shares. It will be argued that the performance of retailers simultaneously implementing both QR and global

sourcing strategies will be g

strategies.

These general themes will b

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Chapter 4. Research findings

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sourcing strategies will be greater than retailers implementing only one of these strategies.

These general themes will be formally discussed in Chapter 3 of this dissertation. The formal hypotheses developed in Chapter 3 will be tested by a retail industry field survey of large, diverse non-food retailers. Specific retailers to be studied include: department stores, general merchandisers, discounters, and various specialty stores (e.g., apparel, toys, books). A thorough discussion of the research methodology is the focus of Chapter 4. Research findings will be presented in Chapter 5.

Based on the nature of Part I and Part II, this dissertation is expected to make theoretical contributions to existing literature bases on: [1] retailing, [2] logistics, [3] management, and [4] international business. Each of the six previously discussed research themes will contribute directly to the conceptual understanding of quick response, in particular, and also global sourcing.

SIGNIFICANCE OF THE RESEARCH

In conclusion, this dissertation will prove to be important for three reasons in particular. First, QR is an extremely *timely* topic, both literally and figuratively. Time-based competition appears to be the key differentiator of the 1990s (Stalk 1988). Quality, which can be considered the differentiator of the 1980s, has instead become an order qualifier. Second, although there are a plethora of company examples in the trade journals documenting the upside and downside of both global sourcing and QR, very few

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The remainder of this diss
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attempts outside of the trade press have endeavored to explain these strategic initiatives in the retailing industry. This dissertation is an attempt to fill an obvious theoretical and empirical void in the literature. Third, and finally, the conclusions drawn from this research will be very managerially relevant. As academic research is often criticized for being "unpractical", this dissertation should prove to have many practical implications and applications.

The remainder of this dissertation is organized as follows. In Chapter 2, key constructs are defined and operationalized. In Chapter 3, the theoretical model and hypothesis are introduced and discussed in detail. In Chapter 4, the methodological process is set forth. Chapters 5 and 6, respectively, provide a critical discussion of the results and the implications of this research, both theoretically for managerially.

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CHAPTER 2
Environment, Strategy, Structure, and Performance Literature in Marketing

In this chapter, the basic model is overviewed. In particular, the general relationships between environment, strategy, structure and performance are introduced. This overview is followed by the identification and justification of the major components of the specific model to be tested in this dissertation, their meanings, and their measurement. In particular, key constructs include: *environment* uncertainty, quick response (QR) *strategy*, global sourcing *strategy*, organizational *structure*, relationship *structure* and retailer *performance*.

BASIC MODEL: OVERVIEW

In this dissertation (in Chapter 3), a theoretical model and several propositions are developed regarding the relationships among environment-strategy-structure-performance as they pertain to quick response (QR) in the U.S. retailing industry.

The genesis of the model to be developed and tested is represented by Figure 2-1. The figure reveals the key constructs and the expected relationships between them. The model proposes that: [1] the environment influences strategy and structure; [2] strategy influences structure; and [3] the environment, strategy and structure *all* influence an organization's performance.

Justification for the model is threefold: [1] the classical "strategic management" stance that strategy engenders structure (e.g., Chandler 1962); [2] models of the relationship between strategy and structure often include the environment as antecedent

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and JIT (Gilbert, Young and C
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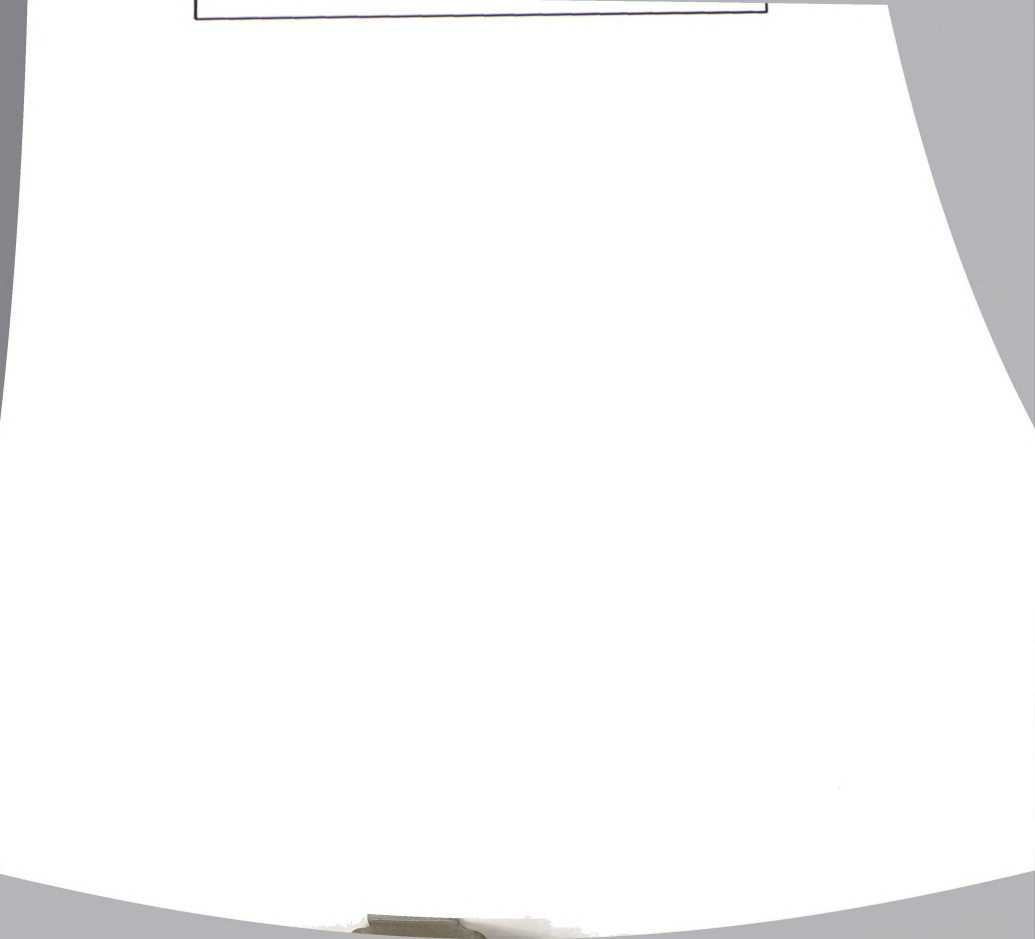
Beamish and daCosta 1989) a

to strategy, structure or both (e.g., Miller and Droge 1986; Prescott 1986; Germain, Droge and Daugherty 1994); and [3] strategy, in particular, and also structure and environment, have been demonstrated to influence performance. Later, Figure 2-2 provides an elaboration of the specific components of the model to be developed in Chapter 3.

The relationships proposed in Figure 2-1 among environment, strategy, structure and performance are well-confirmed in the literature. They are discussed in detail in Chapter 3, but some examples of supporting literature are given here. Environment has been found to influence strategy in the context of JIT exchange (Germain, Droge and Daugherty 1994; Frazier, Spekman and O'Neal 1988), new products (Calantone, diBenedetto and Bhoovaraghavan 1994), exporting (Naidu and Prasad 1994; Cavusgil and Zou 1994). Environment has been found to influence structure in a variety of contexts--new product development (Calantone, diBenedetto and Bhoovaraghavan 1994), JIT (Germain, Droge and Daugherty 1994), channel relations (Robicheaux and Coleman 1994; Heide and John 1992; Klein, Frazier and Roth 1990; Noordewier, John and Nevin 1990), among others. Past studies have also demonstrated that a variety of marketing strategies lead to structural changes, including those of new product development (Calantone, diBenedetto and Bhoovaraghavan 1994), cost vs. differentiation (Miller 1988) and JIT (Gilbert, Young and O'Neal 1994; Germain, Droge and Daugherty 1994). Similarly, performance has been found to be influenced by the environment (e.g., Heide and Stump 1995; Cavusgil and Zou 1994; Kaynak and Kuan 1993), strategy (e.g., Naidu and Prasad 1994; Tan and Litschert 1994; Richardson 1993; Webster 1993; Geringer, Beamish and daCosta 1989) and structure (e.g., Kaynak and Kuan 1993; Mahajan and



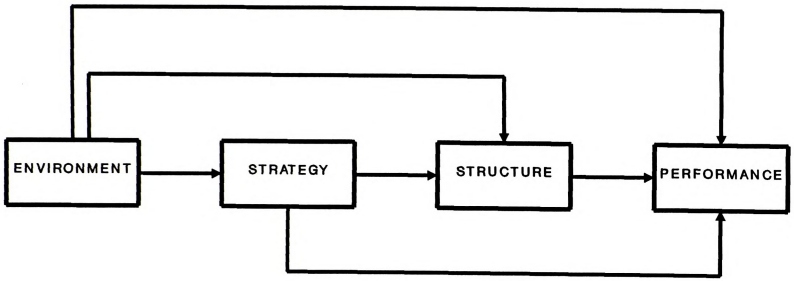


Figure 2-1. Basic Model

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Definition of Constructs

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Figure 2-2. Conceptualization

Wind 1988; Schul, Little and Pride 1988; Gupta 1987) in a variety of contexts. In this chapter, the main constructs are defined in a general business context and relevant operationalizations in past literature are discussed.

MODEL COMPONENTS

Definition of Constructs

Given the broad scope of this dissertation, the focus of this literature review is only the specific constructs to be considered in this dissertation. Figure 2-2 reveals how the basic components of the model are conceptualized in Part I and Part II of this research. Each of these constructs are discussed in detail below.

Component		Conceptualization Part I	Part II
Environment	---------->	Environment Uncertainty	Facilitators of Quick Response Facilitators of Global Sourcing
Strategy	---------->	Quick Response	Quick Response (vs.) Global Sourcing
Structure	---------->	Organizational *(integration, formalization, decentralization)* Relationship *(relational norms)*	
Performance	---------->	Efficiency Effectiveness Adaptability	Efficiency Effectiveness Adaptability

Figure 2-2. Conceptualization of Model Components

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STRATEGY

In Chapter 1, quick response (QR) and global sourcing were described as among the most visible advances in retail sourcing strategies in recent years. Because of their substantial impact on the retailer's competitive position, these practices have changed the way firms view sourcing activities -- elevating sourcing to a position of strategic importance. Given the importance of these two contemporary retailing strategies, QR and global sourcing were selected as the strategic components of this dissertation.

QUICK RESPONSE (QR) and its measurement

In the academic and trade literature, quick response (QR) has been defined by various authors as: an "on-line electronic communication of sales data from retailers to merchandise vendors, with the vendors promptly supplying retailers the merchandise needed to return the inventory in stores to levels previously determined cooperatively by the retailer and the vendor" (Fiorito, May, and Straughn 1995, p.12); "a consumer-driven strategy that pulls things though the pipeline and lets consumers decide what they want instead of the old-fashioned way of trying to forecast what the consumer wants and then push it through the pipeline" (Blackburn 1991, p.248); "a strategy for reducing the time and cost of a retailer's merchandise replenishment cycle through the use of barcoding and Electronic Data Interchange" (Chain Store Age Executive 1992a, p.73); the "technique for shortening the time it takes fiber to reach the mills, fabric to get to the apparel maker, and the finished garment to make it onto the retailer's floor" (McNamara 1993, p.28); and a "strategy of customer service that uses technology to make possible an industry pipeline so flexible and efficient that, ideally, retailers can

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s(8). More simply, others hav

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forecast today what they will sell tomorrow and have the merchandise in the stores, on time, in the right quantities, colors, sizes and styles" (Chain Store Age Executive 1991a, p.4B). More simply, others have described quick response (QR) as: a "technology-driven, co-operative retailer/supplier relationship" (Larson and Sijbrands 1991, p.10); and an "industry-tailored JIT system" (Germain, Droge and Daugherty 1994, p.471). **In this dissertation, quick response is defined as a technology-driven domestic sourcing strategy based on a cooperative relationship between retailer and supplier that seeks to minimize slack resources (i.e. time and inventory) in the supply chain.**

Only one empirical study was found that directly operationalized "quick response" implementation (i.e., Fiorito, May and Straughn 1995). However, based on the similarities between QR and JIT (as discussed in Chapter 1), the JIT literature could also serve as a parallel basis for the measurement of QR. Table 2-1 reveals a sample of relevant measures for the operationalization of quick response in this dissertation.

Table 2-1. Quick Response (QR):

...ident, date	Sampling Unit
...ton, Mac & Straughan ...90, JBDM	retailers
...survey, original	
...mad, Droge & Daugherty ...94, JMR	manufacturers
...survey, Frazier & Rody (1991)	
...ber, Young & O'Neal ...94, JBR	manufacturers
...survey, unidentified	
...ustfed, 1994, ...IM	make-to-order fu
...survey, original	
...bson & Bires (1992) ...JPSM	purchasing and managers
...survey, unidentified	

GLOBAL SOURCING and its

Global sourcing has beer

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company" (Swamidass 1993, p.

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Table 2-1. Quick Response (QR): Measurement

Authors (date)	Sampling Unit	Context	Measures
Fiorito, May & Straughn (1995) *IJRDM* *source(s): original*	retailers	QR	degree of implementation of 15 components of QR; use POS, barcoding, promotional price look-up system, strategic organizational planning for QR, UPC scanning, full price look-up system, training of key employees about QR changes, automatic replenishment of basic goods, vendor-marked merchandise, pre-season planning with vendor, automatic forecasting for staple goods, EDI, store receipt of products directly from vendor, bar-coded shipping container labels, automatic forecasting for fashion goods.
Germain, Droge & Daugherty (1994) *JMR* *source(s): Frazier & Rody (1991)*	manufacturers	JIT	single item, "percentage of sales made on a JIT basis".
Gilbert, Young & O'Neal (1994) *JBR* *source(s): unidentified*	manufacturers	JIT	two items, "self-report status based on a provided detailed definition of JIT systems" and "number of JIT suppliers used".
Handfield (1994) *JOM* *source(s): original*	make-to-order firms	JIT	four 7-point items, "to what extent: [1] are orders placed and delivered on a daily basis with the critical supplier; [2] is the critical supplier located locally; [3] is the critical supplier actively involved in new product design decisions; [4] are smaller lotsized of material frequently delivered?" *(alpha = .74)*
Fawcett & Birou (1992) *IJPD&LM* *source(s): unidentified*	purchasing and materials managers	JIT	single item, "do you have a JIT sourcing program?"

GLOBAL SOURCING and its measurement

Global sourcing has been broadly defined as: the "acquisition of raw materials, components and subassemblies from international sources for use in fabrication, assembly or for resale regardless of whether the import source is internal or external to the company" (Swamidass 1993, p.672); the "setting up of production operations in different countries to serve various markets, or buying and assembling components, parts or finished products worldwide" (Murray, Kotabe and Wildt 1995, p.181); or it refers to "those decisions determining which production units will serve which particular markets

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literature on global sourcing, fr

aper in the recent (i.e., 1995) b

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McGoldrick 1995, p.100. Globa

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Table 2-2 reveals a sam

global sourcing in this dissertati

pecific to retailing, but instead

or European and Japanese mul

1995).

and how components will be procured for production" (Kotabe and Swan 1994, p.118). Literature on global sourcing, from a retailing perspective, was extremely scarce. A chapter in the recent (i.e., 1995) book, International Retailing: Trends and Strategies, by Liu and McGoldrick, focus specifically on global sourcing from a retailing perspective. In the retailing context, global sourcing implies that "retailers tend to be more proactive in the acquisition of sources of supply and their own strategies dominate in the decision-making as to where, when, what, how much and from whom to buy" (Liu and McGoldrick 1995, p.100. Global sourcing, therefore, differs from tradition importing in that with importing "retailers often play a passive role in obtaining merchandise, with suppliers taking the initiative in providing goods" (Liu and McGoldrick 1995, p.100). **In this dissertation, global sourcing is defined as a retailer-driven international sourcing strategy wherein the retailer serves as the catalyst in sourcing the merchandise or subcomponents from abroad.**

Table 2-2 reveals a sample of relevant measures for the operationalization of global sourcing in this dissertation. All studies found in the academic literature were not specific to retailing, but instead were found to largely focus on U.S. manufacturing firms or European and Japanese multinationals operating in the U.S. (Liu and McGoldrick 1995).

Table 2-2. Global Sourcing: Mea

...ence (date)	Sampling Unit
...ey, Knabe & Walsh (1992, IJDE)	U.S. subsidiaries ... multinationals
...rces: unidentified	
...ndi & Glowacka (1992, IJP, 388)	industrial buyers
...rces: original	
...kins & Swan (1994, JP)	U.S. parent firms
...rces: Knabe (1989) and Gomez (1993)	
...ncan & Ivens, (1992)	purchasing and ... managers
...rces: unidentified	
...ck & Gale (1991, JMM)	multinational U.
...rces: original	
...kins & Ornsten (1989)	U.S. subsidiari... multinationals
...rces: original	

As depicted in Figure 2
...mponent of the model rela
...perationalization of structure
Certainly, QR implementatio
...rganizational structure. Dec
...chosen to represent organizati

Table 2-2. Global Sourcing: Measurement

Authors (date)	Sampling Unit	Measures
Murray, Kotabe & Wildt (1995) *JIBS* *source(s): unidentified*	U.S. subsidiaries of foreign multinationals	single item, "percent of total value of all non-standardized components in the products sourced internationally".
Thorelli & Glowacka (1995) *JBR* *source(s): original*	industrial buyers	eight 5-point items, "likelihood of purchasing a component product from foreign suppliers located in eight countries if he/she were to become dissatisfied with the performance of the current supplier". Endpoints include: 1=very unlikely to buy, 5=very likely to buy.
Kotabe & Swan (1994) *JIBS* *source(s): Kotabe (1989) and Goines (1993)*	U.S. parent firms	single item, "ratio of the sum of U.S.-manufactured imports from foreign affiliates plus platform exports from affiliates to third countries divided by U.S. parents' total sales for each industry".
Fawcett & Birou (1992) *source(s): unidentified*	purchasing and materials managers	single item, "do you have a global-sourcing program?"
Min & Galle (1991) *IJP&MM* *source(s): original*	multinational U.S. firms	single item, "what percent of your company's current year purchases were overseas?"
Kotabe & Omura (1989) *JIBS* *source(s): original*	U.S. subsidiaries of foreign multinationals	single item, "ignoring transportation costs, approximately what percent of the total value of components in the product could be sourced from local firms in newly industrialized countries such as Taiwan, South Korea and Brazil without technical assistance from your firm?.

STRUCTURE

As depicted in Figure 2-2, for the purpose of this dissertation, the "structure" component of the model relates only to QR implementation. The most common operationalization of structure in the business literature is organizational structure. Certainly, QR implementation can be expected to influence the retailer's internal organizational structure. Decentralization, integration and performance control were chosen to represent organizational structure based on their relevance to QR. It is also

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uppliers, or relationship structure

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ORGANIZATIONAL STRUC

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pproaches used in key studies

Table 2-3. Evident from the tab

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e.g., Germain, Droge and Dau

nd O'Neal 1988), marketing

1993), manufacturing (e.g., M

1991, Fredrickson 1986), amo

integration, formalization and

esearch. The conceptualizati

of Germain, Droge and Daug

likely to expect that QR implementation influences the retailer's relationship with its QR suppliers, or relationship structure. Information exchange, flexibility and solidarity were chosen to represent relationship structure based on literature on channel relationships that identified relational norms as a key factor in QR partnerships. For these reasons, both organizational and relationship structure were selected to represent the structure components of the model.

ORGANIZATIONAL STRUCTURE and its measurement

Internal or organizational structure refers to an organization's internal pattern of relationships, authority and communication (Thompson 1967). Organizational structure has been measured in many empirical studies over the last decade and has been characterized on a variety of dimensions. The individual facets and measurement approaches used in key studies in marketing and management are summarized below in Table 2-3. Evident from the table is the consistency in which the facets of organizational structure have been studied in the past decade in a variety of contexts, including: JIT (e.g., Germain, Droge and Daugherty 1994; Giunipero and Law 1990; Frazier, Spekman and O'Neal 1988), marketing mix variables (e.g., Moorman, Deshpande and Webster 1993), manufacturing (e.g., Miller and Droge 1986), strategic processes (e.g., Miller 1991, Fredrickson 1986), among others. In particular, the dimensions of centralization, integration, formalization and specialization have dominated this area of organizational research. The conceptualization in this dissertation relies on these works, especially that of Germain, Droge and Daugherty (1994) regarding JIT.

Table 2-3. Empirical Studies of

	Publication
Heide & Weiss (1996	Journal of the A of Marketing
Kumar, Dreze & Doppert 1994	Journal of Mark Research
Jaworski & Kohli 993	Journal of Mark
Norman Johnston & Weiner 1995)	Journal of Mar
Kohli & Jaworski 993	Journal of Mar
Moon & Gleason 992	Journal of Mar
Miller (199)	Management
Goldhar & Law 990)	Production & Management
Khan-Archibald (989)	Academy of Journal
Porter, Spekman & O'Neal (1988)	Journal of M
Miller (1988)	Academy of Journal
Kohli & Ungson (1987)	Journal of M

Table 2-3. Empirical Studies of Internal Organizational Structure

Study	Publication	Facets of Structure	Context
Pelham & Wilson (1996)	Journal of the Academy of Marketing Science	Decentralization Coordination Formalization Differentiation	
Germain, Droge & Daugherty (1994)	Journal of Marketing Research	Decentralization Formalization Integration Specialization	JIT
Jaworski & Kohli (1993)	Journal of Marketing	Formalization Centralization Departmentalization	antecedents of marketing orientation
Moorman, Deshpande & Webster (1993)	Journal of Marketing	Centralization Formalization Complexity	advertising
Bucklin & Sengupta (1993)	Journal of Marketing	Formality	co-marketing alliances
Menon & Varadarajan (1992)	Journal of Marketing	Formalization Centralization	knowledge utilization
Miller (1991)	Management Science	Integration Formalization Specialization Decentralization	undiversified, autonomous companies
Giunipero & Law (1990)	Production & Inventory Management Journal	Integration Decentralization	JIT
Yasai-Ardekani (1989)	Academy of Management Journal	Complexity Formalization Decentralization	electrical engineering firms
Frazier, Spekman & O'Neal (1988)	Journal of Marketing	Integration Performance control Decentralization Specialization	OEM
Miller (1988)	Academy of Management Journal	Liaison devices Technocratization Delegation Formal Controls	undiversified, autonomous companies
Koberg & Ungson (1987)	Journal of Management	Nonformalization Decentralization	schools

Table 2-3 (cont'd).

	Publication
Dickson 1986	Academy of M... Review
Miller & Droge 1986	Administrative ... Quarterly

The selection of the *inte*

...y literature reviews that hav...

decentralization, among other...

structure (e.g., Mintzberg 197...

those analyzed in Germain, ...

research, organizational struc...

integration.

Following a discussion ...

Tables 2-4 through 2-6 presen...

management journals that fo...

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Decentralization

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Miller and Droge 1986). In ...

Table 2-3 (cont'd).

Study	Publication	Facets of Structure	Context
Fredrickson (1986)	Academy of Management Review	Centralization Formalization Complexity	strategic decision process
Miller & Droge (1986)	Administrative Science Quarterly	Formalization Complexity Centralization Integration	mostly manufacturing

The selection of the *internal* structure variables for this dissertation was guided by literature reviews that have consistently identified integration, formalization and decentralization, among others, as major interrelated dimensions of organizational structure (e.g., Mintzberg 1979; Miller 1991). These dimensions are consistent with those analyzed in Germain, Droge and Daugherty (1994) regarding JIT. **In this research, organizational structure is comprised of decentralization, formalization and integration.**

Following a discussion of the variations in meanings of the three constructs, Tables 2-4 through 2-6 present a selection of studies identified in the top marketing and management journals that focus on the three dimensions of organizational structure selected for analysis in this dissertation, and their measurement.

Decentralization

In general, decentralization (or the reverse--centralization) refers to the vertical locus of decision-making authority in the firm (Germain, Droge and Daugherty 1994; Miller and Droge 1986). In particular, decentralization "divides decision-making tasks

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product flow and timing) things

a distinction is made because "

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Zahman 1993, p.85); "the deg

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p.202), and more simply, "

Vasudarajan 1992, p.63). **In**

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Inventory control, electronic

and supplier selection, etc.

into more management bits, reducing collective cognitive limitations and allowing more planned and analytical approaches" (Miller 1987, p.12; Fredrickson 1986, p.287). Both operations decentralization and scheduling decentralization are considered in this dissertation. In general, operations decentralization refers to "how" things are done (e.g., personnel) and scheduling decentralization refers to "when" (e.g., information and product flow and timing) things are done (Germain, Droge and Daugherty 1994). Such a distinction is made because "the concept of time-based competition elevates 'when' to strategic initiative status" (Germain, Droge and Daugherty 1994, p.473). Others describe decentralization (or centralization) as: the "amount of delegation of decision-making authority throughout an organization and the extent of participation by organizational members in decision-making" (Jaworski and Kohli 1993, p.56; Moorman, Deshpande and Zaltman 1993, p.85); "the degree of influence a manager has on major decisions relative to the influence of corporate supervisors" (Gupta 1987, p.484); "the degree to which the right to make decisions and evaluate activities is concentrated" (Fredrickson 1986, p.282), and more simply, "the locus of authority and participation" (Menon and Varadarajan 1992, p.63). **In this dissertation, decentralization refers to the level in the organization that has authority to make decisions in relevant areas such as inventory control, electronic data interchange (EDI), pricing, promotion, product and supplier selection, etc.**

Table 2.4. Centralization/Decen

ce	Sampling Unit
rman, Ortega & Daugherty *SM, JMI*	manufacturers
ources: Jaksen, Pugh & Hickson (1970), and Pugh & Hickson (1976) as adapted for use by Miller (1988, 1991), Tosi-Ardekani (1989), and Miller & Droge (1986) Pelham & Wilson (1996)	
ovetz & Kohli (1995) *JR*	member comp
ources: Aiken & Hage (1966,1968) as adapted for use by: Koberg & Ungson	
Norman, Deshpande & Zaltman (1993) *JM*	research depa users
ources: Deshpande & Zaltman (1982)	
Gupta (1987) *AMJ*	corporate SB
ources: Tannenbaum (1968)	

Formalization

Formalization has be

instructions, and communicat

which rules define roles, auth

procedures" (Jaworski and K

p.85), "the extent to which

behavior" (Fredrickson 198

descriptions, cost and quality

1987, p. 12).

Table 2-4. Centralization/Decentralization: Measurement

Study	Sampling Unit	Measures
Germain, Droge & Daugherty (1994) *JMR* *source(s): Inkson, Pugh & Hickson (1970) and Pugh & Hickson (1976)* *also adapted for use by: Miller (1988/1991) Yasai-Ardekani (1989) and Miller & Droge (1986) Pelham & Wilson (1996)*	manufacturers	operations decentralization - five 7-point items: "Ratings on [1] the number of workers required, [2] allocation of work among available workers, [3] internal labor disputes, [4] overtime at the plant level, [5] plant equipment or machinery to be used". *(alpha=.77)* scheduling decentralization - two 7-point items with same endpoints. "Ratings on [1] delivery dates to customers and priority of orders, [2] production scheduling". *(alpha=.77)*
Jaworski & Kohli (1993) *JM* *source(s): Aiken & Hage (1966/1968)* *also adapted for use by: Koberg & Ungson (1987)*	member companies of MSI	nine 5-point items, assessed the extent to which jobs in the organization were codified, and there was an emphasis on observable rules (e.g., "How things are done around here is left up to the person doing the work"). Endpoints include: 1=strongly agree, 5=strongly disagree. *(alpha=.88)*
Moorman, Deshpande & Zaltman (1993) *JM* *source(s): Deshpande & Zaltman (1982)*	research department users	eight 4-point items, for example: "[1] How frequently do you usually participate in decisions on the adoption/deletion of new products? [2] There is little action taken in my job until a superior approves the decision [3] I have to ask my boss before I do almost anything". Endpoints include: 1=never, 4=always.
Gupta (1987) *AMJ* *source(s): Tannenbaum (1968)*	corporate SBU's	2 items--The first concerned the influence of SBU's managers and their corporate superiors, both line and staff, on the formulation of business units' long range strategic plans; the second sought similar data for the formulation of business units' annual operating budgets.

Formalization

Formalization has been defined as: "the extent to which procedures, rules, instructions, and communications are written down" (Child 1972, p.164); "the degree to which rules define roles, authority relations, communications, norms and sanctions, and procedures" (Jaworski and Kohli 1993, p.56; Moorman, Deshpande and Zaltman 1993, p.85), "the extent to which an organization uses rules and procedures to prescribe behavior" (Fredrickson 1986, p.283), and "the use of formal procedures and job descriptions, cost and quality controls, specialists, and professional technocrats" (Miller 1987, p. 12).

