
Retail buyers' perceptions of quick response systems

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Abstract

Quick response (QR) systems are being implemented by retail firms at an ever quickening pace throughout the USA. While dramatic changes occur throughout the retail company adopting QR strategies, it is the buyers and buyers' assistants that are more affected by these changes than other executives in the retail firm. Therefore, the purpose of this study was to investigate the perceptions, attitudes and opinions of retail buyers toward QR. Over 200 buyers from leading department and specialty store firms that have implemented, or are beginning to implement, QR participated. In general, the findings indicated that buyers had a positive view of QR systems; felt QR would save them time but not reduce the number of buyers currently employed; and that they used technology as an integral part of their job. The study also found several significant factors describing buyers' perceptions of QR that were related to the size of their organization.

Introduction

Quick response (QR) is a vertical strategy where the manufacturer strives to provide products and services to its retail customers in exact quantities on a continuous basis with minimum lead times, resulting in minimum inventory levels throughout the pipeline. Retailers no longer wish to carry high inventory levels and therefore, in many cases, have been demanding QR from manufacturers. Retailers see QR as a way to operate their store with an adequate amount of inventory while providing their customers outstanding service. This higher level of service is necessary given the increased competitiveness faced by retailers.

Facilitating QR requires using various technologies to support accurate, frequent and efficient communications systems. Electronic data interchange (EDI) facilitates QR through the online electronic communication of sales data from retailers to their distribution centers to company headquarters and back to their vendors. Vendors are responsible for promptly supplying the distribution chain with the merchandise requested to maintain the store's inventories at optimum levels cooperatively developed by the retailer and the vendor.

Another important technological component of QR is barcode scanning. A barcode is simply a symbol (a machine readable version of a human readable code), that consists of alternate dark bars and white spaces representing the UPC number designed to be read by scanners which communicate with computers. In order for EDI to work, an exact product identification number or code for each stockkeeping unit (SKU) is necessary. Immediate EDI of sales data are impossible without barcodes. The reported advantages of QR and its resultant technologies include: quicker deliveries, reduced shipping costs, faster inventory turns, fewer stock outs, fewer markdowns, and lower inventory investment, all of which can positively impact profits (*Discount Store News*, 1997; Schnaars, 1991).

Implementing QR requires extensive changes in the working relationships between

Appreciation is extended to Eleanor May for her work on an earlier draft of this manuscript and to Michelle Hillberg and Barbara Geathers who assisted with data presentation.

retailers and manufacturers, as well as systems changes in this link in the chain of distribution from raw materials to consumers. Retailers using QR strategies have had to develop new processes and relationships to ensure efficiency in the distribution linkages. These new processes include moving boxes directly to the sales floor, rather than through shipping and storage areas, which reduces shipping costs and shortens the time it takes to get new merchandise to the sales floor (*Discount Store News*, 1997). Because of all these changes taking place retailers' and vendors' staffs must jointly develop detailed models of their inventory plans by individual SKUs. These models, which must allow for seasonal demand changes must be at the style, size, and color level for each selling unit (Hammond 1991, 1992; Harvard Business School, 1987, 1990, 1991).

For successful QR implementation, it is essential that top management understand and enthusiastically support the QR concept and provide others involved in QR with both the tools and the necessary training. The level of cooperation in the human linkages, as well as the attitudes and commitment of these people toward the new concepts and organization, can determine whether a QR program will be a success (Johnsen, 1996).

QR is a process, not a procedure, product or program. QR linkages involve changes in job functions for both retailers and vendors. Many of these job function shifts necessitate organizational changes. Macbeth (1994) explored the nature of partnerships in the purchasing process and found that, for successful business relationships to be partnerships, a network must be formed that involves interacting and interdependent groups of individuals from each organization that complements and shares with each other for the betterment of all the partners. Retail buyers' and merchandisers' responsibilities and authority are markedly different under a QR strategy than they are without QR. Without QR, most retail buyers are involved on a day-to-day basis with determining which specific merchandise to reorder. With QR, however, buyers' emphasis must shift to: detailed joint planning of merchandise lines and items with vendor partners; developing and maintaining good relations with vendor partners; and jointly introducing new items or new lines (Baker and Hauer, 1993; Carter, 1991;

Dahlstrom and Dwyer, 1993; Gardner *et al.*, 1993; Hunter, 1990).

As a result of their altered relationships with retailers, vendors may also need organizational changes. As previously mentioned, QR linkages require the development and implementation of new communication linkages and systems. Secondly, unless the vendor has already implemented short-cycle manufacturing, QR usually requires a shift to smaller production runs to satisfy the more frequent, smaller shipments demanded by retailers using a QR strategy. The full commitment of vendors' top management is as important as is that of retail buyers' management (Kincade and Cassill, 1993).