Consistent with other st

rmalization: the extent of form

Droge and Daugherty 1994).

researchers have emphasized t

rketing overall (Jaworski, Sta

nd maintenance of JIT exchang

Germain, Droge and Daugher

ontrol with 'output' control,

(i.e. benchmarking) can also

Daugherty 1994, p.473). **In th**

of formalization) **is defined**

ompared with industry stan

Of the variables selecte

tegration is the least consid

"lateral linkages that coordina

foster mutual adjustment, and

objectives" (Germain, Droge

p.542). Others have referre

1987/1988). Liaison devices

integrative devices seek to "

contacts among decision-ma

scrutinize, and reconcile

dissertation, integration is

Consistent with other studies, the focus in this dissertation is on one aspect of formalization: the extent of formalized performance control (Khandwalla 1974; Germain, Droge and Daugherty 1994). Performance control was selected because many researchers have emphasized the importance of the performance appraisal system in marketing overall (Jaworski, Stathakopoulos and Krishnan 1993) and in the establishment and maintenance of JIT exchange in particular (e.g., Frazier, Spekman and O'Neal 1988; Germain, Droge and Daugherty 1994). "A narrow definition equates performance control with 'output' control, but more generally the results obtained by competitors (i.e., benchmarking) can also be monitored on formal basis" (Germain, Droge and Daugherty 1994, p.473). **In this dissertation, performance control** (i.e., a dimension of formalization) **is defined as the extent to which performance (or output) is compared with industry standards or competitors.**

Of the variables selected to represent organizational structure in this dissertation, integration is the least considered in the literature. Integration has been defined as: "lateral linkages that coordinate differentiated subunits, reduce conflict and duplication, foster mutual adjustment, and coalesce subunits toward meeting overall organizational objectives" (Germain, Droge and Daugherty 1994, p.472; Miller and Droge 1986, p.542). Others have referred to integration as the use liaison devices (e.g., Miller 1987/1988). Liaison devices include task forces and coordinative committees. Such integrative devices seek to "encourage rationality in decision-making by precipitating contacts among decision-makers that may motivate systematic attempts to develop, scrutinize, and reconcile divergent perspectives" (Miller 1987, p.11). **In this dissertation, integration is defined as the extent to which decision-making at top**

Table 2-5: Formalization/Perf

ation date:	Sampling, U.S. m
Formalization	
Ferman, Droge & Daugherty '94: *MR*	manufacturers
ources: Ireson, Pugh & Hickson (1970); and Pugh & Hickson (1976); *ta adapted for use by: Miller (1983);* Tosi-Aridelano (1989); and Miller & Droge (1986); Pelham & Wilson (1996);	
Jaworski & Kohli (1993): *JM*	member com
ources: Aiken & Hage (1966/1968);	
Norman, Deshpande & Zaltman (1985: *JM*	research dep users
ources: Deshpande & Zaltman (1982);	
Kohli & Sengupta (1993):	suppliers & distributors
ources: Ruekert & Walker (1987)	
Performance Control	
Ferman, Droge & Daugherty (94: *MR*	manufacturers
ources: Khandwalla (1974)	
ta adapted for use by: Miller & Droge	

Table 2-5. Formalization/Performance Control: Measurement

Authors (date)	Sampling Unit	QR	Measures
Formalization			
Germain, Droge & Daugherty (1994) *JMR* *source(s): Inkson, Pugh & Hickson (1970) and Pugh & Hickson (1976)* *also adapted for use by: Miller (1983) Yasai-Ardekani (1989) and Miller & Droge (1986) Pelham & Wilson (1996)*	manufacturers		eight dichotomous (yes/no) items; "which of the following documents are used in your firm: [1] information booklets, [2] an organizational chart, [3] written job descriptions, among others.
Jaworski & Kohli (1993) *JM* *source(s): Aiken & Hage (1966/1968)*	member companies of MSI		five 5-point items, assessed to degree of hierarchical authority within the organization (e.g., "A person who wants to make his own decisions would be quickly discouraged here". Endpoints include: 1=strongly agree, 5=strongly disagree. *(alpha=.76)*
Moorman, Deshpande & Zaltman (1993) *JM* *source(s): Deshpande & Zaltman (1982)*	research department users		fifteen 4-point items, for example: [1] I can make my own decisions in my job, [2] I make up my own rules on this job, [3] There is not a specific rule manual detailing what I do, [4] We follow strict operational procedures at all times. Endpoints include: 1=definitely true, 4= definitely false.
Bucklin & Sengupta (1993) *source(s) Ruekert & Walker (1987)*	suppliers & distributors		four 5-point items, "Rate extent to which: [1] written documents spell out detailed tasks, activities and schedules for both parties, [2] Standard operating procedures are required for both parties, [3] This partnership is based on a shared informal understanding rather than specific terms" and "[4] What is the approximate number of pages in the agreement?" *(alpha=.65)*
Performance Control			
Germain, Droge & Daugherty (1994) *JMR* *source(s): Khandwalla (1974)* *also adapted for use by: Miller & Droge (1986)*	manufacturers		four 7-point items, "rate the extent to which performance is compared with industry standards or competitors on [1] functional costs, [2] customer service, [3] productivity levels, [4] operations. Endpoints include: 1=used rarely orfor small part of operations, 7=used frequently or throughout the firm. *(alpha=.86).*

levels in the firm is character

which different departments, fu

of decisions (e.g., distribution/

Table 2-6. Integration: Meas

Sampling Unit

Lemak, Droge & Daugherty manufacturers
394–369

Source: Miller (1983).
As adapted for use by: Miller (1987/1988,
and Miller & Droge (1986)

RELATIONSHIP STRUCTU

Researchers interested

the physical distribution aspec

the late 1960s (Brown, Lusch

research in this area has resu

behavioral relationships invo

Mohr and Nevin (1990) con

resemble either extremes of th

is established through domin

necessary for transacting (Bo

an emphasis on individual

communications. Relatio

philosophies, high levels of

levels in the firm is characterized by participative, cross-functional committees in which different departments, functions or divisions get together to decide specific classes of decisions (e.g., distribution/operation, buying, merchandising).

Table 2-6. Integration: Measurement

Study	Sampling Unit	Measures
Germain, Droge & Daugherty (1994) *JMR* *source: Miller (1983)* *also adapted for use by: Miller (1987/1988/1991) and Miller & Droge (1986)*	manufacturers (JIT)	"integrative committees" - four 7-point items; "rate the extent to which decision-making at top levels are characterized by participative, cross-functional committees in which different departments get together to decide: [1] distribution service strategy, [2] marketing strategy, [3] capital budget decisions, [4] long-term strategies. Endpoints include: 1=rare use of committees, 7=frequent use of committees. *(alpha=.81).*

RELATIONSHIP STRUCTURE and its measurement

Researchers interested in the broad topic of marketing channels, as contrasted with the physical distribution aspects of channels, began to adopt a behavioral orientation in the late 1960s (Brown, Lusch and Koenig 1984). Since that time a significant stream of research in this area has resulted in the distribution channel being viewed as a set of behavioral relationships involving power, dependence, conflict and relational norms. Mohr and Nevin (1990) conceptualize channel structure as the degree to which firms resemble either extremes of the discrete/relational exchange continuum. System structure is established through dominant norms of behavior understood by bother parties to be necessary for transacting (Boyle and Dwyer 1995). Discrete transacting norms include an emphasis on individual goals, minimal investment in a partner, and formal communications. Relational norms are characterized by win-win negotiation philosophies, high levels of mutual, long-term investing, and informal communications

(Dwyer, Schurr and Oh 1987

Facets of relationship

ver the last decade. The in

tudies are summarized in Tab

conceptualization in this diss

facets relate to quick respons

As depicted in Table

last decade from a more bur

(1990) viewed relationship st

from long-run orientations

(Boyle, Dwyer, Robicheau

relationship structure studie

topic. In general, norms ar

by a group of decision-mak

1992). Since the early stud

of research in several bra

(Thibaut and Kelley 1959)

economics (Bendor and M

Despite the diversit

he convergence on its basi

are defined as patterns of

by members of an exchan

(Bienbaum and Sagarin 19

(Dwyer, Schurr and Oh 1987).

Facets of relationship structure have been measured in several empirical studies over the last decade. The individual facets and measurement approaches used in those studies are summarized in Table 2-7, adapted from Robicheax and Coleman (1994). The conceptualization in this dissertation relies on these works but clarifies how the various facets relate to quick response partnerships.

As depicted in Table 2-7, the study of relationship structure has evolved in the last decade from a more bureaucratic context to one of relationalism. Mohr and Nevin (1990) viewed relationship structure from Macneil's (1980) attempts to distinguish short- from long-run orientations in commercial exchange by attending to important *norms* (Boyle, Dwyer, Robicheaux and Simpson 1992). Relational norms is the facet of relationship structure studied in this dissertation, based on its relevance to the research topic. In general, norms are expectations about behavior that are at least partially shared by a group of decision-makers (Gibbs 1981; Moch and Seashore 1981; Heide and John 1992). Since the early study by Sherif (1936), the concept of norms has been at the core of research in several branches of the social sciences, including social psychology (Thibaut and Kelley 1959), political science (Axelrod 1986), law (MacNeil 1980), and economics (Bendor and Mookherjee 1990) (*in Heide and John 1992*).

Despite the diversity of literatures in which the concept appears, there seems to be convergence on its basic meaning (Heide and John 1992). Relational or social norms are defined as patterns of accepted and expected sentiments and behavior that are shared by members of an exchange system and have the force of social obligation or pressure (Birenbaum and Sagarin 1976; Jackson 1966). Norms represent an overarching, complex

Table 2-7. Empirical Studies

Sub	Publication
Gundlach, Achrol & Mentzer (1995)	Journal of M
Heide (1994)	Journal of M
Hiling, Crosby & Jackson (1994)	Journal of I Research
Jap & Ganesan (1992)	Journal of
Heide & John (1992)	Journal of
Kaufmann & Dant (1992)	Marketing
Noordewier, John & Nevin (1990)	Journal of
Dwyer, Dwyer, Robicheaux & Simpson (1992)	Journal of Research
Dwyer & Oh (1987)	Journal of Research
Dwyer & Stern (1986)	Marketing Relationsh Performa
Dwyer & Welsh (1985)	Journal of Research
Hunt (1984)	Journal of Research

Table 2-7. Empirical Studies of Relationship Structure

Study	Publication	Facets of Structure	Context
Gundlach, Achrol & Mentzer (1995)	Journal of Marketing	Solidarity Mutuality Flexibility Role integrity Harmonization of conflict	relational norms
Heide (1994)	Journal of Marketing	Flexibility	flexibility
Pilling, Crosby & Jackson (1994)	Journal of Business Research	Information Exchange Benefit/Burden Sharing Installing Operating Controls	relationalism
Dant & Schul (1992)	Journal of Marketing	Solidarity Role Integrity Mutuality	relational norms
Heide & John (1992)	Journal of Marketing	Flexibility Information Exchange Solidarity	relational norms
Kaufmann & Dant (1992)	Marketing Letters	Planning and consent Solidarity Limited power use Role integrity Harmonization of conflict Flexibility Mutuality	relational exchange
Noordewier, John & Nevin (1990)	Journal of Marketing	Flexibility Information exchange Assistance Monitoring Continuity expectations	relational syndrome
Boyle, Dwyer, Robicheaux & Simpson (1992)	Journal of Marketing Research	Flexibility Solidarity Mutuality	relationalism
Dwyer & Oh (1987)	Journal of Marketing Research	Formalization Centralization Participation	relationalism
Reve & Stern (1986)	Marketing Channels: Relationships and Performance	Vertical interactions Formalization Centralization	interorganizational form
Dwyer & Welsh (1985)	Journal of Marketing Research	Formalization Centralization Specialization Participation	channel decision structure
John (1984)	Journal of Marketing Research	Formalization Centralization Control	bureaucratic structure

construct composed of a numb

norms have been operationaliz

et al. 1991; Gundlach and Ach

Kaufman and Stern 1988, 19

namely solidarity, mutuality

harmonization of conflict.

As used in this disse

relational norms constitute

dimensions: flexibility, info

dimensions were based on th

in this research do not co

representative indicators of

Following a discussion of th

Tables 2-8 through 2-10 repr

operationalized.

Flexibility

Flexibility has been

adaptation of the substance

circumstances that confront

1995, p.84); "smooth alterati

unforeseen or changing con

1968); "a bilateral expectat

construct composed of a number of elements (Noordewier, John and Nevin 1990). Many norms have been operationalized from previous conceptualizations in the literature (Boyle et al. 1991; Gundlach and Achrol 1993; Heide and John 1992; Kaufmann and Dant 1992; Kaufman and Stern 1988, 1992; Macneil 1980; Noordewier, John and Nevin 1990), namely solidarity, mutuality, information exchange, flexibility, role integrity, and harmonization of conflict.

As used in this dissertation, and as characterized by Heide and John (1992), relational norms constitute a higher order construct consisting of the following dimensions: flexibility, information exchange and solidarity. Selection of these dimensions were based on their relevance to this research. The three relational norms in this research do not constitute an exhaustive set, but they seem central and representative indicators of relationship structure in quick response partnerships. Following a discussion of the various meanings attached to each of these constructs, Tables 2-8 through 2-10 represent how these three facets of relational norms have been operationalized.

Flexibility

Flexibility has been described as: "implying good faith modification and the adaptation of the substance and terms of exchange in light of unforeseen or changed circumstances that confront parties to an agreement" (Gundlach, Achrol and Mentzer 1995, p.84); "smooth alterations in practices and policies by trading partners in light of unforeseen or changing conditions" (Boyle, Dwyer, Robicheaux and Simpson 1992, p.464); "a bilateral expectation of willingness to make adaptations as circumstances

change' (Heide 1994, p.74; H

ward buyer-requested adjust

990, p.83). In this dissertat

willingness to make adaptat

Information Exchange

Of the three dimens

information exchange has re

exchange has been defined

provide information useful to

of atypical information, part

planning information" (Noor

proprietary, long-term forec

shared by exchange partners

Jackson 1994, p.242). In t

bilateral expectation that p

partner (Heide and John 19

change" (Heide 1994, p.74; Heide and John 1992, p.35); and "the reaction of suppliers toward buyer-requested adjustments or change requests" (Noordewier, John and Nevin 1990, p.83). **In this dissertation, flexibility is defined as a bilateral expectation of willingness to make adaptations as circumstances change** (Heide and John 1992).

Information Exchange

Of the three dimensions of relational norms selected in this dissertation, information exchange has received the least attention in the literature. Information exchange has been defined as: "a bilateral expectation that parties will proactively provide information useful to the partner" (Heide and John 1992, p.35); "the exchange of atypical information, particularly long-term forecasting, proprietary, and structural planning information" (Noordewier, John and Nevin 1990, p.84); and "the nature (i.e., proprietary, long-term forecasting, product design) and the timeliness of information shared by exchange partners" (Anderson and Narus 1990, p.46; Pilling, Crosby and Jackson 1994, p.242). **In this dissertation, information exchange is defined as a bilateral expectation that parties will proactively provide information useful to the partner** (Heide and John 1992).

Table 2-8. Flexibility: Meas

...ation/ date	Sampling
...nbach, Achrol & Mentzer ...98; JM	manufactu... distributo...
...ources: *unidentified*	
...ida 1994; JM ...mpo	manufactu... supplier-r...
...ources: *Kaufmann & Stern (1988) and Noordewier, John & Nevin* ...as adapted for use by: *Heide & John*	
...nbach & Achrol (1993) ...994	manufactu... distributo...
...ources: *unidentified*	
...ivia, Dwyer, Robicheaux & ...& Simpson (1991) *JMR*	automobil...
...ources: *Kaufmann & Stern (1988) and Dwyer (1990)*	
...oordewier, John & ...vins (1990) *JM*	OEM pur...
...ources: *original*	

Table 2-8. Flexibility: Measurement

Authors (date)	Sampling Unit	Measures
Gundlach, Achrol & Mentzer (1995) *JM* *source(s): unidentified*	manufacturers & distributors	one of 5 items that measure relational norms; "[1] this relationship is flexible in accommodating one another if special problems/needs arise".
Heide (1994) *JM* changes *source(s): Kaufmann & Stern (1988) and Noordewier, John & Nevin (1990)* *also adapted for use by: Heide & John (1992)*	manufacturers & suppliers	three 7-point items: "[1] flexibility in response to requests for is characteristic of this relationship, [2] the parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances, [3] when some unexpected situation arises, the parties would rather work out a new deal than hold each other to the original terms". Endpoints include: 1=completely inaccurate description, 7=completely accurate description.
Gundlach & Achrol (1993) *JPP&M* *source(s): unidentified*	manufacturers & distributors	four items, scales unidentified: "Ratings on extent to which [1] terms are modified in response to change, [2] terms are modified where predictions fail, [3] accommodating are made in response to special problems, [4] original agreements strictly are adhered to (R)".
Boyle, Dwyer, Robicheaux & & Simpson (1991) *JMR* *source(s): Kaufmann & Stern (1988) and Dwyer (1990)*	automobile dealers	three 5-point items; "[1] we are usually willing to make adjustments to contracts in the face of problems or special circumstances, [2] we are willing to put aside contractual terms in order to work through difficult problems, [3] we are apt to rework prior agreements when unforeseen supply or market disturbances arise". Endpoints include: 1=always, 5=never.
Noordewier, John & Nevin (1990) *JM* *source(s): original*	OEM purchasers	four 5-point items; [1] supplier is flexible in response to requests we make, [2] supplier can readily adjust inventories to meet unforeseen needs that might occur, [3] supplier hands change well, and [4] supplier can provide emergency deliveries. Endpoints include: 1=strongly agree, 5=strongly disagree.

Table 2-9. Information Exc

Authors (date)	Sampling
Heide & John (1992) *JM*	manufact supplier
SOURCE: Kaufmann & Stern (1988) as *Noordewier, John & Nevin (19*	
Noordewier, John & Nevin (1990) *JM*	OEM pur
SOURCE: original	

Solidarity

The final facet of

solidarity. Solidarity has be

fellowship that arises from c

relationship" (Gundlach, Ac

a high value is placed on the

which the preservation of th

exchange partners as being

Simpson 1991, p.464); and

as being important in and o

1988, p.540). In this disser

a high value is placed on t

Table 2-9. Information Exchange: Measurement

Authors (date)	Sampling Unit	Measures
Heide & John (1992) *JM* *source(s): Kaufmann & Stern (1988) and Noordeweir, John & Nevin (1990)*	manufacturers & suppliers	four 7-point items: "In this relationship, it is expected that: [1] any information that might help the other party will be provided to them, [2] exchange of information in this relationship takes place frequently and informally, and not only according to a prespecified agreement, [3] the parties will provide proprietary information if it can help the other party, [4] we each other informed about events or changes that may affect the other party". Endpoints include: 1=completely inaccurate description, 7=completely accurate description.
Noordewier, John & Nevin (1990) *JM* *source(s): original*	OEM purchasers	four 5-point items; "[1] we give supplier usage information to help them plan for our needs, [2] we keep our supplier informed of production plans, [3] we regularly provide supplier with long-range forecasts of supply requirements, and [4] we inform supplier in advance of impending design changes". Endpoints include: 1=strongly agree, 5=strongly disagree.

Solidarity

The final facet of relational norms to be considered in this dissertation is solidarity. Solidarity has been defined in the literature as: "the extent to which unity or fellowship that arises from common responsibilities and interests dominates an exchange relationship" (Gundlach, Achrol and Mentzer 1995, p.84); "a bilateral expectation that a high value is placed on the relationship" (Heide and John 1992, p.36); "the degree to which the preservation of the unique and continuing relationship is internalized by the exchange partners as being important in and of itself" (Boyle, Dwyer, Robicheax and Simpson 1991, p.464); and "the extent to which the involved parties view the exchange as being important in and of itself" (Dant and Schul 1992, p.43; Kaufmann and Stern 1988, p.540). **In this dissertation, solidarity is defined as a bilateral expectation that a high value is placed on the relationship** (Heide and John 1992).

Table 2-10. Solidarity: Me

...hors, date,	Samplin
...nlach, Achrol & Mentzer (1993; *JM*	manufac distribu
...rces: unidentified	
...nlach & Achrol (1993; *JPIM*	manufac distribu
...rces: unidentified	
...ruz & John (1992; *JM*	manufac supplie
...rces: Kaufmann & Stern (1988) and Noordewier, John & Nevi	
...brle, et. al. (1991; *JMR*	automobi
...rces: Kaufmann & Stern (1988) and Dwyer (1990)	

Table 2-10. Solidarity: Measurement

Authors (date)	Sampling Unit	Measures
Gundlach, Achrol & Mentzer (1995) *JM* *source(s): unidentified*	manufacturers & distributors	one of 5 items that measure relational norms; "[1] staying together in the face of adversity/challenge is very important to both firms".
Gundlach & Achrol (1993) *JPP&M* *source(s): unidentified*	manufacturers & distributors	four items, scales unidentified: "Ratings on extent to which [1] sacrifices are made to keep the relationship intact, [2] the parties act together in seeking unified solutions, [3] the parties stay together in the face of adversity, [4] one party seeks to benefit one's own organization (R)".
Heide & John (1992) *JM* *source(s): Kaufmann & Stern (1988) and Noordewier, John & Nevin (1990)*	manufacturers & suppliers	three 7-point items; "[1] problems that arise in the course of this relationship are treated by the parties as joint rather than individual responsibilities, [2] the parties are committed to improvements that may benefit the relationship as a whole, and not only the individual parties, [3] the parties in this relationship do not mind owing each other favors". Endpoints include: 1=completely inaccurate description, 7=completely accurate description.
Boyle, et. al (1991) *JMR* *source(s): Kaufmann & Stern (1988) and Dwyer (1990)*	automobile dealerships	three 5-point items: "[1] my firm is committed to the preservation of good working relationships with this customer, [2] I consider my firm and my primary manufacturers' firm to be partners in the industry, [3] I am apt to be very conscientious, responsive, and resourceful to maintain a cooperative relationship with this manufacturer". Endpoints include: 1=always, 5=never. inaccurate description, 7=completely accurate description.

In this dissertation,
retailers' environment is i
Environmental uncertainty (
n the literature to be cataly
nspires retailers to adopt ei
mportant to examine enviro
f either of these two strat
environmental strategic driv
dissertation.

ENVIRONMENTAL UNC

The environment can
organizations must adapt to
1967). Much of the literatur
dealing with the environmen
Pride (1994) compiled a tal
ncluding: uncertainty, threa
diversity or *variety*, dynami
domain consensus, turbulenc
or munificence or *resourceful*
dimension of uncertainty is
implementation. In Part II,

ENVIRONMENT

In this dissertation, the environment is an important component because the retailers' environment is increasingly characterized as dynamic and ever-changing. Environmental uncertainty (i.e., dynamism, unpredictability, heterogeneity) are suggested in the literature to be catalysts of QR implementation. Also, little is known about what inspires retailers to adopt either QR or global sourcing strategies. As a result, it is also important to examine environmental factors that could potentially influence the adoption of either of these two strategies. For these reasons, environmental uncertainty and environmental strategic drivers were selected as the environmental components in this dissertation.

ENVIRONMENTAL UNCERTAINTY and its measurement

The environment can be viewed as a dynamic but amorphous reality in which organizations must adapt to and also act upon (Lawrence and Lorsch 1967; Thompson 1967). Much of the literature on organizational environments portrays decision makers dealing with the environment in terms of abstract dimensions. Clark, Varadarajan and Pride (1994) compiled a table highlighting the most important of these dimensions, including: uncertainty, threat level, dependency *or power volume*, homogeneity *or diversity or variety*, dynamism *or stability or volatility*, rate of change, routineness, domain consensus, turbulence *or causal texturing*, complexity *or connectedness*, capacity *or munificence or resourcefulness*. In Part I of this dissertation, only the environmental dimension of uncertainty is studied and its impact on quick response (QR) strategy implementation. In Part II, a variety of these environmental dimensions are considered

as drivers of QR and global

In general, environ

management literature as:

degree of confidence to how

Varadarajan and Pride 1994

environment" (Germain, I

unpredictability of environ

corporate performance" (M

perceive unpredictable chan

Environmental uncer

partnerships). However, e

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reveals how uncertainty has

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In general, environment uncertainty has been defined in the marketing and management literature as: "the degree to which probability can be assigned with any degree of confidence to how environmental change will affect the organization" (Clark, Varadarajan and Pride 1994, p.28); "the degree of dynamism and unpredictability in the environment" (Germain, Droge and Daugherty 1994, p.474; Duncan 1972); "the unpredictability of environmental or organizational variables that have an impact on corporate performance" (Miller 1993, p.694); and "the extent to which decision makers perceive unpredictable changes in their external environment" (Koberg 1987, p.800).

Environmental uncertainty can take many forms in channel relationships (e.g., QR partnerships). However, environment uncertainty has not been investigated to a large extent in the marketing channels literature (Brown, Lusch and Koenig 1984). Table 2-17 reveals how uncertainty has been dimensionalized in the business literature. Studies of uncertainty in the context of marketing channels include: Germain, Droge and Daugherty (1994), Pilling, Crosby and Jackson (1994), Ganesan (1994), and Etgar and Valency (1983). Other contexts in which uncertainty has been studied include, but are not limited to: new product development, logistics strategy, cost vs. differentiation, and organizational structure. **In this dissertation, environment uncertainty is defined as the degree of dynamism, unpredictability and heterogeneity in the environment.**

Table 2-11. Empirical Studi

Aut	Publicatio
ehart & Wilson	Journal o of Mar
erman, Droge & Daugherty (1994)	Journal o Researc
Ring, Crosby & Ackoff (1994)	Journal o Researc
Lusztig, Elkhanzhy & Rozenzhtevan (1994)	Journal o Researc
Stewart (1994)	Journal o
Stanfield (1993)	Journal o Manag
McGinnis & Kohn (1993)	Journal o Logisti
Tuna-Arslankaya (1989)	Academy Journal
Astrid & Stern (1988)	Journal o Researc
Kotas & Hitt (1988)	Academy Journal
Miller (1988)	Academy Journal
Norberg (1987)	Academy Journal
Bourne, Hoffman & Hinde (1987)	Academy Journal
Miller & Droge (1986)	Academy Journal
Ogan & Valency (1983)	Journal o

Table 2-11. Empirical Studies of Environment Uncertainty

Study	Publication	Facets of Uncertainty	Context
Pelham & Wilson	Journal of the Academy of Marketing Science	Dynamism Competitive Intensity	
Germain, Droge & Daugherty (1994)	Journal of Marketing Research	Dynamism Unpredictability Heterogeneity	JIT
Pilling, Crosby & Jackson (1994)	Journal of Business Research	Static-Dynamic Number of Market Factors	relational bonds
Calantone, diBenedetto & Bhoovaraghavan (1994)	Journal of Business Research	Uncertainty Hostility	new products
Ganesan (1994)	Journal of Marketing	Volatility Diversity	long-term relationships
Handfield (1993)	Journal of Operations Management	Demand Uncertainty	JIT
McGinnis & Kohn (1993)	Journal of Business Logistics	Munificence Dynamism Heterogeneity Hostility	logistics strategy
Yasai-Ardenkani (1989)	Academy of Management Journal	Munificence Scarcity	organizational structure
Achrol & Stern (1988)	Journal of Marketing Research	Diversity Dynamism Concentration Capacity	decision-making
Keats & Hitt (1988)	Academy of Management Journal	Munificence Instability Complexity	strategy and structure
Miller (1988)	Academy of Management Journal	Dynamism Unpredictability Heterogeneity	Porter's strategies
Koberg (1987)	Academy of Management Journal	Uncertainty Scarcity	organizational behavior
Stearns, Hoffman & Heide (1987)	Academy of Management Journal	Complexity Scarcity Uncertainty	performance
Miller & Droge (1986)	Academy of Management Journal	Dynamism Unpredictability Heterogeneity	organizational structure
Etgar & Valency (1983)	Journal of Retailing	Stability Turbulence Capacity	channel contracts

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there may be no end to the d

shortcomings. Table 2-12 r

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Environmental Strategic I

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management, and marketing

The information provided in Table 2-11 above reveals two important problems that exist in the characterization of organizational environments. First, there is much overlap and duplication in the dimensions. Second, and perhaps of greatest relevance, there may be no end to the dimensionalization process (Clark et al., 1994). Despite these shortcomings, Table 2-12 reveals the various ways environment uncertainty has been operationalized in the last decade in the business literature. Also included in the table are the sampling units and the originating sources.

Environmental Strategic Drivers

At a macro level, many authors have attempted to categorize the environment in which a firm operates both internally and externally (e.g., Cavusgil and Zou 1994). Part II of this dissertation looks at factors in the retailer's environment that serve as a catalyst in the implementation a quick response and/or global sourcing strategy. External driving forces include, but are not limited to: environment uncertainty and competitiveness (domestic or from abroad) as a motivating factor. Internal driving forces include: degree of internationalization, retailer power, technological sophistication, sophistication of management, and marketing orientation.

Table 2-12. Environment

Info
Vats & Srivastava (1994) JOI
source: *unidentified*
Kenan, Droge & Daugherty (1994) JMR
source: *Khandwalla (1974/1977) and Miller (1983)* also adapted for use by: *Miller (1988) and Miller & Droge (1986)*
Caulfield (1993) JOM
source: *St. John & Herriot (1993)*
Miller (1993) JIBS
source: *Miles & Snow (1978)*
Khoury (1987)
source: *Duncan (1972)* also adapted for use by: *Bourgeous (1*
Brown, Lusch & Koenig (1984) IJPD&MM
source: *original*
Tyge & Valency (1983) JR
source: *Aldrich (1979)*

Table 2-12. Environment Uncertainty: Measurement

Study	Sampling Unit	Measures
Maltz & Srivastava (1994) *MSI* *source(s): unidentified*	retailers	single item, expected sales-actual sales / actual sales
Germain, Droge & Daugherty (1994) *JMR* *source(s): Khandwalla (1974/1977) and Miller (1983)* *also adapted for use by: Miller (1988) and Miller & Droge (1986)*	manufacturers	four 7-point items with endpoints describing environmental opposites. Right hand anchors include: our firm must change its marketing practices extremely often, actions of competitors are unpredictable, demands and tastes are almost unpredictable, the production process changes often in major ways.
Handfield (1993) *JOM* *source(s): St. John & Heriot (1993)*	make-to-order firms	single item, *demand uncertainty*, "average weekly % deviation in the master production schedule for the major product line in the last year".
Miller (1993) *JIBS* *source(s): Miles & Snow (1978)*	managers	thirty-five 7-point scales; "in the primary industry and country where you work, evaluate the aspects of your environment": 7 segments comprise of 35 items: "[1] government and policies, [2] economy, [3] resources and services used, [4] product market and demand, [5] competition, [6] industry technology".
Koberg (1987) *source(s): Duncan (1972)* *also adapted for use by: Bourgeous (1985)*	secondary schools	nine 5-point items; "indicate your ability to anticipate or accurately predict changes and the effects of the following items: [1] supply or availability of teachers, [2] supply of educational materials, [3] governmental regulatory control, [4] relationship with school board, and so on". Endpoints include: 1 = none, 5 = very high.
Brown, Lusch & Koenig (1984) *IJPD&MM* *source(s): original*	retailers	seven 7-point items designed to reflect uncertainty in estimating how much inventory to carry (i.e., reliability of supplier's deliveries, predictability of seasonal fluctuations in demand, supplier's order-filling accuracy, availability).
Etgar & Valency (1983) *JR* *source: Aldrich (1979)*	retailers	sum of variables measuring environmental stability, turbulence, and capacity.

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PERFORMANCE

Performance is a recurrent theme that is of interest to both academic scholars and practicing managers. While prescriptions for improving and managing organizational performance are widely available, the academic community has been preoccupied with discussions and debates about issues of terminology, levels of analysis (i.e., individual, work-unit, or organizational), and conceptual bases for assessment of performance (Venkatraman and Ramanujam 1986).

The importance of business performance in strategy research can be argued along three dimensions--theoretical, empirical, and managerial (Venkatraman and Ramanujam 1986). Theoretically, the concept of performance is at the center of strategic management. Most strategic management theories either implicitly or explicitly underscore performance implications, since performance is the ultimate test of any strategy (Schendel and Hofer 1979: Venkatraman and Ramanjam 1986). Empirically, most strategy research studies employ the construct of business performance to examine a variety of strategy content and process issues. The managerial importance of business performance is all too evident in the many prescriptions offered for performance improvement.

Walker and Ruekert (1987) in a comprehensive review of marketing literature identified three performance dimensions of primary importance to top corporate and business unit managers.

> *Effectiveness* is the success of a business' products and programs in relation to those of its competitors in the market. Effectiveness measures are commonly called subjective performance measures as they involve managers' perceived intake of the environment. This performance

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ROS and ROI relative
performance measures (
competitors or industry)

Efficiency is the outcor
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RETAILING PERFORMA

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dimension is typically measured by financial performance measures (e.g., ROS and ROI relative to competitors or industry) and/or strategic performance measures (e.g., market share or sales growth rate relative to competitors or industry).

Efficiency is the outcome of a business' programs in relation to the resources employed in implementing them. Efficiency measures of performance are commonly referred to as objective or economic performance as they deal with actual operating performance. Common measures include: sales, profitability as a percentage of sales, ROI, ROA, ROS, sales per employee.

Adaptability is the business' success in responding over time to changing conditions and opportunities in the environment and can be measured in a number of ways, depending on the environmental context of the organization (e.g., percentage of sales accounted for by products introduced in past 5 years).

RETAILING PERFORMANCE and its measurement

In the retailing literature, an operational definition of performance has also been elusive and much debated. Two articles on "general" retailer performance provide an overview of enduring issues in measuring performance at the retail level: Achabal, Heineke, and McIntyre (1984) and Goodman (1985). Goodman summarized that the output of retailing may be viewed either as (a) the provision of service, that is, adding value to goods which have been "produced" by others, or, alternatively (b) providing a total product of which the physical goods provided are merely an ingredient. Although the latter concept is more in accord with modern views of the totality of utility, performance measures such as productivity, efficiency, and effectiveness can be defined using either perspective. In any case, the definition and measurement of output is necessary before the other measures can be derived (Goodman 1985, p. 77).

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Achabal, Heineke and McIntyre (1984) endeavored to provide definitional and conceptual clarity to concepts in the elusive area of performance measurement. More specifically, they made useful distinctions between (a) *productivity*, which relates to a single input factor to an output measures, other inputs assumed constant, (b) *efficiency*, which measures the effects of all inputs in combination and thus recognizes that all inputs and the proportions in which they are employed may vary, and (c) *effectiveness*, which takes account of goal achievement as well. A major area of difficulty at all three levels is in identifying conceptually relevant and measurable outputs for retailing or any service industry (Goodman 1985).

Achabal, Heineke, and McIntyre, taking an organizational perspective, suggest long-run return on investment as the appropriate goal. While conceptually sound, Goodman (1985) suggests that this may create some operational problems when, as is often the case, managers must work in terms of shorter-term, more readily measurable goals (e.g., current ROI, growth in sales or market share). In more recent retailing literature, both long-term and short-term measures operationalize the performance construct.

A societal perspective would need to take consumer shopping productivity into account (Ingene 1984). If the output of retailing is service to consumers, then any measure of social productivity should consider the extent to which the preferred service affects not only the outputs which consumers receive but also the inputs which the consumer must incur. These include time, efforts of various sorts such as those to acquire and process information, and money or other things sacrificed as part of the shopping process. Based on the nature of research in this dissertation, an organizational

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perspective of retailer performance is utilized. However, for a review of the societal perspective of retailer performance, Ingene (1984) provides a discussion of the elements of consumer shopping productivity and a survey of relevant research.

For parsimony, performance measurement was limited to those studies to be presented in Chapter 3 that have empirically demonstrated the existence of a link between model constructs (i.e., environment, strategy, structure) and performance. Therefore, the scope of Table 2-13 is confined by select studies contained in Table 3-3 (environment-performance link), Table 3-5 (strategy-performance link) and Table 3-5 (structure-performance link).

As is evident from Table 2-13, no consensus exists regarding the most appropriate measures of organizational performance. Consistent with the suggestion of Walker and Ruekert (1987), **in this dissertation, performance is defined in terms of effectiveness (i.e., financial and strategic), efficiency (i.e., economic) and adaptability dimensions.**

Table 2-13. Performance M

ies	Context
Jasme, Gibenedetto & Bozeungbaum (1994)	strategy-
Jeogli & Zou (1994)	environm strategy-
Unite & Swan (1994)	strategy-
Mair & Srivastava (1994)	environm
Ar & Litchert (1994)	strategy-
Uptak & Khan (1993)	environm strategy- structure
Unite & Murray (1990)	strategy-
Unite & Omura (1989)	strategy-
Johnson & Pearce (1988)	strategy-
Gupa (1987)	structure
Pence, Robbins & Robinson (1987)	structure
Miller & Toulouse (1986)	strategy- structure

Table 2-13. Performance Measurement: Select Business Literature

Study	Context	Performance Measure
Calantone, diBenedetto & Bhoovaraghavan (1994)	strategy-performance	[1] overall rated financial success of firm's new product development program over past five years, [2] rated degree of success or failure of the product.
Cavusgil & Zou (1994)	environment-performance strategy-performance	[1] extent to which initial strategic goals of management were achieved, [2] average annual growth rate of export sales over five years, [3] overall profitability of exporting over five years, [4] management's perceived success of the venture.
Kotabe & Swan (1994)	strategy-performance	[1] global market share equals ratio of firm's consolidated global sales to total production of ten OECD countries and five NIC countries, [2] profitability equals consolidated return on sales.
Maltz & Srivastava (1994)	environment-performance	realized value equares the ratio of potential ROI to no-option ROI
Tan & Litschert (1994)	strategy-performance	rate performance relative to close competitors based on after-tax return on total assets, [2] after-tax return on total sales, [3] total sales growth, [4] overall performance and success, [5] competitive positions.
Kaynak & Kuan (1993)	environment-performance strategy-performance structure-performance	[1] export sales, [2] export profitability, [3] percentage of total profit from exporting, [4] percentage of total profit from exporting.
Kotabe & Murray (1990)	strategy-performance	[1] relative market share, [2] sales growth rate, [3] pre-tax profitability.
Kotabe & Omura (1989)	strategy-performance	[1] product's relative market share in the U.S., [2] product's pre-tax profitability in the U.S.
Robinson & Pearce (1988)	strategy-performance	[1] firm sales, [2] return on assets, [3] return on sales.
Gupta (1987)	structure-performance	rate SBU performance relative to superior's expectations on: [1] sales growth rate, [2] market share, [3] profit to sales ratio, [4] cash flow, [5] ROI, [6] new product development, [7] R&D activities, [8] cost reduction programs, [9] personnel development, [10] political/public affairs.
Pearce, Robbins & Robinson (1987)	structure-performance	[1] firm sales, [2] return on assets, [3] return on sales.
Miller & Toulouse (1986)	strategy-performance structure-performance	Actual percentage over past 5 years: [1] average annual growth rate in sales, [2] average annual growth rate in net income, [3] average rate of ROI. Perceived performance relative to industry average in: long-run profitability, [2] growth in sales or revenues.

SUM

Table 2-14 provides

definitions, and important s

Table 2-14. Summary of K

Variable	Definition
STRATEGY	
Quick Response	A technology-drive sourcing strategy b cooperative relation retailer and supplier to minimize slack r the supply chain.
STRATEGY	
Global Sourcing	A retailer-driven int sourcing strategy w retailer serves as th in sourcing the mer subcomponents fro
ORGANIZATIONAL STRUCTURE	
Integration	The extent to which making at top levels is characterized by cross-functional com which different depa together to decide s classes of decisions.
ORGANIZATIONAL STRUCTURE	
Formalization	The extent to which and procedures are down.
Performance Control	The extent to which performance (or outp compared with indust standards or competi

SUMMARY OF LITERATURE REVIEW

Table 2-14 provides a summary of the key constructs in this dissertation, their definitions, and important sources.

Table 2-14. Summary of Key Constructs

Variable	Definition	Critical Sources	Alternative Labels	Recent Studies
STRATEGY				Fiorito, May & Straughn
Quick Response	A technology-driven domestic sourcing strategy based on a cooperative relationship retailer and supplier that seeks to minimize slack resources in the supply chain.	JIT work (e.g., Germain, Droge & Daugherty 1994)	JIT in retailing	(1995), Fernie (1995), Phillips & Droge (1995a,b)
STRATEGY			International	
Global Sourcing	A retailer-driven international sourcing strategy wherein the retailer serves as the catalyst in sourcing the merchandise or subcomponents from abroad.	manufacturing (e.g., Kotabe & Omura 1989, Min & Galle 1991)	sourcing, offshore sourcing, global purchasing	Liu & McGoldrick (1995), Kotabe & Swan (1994)
ORGANIZATIONAL STRUCTURE				
Integration	The extent to which decision-making at top levels in the firm is characterized by participative, cross-functional committees in which different departments get together to decide specific classes of decisions.	Miller (1983)	Liaison devices	Germain, Droge & Daugherty (1994), Miller (1991/1988), Miller & Droge (1986)
ORGANIZATIONAL STRUCTURE				
Formalization	The extent to which rules and procedures are written down.	Hage (1966/1968), Inkson, Pugh & Hickson (1970), Pugh & Hickson (1976)	-----	Germain, Droge & Daugherty (1994), Jaworski & Kohli (1993), Miller (1991), Miller & Droge (1986)
Performance Control	The extent to which performance (or output) is compared with industry standards or competitors.	Khandwalla (1974)	-----	Germain, Droge & Daugherty (1994), Miller & Droge (1986)

Table 2-14 (cont'd).

Variable	Definition
ORGANIZATIONAL STRUCTURE	
Decentralization	The level in the or that has authority t decisions in areas inventory control,
RELATIONSHIP STRUCTURE	
Flexibility	A bilateral expecta willingness to mak as circumstances ch
RELATIONSHIP STRUCTURE	
Information Exchange	A bilateral expecta parties will proactiv information useful partner.
RELATIONSHIP STRUCTURE	
Solidarity	A bilateral expecta high value is placed relationship.
ENVIRONMENT	
Environment Uncertainty	The degree of dyna unpredictability and heterogeneity in the environment.

Based on the informa

the operationalization of th

introduced. In Chapter 3,

hypotheses set forward.

Table 2-14 (cont'd).

Variable	Definition	Critical Sources	Alternative Labels	Recent Studies
ORGANIZATIONAL STRUCTURE				
Decentralization	The level in the organization that has authority to make decisions in areas such as, inventory control, EDI, pricing.	Inkson, Pugh & Hickson (1970), Hickson & Pugh (1976)	Decentralization Delegation	Germain, Droge & Daugherty (1994), Miller (1991/1988), Miller & Droge (1986)
RELATIONSHIP STRUCTURE				
Flexibility	A bilateral expectation of willingness to make adaptations as circumstances change.	Kaufmann & Stern (1988), Noordewier, John & Nevin (1990), Dwyer (1990)	-----	Gundlach, Achrol & Mentzer (1995), Heide & John (1992)
RELATIONSHIP STRUCTURE				
Information Exchange	A bilateral expectation that parties will proactively provide information useful to the partner.	Kaufmann & Stern (1988), Noordewier, John & Nevin (1990)	-----	Heide & John (1992)
RELATIONSHIP STRUCTURE				
Solidarity	A bilateral expectation that a high value is placed on the relationship.	Kaufmann & Stern (1988), Noordewier, John & Nevin (1990), Dwyer (1990)	-----	Gundlach, Achrol & Mentzer (1995), Heide & John (1992)
ENVIRONMENT				
Environment Uncertainty	The degree of dynamism, unpredictability and heterogeneity in the environment.	Khandwalla (1974/1977), Miles & Snow (1978), Miller (1983)	volatility, diversity scarcity, capacity, hostility	Germain, Droge & Daugherty (1994), Miller (1993)

Based on the information contained in this chapter, in Chapter 4 (methodology), the operationalization of these constructs for the purpose of this research will be introduced. In Chapter 3, the relationships among constructs will be discussed and hypotheses set forward.

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PART I - QUICK RES

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CHAPTER 3
Model and Theoretical Framework

In Chapter 1, quick response (QR) was described as a key strategy in contemporary retailing that evolved from offshore competition. Global sourcing was introduced as an alternative sourcing strategy to the more domestic QR strategy, as most sources regard the two strategies as sourcing opposites. Global sourcing offers a low-cost alternative to domestic sourcing and QR yields timely merchandise. Chapter 2 introduced the key constructs and provides a summary of corresponding definitions and measurement issues. In this Chapter, the links between the model's constructs are justified and empirically-testable hypotheses are set forth.

In Part I of this research, the main focus is QR and its implications for management practice, both internally and with major suppliers, and its related performance implications. In Part II, drivers of the two strategies are examined and the effectiveness of QR is compared to the effectiveness of global sourcing.

PART I - QUICK RESPONSE: ANTECEDENTS AND CONSEQUENCES

Part I of this dissertation looks at factors that cause and accompany quick response in the retailing industry and their implications on retailer performance. In particular, a theoretical model and several propositions are developed regarding the relationships among environment-strategy-structure-performance as they pertain to quick response (QR) in the U.S. retailing industry. The classical "strategic management" stance is taken that strategy engenders structure. While the argument can be made that structure influences strategy (e.g., Miller 1987; Fredrickson 1986), the dominant

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Three main themes

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In sum, the full mo

1] environment uncertainty

tructure; [2] QR implemen

tructural changes; and [3]

directly impact retailer perf

the QR strategic initiative

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Tables 3-1 through

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paradigm (i.e., strategy influences structure) is maintained in this dissertation.

Three main themes guide part I of this dissertation. The first theme is that QR strategy has a significant influence on structure, both organizational and relationship structure. The second is that environment uncertainty has a significant influence on the implementation of a QR strategy and both organizational and relationship structure. This is consistent with more recent models of the relationship between strategy and structure that often include environment uncertainty as a predictor of strategy, structure, or both (e.g., Miller and Droge 1986; Miller 1988; Germain, Droge and Daugherty 1994). The final theme to be addressed in Part I is that retailer performance is significantly influenced by environment uncertainty, QR strategy implementation, and structure.

In sum, the full model proposed in this dissertation (see Figure 3-1) posits that: [1] environment uncertainty directly influences the implementation of QR strategy and structure; [2] QR implementation directly influences both organizational and relationship structural changes; and [3] that environment uncertainty, strategy and structure each directly impact retailer performance. Regarding indirect effects, the model implies that the QR strategic initiative in retailing mediates the relationship between environment uncertainty and structure. Similarly, organizational and relationship structure are believed to mediate the relationship between QR strategy and performance.

Tables 3-1 through 3-6 that follow, show that the general existence of the relationships proposed in Figure 3-1 are supported by past research. In the remainder of this chapter, supporting arguments for the specific links proposed in the model are discussed, starting first with the main contention that strategy engenders structure.

H7
H4 & H5

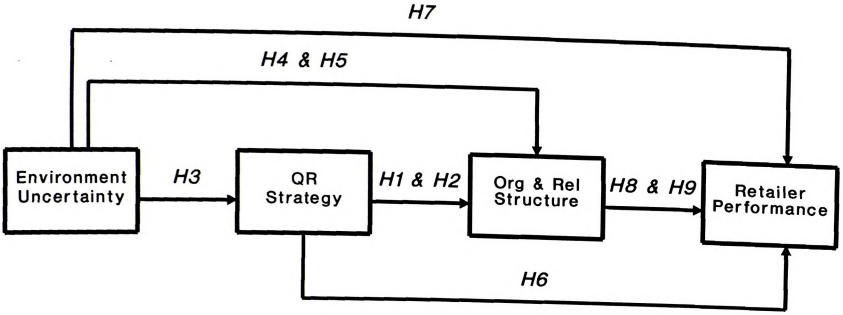

Figure 3-1. Proposed Model

Table 3-1. Environment-S

Study	Journ
Kerman, Droge & Daugherty (1994)	Journa Rese
Calantone, diBenedetto & Bhoovaraghavan (1994)	Journa Rese
Dowgji & Zou (1994)	Journa
Naidu & Prasad (1994)	Journa Rese
Tan & Litschert (1994)	Strateg Jourr
McGinnis & Kohn (1993)	Journa Logi
Wiersema & Bantel (1993)	Strateg Jourr
Venkatraman & Prescott (1990)	Strateg Jourr
Lusch & Laczniak (1989)	Journa of M
Frazier, Spekman & O'Neal (1988)	Journa
Kotas & Hitt (1988)	Acade Mani
Miller (1988)	Acade Mani
Miller, Droge & Toulouse (1988)	Acade Mani
Dominguez & Vanmanckle (1987)	Journa Macr

Table 3-1. Environment-Strategy Relationship

Study	Journal	Findings
Germain, Droge & Daugherty (1994)	Journal of Marketing Research	Environment uncertainty found to influence the implementation of JIT selling strategy.
Calantone, diBenedetto & Bhoovarghavan (1994)	Journal of Business Research	Environment uncertainty found to have positive effects on strategic posture. Environment hostility found to negative effects on strategic posture.
Cavusgil & Zou (1994)	Journal of Marketing	External and internal forces in the environment found to influence export strategy.
Naidu & Prasad (1994)	Journal of Business Research	Factors in international marketing environment found to influence a firm's export development strategy.
Tan & Litschert (1994)	Strategic Management Journal	Environment uncertainty found to positively influence defensive strategies and negatively influence proactive strategies.
McGinnis & Kohn (1993)	Journal of Business Logistics	Logistics strategy will vary depending on the firm's perceived environment.
Wiersema & Bantel (1993)	Strategic Management Journal	Environmental munificence and environmental instability found to be positively related to strategic change.
Venkatraman & Prescott (1990)	Strategic Management Journal	An eight-environmental typology found to influence strategic resource deployments.
Lusch & Laczniak (1989)	Journal of the Academy of Marketing Science	Increased competitive intensity found to influence nonprice marketing strategy.
Frazier, Spekman & O'Neal (1988)	Journal of Marketing	Environment uncertainty posited to influence JIT exchange.
Keats & Hitt (1988)	Academy of Management Journal	Environment instability found to have a negative effect on levels of diversification and divisionalization.
Miller (1988)	Academy of Management Journal	An differentiation strategy is most likely to be pursued in uncertain environments. A cost leadership strategy is most likely to be pursued with stable and predictable environments.
Miller, Droge & Toulouse (1988)	Academy of Management Journal	Environment uncertainty found to influence product innovation.
Dominguez & Vanmarcke (1987)	Journal of Macromarketing	The more competitiveness in the market, the greater the use of marketing mix elements.

Table 3-1 (cont'd).

Study	Journal
Fennell & Alexander (1987)	Academy of Mana
Koberg (1987)	Academy of Mana

Table 3-1 (cont'd).

Study	Journal	Findings
Fennell & Alexander (1987)	Academy of Management Journal	Institutional environment found to affect hospitals' choice of boundary spanning strategies.
Koberg (1987)	Academy of Management Journal	The greater the environment uncertainty and scarcity of resources, the greater the frequency of strategic organizational adjustments.

Table 3-2. Environment-St

Study	Journal
Calantone, diBenedetto & Bhoovaraghvan (1994)	Journal Resea
Germain, Droge & Daugherty (1994)	Journal Resea
Kotchetkoff & Coleman (1994)	Journal of M
Leslie & John (1992)	Journal
Tamash & Kim (1992)	Decisio
Alexander (1991)	Acader Mana
Miller (1991)	Manag
Klein, Frazier & Roth (1990)	Journa Resea
Noordewier, John & Nevin (1990)	Journa
Lusch & Laczniak (1989)	Journa of M
Dess & Origer (1987)	Acader Mana
Dominguez & Vasmarcke (1987)	Journa Macr
Fennell & Alexander (1987)	Acader Mana
Kaberg (1987)	Acader Mana

Table 3-2. Environment-Structure Relationship

Study	Journal	Findings
Calantone, diBenedetto & Bhoovaraghvan (1994)	Journal of Business Research	Environment hostility found to have positive effects on organizational structure.
Germain, Droge & Daugherty (1994)	Journal of Marketing Research	Environment uncertainty found to lead to changes in organizational structure.
Robicheaux & Coleman (1994)	Journal of the Academy of Marketing Science	Internal and external polity and economy posited to influence channel relationship structure.
Heide & John (1992)	Journal of Marketing	Uncertainty found to affect level of integration or joint action.
Umanath & Kim (1992)	Decision Sciences	Uncertainty in the task environment found to affect decision-making structure.
Alexander (1991)	Academy of Management Journal	Organizations found to practice selective decentralization under conditions of increasing uncertainty.
Miller (1991)	Management Science	Environment uncertainty found to positively influence formalization, specialization and use of technocrats and liaison devices and negatively influence centralization.
Klein, Frazier & Roth (1990)	Journal of Marketing Research	Volatility and diversity in environment found to affect relationship structure.
Noordewier, John & Nevin (1990)	Journal of Marketing	Performance enhanced when relational elements introduced in response to uncertainty.
Lusch & Laczniak (1989)	Journal of the Academy of Marketing Science	Resource constraints found to influence structural fluctuations.
Dess & Origer (1987)	Academy of Management Review	Model proposes that firms competing in complex and dynamic environments are required to differentiate their structure into several distinct subsystems.
Dominguez & Vanmarcke (1987)	Journal of Macromarketing	The more competitive a market, the greater the extent of departmentalization and the more likely the use of marketing experts.
Fennell & Alexander (1987)	Academy of Management Journal	Complexity in institutional environment posited to be matched by complexity in firm organization.
Koberg (1987)	Academy of Management Journal	Organic structures found to be influenced by conditions of high environment uncertainty and resource scarcity.

Table 3-2 (cont'd).

Study	Journal
Kinberg & Ungson (1987)	Journa
Keller & Droge (1986)	Admin Qua
Slack & Kraft (1986)	Acade Man

Table 3-2 (cont'd).

Study	Journal	Findings
Koberg & Ungson (1987)	Journal of Management	Environment uncertainty found to be negatively related organic structures.
Miller & Droge (1986)	Administrative Science Quarterly	Hypothesized that environment influenced structure, but only a weak relationship found.
Jauch & Kraft (1986)	Academy of Management Review	Environment proposed to influence structure decisions.

Table 3-3. Environment-I

Study	Jou
Heide & Stump (1995)	Journ Res
Stone & Kolvereid (1995)	Journ Bus
Cavusgil & Zou (1994)	Journ
Maltz & Srivastava (1994)	MSI
Kaynak & Kuan (1993)	Journ Res
Okumuslu (1993)	Journ Res
Weitzema & Bantel (1992)	Strate Jour
MacArthur & Nystrom (1991)	Journ Res
Souerta, Hoffman & Heide (1987)	Acade Man
Jauch & Kraft (1986)	Acade Man
Hambrick (1983)	Acade Man

Table 3-3. Environment-Performance Relationship

Study	Journal	Findings
Heide & Stump (1995)	Journal of Business Research	Volume unpredictability (i.e., environment) found to have negative effects on performance.
Shane & Kolvereid (1995)	Journal of Small Business Management	Most of the performance of start-up firms was explained by the national environment faced by the entrepreneur.
Cavusgil & Zou (1994)	Journal of Marketing	Firm characteristics found to influence export performance.
Maltz & Srivastava (1994)	MSI Working Paper	Environment uncertainty found to have a positive impact on realized values of interorganizational information technology.
Kaynak & Kuan (1993)	Journal of Business Research	Dimensions of organizational environment (i.e., organizational characteristics, decision-maker characteristics, foreign target market) found to influence performance.
Okoroafo (1993)	Journal of Business Research	Environmental changes (i.e., improved financial infrastructure and production costs) found to have a significant positive effect on performance.
Wiersema & Bantel (1993)	Strategic Management Journal	Environmental munificience and environmental instability found be positively related to firm performance.
McArthur & Nystrom (1991)	Journal of Business Research	Environmental dynamism exhibited a direct effect on performance.
Stearns, Hoffman & Heide (1987)	Academy of Management Journal	Environment uncertainty found to have a direct effect on television station performance.
Jauch & Kraft (1986)	Academy of Management Review	Environment proposed to directly influence organizational performance.
Hambrick (1983)	Academy of Management Journal	Performance influenced by environment (i.e., product life cycle stage and industry new product innovation).

Table 3-4. Strategy-Struct

Sub	Jou
Glasmeier, diBenedetto & Bhavaraghavan (1994)	Journ Res
Germain, Droge & Daugherty (1994)	Journ Res
Ginter, Young & O'Neil (1994)	Journ Res
Gupta & Victor (1991)	Strat Jou
Govu & Slevin (1990)	Journ Ver
Huang & Chiu (1988)	Journ Ecc
Miller (1988)	Acad Ma
Miller, Droge & Toulouse (1988)	Acad Ma

Table 3-4. Strategy-Structure Relationship

Study	Journal	Findings
Calantone, diBenedetto & Bhoovaraghavan (1994)	Journal of Business Research	Strategic posture found to have a positive effect on organizational structure.
Germain, Droge & Daugherty (1994)	Journal of Marketing Research	JIT selling found to influence changes in organizational structure.
Gilbert, Young & O'Neal (1994)	Journal of Business Research	Firms actively engaged in JIT found to exhibit a strong orientation toward diversity, duration, facilitation and symmetry in their relationships with suppliers.
Habib & Victor (1991)	Strategic Management Journal	MNCs found to choose their organizational structure consistent with the kind of strategy they are pursuing.
Covin & Slevin (1990)	Journal of Business Venturing	Entrepreneurial strategic postures found to influence organic organizational structures.
Chang & Chio (1988)	Journal of Industrial Economics	Diversification strategy found to result in multidivisional structure.
Miller (1988)	Academy of Management Journal	Porter's generic strategies found to influence organizational structure.
Miller, Droge & Toulouse (1988)	Academy of Management Journal	Intended rationality of the strategy-making process found to increase structural formalization and integration. Increased product innovation found to increase structural formalization and integration and decrease centralization.