One of the biggest benefits for vendors in QR partnerships is gaining access to retail sales data by SKU (Ryan, 1997). Access to these data allows the manufacturer to plan production runs that meet the customers' needs. Pre-QR retailers would find themselves holding large inventories, yet they were out-of-stock of the best-selling merchandise. It has been estimated that 40 to 50 percent of sales in department stores are lost because stores were stocked with the wrong sizes and colors (Ryan, 1997, p. 22).

Research study

To measure the impact of QR on the merchandiser of retail firms, a study was conducted among retail buyers. Since department store merchandise spans a number of product lines and many SKUs it was felt these type firms would be ideal for this study. The merchandise sold by these firms emphasize apparel and accessories, furniture, and home furnishings. Retailers specializing in such merchandise as food, drugs, books, home building supplies, and appliances were not included in this study, even though some of the firms included carried these lines to a limited degree. The firms in the study were department stores, specialty stores (apparel and accessories), as well as discount stores.

The purpose of the study was to investigate the perceptions and attitudes, problem areas, and possible roadblocks facing the retail buyer in companies committed to implementing QR systems. There has been little published in trade or academic journals that indicates the role of buyer perceptions and attitudes toward the multitude of changes in their job content, performance evaluation, and incentive programs. The objectives of the study were:

- (1) To identify buyers' perceptions and attitudes toward QR systems and strategies in their companies.
- (2) To identify technologies currently being used by retail buyers to implement QR systems.
- (3) To evaluate the impact of organizational size in the implementation of QR systems.

Methodology

Meeting the objectives of this research required that firms had some level of involvement with QR systems. Therefore, 72 retail firms from a previous study, who had responded positively in adopting QR strategies, were asked to participate in this study (Fiorito *et al.*, 1995). Executives from 38 companies indicated they would participate by distributing questionnaires to their buyers. Each retail executive indicated the number of questionnaires they would distribute. The number of questionnaires requested totaled 432. Of those, 218 (50 percent) were returned by buyers in 32 companies. Each retail executive requested a range of 1 to 45 questionnaires and each retail executive returned from 0 to 18 questionnaires. Six companies that requested questionnaires for distribution did not return any questionnaires. Thus the response rate from the individual buyers ranged from 0 to 90 percent. The questionnaire included both scaled items and open-ended responses and addressed buyers' perceptions and opinions of QR, buying merchandise within a QR system, information access, customer service, vendor relationships, use of technology, effects of QR on the buyers' work habits and demographic information on the buyers and their companies.

Research sample characteristics

The 32 responding firms had an average of just over one billion dollars in annual sales; the firms had been in business, on average, 85 years and operated 90 stores. Responses came from every geographic region in the USA, including Hawaii.

Of the 218 buyers, 67 percent were female, the average age was 36 years, and typically they had four years of education after high school and nine years of buying experience. Respondents' characteristics were not significantly different from those typical among others holding retail buying or buying positions in general. A comparison to a survey in

Purchasing (1995) magazine indicated very similar demographic characteristics, except for gender. In the study of industrial buyers males surveyed represented 77 percent and females 23 percent; the average age was 43 years old and 66 percent held a four year college degree and averaged 13 years of experience (*Purchasing*, 1995).

The merchandise categories represented were heavily in apparel lines (82 percent). This may simply be a reflection of the ongoing shift of emphasis by department stores and mass merchandisers increasing the number of apparel and accessory lines and away from hard lines. One example of this strategy is JC Penney's focus on both their private label as well as traditional name brand apparel products, coupled with the movement away from hard lines such as appliances, televisions, and other hardware items. Other areas of merchandise were also included in the responses but represented a minority of the responses.

General perceptions about QR

A major key to success of QR implementation is the quality of the buyer's decisions on merchandise planning, selection, distribution, pricing, and promotion. Buyers' attitudes have always been important in any retail firm. Without the retail buyer's commitment, the success of a program like QR could be seriously impeded. But QR is an organizational wide effort and it requires support from upper management.

The attitude of the buyers in the study was very positive toward QR. When asked how successful QR would be in their store, 75 percent indicated either "extremely successful" or "successful," while 23 percent indicated QR would be "somewhat successful." Only 2 percent indicated it might be "somewhat of a failure" and not one respondent thought the program would fail or should be eliminated. This positive attitude, although certainly not a surprise considering all of the buyers were currently involved with QR systems, inundates the buyer's general perceptions about QR systems (see Table I). QR systems were strongly viewed as needed changes to survive and had the support of top management. Thus buyers felt the QR program would be successful at their store even though it would mean drastic changes in their job duties. Overall, buyers did not feel threatened by the move to QR and felt that their job performance could be measured

Table I General perceptions about quick response

Quick response	Mean	SD
Is a change that is needed	4.32	0.71
Is a necessary strategy in order to survive in the retail industry today	4.17	0.79
Will be successful at my store	4.09	0.64
Has the support of most senior management in my company	3.87	0.94
Will mean a drastic change for me as a buyer	3.40	1.02
Is taking a long time to get support from buyers	2.60	0.92
Will make it more difficult for management to evaluate my job performance	1.97	0.80
Is threatening because of the changes it will cause	1.76	0.80
Is a trend that won't last	1.44	0.75

Notes:

Scale: 5 = strongly agree; 4 = agree; 3 = neither; 2 = disagree; 1 = strongly disagree

by management under a QR system. One buyer wrote the following comment that summed up the buyer's and management's overall feelings about QR:

QR seems to be more easily accepted by younger buyers. The higher you go in management, the longer they have been in retail and the less accepting they are of new ideas in data analyses. When upper management were buyers, QR and its related technologies were not used or necessary.

Perceptions of profitability and service

The speed of QR systems will allow buyers to respond more quickly to customer requests and allow faster, more accurate reordering of merchandise during the buying season (see Table II). These actions were seen as ways to improve store profitability and provide a competitive advantage for their store(s). Further, improved customer service would lead to greater market share and increased profits for the merchandise the retail buyers were responsible for purchasing. One buyer commented:

QR is absolutely necessary for a company to remain positioned for tomorrow and meet the high standards for customer service.

Vendor relations

QR is perceived by the buyers in this study as encouraging the development of closer relationships with vendors. These closer relationships should result in increased cooperation and vendor's use of barcoding technology (see Table III). There appears to be mild agreement among the respondents regarding the location

(domestic vs foreign) of vendors. Buyers felt QR would result in only a small shift toward domestic vendors. Three separate statements were offered on the questionnaire for response concerning vendor location. "QR will encourage an increase in the use of domestic vendors" which had a mean score of 3.34 on a five-point scale, indicating mild agreement. Second, the statement "QR will encourage an increase in the use of foreign vendors" had a mean of 2.41, indicating slight disagreement with this statement. Finally, "QR will not change the percentage of goods purchased from domestic or foreign vendors" which had a mean score of 3.10 and was interpreted as neutral. These results indicate that buyers are not yet able to clearly judge the impact QR will have on their sourcing decisions. Initially, they felt it would provide a slight boost for domestic vendors. QR was not seen as limiting the number of vendors utilized or as a way to shift inventory costs to vendors. Apparel firms that manufacture domestically have indicated that they are able to turn around goods much faster than importers, control their inventories more efficiently and collaborate more fully with retailers on QR replenishment programs than are their off-shore competitors (*Women's Wear Daily*, 1995). It is an expensive investment to get set-up with QR, said one domestic vendor, but the pay-off appears to be worth it (*Women's Wear Daily*, 1995). Buyers in this study indicated that generally, vendors were perceived to be cooperative towards QR systems. However, one buyer wrote:

Table II Perceptions of profitability and services

Quick response	Mean	SD
Will enable me to respond more quickly to the needs of my target customer	4.31	0.57
Will allow me as a buyer to reorder merchandise during the selling season	4.21	0.69
Will improve the profitability of my store	4.18	0.62
Will give my store a competitive advantage	4.09	0.69
Will improve customer service in our store	4.08	0.79
Will help my store gain more market share	4.02	0.73
Will improve the profitability in the department I buy for	4.01	0.77
Will increase employee output	3.44	0.77
Will increase operating expenses	2.80	0.89
Will require more time on the computer which may result in a decrease of customer service	2.15	0.85

Notes:

Scale: 5 = strongly agree; 4 = agree; 3 = neither; 2 = disagree; 1 = strongly disagree

Table III Vendor relationships and quick response systems

Quick response	Mean	SD
Will encourage the development of partnerships with vendors	4.05	0.67
Will lead to better and improved cooperation with vendors	3.87	0.67
Will eventually result in all our vendors being required to print barcodes on merchandise tags	3.85	0.83
Will encourage an increase in the use of domestic suppliers	3.34	0.85
Is a way to shift inventory costs to vendors	3.32	0.94
Will not hinder me from buying merchandise from a vendor that does not barcode merchandise	3.30	0.99
Will not change the percentage of goods purchased from domestic or foreign vendors	3.10	0.87
Will allow the buyer to focus less on pushing the vendors for high initial markup	2.62	0.82
Is difficult to achieve because I lack the cooperation of many vendors	2.59	0.95
Will limit the number of vendors I can use	2.47	0.97
Will encourage an increase in the use of foreign suppliers	2.41	0.68

Notes:

Scale: 5 = strongly agree; 4 = agree; 3 = neither; 2 = disagree; 1 = strongly disagree

QR is great if all three partners are healthy and strong; one weak partner destroys it. Generally, we as a department store and the grieger goods [grieger goods are woven or knitted textiles that have not been dyed, or otherwise finished] supplier have been strong, healthy advocates. However, my immediate vendor is the weakest link. They whine about the increased time demands. We've been trying for two years and have yet to experience the true intended benefit because of the weak partners.