Table 3-5. Strategy-Perfo

Study	Jou
Pelham & Wilson (1996)	Journ of
Boyle & Dwyer (1995)	Journ Res
Glaimne, diBenedetto & Bhoovaraghavan (1994)	Journ Res
Cavusgil & Zou (1994)	Journ
Knabe & Swan (1994)	Journ Bus
Naidu & Prasad (1994)	Journ Res
Tan & Litschert (1994)	Strate Jou
Kamak & Kuan (1993)	Journ Res
Mosakowski (1993)	Journ
Richardson (1993)	Strate Jou
Webster (1993)	Journ Res
Civin & Slevin (1990)	Journ Ver
Fraser & Willard (1990)	Strate Jou
Knabe & Murray (1990)	Journ Bus
Parry & Bass (1990)	Mark

Table 3-5. Strategy-Performance Relationship

Study	Journal	Findings
Pelham & Wilson (1996)	Journal of the Academy of Marketing Science	Low-cost strategy significantly and positively influences growth/share.
Boyle & Dwyer (1995)	Journal of Business Research	Influence strategies showed significant detrimental effects on relationship performance.
Calantone, diBenedetto & Bhoovaraghavan (1994)	Journal of Business Research	Strategic posture found to significantly influence new product success (i.e., financial performance).
Cavusgil & Zou (1994)	Journal of Marketing	Export marketing strategy found to positively influence performance.
Kotabe & Swan (1994)	Journal of International Business Studies	Extent of offshore sourcing found to be weakly negatively related to U.S. multinational's profitability.
Naidu & Prasad (1994)	Journal of Business Research	Export development strategy found to influence export performance.
Tan & Litschert (1994)	Strategic Management Journal	Defensive strategies found to positively influence performance.
Kaynak & Kuan (1993)	Journal of Business Research	Export marketing strategy found to influence performance.
Mosakowski (1993)	Journal of Management	When focus and differentiation strategies are established, performance is higher than for other firms.
Richardson (1993)	Strategic Management Journal	Parallel sourcing found to positively influence supplier performance.
Webster (1993)	Journal of Business Research	Significant relationship found between the importance placed on marketing culture (i.e., strategy) and firm profitability.
Covin & Slevin (1990)	Journal of Business Venturing	Strategic posture found to influence firm performance.
Fesser & Willard (1990)	Strategic Management Journal	Strategy found to be an important input at a very early stage into the subsequent performance of the firm.
Kotabe & Murray (1990)	Journal of International Business Studies	Degree of internal sourcing is found to explain market performance independently of innovative activities.
Parry & Bass (1990)	Marketing Letters	Pioneers were observed to have higher market shares than followers.

Table 3-5 (cont'd).

Study	Jou
Noordewier, John & Nevin (1990)	Journ
Grieger, Beamish & LaCosta (1989)	Strat Jou
Kotabe & Omura (1989)	Journ Bus
Robinson & Pearce (1988)	Strat Jou
Walters (1988)	Journ
Weber & Toulouse (1986)	Amer Sm
Zou & Davis (1984)	Acad Ma

Table 3-5 (cont'd).

Study	Journal	Findings
Noordewier, John & Nevin (1990)	Journal of Marketing	Relational elements in purchase arrangements found to positively influence performance.
Geringer, Beamish & daCosta (1989)	Strategic Management Journal	Diversification strategy found to positively influence performance.
Kotabe & Omura (1989)	Journal of International Business Studies	Product market performance found to be positively related to the internal components sourcing strategy.
Robinson & Pearce (1988)	Strategic Management Journal	Strategic orientations focusing on product innovation linked to high levels of performance.
Walters (1988)	Journal of Retailing	Direct mail promotions found to have a positive effect on retailer profit.
Miller & Toulouse (1986)	American Journal of Small Business	Success linked to more explicit strategies.
Dess & Davis (1984)	Academy of Management Journal	Commitment to at least one of the generic strategies will result in higher performance. In this study, overall cost leadership had highest performance level.

Table 3-6. Structure-Per

Author(s)	J
Boyd & Fulk (1996)	Jour
Bourgeois & Eisenhardt (1988)	Jour
Bourgeois (1985)	Acad
Burns & Stalker (1961)	Jour
Burns (1967)	Jour
Burns (1973)	Jour
Burns (1975)	Jour
Burns (1978)	Jour
Burns (1979)	Jour
Burns (1980)	Jour
Burns (1981)	Jour
Burns (1982)	Jour
Burns (1983)	Jour
Burns

Table 3-6. Structure-Performance Relationship

Author(s)	Journal	Findings
Robicheaux & Coleman (1994)	Journal of the Academy of Marketing Science	Channel relationship structure posited to influence polity and economic performance.
Parkhe (1993)	Academy of Management Journal	Interfirm strategic alliance structure linked to performance.
Kaynak & Kuan (1993)	Journal of Business Research	Export operating unit structure found to positively effect performance.
Covin & Slevin (1990)	Journal of Business Venturing	Organic structures found to influence firm performance.
Noordewier, John & Nevin (1990)	Journal of Marketing	Relational elements (e.g., long-term orientation) enhance the performance outcomes in buyer-seller relationships.
Chang & Chio (1988)	Journal of Industrial Economics	Business groups that have a multidivisional structure found to show superior economic performance.
Mahajan & Wind (1988)	Long Range Planning	Profitability found to be influenced by synergy building (i.e., a cooperative relationship structure).
Schul, Little & Pride (1988)	Journal of Retailing	Franchisees' perceptions of structure were found to be significantly correlated with various dimensions of channel satisfaction.
Gupta (1987)	Academy of Management Journal	Corporate-SBU decentralization positively contributed to SBU effectiveness.
Hoskisson (1987)	Academy of Management Journal	Multidivisional structure found to affect firm performance.
Koberg & Ungson (1987)	Journal of Management	Performance is significantly linked to organic structure.
Pearce, Robbins & Robinson (1987)	Strategic Management Journal	Planning formality linked to all indicators of objective performance.
Gupta & Govindarajan (1986)	Academy of Management Journal	Resource sharing (i.e., a form of governance structure) found to influence SBU effectiveness.
Miller & Toulouse (1986)	American Journal of Small Business	Success linked to delegation of decision-making authority.

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QR STRATEGY: ANTECEDENT TO STRUCTURE

The Impact of QR Strategy on Organizational Structure

Chandler (1962) observed that major changes in organizational strategy (e.g., geographic dispersion, vertical and horizontal integration) were followed by changes in structural form. Since then, many have confirmed this dominant view that structure follows strategy (see Table 3-4). In particular, this association has been confirmed in the domain of: new product development (e.g., Calantone, diBenedetto and Bhoovaraghavan 1994); JIT (e.g., Germain, Droge and Daugherty 1994; Gilbert, Young and O'Neal 1994), entrepreneurship (e.g., Covin and Slevin 1990), global strategy (e.g., Habib and Victor 1991), among others.

As justified in Chapter 2, selection of the *internal* structure variables for this dissertation was guided by literature reviews that have consistently identified integration, formalization and decentralization as major interrelated dimensions of organizational structure (e.g., Mintzberg 1979; Miller 1991). In this section, arguments are developed that parallel those in Germain, Droge and Daugherty (1994) regarding JIT. Assuming that, on average, firms select the appropriate structure for the strategy they plan to pursue, the following research question is addressed: what changes in management practice occur as the extent of involvement with QR increases? It is argued that QR has a significant positive impact on organizational integration, performance control and operations decentralization and a significant negative impact on scheduling decentralization.

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The Impact of QR on Integration

Teamwork is a buzzword in the 1990s, and it is a concept in contemporary business practice that mandates organizational integration. As defined in Chapter 2, integration refers to the extent to which decision-making at top levels in the firm is characterized by participative, cross-functional committees in which different departments, functions or divisions get together to decide specific classes of decisions (e.g., distribution/operations, buying, merchandising, pricing).

Just as increased integration among purchasing, engineering, production, materials management, marketing and distribution is often hypothesized under JIT exchange (e.g., Frazier, Spekman and O'Neal 1988; Giunipero and Law 1990; Natarajan and Weinrauch 1990; Germain, Droge and Daugherty 1994), integration among distribution, marketing, merchandising and buying functions can be hypothesized under QR. Reduction in slack resources (particularly time and inventory), the desired outcome of QR partnerships (Phillips and Droge 1995a), "increases the need for tight interdepartmental linkages as variance in the output of one department cannot be absorbed by that of another" (Germain, Droge and Daugherty 1994, p.472). In other words, successful QR implementation involves integration within the company so that implementation problems are looked at in total, versus unique to each different department. For these reasons, the following hypothesis is set forth.

H1a: As QR implementation increases, integration increases.

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The Impact of QR on Formalization (i.e., Performance Control)

Formalization is defined in this dissertation as the extent to which rules and procedures are written down. In this study, the focus is on one aspect of formalization--the extent of formalized performance control (Khandwalla 1974; Germain, Droge and Daugherty 1994). "Performance control was selected because many researchers have emphasized the importance of the performance appraisal system in marketing overall (Jaworski, Stathakopoulos and Krishnan 1993) and in the establishment and maintenance of JIT exchange in particular (e.g., Frazier, Spekman and O'Neal 1988"; Germain, Droge and Daugherty 1994, p. 473).

The use of formalized performance control should increase with QR for two major reasons. First, QR retailers have reduced overall inventory levels, supporting QR as a slack resource elimination strategy (Phillips and Droge 1995a). Therefore, the scenario of information replacing inventory requires intensive controls of inputs/outputs as large fluctuations in demand cannot be filled with the minimal, if any, safety stock that is characteristic of time-based strategies. Second, intensive managing of the elements that accompany QR partnerships (e.g., new technology and processes, long-term partnerships, trust) requires intensive controls. QR retailers "are asked to simultaneously provide better service and quality products at lower costs, and if they do not meticulously manage their own processes, they will eventually absorb the costs themselves" (Germain, Droge and Daugherty 1994, p.473). Under QR, the primary mission of retailers does not change: They are still responsible for understanding the customer demands, analyzing sales trends, merchandising products and maintaining the correct image in the marketplace. But with QR, they are also more accountable for managing financial,

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bottomline profitability (Chain Store Age Executive 1991). As QR improves merchandising, the distribution/warehousing function, and store operations, it rewards the retailer with better customer service and lower operating expenses... benefits that translate into bottom-line results. In fact, "QR affects every component of a retailer profit-and-loss statement: above the line, sales improve and markdowns are minimized; below the line, operating expenses are reduced for merchandising, distribution, administrating and inventory management" (Chain Store Age Executive 1991, p.8B). For these reasons, performance control by retailers is expected to increase as the extent of QR implementation increases.

H1b: As QR implementation increases, performance control increases.

The Impact of QR on Decentralization

In its most general form, decentralization refers to the vertical locus of decision-making authority in the firm. More specifically, in this research, decentralization refers to the level in the organization that has authority to make decisions in areas such as, inventory control, electronic data interchange (EDI), pricing, promotion, product and supplier selection, etc. Both operations decentralization and scheduling decentralization are considered. As discussed in the previous chapter, operations decentralization refers to "how" things are done (e.g., personnel) and scheduling decentralization refers to "when" (e.g., information and product flow and timing) things are done.

Germain, Droge and Daugherty (1994), suggest and confirm that although the literature suggests that JIT exchange partnerships may be more decentralized (e.g., Davy,

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White, Merritt and Gritzmacher 1992; Giunipero and Law 1990), "such a generalization may be misleading" (p.473). In their research, they found operations decentralization to be unrelated to JIT selling and scheduling decentralization to be negatively related. This finding is consistent with Carter and Cullen's (1984) contention that not all domains of organizational decision-making are necessarily centralized or decentralized equally.

More specifically, QR is a company-wide commitment to continuous improvement and change. Therefore, regarding operations decentralization, QR requires authority and responsibility to be pushed down the hierarchy so decisions can be made by the people most in touch with the marketplace (Chain Store Age Executive 1991). This does not mean that management abdicates its responsibility. Rather it means that management must recognize the potential and develop the skills of subordinates to allow this increased delegation of responsibility (Chain Store Age Executive 1991, p.9B). In this case, operations decentralization is posited to increase as QR increases.

H1c: As QR implementation increases, operations decentralization increases.

Looking at scheduling decentralization, in QR partnerships, retailers must proactively provide suppliers with timely, proprietary information (e.g., inventory and sales data) and involve suppliers with related decisions and processes. "The sharing of such sensitive information is evidence of the critical importance of timing" (Germain, Droge and Daugherty 1994, p.473). As a result, managers may become averse to delegating responsibility of these critical decisions downward in the organization. Therefore, given the heightened importance of scheduling to both the retailer and supplier and given the

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timeliness required of QR-related decisions, it is posited that QR implementation results in an upward shift in the vertical locus of organizational decision-making.

H1d: As QR implementation increases, scheduling decentralization decreases.

In summary, hypotheses H1a through H1d suggest that as QR implementation increases, so do integration, operations decentralization and performance control, while scheduling decentralization decreases.

The Impact of QR Strategy on Relationship Structure

Researchers interested in the broad topic of marketing channels, as contrasted with the physical distribution aspects of channels, began to adopt a behavioral orientation in the late 1960s (Brown, Lusch and Koenig 1984). Since that time a significant stream of research in this area has resulted in the distribution channel being viewed as a set of behavioral relationships involving power, dependence, conflict and relational norms. Maintaining the dominant view that structure follows strategy, the implementation of QR is also posited to effect the retailer's structure of relationships with its major suppliers.

As discussed in Chapter 2, selection of the *relationship* structure variables was guided by literature on channel relationships that identified relational norms as a key factor in QR partnerships. Since the early study by Sherif (1936), the concept of norms has been at the core of research in several branches of the social sciences. A working definition is that norms are expectations about behavior that are at least partially shared by a group of decision-makers (Gibbs 1981; Heide and John 1992). As used in this

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dissertation, and as defined by Heide and John (1992), relational norms constitute a higher order construct consisting of the dimensions information exchange, flexibility, and solidarity. Assuming that, on average, firms select the appropriate structure for the strategy they plan to pursue, the following research question is addressed: what changes in channel relationships occur as the extent of involvement with QR increases? It is argued that QR has a positive impact on information exchange, flexibility and solidarity.

The Impact of QR on Information Exchange

In Chapter 2 of this dissertation, information exchange was defined as a bilateral expectation that parties will proactively provide information useful to the partner. QR is based on the fundamental premise of information exchange. The QR partnership requires new business practices, starting with a cooperation that stems from a knowledge of each other's business objectives, opportunities, and constraints. Basic objectives of information exchange include: improving joint knowledge of future consumer demand, to better manage variability and gain control of the volumes and to make more effective use of limited time (Whiteoak 1993). Information exchange is the enabling mechanism for QR. In QR, information is exchanged more openly, not as in an adversarial relationship (the traditional retail-supplier relationship) (Jackson 1985). Retailers, however, must share information to help vendors plan production and distribution not only at the onset but throughout the duration of the relationship.

The objectives of information exchange discussed above are fundamental not only for QR implementation, but also for successful long-term execution. Information exchange between retailers and vendors is expected to become increasingly important in

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successful QR partnerships as the relationships mature for a combination of two reasons. First, increased levels of information exchange enable the trust and loyalty required for long-term QR partnership success. Second, today's dynamic retailing environment and the constantly changing needs of consumers demands efficient and accurate information exchange by the QR partners if the relationship is to evolve successfully. In other words, unless information is exchanged truthfully and in a timely manner, consumers' needs can not be readily met. Therefore, the need for information exchange not only occurs at the onset of the partnership, but even more so as the relationship matures. Without the increasingly accurate and efficient exchange of information, QR partnerships cannot be successful in the long-run. For these reasons, the following hypothesis is set forth.

H2a: As QR implementation increases, information exchange increases.

The Impact of QR on Flexibility

Flexibility was defined earlier as a bilateral expectation of willingness to make adaptations as circumstances change. It represents insurance that the relationship will be subject to good-faith modification if a particular practice proves detrimental in the light of changed circumstances.

Time is the new enemy in retailing because the longer the forecasting period, the less likely merchandise will meet customer demand (Chain Store Age Executive 1991). "Quick Response is a strategy of customer service that uses technology to make possible an industry pipeline so flexible and efficient that, ideally, retailers can forecast today what they will sell tomorrow and have the merchandise in the stores, on time, in the

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Such cooperation may er

right quantities, colors, sizes and styles" (Chain Store Age Executive 1991, p.4B). Achieving this timely response requires flexibility between retailers and suppliers. Thus, because consumers needs, wants and desires change daily, a flexible working relationship between retailers and suppliers is required. Each party must be willing to make adaptations to variations in demand. Information technology and efficient information exchange, key aspects of a successfully implemented QR system, are the enabling mechanisms for flexibility. The speed and flexibility with which a supplier and retailer can respond to rapidly changing circumstances (i.e., consumer demand), may determine who survives in today's competitive retailing environment. Therefore, because QR is based on the notion of "timely response", flexibility is expected to increases and the extent of QR implementation increases. Hence,

H2b: As QR implementation increases, flexibility increases.

The Impact of QR on Solidarity

In this research, solidarity refers to a bilateral expectation that a high value is placed on the relationship. It prescribes behaviors directed specifically at relationship maintenance. QR is based on a new type of relationship between retailers and vendors. For both, the partnership requires new business practices, starting with a cooperation that stems from a knowledge of each other's business objectives, opportunities and constraints (Chain Store Age Executive 1991). Such cooperative relationships may be formed for cost, benefit and information sharing purposes (Germain, Droge and Daugherty 1994). Such cooperation may emerge out of a wide variety of starting conditions, such as

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preexisting friendship ties, institutional mandates, or resource dependence (Ring and Van de Ven 1994). Benefits of cooperative relationships include: reduced uncertainty, managed dependence (Spekman, Strauss and Smith 1985), exchange efficiency, access to complementary skills, and social satisfactions from the association (Dwyer, Schurr and Oh 1987).

Relationship maintenance, a requirement of success in QR, is built on cooperation. A successful QR partnership is a mutually cooperative relationship between a retailer and supplier (e.g., strategic alliance) and is based on commitment regarding future exchanges. Commitment from both the retailer's own management and from the vendor community are overwhelmingly viewed as the most important success factors in implementing QR (Chain Store Age Executive 1993). As these cooperative transactions are repeated through time, and if they meet basic norms of equity and efficiency, the parties may feel increasingly secure in committing more of their available resources and expectations in subsequent cycles of cooperation (Ring and Van de Ven 1994). For these reasons, the following hypothesis is set forth.

H2c: As QR implementation increases, solidarity increases.

In summary, hypotheses H2a through H2c suggest that as the extent of QR implementation increases, the following also increase: information exchange, flexibility and solidarity.

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ENVIRONMENT UNCERTAINTY: ANTECEDENT TO STRATEGY AND STRUCTURE

Models of the relationships between strategy and structure often include uncertainty as a predictor of strategy, structure or both (e.g., Miller and Droge 1986; Prescott 1986; Germain, Droge and Daugherty 1994). In this dissertation, environment uncertainty is posited directly affect QR strategy implementation and structure (both organizational and relationship). Since it has already been proposed that QR predicts structure, the propositions as a set imply that QR *mediates* the relationship between environment and structure. Mediation is one type of "fit" definition in contingency theory research. Complete mediation occurs if the direct effects of uncertainty on structure are nonsignificant and the indirect effects through QR strategy are significant (Venkatraman 1989). Partial mediation occurs if both the direct and indirect effects of uncertainty on structure are significant (Venkatraman 1989).

The Impact of Environment Uncertainty on QR Strategy Implementation

The effect of the organization's external environment on logistics strategy has not been widely studied (McGinnis and Kohn 1993). However, a common proposition in the normative strategic management literature is that strategists should make decisions based on accurate assessments of their external environments. In Chapter 2, environment uncertainty was defined as the degree of dynamism, unpredictability, and heterogeneity in the environment. It is posited that uncertainty leads to the implementation of a QR strategy. As demonstrated in Table 3-1, this link between environment and strategy is well-confirmed in the literature. For example, this relationship has been found to exist

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in a variety of contexts, including: new product development (e.g., Calantone, diBenedetto and Bhoovarghavan 1994), export strategy (e.g., Cavusgil and Zou 1994; Naidu and Prasad 1994), logistics strategy (e.g., McGinnis and Kohn 1993), JIT (Germain, Droge and Daugherty 1994; Frazier, Spekman and O'Neal 1988), among others.

In the strategy literature (e.g., Child 1972; Duncan 1972), the argument has long been made that changes in ways of conducting business are unlikely to be considered in placid environments. The current status of the retail environment is far from placid. Radical strategic initiatives, like QR, become more likely overall as environmental uncertainty increases (Germain, Droge and Daugherty 1994). This logic is consistent with similar research on JIT practice. For example, Frazier, Spekman and O'Neal (1988) hypothesized that uncertainty should increase the appeal of JIT exchange in particular, as it offers a relatively low risk means of channel coordination without costly ownership. Similarly, Germain, Droge and Daugherty (1994) found that organizations facing more volatile environments increasingly adopt JIT selling as a strategic response.

Environmental uncertainty can take many forms in channel relationships. For the retailer, uncertainty arises largely from inabilities to precisely gauge product demand. It is almost impossible to predict consumer demand (Women's Wear Daily 1993). Therefore, uncertainty surrounds demand if there is not enough time to receive merchandise from the suppliers that is demanded by consumers. More specifically, retail buyers are vulnerable to two types of risk caused by environmental uncertainty. They could underestimate the popularity of the style and lose potential sales or overestimate sales and generate excessive inventories and subsequent markdowns. QR allows retailer

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to order merchandise on a weekly or biweekly basis. Thus, buyers can make use of recent market exposure and information, which allows them to better estimate actual sales. The risk of a large difference between expected and actual sales is significantly reduced, and orders can be placed to better reflect actual market conditions (Maltz and Srivastava 1994).

In sum, QR helps buffer the retailer from uncertainty by improving overall customer service, quality and productivity. The competitive advantage gained can be used to obtain longer contracts, enhance market share and increase profits (Germain, Droge and Daugherty 1994). The net effect is that a retailer confronting an uncertain environment may more avidly seek the competitive security that a relational trading exchange such as QR offers. Hence.

H3: As environment uncertainty increases, the extent of QR implementation increases.

The Impact of Environment Uncertainty on Structure

In addition to the association between environment uncertainty and strategy discussed above, environment uncertainty has also been found to have important implications for the structures of organizations. Table 3-2 revealed a sampling of studies from a variety of business disciplines that have confirmed the existence of such a relationship. For example, the environment has been found to be a predictor of structure in the contexts of: channel relationships (e.g., Heide and John 1992; Noordewier, John and Nevin 1990; Klien, Frazier and Roth 1990), new products (e.g., Calantone,

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The Impact of Environment Uncertainty on Organizational Structure

According to Burns and Stalker (1961), Thompson (1967), and Koberg and Ungson (1987) uncertainty creates the need for more organic (as compared to bureaucratic) structures. Organic structures are typically characterized as more integrated, specialized, formalized and decentralized. The rationale is simple: "because uncertain environments result in both highly complex, nonrepetitive tasks and administrative difficulties, a premium is placed on flexibility and adaptive organizational response" (Germain, Droge and Daugherty 1994, p.474). More specifically, "Lawrence and Lorsch (1967) and Galbraith (1973) contend that uncertainty in the organizational environment requires a differentiated organization structure with a broad array of formalized managerial positions and specialized tasks and a consequent need for liaison devices to integrate the efforts of the many specialists performing these tasks" (Miller 1991, p.36). Regarding decentralization, less centralized structures become preferred because they enhance managerial ability to maneuver and react quickly. And finally, regarding performance control and uncertainty in the similar context of JIT, Germain, Droge and Daugherty (1994) suggest that "uncertain environments may require [1] more extensive performance control systems to improve the accuracy and [2] real-time performance control systems to enhance flexibility and adaptivity by decreasing 'information cycle time' to match environmental dynamics more closely" (p.474). Thus, organic structures that typically emerge in the face of uncertainty tend to be more integrated, formalized and decentralized than bureaucratic ones.

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H4: As environment uncertainty increases, the following all increase: (a) integration, (b) performance control, (c) operations decentralization, (d) scheduling decentralization.

The Impact of Environment Uncertainty on Relationship Structure

In addition to the more traditional view that environment uncertainty affects organizational structure, a more recent trend in the marketing literature is the establishment of the existence of a relationship between environment uncertainty and relationship or boundary-spanning structure. Several studies have proposed or confirmed such a link (e.g., Noordewier, John and Nevin 1990; Klein, Frazier and Roth 1990).

It has been argued that uncertainty has a large impact on the appropriate governance mechanism for a given exchange because unanticipated changes render it more difficult, if not impossible, to identify all possible contingencies beforehand. More specifically, "as uncertainty increases, the limited cognitive capabilities of human agreements put a strain on their ability to craft a priori agreements that take all relevant contingencies into effect" (Noordewier, John and Nevin 1990, p.82). Thus, it is possible to conclude that when uncertainty surrounds interorganizational exchange, various dimensions of relational norms (i.e., flexibility, information sharing, solidarity) increase. In particular, regarding flexibility and information exchange, because uncertain environments result in both highly complex, nonrepetitive tasks and administrative difficulties, a premium is placed on flexibility in organizational responses (Germain, Droge and Daugherty 1994), which is largely in part facilitated by proactive information exchange. Finally, solidarity in an uncertain environment makes the limitation of not identifying all possible contingencies *a priori* trivial. Simply, solidarity in exchange

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buffers the uncertainty by knowing that value is placed on the relationship and that unidentified contingencies can be dealt with in a manner acceptable to the parties involved. In general, norms buffer uncertainty by serving as a general protective device against deviant behavior (Stinchcombe 1986; Thaibaut 1968). Thus, exchange relationships that typically emerge in the face of uncertainty tend to be more relational (vs. discrete) in orientation. Hence,

H5: As environment uncertainty increases, the following also increase: (a) information sharing, (b) flexibility, (c) solidarity.

ANTECEDENTS OF PERFORMANCE: ENVIRONMENT, STRATEGY & STRUCTURE

In Tables 3-3, 3-5 and 3-6, the environment, strategy and structure were shown to influence organizational performance in a variety of business contexts. Specific to this dissertation, hypotheses are set forth suggesting that environment uncertainty, QR strategy implementation, and structure (i.e., organicity and relationalism) each directly have retailer performance implications.

The Impact of QR Strategy Implementation on Performance

The traditional stance in the literature is that strategy influences performance (e.g., Dess and Davis 1984; Hambrick 1985; Miller and Friesen 1986). Table 3-5 demonstrated the link between strategy and performance in many contexts, including: new products (e.g., Calantone, diBenedetto and Bhoovaraghavan 1994; Parry and Bass

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1990), exporting (e.g., Naidu and Prasad 1994; Cavusgil and Zou 1994); global sourcing (e.g., Kotabe and Swan 1994; Kotabe and Murray 1990), promotion (e.g., Walters 1988); and channel relations (e.g., Noordewier, John and Nevin 1990), among others. Select examples of performance implications in retailing include:

> "For the typical retailer, the cost of carrying inventory averages $.17 per $1.00 value. When that 17% of non-value-added cost -- caused by the expense of labor, facilities and borrowed money -- is squeezed out of the pipeline, both retailers and manufacturers stand to improve their inventory productivity and reduce carrying costs significantly" (Chain Store Age Executive 1991).

> "JCPenney, a leader in quick response, in a three-way partnership with Eddy Haggar Limited and Milliken Mills, all parties maintained minimum inventories of a very successful women's pant, while fulfilling 96% of the orders to customers' satisfaction. A re-engineering of the manufacturing process (towards routinization) eliminated 30 days from the cycle time, allowing inventory turns to double" (Oesterreicher 1993).

In the context of this dissertation, QR strategy implementation is expected to enhance retailer performance for several reasons, including--fewer markdowns, lower operating expenses, higher turns, increased selling space and improved customer service (Phillips and Droge 1995a)--all contributing to increased sales and profits. Fiorito, May and Straughn (1995) report that "most retailers who have implemented QR have realized net positive impacts on their financial operating data, which result in higher profits and/or better pricing to consumers" (p.12).

Under QR, inventory is received by the retailer as needed, affording the retailer the opportunity to convert storage space into selling space. Similarly, QR lowers safety stock requirements for retailers, thereby increasing merchandise turnover (Maltz and Srivistava 1994). Fewer out-of-stock situations results in a reduction in missed sales and

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an increase in customer service. For these reasons, increased retailer performance is expected to accompany QR implementation.

H6: As QR strategy implementation increases, retailer performance increases.

The Impact of Environment Uncertainty on Performance

In Table 3-3, the link between the environment and performance was shown in a wide variety of contexts, including: buyer-supplier relationships (e.g., Heide and Stump 1995), entrepreneurship (e.g., Shane and Kolvereid 1995), export strategy (e.g., Cavusgil and Zou 1994; Kaynak and Kuan 1993), among others. Environmental conditions found to directly influence performance include, but are not limited to: organizational characteristics, decision-maker characteristics, foreign target market, infrastructure, technology, competition, industry characteristics, and uncertainty.

Consistent with the scope of this dissertation, several studies revealed the existence of a specific relationship between *environment uncertainty* and performance (e.g., Heide and Stump 1995; McArthur and Nystrom 1991; Stearns, Hoffman and Heide 1987). Empirical organization theory holds the assumption that high levels of perceived uncertainty are detrimental to performance (Bourgeois 1985). The logic behind such an association is simple. In any environment characterized by uncertainty, if no adaptation mechanism is cultivated, the costs of making changes in response to unanticipated events will eventually undermine the returns an organization derives. In other words, environmental conditions (like uncertainty) will adversely affect performance unless appropriate strategic or structural arrangements are designed to deal with them (Heide and Stump 1995). Thus, in the absence of a structure designed to handle changing

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environmental conditions (e.g., uncertainty), performance will be expected to decline. This is the essence of the following hypothesis.

H7: As environment uncertainty increases, retailer performance decreases.

The Impact of Organizational Structure on Performance

Regarding the structure-performance link, Table 3-6 confirmed the structure-performance link in a variety of different contexts, including: interfirm relationships (e.g., Robicheaux and Coleman 1994; Parkhe 1993; Mahajan and Wind 1988; Schul, Little and Pride 1988), export behavior (e.g., Kaynak and Kuan 1993), entrepreneurship (e.g., Covin and Slevin 1990), among others.

Both Covin and Slevin (1990) and Koberg and Ungson (1987) have found organizational performance to be significantly linked to organic structures, typically characterized as more integrated, specialized, formalized and decentralized than bureaucratic ones. Similarly, Gupta (1987) found that corporate decentralization positively contributed to organizational performance. Regarding integration, Miller and Toulouse (1986) linked success to delegation of decision-making. For these reasons, the following hypothesis is set forth.

H8a-d: Organizational structures characterized as organic (i.e., more integrated, formalized, and decentralized), will result in increased retailer performance.

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The Impact of Relationship Structure on Performance

Noordewier, John and Nevin (1990) found that relational elements (i.e., supplier flexibility, supplier assistance, information provided to supplier, monitoring of supplier and expectation of continuity) enhance the performance outcomes in buyer-seller relationships. Most recent studies, however, provide only indirect support for the link between channel structure and performance (Robicheaux and Coleman 1994). Intuitively, however, "retailers with long-term relationships can achieve a competitive advantage by receiving merchandise in short-supply, information on new and best-selling products and competitive activity, best allowable prices, and advertising and markdown allowances" (Ganesan 1994, p.1). Relational norms, in turn, are considered to be important mechanisms for regulating long-term relational exchanges (Gundlach, Achrol and Mentzer 1995). For these reasons, it will be tested in this dissertation that an increase in relational norms--information exchange, flexibility, and solidarity--enhances retailer performance.

H9a-c: Exchange structures characterized as relational (i.e., high in information exchange, flexibility, solidarity) will result in increased retailer performance.

Additional Performance Implications

Another central performance contention of this research is that good performers will exhibit significant complementarities of strategy with both structure and environment, so that the relationships predicted in Figure 3-1 between environment, strategy and structure will be more pronounced among good than among bad performers. Miller (1988) largely confirmed this contention in the context of Porter's business

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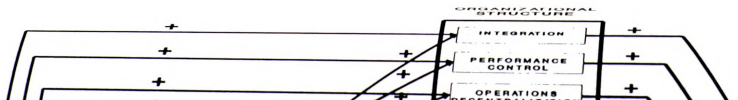
strategies. Therefore, the complementarities or congruencies of QR strategy with structure and environment uncertainty suggested by hypotheses 1 through 4 are expected to be associated more so with good performance than with poor performance. Hence,

H10: The associations predicted by Hypotheses 1 through 4 will be stronger in groups of high performers than in groups of low performers.

In summary, Figure 3-2 provides a representation of the full model and the proposed direction of the links between model constructs as suggested by the preceding hypotheses.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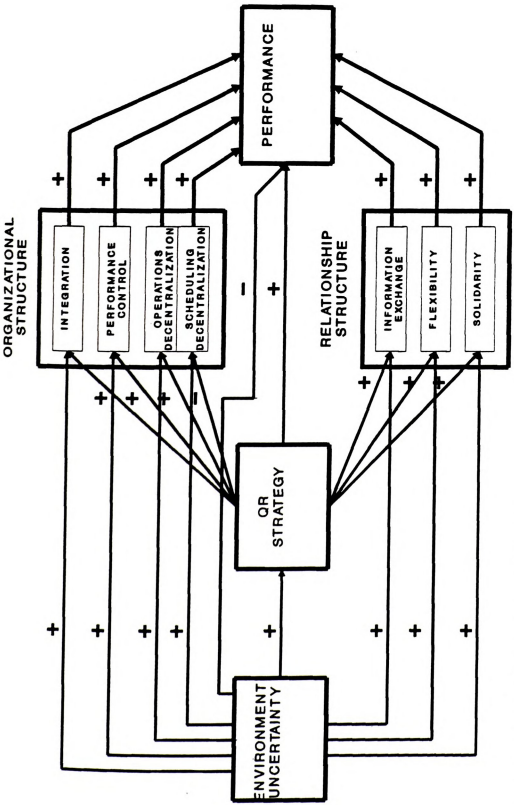

Figure 3-2. Model and Hypotheses: A Summary

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PART II - QUICK RESPONSE AND GLOBAL SOURCING: DRIVERS AND PERFORMANCE IMPLICATIONS

In strategy, "competitive positioning commonly involves a singular approach emphasizing either cost leadership or differentiation, however, some competitors may adopt multiple approaches by combining the two" (Cappel, Wright, Wyld and Miller 1994, p.209). Part II of this dissertation examines the effectiveness of QR and another major strategy in retailing, global sourcing. As discussed in Chapter 1, quick response emerged in the late 1980s in response to competition from offshore. In the apparel industry, for example, it was estimated that at that time over 50 percent of the apparel and textiles purchased were sourced from the Orient (Blackburn 1991). In manufacturing, in general, it has been estimated that over 70 percent of all manufacturing industries in the U.S. face serious global competition (Fawcett and Birou 1992). Drowning in a flood of imports, U.S. producers, suppliers and retailers were compelled to reorient their corporate strategies toward time (Blackburn 1991). Based on this well-accepted explanation as to the origin of QR, global sourcing is typically viewed as an alternative strategy (e.g., McNamara 1993). The former offers the retailer a low-cost alternative to domestic sourcing and the latter yields a strategy based on the cutting-edge concept of information replacing inventory in the supply chain. Some literature, however, has questioned the apparent non-compatibility of these two retail strategies.

DRIVERS OF QR AND GLOBAL SOURCING

Due to the lack of research on these two retail strategies, little is known about what inspires retailers to adopt either quick response or global souring strategies.

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Therefore the intent of this inquiry is simply to gain a better understanding of these two strategies by examining the effects of a variety of facets in the retailer's environment. As discussed thoroughly in the context of Part I, environments can and should influence organizational strategy. Factors identified in the literature as potential external drivers of QR include: environment uncertainty (e.g., Phillips and Droge 1995a,b; Germain, Droge and Daugherty 1994; Handfield 1994); cost reduction (Phillips and Droge 1995a); retailer power; and foreign competition (e.g., Blackburn 1991). External environment factors believed to influence global sourcing implementation include: cost reduction, competitive products from overseas, availability, and the internationalization of retailing (Liu and McGoldrick 1995). Regarding cost reduction, the trends of retailer concentration *and* increasing competition mean little opportunity for retailers to raise prices in an effort to increase profits. Many are pursuing an alternative strategy of reducing supplier costs with global sourcing. Regarding overseas competition, developing countries have become, and are becoming increasingly competitive in the area of manufactured products. Retailers are finding that many items with higher quality or a combination of low price and quality can be found in developing countries (Fagan 1991; Monczka and Trent 1991b). Some retailers opt to source globally to enhance the reliability of their supply, to supplement their domestic sources, or to meet increased demand (Liu and McGoldrick 1995). In many cases, certain products can only be found overseas.

H11: External drivers of quick response and/or global sourcing implementation include: cost reduction, differentiation, competition, retailer power, environment uncertainty, availability and the internationalization of retailing.

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The literature on internal contribution factors is less substantial. Contributing factors in the retailer's internal organizational environment include: technological sophistication, corporate goals (e.g., time-based or differentiation), sophistication of management, innovativeness, and marketing orientation. Similarly, factors in the retailer's internal organizational environment believed to influence global sourcing include: technological sophistication, corporate goals (e.g., cost-minimization), degree of internationalization, and sophistication of management.

H12: Internal drivers of quick response and/or global sourcing implementation include: corporate goals, degree of internationalization, sophistication of management, innovativeness, technological sophistication, and marketing orientation.

STRATEGIC PERFORMANCE IMPLICATIONS

Because developing a better understanding of the strategy-performance relationship in service industry environments is an "incremental process" (Cappel et al. 1994, p.211), both scenarios and their performance implications are considered. First, quick response and global sourcing will be viewed as strategic alternatives. Second, the two strategies will be assumed to coexist.

Quick Response and Global Sourcing as Competing Strategies

In Chapter 1, the benefits of quick response and global sourcing were discussed. In sum, QR is expected to enhance retailer performance for several reasons, including--fewer markdowns, lower operating expenses, higher turns, increased selling space and

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improved customer service (Phillips and Droge 1995)--all contributing to increased sales and profits. Global sourcing's competitive impact extends beyond cost containment to influence performance along the competitive dimensions of quality, dependability, flexibility and innovation (Hayes, Wheelwright and Clark 1988).

While it seems logical for retailers to desire integrating these two strategies to gain the benefits from each, the more traditional view is that these two approaches to strategic purchasing are considered to be inherently incompatible -- one suggests movement towards zero-inventories and one does not. For example, Fawcett and Birou (1992) found that nearly 2/3 of purchasing and material managers studied reported that they believed JIT, a time-based strategy in manufacturing, and global sourcing to be incompatible. The most basic conflict is that of buyer-supplier proximity (Fawcett and Birou 1992).

This more traditional view that global sourcing and QR are strategic alternatives is consistent with Porter's work (e.g., Porter 1980,1985). In Porter's terminology, QR is characteristic of a differentiation strategy and global sourcing is characteristic of a cost-leadership strategy. While many acknowledge that a common outcome of successful QR implementation is cost-reduction, it is argued in this dissertation that QR is primarily a differentiation strategy for the following reason. Porter's (1980) definition of differentiation is that the "offering of the firm creates something that is perceived *industrywide* as being unique" (p. 37) and QR's end result is having merchandise in the stores when consumers want it, unarguably an outcome perceived to be unique throughout the retailing industry. This is not to say that QR retailers are not concerned with costs. According to Porter (1980), "a differentiation strategy does not allow the

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firm to ignore costs, but rather they are not the primary strategic target".

Porter argued that with the exclusive pursuit of a single generic strategy, be it cost leadership or any of a variety of differentiation approaches, businesses can realize significant and competitive advantages over their rivals. Specifically, Wright, Hotard, Kroll and Tanner (1990) reported that businesses competing primarily with a differentiation strategy should outperform those competing on a low-cost basis. They contend that companies competing primarily with the differentiation strategy may obtain a competitive advantage, in spite of their higher cost structures, since their unique product or service offerings allow the alternative of charging higher prices.

In this mutually exclusive world of Porter and given that QR emerged in response to offshore sourcing, it seems logical to suggest that for retailers to initiate a QR strategy, the perceived advantages must outweigh other strategic options (e.g. global sourcing). If this contention proves to be true, then performance for retailers with a QR strategy should exceed the performance of retailers with global sourcing as their predominant strategy. Hence, the following hypothesis is set forth.

H13: The performance of retailers implementing only (or primarily) QR strategies will be greater than the performance of retailers implementing only (or primarily) global sourcing strategies.

Quick Response and Global Sourcing as Complementary Strategies

In an article titled "The Generic Strategy Trap", Miller (1992) advocates using a mixed strategy as opposed to a singular approach. Competing on a combined approach of differentiation and low cost may be beneficial because the differentiated output

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(products and/or services) have the advantage of higher pricing, while emphasis on low costs maintains costs in comparison to competitors. Past research indicates the result of competing with a combination of these approaches may be associated with higher profitability and larger market shares (e.g., Miller and Friesen 1980; Phillips, Chang and Buzzell 1983; Jones and Butler 1988; Wright et al. 1990).

Extending the more traditional notion that QR strategy and global sourcing are strategic alternatives, there is evidence in the trade press (e.g., Sungchil 1994-*QR;* Vickery 1989-*JIT*) that the two strategies coexist in a manner advantageous to the retailer. Similarly, Vickery (1989) concluded that the benefits of foreign sourcing often outweigh its disadvantages, even in a time-based environment, and further suggest several strategies for facilitating foreign sourcing in a time-based environment.

Specific to retailing and based on Porter's generic strategy framework, Cappel, Wright, Wyld and Miller (1994) suggest retailers employing a combination low cost/differentiation strategy will outperform those competing solely on the basis of low cost or differentiation. Fawcett and Birou (1992) contend that the principal rational for striving to combine global and time-based (e.g., QR) sourcing comes from the substantive competitive benefits available through the successful implementation of the two strategies. For these reasons, the following hypothesis is set forth.

H14: The performance of retailers simultaneously implementing both QR and global sourcing strategies will be greater than retailers implementing only QR strategies or global sourcing strategies.

Hypotheses 1 through 14 will be tested by the methodology discussed in Chapter 4 and the results will be presented and discussed in Chapters 5 and 6 of this dissertation.

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CHAPTER 4
Research Methodology

This chapter describes the methodology employed to test the hypotheses developed in Chapter 3. First, the questionnaire development process is discussed. Second, the research variables included in this study are operationalized. Third, the research design, including sampling procedures and data collection, is overviewed. Finally, the techniques and procedures for analyzing the data are outlined. In an effort to attain high response rates possible, Dillman's (1978) Total Design Method (TDM) provides direction for the questionnaire construction and survey implementation portion of this dissertation.

QUESTIONNAIRE AND MEASURES

To adequately test the proposed hypotheses, a structured questionnaire was developed in several stages. First, a comprehensive review of the literature was performed. Second, from that review, valid multiple item scales were borrowed and adapted to suit the purpose of this research. In some instances, measures had to be developed using a scale development paradigm similar to those described by Churchill (1979) and Gerbing and Anderson (1988). In both cases, a large number of items were generated to fully capture the construct domains. Third, a pretest was conducted to refine the items. Retail executives and academicians with familiarity in this research area were administered the questionnaire and were asked to evaluate the length, the time needed for completion, and the content of individual items. Items that were found to be ambiguous were either modified or deleted. Finally, the questionnaire was finalized based on the pretest feedback and experts' comments. The questionnaire contains several

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major sections of variables, consistent with the proposed model constructs. The scales used to measure each construct are presented below.

Environment

Environment uncertainty. In Chapter 2, Table 2-12 revealed a sample of relevant measures in the literature for the operationalization of environment uncertainty. In this dissertation, the genesis of the environment uncertainty scale was Miller and Droge's (1986; see also Khandwalla 1977) scale. The scale was modified slightly to be consistent with the retail industry environment. The scale taps uncertainty in marketing practices, competitor actions, customer demands and tastes, and industry norms. In this dissertation, environment uncertainty is measured as follows:

Please rate the extent to which you agree or disagree with the following statements.

		strongly disagree						strongly agree
1.	many new products are introduced in our industry during a typical year	1	2	3	4	5	6	7
2.	many new competitors appear in our industry during a typical year	1	2	3	4	5	6	7
3.	demand in our primary line of business is stable	1	2	3	4	5	6	7
4.	competitor marketing practices in our line of business change rapidly	1	2	3	4	5	6	7
5.	sales forecasts are often accurate	1	2	3	4	5	6	7
6.	products in our primary line of business quickly become obsolete	1	2	3	4	5	6	7
7.	market shares among top competitors are stable	1	2	3	4	5	6	7

Strategy

Two retail strategies are the focus of this research: quick response and global sourcing. In Part I, the main focus is QR, its implications for management practice, and its related performance implication. In Part II, drivers of the two strategies are considered, and the effectiveness of QR is compared to the effectiveness of global

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Quick Response. Table 2-1 in Chapter 2 provided a sample of relevant measures for the operationalization of quick response (QR). As is evident from the table, only one empirical study was found that operationalized quick response implementation (i.e., Fiorito, May and Straughn 1995). However, based on the previously noted similarities between QR and JIT (as discussed in Chapter 1), the JIT literature is also relevant in the operationalization of the construct. In this dissertation, quick response implementation is operationalized in two ways. First, following a definition of quick response, three straight-forward questions are asked regarding basic QR utilization. The first two questions (below) were borrowed from the JIT literature -- Fawcett and Birou (1992) and Germain, Droge and Daugherty (1994), respectively. The third question is original and is an expected source of variation in the model to be tested in this dissertation.

Quick Response (QR) is a technology-driven sourcing strategy based on a cooperation relationship between retailer and supplier that seeks to minimize slack resources (i.e., time and inventory) in the supply chain.

1. Does your company have a formal QR sourcing program? ___ yes, for ___ years
___ no

If you answered NO, please skip the following question.

2. How formalized is your QR program?

very informal						very formal
1	2	3	4	5	6	7

3. Regardless of your answer to the previous questions, what percent of merchandise is sold on a quick response (QR) basis? _____% of sales
_____% of unit volume

If you answered 0%, please skip the following question.

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4. Of the merchandise sold on a QR basis, what percent is:

i. seasonal? _____% of sales
_____% of unit volume

ii. fashion? _____% of sales
_____% of unit volume

iii. basic? _____% of sales
_____% of unit volume

Second, a scale similar to that used by Fiorito, Day and Straughn (1995) seeks to identify the degree of implementation of several QR-related activities. A similar scale, in the context of JIT, was used by Germain, Droge and Daugherty (1994). The reason for using a more subtle scale is that even though a retailer does not have a formal QR program, it may be engaging in several QR activities. More specifically, the scale is operationalized as follows:

Please rate your agreement with the following statements.	strongly disagree						strongly agree
1. cross-docking is a part of operations	1	2	3	4	5	6	7
2. we provide vendors with stock-out data	1	2	3	4	5	6	7
3. we provide vendors with sales data	1	2	3	4	5	6	7
4. we involve vendors with inventory replenishment processes	1	2	3	4	5	6	7
5. shipping container marking is used	1	2	3	4	5	6	7
6. we use advance shipping notice to our stores	1	2	3	4	5	6	7
7. we purchase in small lots (or small case sizes)	1	2	3	4	5	6	7
8. small amounts of inventory are kept in the system	1	2	3	4	5	6	7
9. we have a quick response team that meets with vendors	1	2	3	4	5	6	7
10. we scan transactions at the SKU level	1	2	3	4	5	6	7
11. we make daily small lot shipments from warehouses/ distribution centers to retail outlets	1	2	3	4	5	6	7
12. we use electronic data interchange (EDI) to order from suppliers	1	2	3	4	5	6	7
13. we use electronic communications to replace retail outlet inventory from that held in warehouse/distribution centers	1	2	3	4	5	6	7
14. we extensively use quick response (QR)	1	2	3	4	5	6	7

Global Sourcing. In Table 2-2 of Chapter 2, a sample of relevant measures for the operationalization of global sourcing were provided. Consistent with the majority of

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articles that have provided scales for the measurement of this construct, global sourcing was operationalized by two questions. The genesis for first question is Fawcett and Birou (1992). The second question has been used by Murray, Kotabe and Wildt (1995) and Min and Galle (1991). Questions 3 through 14 are original items. In this dissertation, global sourcing is operationalized as follows:

Global sourcing is a retailer-driven sourcing strategy where the retailer serves a the catalyst in sourcing the merchandise or subcomponents from abroad.

1. Does your company have a formal global sourcing program? __ yes, for ___ years
__ no

If you answered NO, please skip the following question.

		very informal						very formal
2.	How formalized is your global sourcing program?	1	2	3	4	5	6	7

3. Regardless of your answer to the previous question, what percentage of your sourcing/procurement is from global suppliers? _____ % of sales
_____ % of unit volume

If you answered 0%, please skip the following question.

Please rate your agreement with the following statements.

		strongly disagree						strongly agree
4.	we have a supplier selection process that extensively evaluates suppliers regardless of their country-of-origin	1	2	3	4	5	6	7
5.	close relationships with global suppliers is key to our global sourcing strategy	1	2	3	4	5	6	7
6.	a large percent of our merchandise is procured from outside the U.S.	1	2	3	4	5	6	7
7.	we have our own offices in foreign countries to oversee production	1	2	3	4	5	6	7
8.	our buyers often travel overseas	1	2	3	4	5	6	7
9.	we produce most of our private label brands overseas	1	2	3	4	5	6	7
10.	we have efficient global transportation and logistics systems	1	2	3	4	5	6	7
11.	most of our global shipments preclear customs	1	2	3	4	5	6	7
12.	we extensively use global sourcing	1	2	3	4	5	6	7
13.	we proactively seek global sourcing opportunities	1	2	3	4	5	6	7
14.	our merchandising success is largely attributable to global sourcing	1	2	3	4	5	6	7

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Organizational Structure

As discussed in Chapter 2, the selection of the *organizational* structure variables for this dissertation was guided by literature reviews that have consistently identified integration, formalization and decentralization, as major interrelated dimensions of organizational structure. Tables 2-4 through 2-6 in Chapter 2 provided a sample of relevant measures for the operationalization of these selected dimensions of organizational structure. The main source for the operationalizations of these constructs is Germain, Droge and Daugherty (1994). However, the origin of these scales are the Aston studies (e.g., Inkson, Pugh and Hickson 1970; Pugh and Hickson 1976). Others that have adopted the scales include: Miller (1983/1988); Yasai-Ardekani (1989); and Miller and Droge (1986). Due to the context of this dissertation (i.e., retailing), modifications and additions to the original scales were necessary.

Integration. In this dissertation, integration is operationalized as follows:

To what extent is decision-making at top levels in your firm characterized by participative, cross-functional committees in which different departments, functions or divisions get together to decide the following classes of decisions?

		used rarely						used often
21.	distribution/operations strategy	1	2	3	4	5	6	7
22.	marketing/merchandising strategy	1	2	3	4	5	6	7
23.	purchasing/buying strategy	1	2	3	4	5	6	7
24.	capital budget decisions (selection of long-term investments)	1	2	3	4	5	6	7
25.	long-term strategies (of growth or diversification) and decisions related to changes in the firm's operating philosophy	1	2	3	4	5	6	7

Decentralization. As discussed in Chapter 3, time-based competition (i.e., QR) makes the distinction between when things are done and how things are done particularly relevant. The first fifteen questions are representative of operations decentralization.

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The remaining four questions capture the domain of scheduling decentralization. In particular, decentralization is operationalized in the following way:

Which level has the authority to make the following decisions?

1=CEO, chairman, president
2=executive, sr. vice-president, GMM
3=DMM, director (e.g., MIS, store operations)
4=buyer, regional manager
5=district stores manager
6=store manager
7=assistant store manager

1. inventory control/order processing software adoption	1 2 3 4 5 6 7
2. warehousing technology (e.g., robotics, software) adoption	1 2 3 4 5 6 7
3. electronic data interchange (EDI) adoption	1 2 3 4 5 6 7
4. retail technology adoption (e.g., POS scanning technology)	1 2 3 4 5 6 7
5. the number of retail workers required	1 2 3 4 5 6 7
6. internal labor disputes	1 2 3 4 5 6 7
7. overtime at the retail level	1 2 3 4 5 6 7
8. number of retail outlets to operate	1 2 3 4 5 6 7
9. number of warehouses/distribution centers to operate	1 2 3 4 5 6 7
10. pricing policy	1 2 3 4 5 6 7
11. in-store promotions/advertising	1 2 3 4 5 6 7
12. product selection	1 2 3 4 5 6 7
13. supplier selection	1 2 3 4 5 6 7
14. retail location decisions	1 2 3 4 5 6 7
15. warehouse/distribution location decisions	1 2 3 4 5 6 7
16. production scheduling (e.g., programming deliveries)	1 2 3 4 5 6 7
17. product delivery schedules from vendor	1 2 3 4 5 6 7
18. warehouse-distribution product receiving decisions	1 2 3 4 5 6 7
19. store deliveries	1 2 3 4 5 6 7

Performance Control. Performance control is one aspect of the broader construct of formalization. For the reasons set forth in Chapter 2, the specific dimension of performance control was deemed more relevant to this research than was the more general concept of formalization. In this dissertation, performance control is operationalized as follows:

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Rate the extent to which the performance of your firm is monitored in each of the following areas.

		used rarely						used often
16.	functional costs (e.g., operations, selling)	1	2	3	4	5	6	7
17.	cost controls by fixing standard costs and analyzing variation	1	2	3	4	5	6	7
18.	productivity analysis	1	2	3	4	5	6	7
19.	customer satisfaction and follow-up	1	2	3	4	5	6	7
20.	customer service (e.g., no lines, rainchecks)	1	2	3	4	5	6	7

Relationship Structure

For the purpose of this research, relationship structure is conceptualized in terms of relational norms. As characterized by Heide and John (1992), in this dissertation, relational norms constitute a higher order construct consisting of the dimensions: flexibility, information exchange and solidarity. Tables 2-8 through 2-10 in Chapter 2 provided a sample of relevant measures for the operationalization of these selected facets of relational norms. The main source for the operationalizations of these dimensions is Heide and John (1992). However, the origin of these scales are Kaufmann and Stern (1988) and Noordewier, John and Nevin (1990). These scales were adopted for use in this dissertation without modification.

Flexibility. In this dissertation, flexibility is operationalized as follows:

Regarding your relationship with your largest suppliers, how accurate are the following descriptions?

		completely inaccurate						completely accurate
1.	Flexibility in response to requests for change is a characteristic of this relationship	1	2	3	4	5	6	7
2.	The parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances	1	2	3	4	5	6	7
3.	When some unexpected situation arises, the parties would rather work out a new deal than hold each other to the original terms	1	2	3	4	5	6	7

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Information Exchange. Information exchange is operationalized as follows:

		completely inaccurate						completely accurate
4.	In these relationships, it is expected that any information that might help the other party will be provided to them	1	2	3	4	5	6	7
5.	Exchange of information in this relationship takes place frequently and informally, and not only according to a prespecified agreement	1	2	3	4	5	6	7
6.	It is expected that the parties will provide proprietary information if it can help the other party	1	2	3	4	5	6	7
7.	It is expected that we keep each other informed about events or changes that may affect the other party	1	2	3	4	5	6	7

Solidarity. The final dimension of relationship structure, solidarity, is operationalized as follows:

		completely inaccurate						completely accurate
8.	Problems that arise in the course of this relationship are treated by the parties as joint rather than individual responsibilities	1	2	3	4	5	6	7
9.	The parties are committed to improvements that may benefit the relationship as a whole, and not only individual parties	1	2	3	4	5	6	7
10.	The parties in this relationship do not mind owing each other favors	1	2	3	4	5	6	7

Performance

Walker and Ruekert (1987) in a comprehensive literature review of marketing literature identified three performance dimensions of primary importance to top corporate and business unit managers: effectiveness, efficiency, and adaptability.

Effectiveness. In the performance context, effectiveness is the success of a business' product and programs in relation to those of its competitors in the market. This performance dimension is typically measured by financial performance measures and/or strategic performance measures. Both strategic and financial measures are used to represent effectiveness -- the first three items represent strategic measures and the last two represent financial measures. The dimensions are operationalized as follows:

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Rate your organization's performance over the past 5 years relative to the competition in your primary industry.

		well below industry average						well above industry average
1.	market share growth	1	2	3	4	5	6	7
2.	sales growth	1	2	3	4	5	6	7
3.	profit growth	1	2	3	4	5	6	7
4.	return on investment (ROI)	1	2	3	4	5	6	7
5.	return on sales (ROS)	1	2	3	4	5	6	7

Please indicate your company's success in meeting expectations in the following areas.

		well below our expectations						well above our expectations
1.	market share growth	1	2	3	4	5	6	7
2.	sales growth	1	2	3	4	5	6	7
3.	profit growth	1	2	3	4	5	6	7
4.	return on investment (ROI)	1	2	3	4	5	6	7
5.	return on sales (ROS)	1	2	3	4	5	6	7

Efficiency. Performance efficiency is the outcome of a business' programs in relation to the resources employed in implementing them. Efficiency measures of performance are commonly referred to as objective or economic performance as they deal with actual operating performance. In this dissertation, efficiency is operationalized as follows:

Please indicate your company's performance on the following dimensions.

1. annual corporate sales ($) $_____
2. return on inventory (ROI) _____
3. return on sales (ROS) _____

Adaptability. Adaptability is the business' success in responding over time to changing conditions and opportunities in the environment. Two original items comprise this dimension of performance. The operationalization is as follows:

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Rate the extent to which your company is characterized by the following statements.

		to a very little extent						to a very great extent
1.	Our company has successfully responded to changing conditions in the environment.	1	2	3	4	5	6	7
2.	Our company has successfully responded to opportunities in the environment.	1	2	3	4	5	6	7

Strategy performance. Several performance items specific to this research were developed. In particular, the perceived success of quick response and global sourcing are of interest. Four items were developed to represent this research-specific performance dimension. The first two items tap the retail executive's belief that the strategies have positive performance implications *regardless of if the retailer is not currently implementing a QR or global sourcing strategy*. The second two items consider the perceived performance of only those retailers currently implementing a QR or global sourcing strategy.

In general, how strongly do you agree or disagree with the following statements?

		strongly disagree						strongly agree	
1.	A quick response strategy contributes greatly to the overall success of a retailer.	1	2	3	4	5	6	7	
2.	A global sourcing strategy contributes greatly to the overall success of a retailer.	1	2	3	4	5	6	7	
		very dissatisfied						very satisfied	
3.	If your company is currently implementing a quick response strategy, how satisfied are you with its results?	1	2	3	4	5	6	7	n/a
4.	If your company is currently implementing a global sourcing strategy, how satisfied are you with its results?	1	2	3	4	5	6	7	n/a

Strategy Drivers

As discussed in Chapter 3, several drivers of quick response and global sourcing have been identified in the literature (e.g., environment uncertainty, retailer power,

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foreign competition, degree of internationalization). Three scales were developed to characterize the retailer and its perceived environment on dimensions that are potential drivers of quick response, global sourcing, or both. Items in the first scale tap corporate goals and strategies. Items in the second scale tap the retailer's perceptions of their operating environment. Items in the third scale tap management characteristics.

1. *How would you best characterize your company's corporate goals and strategies?*

cost reduction tactics are very important to us	1 2 3 4 5 6 7	cost reduction strategies are not very important to us
we are first to adopt new products or new technologies	1 2 3 4 5 6 7	we are last to adopt new products or new technologies
risk-averse	1 2 3 4 5 6 7	risk-taker
price-driven	1 2 3 4 5 6 7	quality-driven
differentiation from competitors is central to our strategy	1 2 3 4 5 6 7	differentiation from competitors is not central to our strategy
we have established overseas operations	1 2 3 4 5 6 7	we have domestic operations only
industry-follower	1 2 3 4 5 6 7	industry-leader
we mostly rely on domestic sources of supply	1 2 3 4 5 6 7	we mostly rely on foreign sources of supply

2. *How would you best characterize the environment in which your company operates?*

we have a lot of power over our largest suppliers	1 2 3 4 5 6 7	we have very little power over our largest suppliers
large fluctuations in demand for our products	1 2 3 4 5 6 7	stable demand for our products
foreign competition is our greatest concern	1 2 3 4 5 6 7	domestic competition is our greatest concern
many competitors have overseas operations	1 2 3 4 5 6 7	few competitors have overseas operations

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3. *How would you best characterize <u>your company's management profile</u>?*

our management possesses a great deal of international business experience	1	2	3	4	5	6	7	our management possesses domestic business experience only
we have a long history of international business involvement	1	2	3	4	5	6	7	we have no international business involvement
innovative	1	2	3	4	5	6	7	traditional
receptive to change	1	2	3	4	5	6	7	not receptive to change

Due to the complexity of the construct, the following questions were adapted from Jaworski and Kohli (1993) to tap the retailer's "marketing orientation". The first two items tap intelligence generation, the second two items tap intelligence dissemination, and the final two items tap market responsiveness.

Rate the extent to which you agree or disagree with the following statements.

		strongly disagree				strongly agree
1.	We often meet with customers to find out what products they will need in the future.	1	2	3	4	5
2.	We do a lot of in-house market research.	1	2	3	4	5
3.	Departments get together periodically to discuss market trends and developments.	1	2	3	4	5
4.	Data on our customers are regularly disseminated to our stores.	1	2	3	4	5
5.	It takes us a long time to decide how to respond to our competitors' new campaigns.	1	2	3	4	5
6.	We tend to ignore changes in our customers' product or service needs.	1	2	3	4	5

Context

The following set of questions, appearing at the beginning of the questionnaire, were developed to obtain descriptive company profiles.

1. annual corp
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7. number of
8. ownership

9. percent
10. percent

11. What is
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1. annual corporate (or business unit) sales ($) _____
2. number of full-time equivalent (FTE) employees _____
3. number of U.S. retail outlets _____
   warehouses/distribution centers _____
4. number of foreign retail outlets _____
   warehouses/distribution centers _____
5. number of SKU's _____
6. number of suppliers who are manufacturers _____
7. number of suppliers who are wholesalers _____
8. ownership [ ] U.S.
   [ ] Canadian
   [ ] European, specify country _____
   [ ] Asian, specify country _____
   [ ] other, specify country _____

9. percent of sales beyond the home market? _____%
10. percent of outlets beyond the home market? _____%

11. What is your primary retail industry?

supermarket/grocery	[ ]	general merchandisor	[ ]
department store	[ ]	specialty hardline	[ ]
specialty apparel	[ ]	other _____	[ ]

SAMPLING FRAME

A retail industry field survey of large, diverse non-food retailers is conducted to collect the primary data. A multiple industry retailer design is a valid research design for testing the proposed model because the design systematically generates variance in all the model constructs.

Retailers selected for this research will be derived from a list of large U.S. retailers supplied by Ward's Business Directory of U.S. Private and Public Companies. Included in the database will be only those nonfood retailers with annual sales in excess of $100 million. Specific retailers to be included in the list include: department stores, general merchandisers, discounters, and various specialty stores (e.g., women's apparel,

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toys, books). A minimum sample of 150 randomly sampled retailers is desired. The designated respondent will be either the GMM or the top logistics/distribution executive.

DATA COLLECTION

Data collection for this research will involve three phases, similar to that suggested by Dillman's (1978) Total Design Method (TDM). In the initial phase, telephone consent to participate in the study initiates the data collection process. Although not included in the TDM, it was decided that due to the typically very low response rates obtained when sampling retailers, the most financially efficient means of acquiring the desired sample size is to establish verbal contact from the sampling units via telephone. Questionnaire packets will only be sent to the retailers where verbal approval has been obtained. Included in the packet are: a personalized cover letter, a questionnaire, and a postage-paid first class business reply envelope. The cover letter explains the purpose of the research and its significance to retail practice, states the importance of participation in the study, describes the time and effort needed to complete the questionnaire, assures confidentiality, promises a summary benchmarking report if the completed questionnaire is returned with a business card, and thanks the business executive in advance for his/her participation. An estimated response rate of 25 percent renders sending out approximately 800 questionnaires in the initial mailing (with an attempt to obtain approximately equal representation from the various types of retailers). As suggested by Dillman (1978), exactly one week after the first mailout, a postcard follow-up reminder is sent to all recipients of the questionnaire.

A second phase of data collection will begin three weeks after the initial mailing

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(Dillman 1978). A personalized cover letter, a replacement copy of the questionnaire, and a postage-paid business reply envelope will be sent to everyone who has not responded. The cover letter will restate the importance of participation and will urge the executive to take some time to complete and return the enclosed questionnaire. The questionnaire, and the business-reply envelope will be identical to that sent in the initial mailing.

Assuming that the desired sample size has not been reached, a third phase of data collection will begin. As suggested by Dillman (1978), seven weeks after the first mailout, a new cover letter and a replacement questionnaire is sent by *certified mail*.

DATA ANALYSIS

A multi-step approach to data analysis will be adopted in this dissertation. First, potential non response-bias will be evaluated by comparing early and late respondents in terms of annual sales and number of full-time employees. Second, the descriptive statistics for all scale items will be calculated and potential nonnormality problems will be assessed. Third, the reliability of the constructs pertaining to the environment, strategy, structure and performance will be evaluated and the measurement model will be purified. Fourth, a test of the research hypotheses will be conducted through correlation analysis, multiple regression analysis, structural equations modelling and analysis of covariance. More specifically, the intended tool of evaluation for the model and corresponding hypotheses (i.e., H1 through H10) presented in Part I of this dissertation is correlation analysis, regression analysis and structural equations modelling. In the event of poor model fit, the model will be disaggregated and the relationships

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between individual elements will be analyzed. Given the present form of the hypotheses, regression analysis is an appropriate method to test the strength and direction of each link in the disaggregated model. To test the hypotheses in Part II, multiple regression analysis and analysis of covariance are the intended tools of evaluation. In particular, Hypotheses 11 and 12 (regarding drivers of quick response and global sourcing) will be tested using regression analysis. Hypotheses 13 and 14 (regarding strategy-performance relationships) will be tested using analysis of covariance.

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CHAPTER 5
Analyses and Findings

A multistep approach to data analysis is adopted in this research. First, potential nonresponse bias is assessed by comparing responding retailers with nonresponding retailers on the basis of sales and number of employees. Second, the descriptive statistics for all scale items are calculated and potential nonnormality problems are assessed. Third, the reliability of the constructs pertaining to the environment, strategy, structure and performance are evaluated and the measurement model is purified. Fourth, a test of the research hypotheses are conducted through correlation analysis, regression analysis, structural equations modelling and analysis of covariance.

RESPONSE RATE & NONRESPONSE BIAS

Among the 389 retailers contacted from Ward's Business Directory, 19 were no longer in business (N=370). Out of the 370 retailing executives contacted, 56 indicated inability or unwillingness to participate. A total of 141 questionnaires were completed and returned. Thus, an overall response rate of 38.11 percent (141/370).

As a preliminary step, nonresponse bias was assessed by comparing responding versus nonresponding retailers on the profile variables of annual sales and number of full-time equivalent (FTE) employees. While it is true that retailers can differ in many other ways, these were the only comparative data available for the responding and nonresponding groups. Moreover, it is a common practice in business research to compare such groups with respect to sales and number of employees.

Table 5-1 reports the results of the t-test comparisons. Based on average annual

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sales, retailers that responded to the survey were not significantly larger than those that did not respond ($t=2.47, p>.21$). Similarly, based on average number of full-time equivalent (FTE) employees, retailers that responded were not significantly larger than those that did not ($t=1.18, p>.79$).

Table 5-1. Assessment of Nonresponse Bias

Characteristics	Category	Mean	t-value	Signif. Level
Annual Sales	Respondents	2847.4m	2.47	.213
	Nonrespondents	2392.1m		
Number of Full-Time Employees	Respondents	16.86k	1.18	.793
	Nonrespondents	15.81k		

SAMPLE CHARACTERISTICS

Table 5-2 summarizes the major characteristics of the final sample of 141 retailers. U.S. ownership characterizes 131 (or 95.4 percent) of these retailers. Regarding primary industry classification, 5.8 percent were general merchandisers, 10.1 percent were discount department stores, 22.3 percent were specialty apparel retailers, 11.5 percent were specialty hardline retailers, 6.5 percent were drug stores, 1.4 percent

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were convenience stores, 24.5 percent were department stores, and 18.9 percent were miscellaneous retail operations (e.g., accessories, sporting goods, gift/novelty). The average number of U.S. retail outlets was 306.8 and 3.7 warehouses or distribution centers. On the international level, the retailers had an average of 8.6 foreign retail outlets and 0.3 foreign warehouses or distribution centers. Annual sales of the retailers averaged $2,847.4 million and average organizational age was 50.3 years. The average number of stock-keeping-units (SKU) was 1264.2. The number of full-time equivalent (FTE) employees averaged 16,213.

Regarding retail strategy implementation, 40.5 percent were implementing both quick response and global sourcing, 12.9 percent were implementing only quick response, 31.0 percent were implementing only global sourcing, while 15.5 percent were not implementing either strategy.

DATA QUALITY AND RELIABILITY OF CONSTRUCTS

To assess data quality, the means, standard deviations, kurtosis, and skewness of each item were computed; the information is reported in Appendix 5-1. In the first column, the variable names for each construct are listed. The second column contains the means from the seven-point scales used to measure how strongly respondents agree with some items and disagree with others (1=strongly disagree, 7=strongly agree). Column three displays the standard errors associated with each variable. A close examination of the fourth column reveals that kurtosis for the majority of variables is below 2.00, a level beyond which nonnormality becomes a concern. Similarly, the fifth column reveals that the skewness of all items is smaller than the lower bound of concern

Table 5-2. Sar

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Table 5-2. Sample Characteristics

Characteristic		Cases	Percent
Industry	general merchandiser	8	5.8
	department store	34	24.5
	discount department store	14	10.1
	specialty apparel	31	22.3
	specialty hardline	16	11.5
	drug store	9	6.5
	convenience store	2	1.4
	miscellaneous	25	18.9
Ownership	U.S.	131	95.4
	Europe/Asia	6	4.6
Title of Respondent	CEO, president	17	12.6
	GMM, sr. vice-president	65	48.1
	DMM, director	34	25.2
	buyer, regional manager	19	14.1
Strategy Implementation	quick response (QR) & global sourcing (GS)	47	40.5
	QR only	15	12.9
	GS only	36	31.0
	neither QR or GS	18	15.5

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Each construct in the proposed model was measured by multiple items in the questionnaire. To assess the reliability of the constructs, a coefficient alpha (Cronbach 1971) was computed for each construct. After purifying the measurement model by dropping items with low item-construct correlations, all recalculated coefficient alphas were found to be adequate. These levels of internal consistency are all above the minimum acceptable level of .600 (Nunnally 1967). The first column of Table 5-3 through 5-7 names the construct and then lists the corresponding items used to measure each construct. The second column reports the item-construct correlations after correction for attenuation. The last column reports the coefficient alpha for the constructs.

Due to the many ways in which performance was operationalized in this study, principle components factor analysis with varimax rotation was used to identify the one factor that best represents the performance construct. Four factors emerged with eigenvalues greater than one. An eight-item factor explaining the largest percent of the variance (51.03%) was selected for use as the performance construct in all analyses that follow.

Reliabilities for all constructs are within acceptable limits (see Tables 5-3 through 5-7). For both strategy variables, coefficient alphas are greater than .800. All four organizational structure variables exceed .700 and the three relationship structure variables also exceed .700. The performance scale is very reliable, as indicated by its high coefficient alpha of .909. Of all the constructs, the coefficient alpha for

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similar scales

1984).

environment uncertainty was least reliable at .639, but is still within the acceptable limit of over .600 (Nunnally 1967) and is within the range of other studies using the same or similar scales (e.g., Germain, Droge and Daugherty 1994; Brown Lusch and Koenig 1984).

Table 5-3. Str

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Table 5-3. Strategy Reliabilities

CONSTRUCT items (VAR NAME)	item-construct correlation	Cronbach's alpha
QUICK RESPONSE STRATEGY		.813
1. cross-docking is part of our operations (QR13)	.392	
2. we provide vendors with stock-out data (QR14)	.614	
3. we provide vendors with sales data (QR15)	.639	
4. we involve vendors with inventory replenishment processes (QR16)	.636	
5. shipping container marking is used (QR17)	.421	
6. we use advance shipping notice to our stores (QR18)	.398	
7. we have a quick response team that meets with vendors (QR21)	.652	
8. we scan transactions at the SKU level (QR22)	.318	
9. we make daily small lot shipments from warehouses/DCs to retail outlets (QR23)	.257	
10. we use electronic data interchange (EDI) to order from suppliers (QR24)	.478	
11. we use electronic communications to replace retail outlet inventory from than held in warehouses/DCs (QR25)	.455	
GLOBAL SOURCING STRATEGY		.862
1. we have a supplier selection process that extensively evaluates suppliers regardless of their country-of-origin (GS6)	.404	
2. close relationships with global suppliers is key to our strategy (GS7)	.669	
3. a large percentage of our merchandise is procured from outside the U.S. (GS8)	.544	
4. we have our own offices in foreign countries to oversee production (GS9)	.733	
5. our buyers often travel overseas to evaluate and select suppliers (GS10)	.714	
6. we produce most of our private label brands overseas (GS11)	.606	
7. we have efficient global transportation and logistics systems (GS12)	.747	
8. most of our global shipments preclear customs (GS13)	.476	

Table 5-4. Org

ORGANIZATI items (VAR
INTEGRATIO
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1. distributior
2. marketing/
3. purchasing
4. long-term
5. interdepar engi
6. task force depa
7. liaison pe de
PERFORMA
1. functiona
2. cost cont ana
3. producti
4. custome
5. custome
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9. pricing
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12. suppl
13. retail
14. warel
SCHEDU
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1. prod
2. prod
3. ware
4. store

Table 5-4. Organizational Structure Reliabilities

ORGANIZATIONAL STRUCTURE CONSTRUCTS items (VAR NAME)	item-construct correlation	Cronbach's alpha
INTEGRATION		.811
Participative, cross-functional committees in decision-making used in:		
1. distribution/operations strategy (OS24)	.598	
2. marketing/merchandising strategy (OS25)	.520	
3. purchasing/buying strategy (OS26)	.395	
4. long-term planning (OS27)	.615	
5. interdepartmental committees set up to allow departments to engage in joint decision-making (OS28)	.704	
6. task forces or temporary bodies set up to facilitate inter-departmental collaboration on specific projects (OS29)	.588	
7. liaison personnel whose job is to coordinate the efforts of several departments for a project (OS30)	.421	
PERFORMANCE CONTROL		.711
1. functional costs (e.g. operations, selling) monitored (OS1)	.452	
2. cost controls monitored by fixing standard costs and analyzing variation (OS2)	.370	
3. productivity analysis (OS3)	.540	
4. customer satisfaction and follow-up (OS4)	.502	
5. customer service (e.g., no lines, rainchecks) (OS5)	.479	
OPERATIONS DECENTRALIZATION		.854
Level of authority in decision-making:		
1. inventory control/order processing software (OS6)	.471	
2. warehousing technology (e.g., robotics, software) (OS7)	.669	
3. electronic data interchange (EDI) (OS8)	.483	
4. retail technology (e.g., POS scanning technology) (OS9)	.629	
5. number of retail workers required (OS10)	.425	
6. internal labor disputes (OS11)	.321	
7. number of retail outlets to operate (OS12)	.588	
8. number of warehouses/DCs to operate (OS13)	.662	
9. pricing policy (OS14)	.601	
10. in-store promotions/advertising (OS15)	.398	
11. product selection (OS16)	.397	
12. supplier selection (OS17)	.441	
13. retail location (OS18)	.458	
14. warehouse/distribution location (OS19)	.459	
SCHEDULING DECENTRALIZATION		.834
Level of authority in decision-making:		
1. production scheduling (e.g., programming deliveries) (OS20)	.701	
2. product delivery schedules from vendor (OS21)	.682	
3. warehouse-distribution product receiving (OS22)	.692	
4. store deliveries (OS23)	.581	

Table 5-5. R

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3. the p

Table 5-5. Relationship Structure Reliabilities

RELATIONSHIP STRUCTURE CONSTRUCTS item (VAR NAME)	item-construct correlation	Cronbach's alpha
FLEXIBILITY		.750
1. flexibility in response to requests for change characterize our supplier relationships (S2)	.620	
2. the parties expect to be able to make adjustments to cope with changing circumstances (S3)	.593	
3. when unexpected situations arise, the parties would rather work out a new deal than hold each other to original terms (S4)	.771	
INFORMATION EXCHANGE		.860
1. it is expected that any information that might help the other party will be provided to them (S5)	.714	
2. exchange of information takes place frequently and informally, not only according to a prespecified agreement (S6)	.679	
3. it is expected that the parties will provide proprietary information if it can help the other party (S7)	.721	
4. it is expected that we keep each other informed about events or changes that may affect the other party (S8)	.711	
SOLIDARITY		.702
1. problems that arise in these relationships are treated as joint rather than individual responsibilities (S9)	.664	
2. the parties are committed to improvements that may benefit the relationship, not only individual parties (S10)	.671	
3. the parties do not mind owning each other favors (S11)	.554	

Table 5-6. P

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performance industry: 1. market 2. sales gr 3. profit g 4. return 5. return 6. quick r 7. success 8. success

Table 5-7.

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Table 5-6. Performance Reliabilities

PERFORMANCE CONSTRUCT items (VAR NAME)	item-factor correlation	Cronbach's alpha
FIRM PERFORMANCE performance over past 5 years relative to competition in primary industry:		.909
1. market share growth (P1)	.822	
2. sales growth (P2)	.826	
3. profit growth (P3)	.728	
4. return on investment (P4)	.790	
5. return on sales (P5)	.795	
6. quick response (P7)	.538	
7. successful response to changing conditions in environment (P20)	.723	
8. successful response to opportunities in environment (P21)	.623	

Table 5-7. Environment Reliability

ENVIRONMENT CONSTRUCT item (VAR NAME)	item-factor correlation	Cronbach's alpha
ENVIRONMENT UNCERTAINTY		.639
1. many new products are introduced in our industry during a typical year (ENV1)	.446	
2. many new competitors appear in our industry during a typical year (ENV2)	.458	
3. competitor marketing practices change rapidly (ENV4)	.440	

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HYPOTHESES TESTING

Consistent with the manner in which the hypotheses were presented in Chapter 3, this section on hypotheses testing will consist of two parts. In Part I, several different techniques are used to assess hypotheses set forth in Chapter 3 (i.e., H1 through H10). To test the proposed model of the antecedents and consequences of quick response strategy implementation (H1 through H9), correlation analysis, multiple regression and path analysis are employed. Correlation analysis simply assesses the relationship between two variables without controlling for the effects of other variables, and is particularly useful in exploring relationships between variables that were not hypothesized. It also helps in associating the results to those in past research that used different sets of variables. Multiple regression analysis, a more sophisticated technique, evaluates the impact of several independent variables on a given dependent variable. In contrast to simple correlation analysis, all other variables included in the model are controlled for when examining the relationships between the dependent and any one variable. Then, using structural equations modelling, the path model in entirety is simultaneously estimated. Decisions to support or refute the hypotheses (H1 through H9) will be based on these three different analyses. Finally, a two-group path model will explore any differences in the environment-strategy-structure portion of the model between high- and low-performing retailers (H10).

In Part II, multiple regression analysis is used to evaluate the internal and external drivers of quick response (QR) and global sourcing implementation (i.e., H11 and H12). Then, various combinations of strategy-performance relationships (i.e., H13 and H14) will be tested using analysis of covariance (ANCOVA).

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PART I: HYPOTHESES TESTING
QUICK RESPONSE(QR): ANTECEDENTS & CONSEQUENCES

In this section, the findings to Hypothesis 1 through 10 are presented. First, the significance of the overall path model is introduced and briefly discussed. The reason for introducing the overall results of the path model at the onset is that the findings provide preliminary support for the soundness of the set of relationships proposed in the model within the context of the retailing industry. Second, the model is broken down into four distinct sets of hypotheses and results are discussed from the perspectives of three independent analytic techniques: correlation analysis, multiple regression and path analysis. Third, consistencies among the analyses are summarized and used to support or refute the relationships proposed in the model. Finally, any differences in the model between high- versus low-performing retailers are assessed.

Path Analysis

Path analysis, with the generalized least squares (GLS) criterion, was performed to test the overall path model, using the covariance matrix as the input. The EQS-generated estimates (Bentler 1991) of the path coefficients (i.e., the standardized beta weights) and the model fit statistics are presented in Figure 5-1.

In line with recommendations of Bagozzi and Yi (1988), multiple indicators were used to judge the overall fit of the model. The X^2 is 31.48 with 17 degrees of freedom ($p=.017$). The X^2/df ratio is 1.85, which is less than 2, and is therefore deemed acceptable. The Bentler-Bonett normed fit index is 0.988, which is well above the desirable value (0.90) indicated by Bentler (1990). This index is better than conventional

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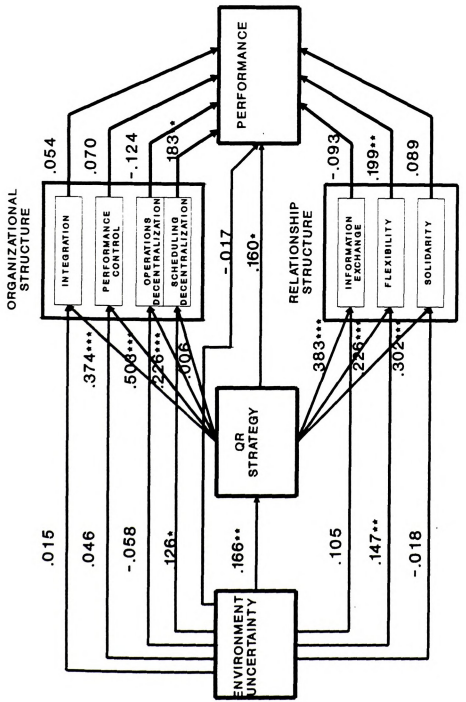

Estimates are "standardized betas"
*** = p < .01
** = p < .05
* = p < .10

Chi-square = 31.58, d.f. = 17, p = 0.017
Bentler-Bonett Normed Fit Index = 0.988
Bentler-Bonett Nonnormed Fit Index = 0.985
Comparative Fit Index = 0.994

Figure 5-1. Path Analysis Results

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indicators like X^2 because it is based on the comparison of a structural model with a base line or null model. Another measure, the Bentler-Bonett non-normed fit index, takes into account sample size when considering the model's degrees of freedom. The fit provided by this measure is also high, at .985. Finally, the comparative fit index is .994, also indicates that the data are well represented by the model. The path analysis results for the individual paths are discussed in the following section, along with the results from correlation analysis and multiple regression analysis.

These preliminary findings help support the theoretical soundness of the proposed overall model in the retailing industry *and* the variables selected for inclusion in this environment-strategy-structure-performance model.

Antecedents of Performance

Recalling the hypotheses (i.e., H6-H9), it was predicted that quick response (QR) strategy implementation, structure (both organizational and relationship), and environment uncertainty are significantly related to retailer performance. Specifically, it is hypothesized that quick response (QR) strategy implementation, and dimensions of organizational and relationship structure are positively related to performance and that environment uncertainty is inversely related to retailer performance.

Correlation analysis (Table 5-8) reveals significant positive relationships between performance and quick response ($r=.23$, $p=.008$), integration ($r=.16$, $p=.061$), performance control ($r=.24$, $p=.005$), information exchange ($r=.19$, $p=.030$), flexibility ($r=.28$, $p=.001$), and solidarity ($r=.24$, $p=.007$). No relationship between performance and either environment uncertainty or decentralization (both operations and

Table 5-8. Correlation Analysis (n=141)

Table 5-8. Correlation Analysis (n=141)

Variable	x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	x_9	x_{10}	mean	s.d.
x_1 Environment Uncertainty	--										4.63	1.12
x_2 Quick Response	0.17[b]	--									4.61	1.14
x_3 Integration	0.07	0.33[a]	--								4.71	1.12
x_4 Performance Control	0.12	0.46[a]	0.35[a]	--							5.66	0.87
x_5 Operations Decentralization	-0.02	0.20[b]	0.18[b]	0.01	--						2.36	0.58
x_6 Scheduling Decentralization	0.13	0.03	0.03	0.05	0.43[a]	--					3.58	0.84
x_7 Information Exchange	0.16[c]	0.37[a]	0.32[a]	0.33[a]	0.04	0.09	--				5.01	1.18
x_8 Flexibility	0.18[b]	0.24[a]	0.24[a]	0.26[a]	0.04	0.05	0.50[a]	--			4.88	1.04
x_9 Solidarity	0.03	0.27[a]	0.21[b]	0.38[a]	-0.11	0.01	0.72[a]	0.50[a]	--		5.07	1.11
x_{10} Performance	0.07	0.23[a]	0.16[b]	0.24[a]	-0.01	0.13	0.19[b]	0.28[a]	0.24[a]	--	4.44	1.15

[a] $p<.01$, [b] $p<.05$, [c] $p<.10$

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Using multiple regression analysis, retailer performance was regressed on all of the antecedent dimensions. The R^2 for the regression model, or percent of variance in performance explained by the nine hypothesized antecedents, was 19.1 percent and the model was highly significant ($p=.011$). The regression beta weights and significance levels are reported in Table 5-9. As can be seen from the table, quick response strategy implementation ($B=.282$, $p=.001$), performance control ($B=.181$, $p=.053$), scheduling decentralization ($B=.271$, $p=.026$), and flexibility ($B=.176$, $p=.071$) have significant and positive influences on retailer performance.

Path analysis (Figure 5-1) results reveal that retailer performance is influenced significantly and positively by QR implementation ($B=.160$, $p<.10$), scheduling decentralization ($B=.183$, $p<.05$), and flexibility ($B=.199$, $p<.05$). Based on the size of the standardized beta weights, flexibility had the largest impact on retailer performance.

In summary, all three techniques found quick response (QR) strategy implementation to have a positive and significant effect on retailer performance. Therefore, **Hypothesis 6 is strongly supported;** as QR implementation increases, firm performance increases.

Two of four dimensions of organizational structure consistently revealed a significant and positive influence on performance. In particular, **Hypothesis 8a is supported** by correlation and multiple regression analysis; as performance control increases, firm performance increases. **Hypothesis 8d was supported** by regression and path analysis; as scheduling decentralization increases, firm performance increases.

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Table 5-9. Regression - Antecedents of Performance

		Regression Beta Weight	Signif. Level (p=)
Quick Response (QR) Strategy		0.282	.001
Organizational Structure	integration	0.007	.297
	performance control	0.181	.053
	operations decentralization	-0.224	.417
	scheduling decentralization	0.271	.026
Relationship Structure	information exchange	-0.050	.470
	flexibility	0.176	.071
	solidarity	-0.005	.487
Environment Uncertainty		-0.029	.235

Model R^2=.191 Model F=2.55 Model p=.011

Only one of the three dimensions of relationship structure, flexibility, was found to positively influence performance by all three analytic techniques. Hence, **Hypothesis 9b is strongly supported;** as supplier-retailer flexibility increases, performance increases.

Antecedents of Organizational Structure

Based on the organizational structure hypotheses set (i.e., H1, H4) it is predicted that quick response (QR) strategy implementation and environment uncertainty are

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significantly related to the four dimensions of organizational structure.

Correlation analysis (Table 5-8) reveals significant positive relationships between quick response and three of the four dimensions of organizational structure; integration ($r=.33$, $p=.001$), performance control ($r=.46$, $p=.001$), and operations decentralization ($r=.20$, $p=.021$). No such relationship between QR and scheduling decentralization existed. Finally, no significant relationships between environmental uncertainty and the four dimensions of organizational structure were revealed.

Multiple regression analysis results for antecedents of organizational structure can be found in Tables 5-10 through 5-13. The R^2 for the regression models, or percent of variance explained, ranged between 21.7 percent (for integration) and 1.2 percent (for scheduling decentralization). The scheduling decentralization model (Table 5-13) was the only model found to be nonsignificant. As can be seen from the tables, quick response strategy implementation has a significant and positive influence on three out of the four dimensions of organizational structure: retailer integration ($B=.327$, $p=.001$), performance control ($B=.338$, $p=.001$) and operations decentralization ($B=.109$, $p=.010$). No significant relationships between environment uncertainty and either integration, performance control, operations decentralization or scheduling decentralization were found.

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Table 5-10. Regression - Antecedents of Integration

	Regression Beta Weight	Signif. Level (p=)
Quick Response (QR) Strategy	0.327	.001
Environment Uncertainty	0.020	.408

Model R^2=.111 Model F=8.24 Model p=.001

Table 5-11. Regression - Antecedents of Performance Control

	Regression Beta Weight	Signif. Level (p=)
Quick Response (QR) Strategy	0.338	.001
Environment Uncertainty	0.073	.124

Model R^2=.217 Model F=18.15 Model p=.001

Table 5-12. Regression - Antecedents of Operations Decentralization

	Regression Beta Weight	Signif. Level (p=)
Quick Response (QR) Strategy	0.109	.010
Environment Uncertainty	-0.039	.199

Model R^2=.045 Model F=3.10 Model p=.048

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Table 5-13. Regression - Antecedents of Scheduling Decentralization

	Regression Beta Weight	Signif. Level (p=)
Quick Response (QR) Strategy	0.010	.442
Environment Uncertainty	0.085	.135

Model R^2=.012 Model F=.65 Model p=.526

Path analysis (Figure 5-1) reveals that quick response implementation was found to significantly and positively influence retailer integration (B=.374, p<.01), performance control (B=.503, p<.01) and operations decentralization (B=.226, p<.01). Based on the size of the standardized beta weights, quick response strategy implementation has the largest impact on performance control, followed by integration and operations decentralization. Environment uncertainty was found to significantly and positively (B=.126, p<.10) influence only scheduling decentralization.

In summary, all three analytic techniques found quick response (QR) strategy implementation to have a positive and significant effect on integration, performance control and scheduling decentralization. Therefore, **Hypotheses 1a, 1b, and 1c are strongly supported;** as QR implementation increases, integration, performance control and scheduling decentralization increase.

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Antecedents of Relationship Structure

Based on the relationship structure hypotheses set (i.e., H2, H5), it is predicted that quick response (QR) strategy implementation and environment uncertainty are significantly related to the three dimensions of relationship structure.

Correlation analyses (Table 5-8) revealed highly significant and positive relationships between quick response and all three dimensions of relationship structure; information exchange ($r=.37$, $p=.001$), flexibility ($r=.24$, $p=.006$), and solidarity ($r=.27$, $p=.002$). Significant and positive relationships were also found between environment uncertainty and both information exchange ($r=.16$, $p=.069$) and flexibility ($r=.18$, $p=.041$).

Multiple regression analysis results for antecedents of the three relationship structure variables can be found in Tables 5-14 through 5-16. The R^2 for the three regression models, or percent of variance explained, ranged between 15.1 percent (for information exchange) and 7.5 percent (for solidarity). All three models were highly significant. QR strategy implementation has a significant and positive influence on all three dimensions of relationship structure: information exchange ($B=.366$, $p=.001$), flexibility ($B=.191$, $p=.003$) and solidarity ($B=.255$, $p=.001$). It is also evident that environment uncertainty has a significant and positive influence on: information exchange ($B=.126$, $p=.082$) and flexibility ($B=.150$, $p=.035$).

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Table 5-14. Regression - Antecedents of Information Exchange

	Regression Beta Weight	Signif. Level (p=)
Quick Response (QR) Strategy	0.366	.001
Environment Uncertainty	0.126	.082

Model R^2=.151 Model F=11.28 Model p=.001

Table 5-15. Regression - Antecedents of Flexibility

	Regression Beta Weight	Signif. Level (p=)
Quick Response (QR) Strategy	0.191	.003
Environment Uncertainty	0.150	.035

Model R^2=.081 Model F=5.58 Model p=.005

Table 5-16. Regression - Antecedents of Solidarity

	Regression Beta Weight	Signif. Level (p=)
Quick Response (QR) Strategy	0.255	.001
Environment Uncertainty	0.040	.322

Model R^2=.075 Model F=5.14 Model p=.007

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Path analysis (Figure 5-1) reveals that quick response significantly and positively influences information exchange ($B=.383$, $p<.01$), flexibility ($B=.226$, $p<.01$), and solidarity ($B=.302$, $p<.01$). Comparing standardized path coefficients, it is evident that QR strategy implementation had the largest impact on information exchange, followed by solidarity and flexibility. Environment uncertainty was found to significantly and positively influence only information exchange ($B=.147$, $p<.05$).

In summary, all three analytic techniques found quick response (QR) strategy implementation to have positive and significant effects on all dimensions of relationship structure. Therefore, **Hypotheses 2a, 2b, and 2c are strongly supported;** as QR implementation increases, information exchange, flexibility and solidarity increase. In addition, all three techniques found environment uncertainty to be positively and significantly related only to flexibility. Hence, **Hypothesis 5b is strongly supported**; as environment uncertainty increases, flexibility increases.

Antecedents of Quick Response

Correlation analysis (Table 5-8) (and simple regression analysis) reveals a significant and positive relationship between quick response (QR) strategy implementation and environment uncertainty ($r=.17$, $p=.050$). Path analysis reveals the same, significant relationship ($B=.166$, $p<.05$). In summary, **Hypothesis 3 is strongly supported;** as environment uncertainty increases, QR strategy implementation also increases. Other environmental antecedents of quick response are explored in Part II of this dissertation.

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Summary

In the above section, the results from testing hypotheses 1 through 9 using three techniques were explored. As a formal summary, Table 5-17 displays all hypothesized relationships, the expected directionality of the hypotheses, and the statistical support they received using the three different analytic procedures (as determined by the significance levels and directionality of the correlation/regression/path estimates). The hypotheses were either supported or refuted based on making aggregate evaluations of the results obtained from the various techniques. The table reveals many consistencies. A hypothesis was strongly supported when all three analytic techniques validated the relationship hypothesized. A hypothesis was supported when the relationship is validated by two different analyses.

All three techniques found quick response (QR) strategy implementation to have a positive and significant effect on retailer performance. Therefore, **Hypothesis 6 is strongly supported;** as QR implementation increases, firm performance increases. Two out of the four dimensions of organizational structure consistently revealed a significant and positive influence on performance. In particular, **Hypothesis 8a is supported** by correlation and multiple regression analysis; as performance control increases, firm performance increases. Also, **Hypothesis 8d was supported** by multiple regression and path analysis; as scheduling decentralization increases, firm performance increases. Only one of the three dimensions of relationship structure, flexibility, was found to positively influence performance by all three analytic techniques. Hence, **Hypothesis 9b is strongly supported;** as supplier-retailer flexibility increases, performance increases. There is little evidence to suggest that integration, operations decentralization,

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information exchange, solidarity and environment uncertainty influence retailer performance.

Regarding organizational structure, the overall model hypothesized that environment uncertainty and QR strategy influence four dimensions of organizational structure: integration, performance control, operations decentralization, and scheduling decentralization. All three analytic techniques found quick response strategy implementation to have a positive and significant effect on integration, performance control and scheduling decentralization. Therefore, **Hypotheses 1a, 1b, and 1c are strongly supported;** as QR implementation increases, integration, performance control and scheduling decentralization increase. As revealed in the table, QR implementation does not influence scheduling decentralization. Also, there is little evidence to suggest that environment uncertainty influences any dimension of organizational structure.

Similar to organizational structure, it was hypothesized that environment uncertainty and QR strategy influence three dimensions of relationship structure: information exchange, flexibility, and solidarity. All three analytic techniques found quick response implementation to have a positive and significant effect on all dimensions of relationship structure. Therefore, **Hypotheses 2a, 2b, and 2c are strongly supported;** as QR implementation increases, information exchange, flexibility and solidarity increase. In addition, all three techniques found environment uncertainty to be positively and significantly related to flexibility. Hence, **Hypothesis 5b is strongly supported**; as environment uncertainty increases, flexibility increases.

Finally, it was hypothesized that environment uncertainty positively influences QR strategy implementation. All three analytic techniques support the existence of this

Table 5-17. Summary of Findings

Hypothesis	Expected Sign	Support(significance level)

Table 5-17. Summary of Findings

Relationship	Hypothesis	Expected Sign	Support(significance level)
Performance Antecedents			
quick response ---> performance	H6	+	CORR***, MR***, PATH*
integration ---> performance	H8a	+	CORR**
performance control ---> performance	H8b	+	CORR***, MR*
operations decentralization ---> performance	H8c	+	*not supported*
scheduling decentralization ---> performance	H8d	+	MR**, PATH**
information exchange ---> performance	H9a	+	CORR**
flexibility ---> performance	H9b	+	CORR***, MR*, PATH**
solidarity ---> performance	H9c	+	CORR***
environment uncertainty ---> performance	H7	-	*not supported*
Organizational Stucture Antecedents			
quick response ---> integration	H1a	+	CORR***, MR***, PATH***
quick response ---> performance control	H1b	+	CORR***, MR***, PATH***
quick response ---> operations decentralization	H1c	+	CORR**, MR***, PATH***
quick response ---> scheduling decentralization	H1d	+	*not supported*
environment uncertainty ---> integration	H4a	+	*not supported*
environment uncertainty ---> performance control	H4b	+	*not supported*
environment uncertainty ---> operations decentralization	H4c	+	*not supported*
environment uncertainty ---> scheduling decentralization	H4d	+	PATH*
Relationship Stucture Antecedents			
quick response ---> information exchange	H2a	+	CORR***, MR***, PATH***
quick response ---> flexibility	H2b	+	CORR***, MR***, PATH***
quick response ---> solidarity	H2c	+	CORR**, MR***, PATH***
environment uncertainty ---> information exchange	H5a	+	CORR*, MR*
environment uncertainty ---> flexibility	H5b	+	CORR**, MR**, PATH**
environment uncertainty ---> solidarity	H5c	+	*not supported*
Quick Response Antecedent			
environment uncertainty ---> quick response	H3	+	CORR**, MR**, PATH**

*** $p < .01$ ** $p < .05$ * $p < .10$

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relationship. Hence, **Hypothesis 3 is strongly supported**; as environment uncertainty increases, QR strategy implementation increases.

High Performers vs. Low Performers

A two-group model was then estimated to determine if there is a contingency explanation for the model, based on performance (i.e., H12). It was hypothesized that the relationships set forth in Hypotheses 1 through 6 would be stronger for high-performing firms than for low-performing firms. The sample was divided into two groups on the basis of firm performance and Hypotheses 1 through 6 were re-evaluated. Group 1 was designated the high performance group (n=69) and Group 2, the low performance group (n=68). In this multisample analysis, the two groups were analyzed simultaneously using generalized least squares (GLS) and were subject to cross-sample constraints. The X^2 is 74.64 with 49 degrees of freedom (p=.011). Other measures of fit provided by EQS were examined. The Bentler-Bonett normed fit index is 0.974, which is well above the desirable 0.900 level as indicated by Bentler (1990). Another measure, the Bentler-Bonett non-normed fit index takes into account the sample size when considering the model's degrees of freedom. The fit provided by this index is also high, at 0.987. Finally, the comparative fit index is 0.991, also indicating the data are well validated by the model.

The chi-square difference test did not justify releasing any of the imposed constraints on any of the paths across both groups. In other words, no significant differences resulted for the hypothesized paths between high- and low-performing retailers. Although the research hypothesis was not supported, this finding simply

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Table 5-18. Two-Group Path Analysis Results (High- vs. Low-Performers)

	High-Perform **Std. Beta**	p-value	Low-Perform **Std. Beta**
Antecedents of Organizational Structure			
quick response ---> integration	.274	2.631 **a**	.293
quick response ---> performance control	.383	3.904 **a**	.431
quick response ---> operations decentralization	.286	2.832 **a**	.274
quick response ---> scheduling decentralization	-.025	-.301 **a**	-.033
environment uncertainty ---> integration	-.018	-.173 **a**	-.020
environment uncertainty ---> performance control	.074	.772 **a**	.088
environment uncertainty ---> operations decentralization	-.092	-.950 **a**	-.094
environment uncertainty ---> scheduling decentralization	.043	.531 **a**	.059
Antecedents of Relationship Structure			
quick response ---> information exchange	.324	3.351 **a**	.320
quick response ---> flexibility	.219	2.023 **a**	.184
quick response ---> solidarity	.182	1.771 **a**	.197
environment uncertainty ---> information exchange	.048	.519 **a**	.050
environment uncertainty ---> flexibility	.208	2.013 **a**	.186
environment uncertainty ---> solidarity	-.039	-.407 **a**	-.045
Antecedent of Quick Response			
environment uncertainty ---> quick response	.204	2.317 **a**	.217

a = not significantly different across groups

Chi Square=74.64, d.f.=49, p=0.011
Bentler-Bonett Normed Fit Index=0.974
Bentler-Bonett Nonnormed Fit Index=0.987
Comparative Fit Index=0.991

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suggests that the relationships hypothesized in the model are purely linear and that the substantive relationships found in the single-group path model exist for high performers as well as for low performers. The standardized path estimates and significance levels can be found in Table 5-18. As is evident from the table, QR strategy implementation completely mediates the relationship between environment uncertainty and organizational structure for high-performing retailers as well as for low-performing retailers.

PART II: HYPOTHESES TESTING
QUICK RESPONSE & GLOBAL SOURCING: DRIVERS & PERFORMANCE IMPLICATIONS

In this section, the findings to Hypothesis 11 through 13 are presented. First, multiple regression analysis is used to evaluate the internal and external drivers of quick response (QR) and global sourcing implementation (i.e., H11 and H12). Then, various combinations of strategy-performance relationships (i.e., H13 and H14) are tested using analysis of covariance (ANCOVA). Both environment uncertainty and retailer size are initially included in the model as covariates.

Strategy Drivers

In Chapter 3, several drivers of quick response (QR) and global sourcing were hypothesized (i.e., H11, H12). Using multiple regression analysis, QR strategy implementation and global sourcing strategy implementation were each regressed on a set of fourteen internal and external antecedent dimensions. The regression beta weights and significance levels for all fourteen dimensions on QR, and then global sourcing, are

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Quick Response Drivers. The R^2 for the regression model, or percent of variance in QR implementation explained by the fourteen hypothesized antecedents, was 73.4 percent and the model was highly significant ($p=.001$). Table 5-19 shows that technological sophistication ($B=.182$, $p=.001$), marketing orientation ($B=.003$, $p=.060$), differentiation orientation ($B=.512$, $p=.001$), risk-taking orientation ($B=.237$, $p=.019$), receptiveness to change ($B=.114$, $p=.063$), and having domestic operations only ($B=.048$, $p=.098$) are internal drivers of QR strategy implementation. Environment uncertainty ($B=.055$, $p=.094$) was the only external driver included in the regression model found to significantly influence quick response. Internal and external factors that did not have a significant impact on QR implementation include: quality control orientation, cost-reduction orientation, being first to adopt new products/technologies, being an industry leader, having a reliance on domestic sources of supply, having power over suppliers and stable product demand.

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Table 5-19. Regression - Drivers of Quick Response

	Regression Beta Weight	Significance Level (p=)
INTERNAL		
technological sophistication	.182	.001
quality control orientation	-.041	.181
marketing orientation	.003	.060
cost-reduction orientation	.091	.182
differentiation orientation	.512	.001
risk-taking orientation	.237	.019
first to adopt new products/technologies	.202	.395
industry-leader	-.035	.364
receptive to change	.144	.064
domestic operations only	.048	.098
reliance on domestic sources of supply	-.074	.263
EXTERNAL		
environment uncertainty	.055	.094
power over suppliers	.029	.135
stable demand for products	-.041	.385

Model R^2=.734 Model F=4.53 Model p=.001

Global Sourcing Drivers. The R^2 for this regression model, or percent of variance in global sourcing implementation explained by the fourteen hypothesized antecedents, was 74.6 percent and this model was also highly significant ($p=.001$). Table 5-20 shows that technological sophistication ($B=.305$, $p=.001$), quality control orientation ($B=.162$, $p=.011$), cost-reduction orientation ($B=.610$, $p=.001$) and having a reliance on foreign sources of supply ($B=.108$, $p=.083$) are significant internal drivers of global sourcing implementation. No external driver included in the regression model was found to significantly influence global sourcing -- environment uncertainty, power over suppliers or stable product demand. Internal factors that did not significantly influence global sourcing implementation include: marketing orientation, differentiation orientation, risk-taking orientation, being first to adopt new products/technologies, being an industry leader, being receptive to change, having overseas operations.

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Table 5-20. Regression - Drivers of Global Sourcing

	Regression Beta Weight	Significance Level (p=)
INTERNAL		
technological sophistication	.305	.001
quality control orientation	.162	.011
marketing orientation	-.021	.492
cost-reduction orientation	.610	.001
differentiation orientation	-.024	.345
risk-taking orientation	.095	.152
first to adopt new products/technologies	.089	.498
industry-leader	.092	.212
receptive to change	.013	.448
overseas operations	-.005	.334
reliance on domestic sources of supply	-.108	.083
EXTERNAL		
environment uncertainty	-.015	.216
power over suppliers	-.065	.254
stable demand for products	.118	.158

Model R^2=.746 Model F=7.33 Model p=.001

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Strategy-Performance Findings

Two dominant combinations of strategy-performance relationships (i.e., H13 and H14) are tested using analysis of covariance (ANCOVA). Both firm size and environment uncertainty were included in the analysis as covariates; however, only firm size was found to significantly influence the strategy-performance relationships. Therefore, in the analyses that follow, firm size was the designated covariate.

QR and Global Sourcing as Competing Strategies. In Chapter 3, it was hypothesized that in the event that quick response (QR) and global sourcing (GS) are *competing* strategies, the performance of retailers implementing only QR strategies will be greater than the performance of retailers implementing only global sourcing strategies (i.e., H13). To test this hypothesis, the sample was divided into two groups on the basis strategy implementation. Analysis of covariance (ANCOVA) on firm performance was performed, with firm size as the designated covariate. In other words, the covariance adjusted performance means of retailers implementing only QR were compared to the adjusted means of retailers implementing only GS. As revealed in Table 5-21, the mean for those retailers implementing only QR is significantly larger ($X=4.48$) than those implementing only GS ($X=3.81$). Therefore, **Hypothesis 13 is supported;** the performance of retailers implementing only (or primarily) QR strategies will be greater than the performance of retailers implementing only (or primarily) global sourcing strategies.

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Table 5-21. Analysis of Covariance (ANCOVA): QR strategy vs. GS strategy

	Firm Performance LSMEANS	significance (p=)
QR strategy only	4.48	.055
GS strategy only	3.81	

covariate = size

Model R^2=.183 Model F=5.16 Model p=.010

QR and Global Sourcing as Complementary Strategies. It was further hypothesized that if quick response (QR) and global sourcing (GS) are *complementary* strategies, the performance of retailers implementing hybrid strategies (QR and GS) will be greater than the performance of retailers implementing only single strategies (either QR or GS) (i.e., H14). Analysis of covariance (ANCOVA) on firm performance was again performed, with firm size as the designated covariate. As revealed in Table 5-22, the covariance adjusted mean for those retailers implementing a hybrid strategy is significantly larger (X=4.62) than those implementing a single strategy (X=4.02). Therefore, **Hypothesis 14 is supported;** the performance of retailers simultaneously implementing both QR and GS strategies is greater than retailers implementing only QR strategies or GS strategies.

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Table 5-22. Analysis of Covariance (ANCOVA): single vs. hybrid strategies

	Firm Performance LSMEANS	significance (p=)
single strategy (QR or GS only)	4.02	.006
hybrid strategy (QR and GS)	4.62	

covariate = size

Model R^2=.163 Model F=8.75 Model p=.001

SUMMARY

Table 5-23 summarizes the overall results of the hypothesis testing. The implications of the findings presented in this chapter are discussed in detail in the following chapter.

Table 5-2

Hypoth Set
H1
H2
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H10
H11
H12
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H1

Table 5-23. Summary of Results

Hypothesis Set	Description of Relationship	# of Expected Effects	# of Supported Effects	Conclusion
H1	Main effects of QR implementation on organizational structure	4	3	strongly supported
H2	Main effects of QR implementation on relationship structure	3	3	strongly supported
H3	Main effect of environment on QR implementation	1	1	strongly supported
H4	Main effects of environment on organizational structure	4	0	not supported
H5	Main effects of environment on relationship structure	3	2	supported
H6	Main effect of QR implementation on performance	1	1	strongly supported
H7	Main effect of environment on performance	1	0	not supported
H8	Main effects of organizational structure on performance	4	2	supported
H9	Main effects of relationship structure on performance	3	1	supported
H10	Effect of performance split on the relationships between environment, strategy and structure (H1-H6)	6	0	not supported
H11	Main effects of environmental drivers on QR implementation	14	7	supported
H12	Main effects of environmental drivers on GS implementation	14	4	supported
H13	Performance effects of competing strategies (QR vs. GS)	1	1	strongly supported
H14	Performance effects of hybrid (QR & GS) vs. single strategies (QR or GS)	1	1	strongly supported

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CHAPTER 6
Discussion and Conclusions

Conclusions from this research offer a number of important insights into issues that are of significant managerial as well as theoretical interest. First, the findings help delineate quick response (QR) strategy for both the academic community and practitioners in terms of environmental antecedents and structural consequences. Second, an important link between QR strategy and performance is substantiated. Third, environmental drivers of both global sourcing and QR are revealed. And finally, performance implications of QR and/or global sourcing provide interesting insight into strategy-performance relationships in retailing. In the following sections, five major themes and associated substantive conclusions that emerged from the study are discussed from two perspectives: theoretical and managerial. Each theme addresses issues first raised in the research questions posed in Chapter 1. Limitations of the study are discussed and directions for future research are suggested.

ANTECEDENTS & CONSEQUENCES OF QUICK RESPONSE

Quick Response (QR), although not well understood, is revolutionizing the U.S. retail industry. In an effort to gain a broader understanding of this time-based strategy, Part I of this dissertation looked at factors that cause and accompany quick response and their implications on retailer performance. In particular, a theoretical model and several propositions were developed and tested regarding the relationships among environment-strategy-structure-performance as they pertain to QR in the U.S. retailing industry. Figure 6-1 presents a summary of the findings revealed from testing the hypotheses set

ORGANIZATIONAL
STRUCTURE

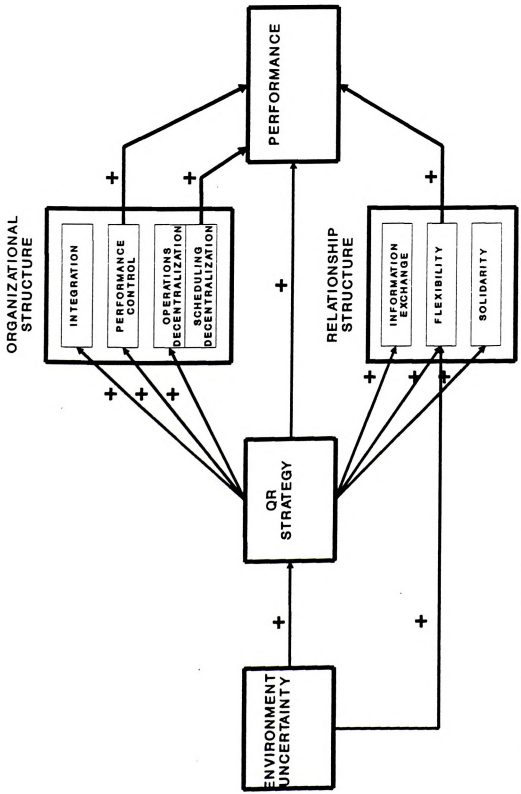

Figure 6-1. Summary of Substantive Relationships

forth in Part I. Only the relationships found to be significant have been included in the diagram. From the pattern of significant relationships, three major themes are identified.

Theme 1: The classical "strategic management" stance upon which the model was based, that strategy engenders structure, was upheld in the context provided by this study. Quick Response (QR) implementation was found to increase the following dimensions of organizational structure: integration, performance control and operations decentralization. QR implementation was also found to increase the following dimensions of relationship structure: information exchange, flexibility and solidarity.

Chandler (1962) observed that major changes in organizational strategy were followed by changes in structural form. Since then, many have confirmed this dominant view that structure follows strategy. Most studies of strategy-structure relationships are within the context of internal organizational structure. In addition to examining organizational structure, in this study, the scope of structure was broadened to include the relationship structure of retailers with their suppliers. In the following paragraphs, theoretical rationale and managerial implications for the findings between QR strategy and both organizational and relationship structure are discussed.

QR Strategy Implementation Increases Integration

Just as increased integration among purchasing, engineering, production, materials management, marketing and distribution is often found under JIT exchange (e.g., Frazier, Spekman and O'Neal 1988; Giunipero and Law 1990; Natarajan and Weinrauch 1990; Germain, Droge and Daugherty 1994), integration among distribution functions,

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marketing/merchandising functions, buying functions and long-term strategy planning functions were found to exist as a result of QR implementation. Reduction in slack resources (particularly time and inventory), the desired outcome of QR partnerships (Phillips and Droge 1995a), "increases the need for tight interdepartmental linkages as variance in the output of one department cannot be absorbed by that of another" (Germain, Droge and Daugherty 1994, p.472). For example, interdepartmental committees may be set up to allow departments to engage in joint decision-making, or liaison personnel whose job is to coordinate the efforts of several departments may be brought in to more efficiently execute QR exchanges. In other words, successful QR implementation mandates integrative mechanisms and teamwork within the company so that implementation problems and opportunities associated with quick response are looked at in total, versus unique to each different department.

QR Strategy Implementation Increases Performance Control

Formalized performance control was found to increase with the implementation of QR. There are two likely reasons. First, because QR retailers have reduced overall inventory levels, the process of information replacing inventory requires intensive controls of inputs/outputs as large fluctuations in demand cannot be filled with the minimal, if any, safety stock. Second, intensive managing of the elements that accompany QR partnerships (e.g., new technology and processes, long-term partnerships, trust) requires intensive controls. For example, with QR, retailers are forced to monitor functional costs, productivity and customer satisfaction based on the following rationale: QR retailers "are asked to simultaneously provide better service and quality products at

lower costs, and if they do not meticulously manage their own processes, they will eventually absorb the costs themselves" (Germain, Droge and Daugherty 1994, p.473). Under QR, the primary mission of retailers does not change. They are still responsible for understanding customers demands, analyzing sales trends, merchandising products and maintaining the correct image in the marketplace. But with QR, the retailers are also more accountable for managing financial, bottomline profitability (Chain Store Age Executive 1991).

QR Strategy Implementation Increases Operations Decentralization

Operations decentralization was also found to increase with quick response (QR) implementation. Because QR is a "time-based" strategy, requiring company-wide commitment to continuous improvement and change, it requires authority and responsibility to be pushed down the hierarchy so "how to" decisions can be made by the people most in touch with the marketplace (Chain Store Age Executive 1991). For example, under QR, decisions regarding inventory control, technology adoption, pricing, number of workers required, product and supplier selection, and location are best made by functional managers. This does not mean that upper management abdicates its responsibility. Rather it means that management must recognize the potential and develop the skills of subordinates to allow this increased delegation of responsibility (Chain Store Age Executive 1991, p.9B).

Contrary to expectations, QR strategy implementation did not increase scheduling decentralization. Compared to operations decentralization, scheduling decentralization refers to "when" things are done (e.g., timing of information and product flows). After

going back and reviewing univariate statistics to lend insight into this inquiry it was revealed that, compared to operations decisions, authority over scheduling decisions were largely decentralized at the onset. It is likely that the reason why QR does not significantly influence scheduling decentralization is that buyers and store managers have always typically made these scheduling decisions, whether they are operating under a traditional mode or a QR mode. Regardless of their chosen mode or strategy, decisions regarding production scheduling, product deliveries, warehouse product receiving and store deliveries in today's retailing environment are largely set up on a cue, or *a priori*. In other words, when inventory levels reach a prespecified minimum, orders are written (traditional mode) or automatic replenishment processes (QR mode) are initiated, either of which do not require centralized decision-making. In sum, scheduling decisions are primarily decentralized regardless of QR implementation.

This finding is the antithesis of both that originally hypothesized in this thesis and that found under JIT selling (Germain, Droge and Daugherty 1994), and is somewhat puzzling given the critical importance of "timing" in QR. For these reasons, further exploration of decentralization dimensions within a retailing context is warranted and is a fruitful area for future research.

QR Strategy Implementation Increases Information Exchange

Information exchange was found to increase with quick response (QR) implementation. Information exchange between retailers and vendors is expected to become increasingly important in successful QR partnerships as the relationships mature for a combination of reasons. First, increased levels of information exchange enable the

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trust and loyalty required for long-term QR partnership success. More specifically, it is expected that any information (including proprietary) that might help the other party will be provided to them in a timely manner. Second, given the time-based nature of QR, exchange of information must take place frequently and informally, not just according to a prespecified agreement. In other words, today's dynamic retailing environment and the constantly changing consumer needs demands efficient and accurate information exchange by the QR partners if the relationship is to evolve successfully. Therefore, the need for information exchange not only occurs at the onset of the partnership, but even more so as the relationship matures.

QR Strategy Implementation Increases Flexibility

Time is the new enemy in retailing because the longer the forecasting period, the less likely merchandise will meet customer demand (Chain Store Age Executive 1991). As a result, flexibility was found to increase with QR implementation largely because it represents insurance that the relationship will be subject to good-faith modifications if a particular practice proves detrimental in the light of changed circumstances. More specifically, "quick response is a strategy of customer service that uses technology to make possible an industry pipeline so flexible and efficient that, ideally, retailers can forecast today what they will sell tomorrow and have the merchandise in the stores, on time, in the right quantities, colors, sizes and styles" (Chain Store Age Executive 1991, p.4B). Achieving this timely response to consumers' requests requires utmost flexibility between retailers and their suppliers. For example, when unexpected situations arise, the parties need to be flexible enough to work out a new deal rather than holding each other

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to the original terms of the contract. Thus, because consumers needs, wants and desires change frequently, a flexible working relationship under QR between retailers and suppliers is essential.

QR Strategy Implementation Increases Solidarity

Solidarity, a bilateral expectation that a high value is placed on relationship maintenance, was also found to increase with quick response (QR) implementation. A QR partnership is a mutually cooperative relationship and is based on commitment regarding future exchanges, very different from the traditional, adversarial relationship. Because QR is based on this new type of relationship between retailers and suppliers, the partnership requires new business practices, starting with a cooperation that stems from a knowledge of each other's business objectives, opportunities and constraints (Chain Store Age Executive 1991). Large investments (e.g., in technology, equipment, time) and long-term partnerships require that a high value be placed on relationship maintenance. The ability to treat problems that arise as joint rather than individual is critical. Similarly, retailers and their suppliers must be committed to improvements that benefit the partnership as a whole, not just the individual interests. Therefore, as these cooperative transactions are repeated through time, and if they meet basic norms of equity and efficiency, the parties may feel increasingly secure in committing more of their available resources and expectations in subsequent cycles of cooperation (Ring and Van de Ven 1994).

Theme 2: Quick Response (QR) strategy implementation completely mediates the relationship between environment uncertainty and organizational structure. QR strategy implementation partially mediates the relationship between environment uncertainty and flexibility.

Models of relationships between strategy and structure often include uncertainty as a predictor of strategy, structure or both (e.g., Miller and Droge 1986; Prescott 1986; Germain, Droge and Daugherty 1994). In this research, environment uncertainty was only found to directly influence strategy. For the retailer, uncertainty arises largely from inabilities to precisely gauge product demand. That is, uncertainty surrounds demand if there is not enough time to receive merchandise from suppliers that is demanded by customers. As a result, retail buyers could underestimate the popularity of the style and lose potential sales or they could overestimate sales and generate excessive inventories and subsequent markdowns. QR allows the retailer to order merchandise on a weekly or biweekly basis. Thus, buyers can make use of more recent market exposure and information, allowing them to better estimate sales. The risk of a large difference between expected and actual sales is significantly reduced, and orders can be placed to better reflect actual market conditions (Maltz and Srivastava 1994). In sum, QR helps buffer the retailer from uncertainty by improving overall customer service, quality and productivity. The net effect is that a retailer confronting an uncertain environment more avidly seeks the competitive security that a time-based strategy, such as QR, offers. Thus, one way retailers are confronting environment uncertainty is through the implementation of time-based strategies.

Through indirect paths, environment uncertainty was found to influence

dimensions of both organizational structure and relationship structure. The mediator in both cases was QR strategy implementation. Mediation is one type of "fit" definition in contingency theory research. Complete mediation occurs if the direct effects of uncertainty on structure are nonsignificant and the indirect effects through QR strategy are significant. Partial mediation occurs if both the direct and indirect effects of uncertainty on structure are significant (Venkatraman 1986).

While uncertainty in the environment leads to increased QR strategy implementation, and QR strategy implementation leads to increased integration, performance control and operations decentralization (i.e. Theme 1), environment uncertainty does not lead directly to increased integration, performance control or decentralization. This simply means that in an uncertain environment, QR is a strategic coping mechanism and the effects of environment uncertainty on organizational structure are indirectly realized through quick response implementation. Hence, QR completely mediates the relationship between environment uncertainty and the three dimensions of organizational structure. These findings should be encouraging to retail managers given the determination that QR strategy implementation can buffer the retail organization from environmental uncertainty.

Looking at the effect of uncertainty on relationship structure, it appears that environment uncertainty directly and indirectly (through QR) affects retailer-supplier flexibility. Hence, QR partially mediates the relationship between environment uncertainty and flexibility. This finding suggests that when faced with uncertainty, retailers seek security via flexible supply chain relationships, QR or otherwise. As for information exchange and solidarity, there is no evidence to suggest that they are utilized

merely as a response to uncertainty.

Theme 3: Quick Response (QR) strategy implementation was found to increase retailer firm performance. In addition to the direct effect of QR on performance, the effect was also mediated by two dimensions of organizational structure (i.e., performance control and scheduling decentralization) and one dimension of relationship structure (i.e., flexibility). That is, indirect effects of QR on performance exist through control, scheduling decentralization and flexibility in addition to the direct effects of QR on performance.

QR Strategy Implementation Increases Firm Performance

One of the most important findings of this study was that quick response (QR) implementation had a direct and positive effect on retailer performance. The rationale is quite simple, although multidimensional. Under QR, inventory is received by the retailer as needed, affording the retailer the opportunity to convert storage space into selling space. Similarly, QR lowers safety stock requirements for retailers, thereby increasing merchandise turnover (Maltz and Srivistava 1994). Fewer out-of-stock situations results in a reduction in missed sales and an increase in customer service. More specifically, QR strategy implementation was most likely found to directly enhance retailer performance for several reasons, including--fewer markdowns, lower operating expenses, higher turns, increased selling space and improved customer service (Phillips and Droge 1995a)--all contributing to increased sales and profits.

Additional effects of QR on performance were mediated by performance control, scheduling decentralization and flexibility. Scheduling decentralization leads to increased performance. The likely explanation is that because decision-makers are hierarchically

closer scheduling decisions, they are theoretically able to better make decisions, which eventually leads to better performance. Driven largely by QR implementation, increased performance control would lead to performance enhancement due simply to the more intensive managing and control over the new elements that accompany QR processes. QR retailers "are asked to simultaneously provide better service and quality products at lower costs, and if they do not meticulously manage their own processes, they will eventually absorb the costs themselves" (Germain, Droge and Daugherty 1994, p.473). Similarly, driven largely by QR implementation, increased retailer-supplier flexibility likely enhanced performance because QR is based on "timely" exchanges. In other words, the ability to respond to rapidly changing circumstances (i.e., flexibility) enables retailers to satisfy consumer demand while keeping costs (i.e., inventory and time) at a minimum.

DRIVERS & PERFORMANCE IMPLICATIONS

A retailer's competitive strategy is to a large extent realized through the deployment of its overall assortment. And while the today's consumer wants it all -- price, quality, and timely delivery -- quick response (QR) and global sourcing each provide different facets to the overall assortment. As discussed in Chapter 1, these two strategies are among the most visible advances in retail sourcing practices in recent years. Because of their potential impact on the retailer's competitive position, these practices have changed the way firms view sourcing activities -- elevating sourcing to a position of strategic importance. Regardless of the excitement over these strategies, relatively little is known about what causes retail firms to engage in quick response (QR) or global

sourcing. In Chapter 1, the origin of quick response (QR) was attributed to the threats imposed by global sourcing. So as to provide a context for the discussion that follows, preliminary research revealed that 40.5 percent of the retailers included in the study were implementing both QR and global sourcing, 12.9 percent were implementing only QR, and 31.0 percent were implementing only global sourcing, while 15.5 percent were reportedly not implementing either strategy.

Part II of this dissertation looked at potential internal and external environmental drivers of these two strategies and examined performance implications. The performance of retailers implementing only QR versus retailers implementing only global sourcing were compared. Further, the performance of retailers implementing both QR and global sourcing were compared against retailers implementing only one of these strategies. Several interesting conclusions, as captured by two major themes, emerged.

Theme 4: Quick Response (QR) results largely from a corporate mentality of "differentiation" and global sourcing results largely from a corporate mentality of "cost leadership".

Environments can and should influence organizational strategy. In this preliminary inquiry into what inspires retailers to implement quick response (QR) and global sourcing strategies, several logical antecedents emerged. Factors found to be environmental drivers of QR, in order of importance, include: differentiation orientation, risk-taking orientation, technological sophistication, receptiveness to change, environment uncertainty and having primarily domestic operations. Similarly, factors found to be

drivers of global sourcing, in order of importance, include: cost-reduction orientation, technological sophistication, quality control orientation and reliance on foreign sources of supply. The only factor found to influence both QR implementation and global sourcing implementation was technological sophistication, or the extent to which certain technologies have been adopted by their company (e.g., robotics, POS scanning, in-store expert systems). A rather interesting finding is that quality control orientation influenced global sourcing implementation and not quick response. This may suggest that retailers implementing QR sacrifice quality control for more timely merchandise. The possibility of such tradeoffs was not a subject of this thesis but is an interesting avenue for future research.

Perhaps the most important conclusion regarding strategic drivers is that QR implementation is largely driven by a corporate mentality that stresses "differentiation" and GS implementation is largely driven by a mentality that stresses "cost reduction". GS offers the retailer a low-cost alternative to domestic sourcing while QR is a strategy based on the cutting-edge concept of information replacing inventory in the supply chain. It can be argued that QR is primarily a differentiation strategy because having merchandise in the stores when consumers want it "is something that is perceived *industrywide* as being unique" (Porter 1980, p.37). This is not to say that QR retailers are not concerned with costs. According to Porter (1980), "a differentiation strategy does not allow the firm to ignore costs, but rather they are not the primary strategic target". Thus, these findings are consistent with Porter's definitions of cost leadership and differentiation and are useful in explaining the strategy-performance relationships discussed in the following section.

Theme 5: While quick response (QR) and global sourcing both lead to enhanced retailer performance, retailers implementing only QR outperform retailers implementing only global sourcing. Further, retailers simultaneously implementing QR and global sourcing outperform those implementing only one of the strategies.

QR is expected to enhance retailer performance for several reasons -- including fewer markdowns, lower operating expenses, higher turns, increased selling space and improved customer service (Phillips and Droge 1995)--all contributing to increased sales and profits. Global sourcing's competitive impact extends beyond cost containment to influence performance along the competitive dimensions of quality, dependability, flexibility and innovation (Hayes, Wheelwright and Clark 1988).

Because developing a better understanding of the strategy-performance relationship is an "incremental process" (Cappel et al. 1994, p.211), this dissertation limits itself to discussing two scenarios and their performance implications. First, the performance implications of implementing either quick response or global sourcing were examined. Second, the performance implications of implementing a hybrid strategy (i.e., QR and GS) versus a single strategy (i.e., QR or GS) were examined.

Quick Response and Global Sourcing as Competing Strategies

While it seems logical for retailers to desire integrating these two strategies to gain the benefits from each, the more traditional view is that these two approaches to strategic purchasing are considered to be inherently incompatible -- one suggests movement towards zero-inventories and one does not. The most basic conflict is that of buyer-supplier proximity (Fawcett and Birou 1992). In this study, while 31.0 percent

of the retailers were implementing global sourcing and not QR, only 12.9 percent were implementing only QR and not global sourcing.

This more traditional view that global sourcing and QR are strategic alternatives is consistent with Porter's work (e.g., Porter 1980,1985). In Porter's terminology and as confirmed in this research, QR is characteristic of a differentiation strategy and global sourcing is characteristic of a cost-leadership strategy. While many acknowledge that a common outcome of successful QR implementation is cost-reduction, it is argued in this dissertation that QR is primarily a differentiation strategy for the following reason. Porter's (1980) definition of differentiation is that the "offering of the firm creates something that is perceived *industrywide* as being unique" (p. 37) and QR's end result is having merchandise in the stores when consumers want it, unarguably an outcome perceived to be unique throughout the retailing industry. This is not to say that QR retailers are not concerned with costs. According to Porter (1980), "a differentiation strategy does not allow the firm to ignore costs, but rather they are not the primary strategic target" (p. 37).

Porter argued that with the exclusive pursuit of a single generic strategy, be it cost leadership or any of a variety of differentiation approaches, businesses can realize significant competitive advantages over their rivals. In Porter's view, being "stuck in the middle" should be avoided. Further, in retailing, it has been argued that retailers competing primarily with a differentiation strategy should outperform those competing on a low-cost basis (Wright, Hotard, Kroll and Tanner 1990). This contention was confirmed in this research. In particular, those retailers implementing only QR, largely a differentiation strategy, outperformed those retailers implementing only GS, a cost-

reduction strategy. There are two likely reasons for this finding. First, retailers competing primarily with the differentiation strategy (i.e., QR) obtain a competitive advantage, in spite of their higher cost structures, since their unique more timely offerings allow the alternative of charging higher prices and/or taking fewer markdowns. Second, in the "mutually exclusive" world of Porter and given that QR is believed to have emerged in response to offshore sourcing, it seems logical to find that for retailers to initiate a QR strategy, the perceived advantages must outweigh other strategic options (e.g. global sourcing).

Quick Response and Global Sourcing as Complementary Strategies

Some argue that competing on a combined approach of differentiation and low cost may be beneficial because the differentiated outputs (products and/or services) have the advantage of higher pricing, while emphasis on low costs maintains costs in comparison to competitors (i.e., Miller 1992). Past research indicates that the result of competing with a combination of approaches may be associated with higher profitability and larger market shares (e.g., Miller and Friesen 1980; Phillips, Chang and Buzzell 1983; Jones and Butler 1988; Wright et al. 1990).

Extending the more traditional notion that QR strategy and global sourcing are strategic alternatives, there is evidence in the trade press (e.g., Sungchil 1994-*QR;* Vickery 1989-*JIT*) that the two strategies coexist in a manner advantageous to the retailer. In this study, the majority of retailers (40.5 percent) were found to be simultaneously implementing both QR and global sourcing, compared to 30.1 percent implementing global sourcing only and 12.9 percent implementing QR only.

Cappel, Wright, Wyld and Miller (1994) suggest that retailers employing a combination low cost/differentiation strategy will outperform those competing solely on the basis of low cost or differentiation. This contention was also confirmed in this research. That is, retailers implementing both quick response and global sourcing outperformed those retailers implementing either quick response or global sourcing.

In summary, although the strategy-performance link is one of the most fundamental and important relationships in business, there is little consensus over what strategy combinations offer the largest performance rewards. This study lends support to the school of thought that argues hybrid strategies lead to enhanced performance (e.g., Miller 1992; Wright et al. 1990; Jones and Butler 1988; Phillips, Chang and Buzzell 1983; Miller and Friesen 1980). Specifically, the performance of retailers implementing a hybrid QR-global sourcing strategy exceed the performance of retailers implementing a single one of these strategies. Further, the performance of retailers implementing only QR exceed the performance of those implementing only global sourcing.

DIRECTIONS FOR FUTURE RESEARCH

Directions for future research can be derived from three different sources. First, they can be derived from limitations realized from the design and execution of the current study. Second, they can be generated from the study of additional relationships included in the study, but not hypothesized. Finally, they can be logical extensions of the completed research.

Limitations of Current Study

First, while the present study requested that respondents answer many of the questions with reference to specific time frames (e.g., over the last 5 years, currently), the research design is not longitudinal, and there is no review of whether the respondents indeed took into account the specified time frames when they responded to the questions. Future research should consider adopting a longitudinal design.

Second, it should be mentioned that for the model representative of the antecedents and consequences of QR, the following sequential ordering was assumed to exist: environment uncertainty, QR strategy, organizational and relationship structure, performance. Although this sequence is a classic one, other sequences are not implausible. For example, both organizational structure and relationship structure could influence QR strategy implementation, and QR strategy implementation could conceivably lead to perceptions of increased uncertainty in the environment. Without longitudinal data, these possibilities cannot conclusively be ruled out.

Third, the sample size of this study is moderate, which primarily resulted from the small size of the sampling frame. After specifying a minimum sales figure of $100 million annually, there were only approximately 400 retailers eligible for inclusion. Future research may direct more resources to data collection so as to increase the sample size by including smaller firms. The relationships among key constructs may be different in smaller firms because, for example, size has been consistently shown to affect organizational structure.

Finally, the reliability of environment uncertainty, although within acceptable limits, is a possible cause for concern. The key question in terms of future research

implications is: Are the managerial implications from this study (and future studies) potentially biased due to the relatively low reliability of the model's only truly exogenous variable -- environment uncertainty? A question of this nature can be addressed on two different levels: conceptual and empirical.

Empirically, a number of issues can be examined for research focusing on environmental aspects. First, the variance of environment uncertainty can be examined relative to the variance of other variables in the model to determine if a transformation would bring a comparatively large variance within range. Based on *post hoc* analyses in this research, such a corrective situation is not suitable based on examination of the input variance/covariance matrix. Second, analyses could be performed to determine if the study's main results about strategy, structure, performance hold if environment uncertainty is excluded from the model. In this research, the relationships between strategy, structure and performance were virtually the same when the model was reanalyzed without the inclusion of environment uncertainty. Third, environment hostility could be substituted for environment uncertainty and the model reanalyzed. This raises a curious question regarding the appropriateness of using an environment uncertainty scale in a retail setting. The context of its use, to date, has primarily been manufacturing. It is possible that in retailing, environment uncertainty may simply be viewed as a "constant". For instance, environment uncertainty scales tap rate of change, which most leading edge retailers probably consider a given in the 1990s. Therefore, scales such as environment hostility may be more appropriate given the generally uncertain environment in which all retailers operate.

From a conceptual level, the effect of environment uncertainty on strategy,

structure and performance is less bothersome. Simply, managers have little, if any, direct influence over environment uncertainty, as they do with the other variables in the model. As a result, managerial implications are not substantively affected by environment uncertainty, regardless of its level of reliability. However, future research in retailing should be aware of the possible ramifications of using environment uncertainty scales. Several methodological suggestions have been given, based on the findings from this research, for future research involving environmental antecedents.

Additional Relationships

Several relationships, in addition to the ones studied in this dissertation, are viable avenues for future research.

First, the main focus of this dissertation was quick response (QR), but researchers could ask parallel questions about the antecedents and consequences of global sourcing. For example, global sourcing may cause organizational structure to become more organic (i.e., more formalized, more integrated, more decentralized). Compared to traditional importing, global sourcing implies that retailers tend to be more proactive in the acquisition of sources of supply and their own strategies dominate decision-making as to where, when, what, how much and from whom to buy (Liu and McGoldrick 1995).

Second, further examination of the issues of decentralization within a retailing context should be explored. In this study, QR implementation influenced operations decentralization but did not influence scheduling decentralization. For the reasons described earlier in this chapter, this finding is curious. Also, while scheduling decentralization was found to influence performance, operations decentralization was not.

These conclusions are similar to those drawn by Germain, Droge and Daugherty (1994) and also Cullin and Carter (1984) who contend that not all domains of organizational decision-making are necessarily centralized or decentralized equally. Given these results, issues of operations versus scheduling decentralization within any time-based competitive strategy, such as QR, remains a very rich area for future research.

Third, interesting subsample analyses based on key variables could provide greater insights into the relationships unveiled in this study so far. Comparisons between some SIC-code retail industry classifications may reveal parallels or discrepancies. For example, relationships may be more pronounced in industries characterized mainly by "basic" products (i.e., hardline specialty), as compared to industries seeking competitive advantage based on "seasonal" or "fashion" offerings. Also, comparisons may be fruitful for general merchandisers, department stores, discount department stores, specialty apparel stores, specialty hardline stores and drug stores.

Interesting comparisons are also likely based on the length of time retailers have been implementing QR. In this study, approximately half of the retailers had been implementing QR for five year or less, and the other half, between six and ten years. It would seem probable that the strategy-structure-performance relationships confirmed in this study would be more pronounced for retailers with greater experience with QR implementation. Of greatest interest would be the effect of QR on performance by retailers implementing the strategy for longer periods of time.

Another key variable for subsample analysis is the supply chain member to initiate QR relationships, either the retailer or manufacturer. In this study, retailers were found to initiate QR in 65 percent of the cases and manufacturers, 26 percent. In instances

when retailers are the initiating party, relationships between QR and structure, and QR and performance, may be greater.

Finally, because developing a better understanding of the strategy-performance relationship is an "incremental process", the effects of both QR and global sourcing on other dimensions of performance are worthy of consideration. In addition to basic firm performance, other specific dimensions of performance include: financial, strategic, objective (or economic), environmental adaptability, and perceived QR and global sourcing success.

Logical Extensions

First, the present study surveyed only non-food retailers. The most logical extension of this research would be to study food retailers. In food retailing, ECR (Efficient Consumer Response) is QR's equivalent. In general, there are three major differences between QR and ECR that would make comparisons between these broad industries particularly interesting: [1] food retailers deal with far fewer supplier than nonfood retailers, [2] they have far fewer SKUs, and [3] their product turnover is much larger. These differences mean that it would be near impossible to maintain adequate stock in the grocery industry with the reorder lead times common in general merchandise. For this reason (plus the premium on food shelf space), inventory is held at a distributor's warehouse, providing a one or two day lead-time for food store reorders. Unlike the general merchandise industry, the grocery industry does not have a major out-of-stock problem, so the potential sales increases from improved in-stock positions are much less. However, there is some similarity between the general

merchandise industry's difficulty in managing short-lived fashion products and the grocery distributors challenge in managing perishable products. Also, replenishment in the grocery industry works differently because automatic reorders are based on warehouse trigger points instead of POS replenishment.

Second, the present study surveyed only retailers based in the U.S. As the result, the findings do not necessarily have worldwide applicability. There are two potential options for future work. First, the main themes of this research could be replicated by studying the same relationships of foreign retailers operating in the U.S. Second, this work could be replicated in other countries. In both cases, one goal would be to define how the research findings can be generalized. If the research cannot be generalized across national boundaries, then factors that limit generalizability (i.e., cultural, political, economic) should be investigated.

SUMMARY

This chapter reviewed the managerial and theoretical contributions, limitations and directions for future research. In Part I of this dissertation, a model that simultaneously and rigorously examined the antecedents and consequences of quick response (QR) strategy implementation was developed and tested. In Part II, drivers and performance implications of QR and global sourcing were explored.

The research proposed and executed in this dissertation contributes to the theory, method and application of QR implementation in particular, and global sourcing to a lesser extent. This was achieved by conceptually and methodologically integrating several core concepts of strategic management, retailing and marketing. This research

should help fill a void in both academic research on retailing strategy and managerial application regarding QR strategy implementation.

APPENDIX

APPENDIX

NONNORMALITY ASSESSMENT

Variable	Mean	Std. Error	Kurtosis	Skewness	Cases
ENV1	5.41	0.12	0.03	-0.72	134
ENV2	3.93	0.12	-0.60	-0.01	134
ENV3	4.51	0.11	-0.38	-0.03	134
ENV4	4.59	0.13	-0.86	-0.22	134
ENV5	4.42	0.10	0.15	-0.26	132
ENV6	3.84	0.14	-0.90	0.24	133
ENV7	4.07	0.10	-0.43	0.09	134
OS1	6.25	0.08	3.38	-1.63	132
OS2	5.28	0.13	0.54	-10.5	128
OS3	5.27	0.11	0.28	-0.64	132
OS4	5.62	0.11	-0.48	-0.63	132
OS5	5.68	0.11	0.56	-0.98	131
OS6	2.40	0.07	-0.54	-0.07	130
OS7	2.01	0.08	2.18	0.91	130
OS8	2.27	0.08	-0.52	0.16	131
OS9	2.11	0.08	0.87	0.68	128
OS10	3.35	0.15	-0.87	0.44	128
OS11	2.74	0.15	-0.03	0.96	123
OS12	1.36	0.07	22.32	4.04	129
OS13	1.39	0.07	19.91	3.55	129
OS14	2.54	0.10	1.22	1.06	131
OS15	2.95	0.11	0.45	0.86	131
OS16	3.36	0.07	-0.18	-0.92	130
OS17	3.19	0.08	-0.94	-0.52	130
OS18	1.78	0.10	4.78	2.06	130
OS19	1.71	0.09	6.19	1.98	126
OS20	3.51	0.10	1.11	0.60	101
OS21	3.68	0.08	3.31	0.30	104
OS22	3.34	0.09	2.02	0.96	103
OS23	3.90	0.13	-0.67	0.38	105
OS24	4.59	0.14	-0.76	-0.50	130
OS25	5.39	0.12	0.82	-1.00	133
OS26	4.80	0.13	-0.34	-0.55	133
OS27	5.26	0.14	-0.12	-0.91	133
S2	4.53	0.11	-0.35	-0.36	125
S3	5.09	0.11	0.82	-0.81	128
S4	4.98	0.11	-0.02	-0.63	129
S5	4.96	0.13	-0.59	-0.38	128

Variable	Mean	Std. Error	Kurtosis	Skewness	Cases
S6	5.19	0.11	-0.27	-0.57	129
S7	4.52	0.14	-0.63	-0.43	128
S8	5.27	0.11	0.77	-1.00	128
S9	4.89	0.11	-0.54	-0.32	127
S10	5.17	0.10	-0.24	-0.56	128
S11	4.61	0.13	-0.47	-0.32	125
QR13	4.54	0.19	-1.17	-0.38	117
QR14	4.37	0.17	-1.07	-0.30	122
QR15	4.94	0.16	-0.55	-0.65	125
QR16	4.81	0.16	-0.72	-0.54	124
QR17	4.81	0.18	-0.74	-0.70	116
QR18	4.42	0.19	-1.38	-0.44	123
QR19	4.76	0.16	-0.88	-0.48	124
QR20	3.93	0.15	-0.86	0.05	120
QR21	3.36	0.20	-1.33	0.44	120
QR22	6.12	0.15	3.50	-2.12	123
QR23	4.49	0.21	-1.39	-0.35	122
QR24	4.39	0.23	-1.78	-0.26	124
QR25	4.38	0.22	-1.53	-0.29	118
GS6	4.56	0.19	-0.93	-0.33	93
GS7	5.10	0.17	0.41	-1.05	91
GS8	4.24	0.19	-1.14	-0.21	92
GS9	3.44	0.26	-1.69	0.34	93
GS10	4.16	0.23	-1.41	-0.24	95
GS11	4.19	0.21	-1.15	-0.37	93
GS12	3.97	0.22	-1.30	-0.26	92
GS13	3.66	0.21	-1.21	0.07	85
GS14	4.01	0.21	-1.23	-0.06	92
GS15	4.19	0.21	-1.19	-0.24	94
GS16	3.65	0.19	-1.25	0.07	93
P1	4.52	0.12	-0.60	-0.10	124
P2	4.57	0.12	-0.13	-0.25	126
P3	4.37	0.13	-0.68	-0.27	126
P4	4.26	0.12	-0.47	-0.11	125
P5	4.28	0.12	-0.46	0.03	125
P6	3.90	0.16	-0.41	-0.09	95
P7	3.71	0.20	-1.28	-0.05	89
P8	3.90	0.15	-0.63	0.13	100
P9	4.00	0.15	-0.51	-0.01	101
P10	3.86	0.15	-0.56	-0.01	101
P11	3.90	0.15	-0.45	0.19	100
P12	3.87	0.15	-0.57	0.09	98
P13	4.17	0.16	-0.65	-0.28	92
P14	3.93	0.18	-0.96	-0.11	86
P20	4.77	0.13	-0.26	-0.58	98
P21	4.73	0.13	0.03	-0.46	98

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