Job and systems related issues

QR systems are seen as increasing buying accuracy through analysis of more timely sales data and thereby increasing the ability to make wiser buying decisions (see Table IV). Buyers felt it would be easier to track merchandise information and having this immediate access to data was a real benefit. Such information would allow for better matching of demand on orders for various

Table IV Job and systems related issues

Quick response	Mean	SD
Will make it easier to track merchandise sales information with more accuracy	4.16	0.75
Will help me make better and more specific buying decisions because I will have access to size and color information of merchandise	4.06	0.72
Will be used primarily for staple, year round merchandise	4.02	0.99
Will take some of the guesswork away from buying decisions	3.90	0.89
Will enable me to have immediate access to sales information	3.88	0.87
Will allow me to buy fewer units at one time	3.85	0.96
Will enable me to make buying commitments closer to the actual selling season	3.83	1.02
Will allow me as a buyer, to forecast better what merchandise to buy	3.82	0.94
Will decrease human error because of additional available information	3.79	0.84
Will allow me as a buyer to pick up on trends faster and more accurately	3.71	1.03
Will help me to make fewer buying mistakes	3.68	0.99
Will decrease the amount of paper work for my job	2.96	1.10
Will reduce my time spent on pre season planning	2.80	1.10
Will be used for trendy or fashion items	2.36	1.13
Is better suited to men's merchandise than women's merchandise	2.34	1.09

Notes:

Scale: 5 = strongly agree; 4 = agree; 3 = neither; 2 = disagree; 1 = strongly disagree

sizes and colors. Orders could be placed for smaller quantities which then would require fewer items to be marked down since orders would more closely match demand and commitments could be made closer to the actual buying season. Buyers felt QR was best suited to staple year round merchandise as opposed to trendy fashion items. They also felt it was applicable to both men's and women's merchandise. One respondent wrote on the questionnaire:

QR will be used mainly for basic merchandise. The technology of EDI or QR are not well understood or communicated by vendors or the retailers. Not many vendors in ready-to-wear are able to use QR at this time.

QR systems will not decrease the amount of paper work or time spent on pre season planning. What it will do, however, is decrease the amount of mistakes the buyer makes through improved forecasts by having access to more accurate and timely data.

Technological infrastructure for QR buyers

Buyers reported extensive use of computers in their companies and on their jobs. Regarding the use of computers, nearly two-thirds (66 percent) of the respondents indicated that computers were "an integral part of day-to-day planning." Another third (34 percent) said the computer usage in their company was "as record keeping to provide information when needed" and 98 percent of the buyers reported they believed their firm used computers for multiple tasks.

The buyers generally were enthusiastic about computer assistance in accomplishing their jobs. When asked to select among six responses, one third (34 percent) of the buyers indicated that they believed they "could not function without" a computer. Nearly another one-third (30 percent) said they used the computer "as a major portion of what I do." And finally, one-third (36 percent) said

that they used a computer “in some of my responsibilities.” Ninety-six percent of the respondents were active computer users while 4 percent reported they “never use a computer” on their job. While this 4 percent may sound surprising, a recent field visit to a major retail corporate buying office by one of the authors revealed that several senior associate buyers utilized manual spreadsheets while their assistants entered the data onto computers.

All the buyers indicated that computers were used in their firms for recording point-of-sales (POS) data. Other uses reported were for open-to-buy, seasonal planning, inventory control, automatic reordering, and other aspects of the merchandising function.

Computer usage or applications, such as EDI and sales data collected by SKU, are virtually essential for the implementation of systems and strategies such as QR. For example, one logistics text cites that in a typical QR arrangement orders from retailers are sent to manufacturers via EDI (Bowersox and Closs, 1996). Retail buyers responding to this study strongly agreed that there was a significant need for technological systems to support the objectives of QR in their job environment. When asked to indicate which of the technological aspects of QR were important to their job, on a five-point scale (scale: 1 = strongly disagree, 5 = strongly agree), buyers strongly agreed QR required:

- (1) Computerized automatic replenishment systems ($\bar{x} = 4.21$);
- (2) Barcode scanning ($\bar{x} = 4.11$);
- (3) Electronic data interchange ($\bar{x} = 4.08$); and
- (4) Sending purchase orders via EDI ($\bar{x} = 4.08$).

Interestingly, the two EDI questions both received identical mean scores indicating a very reliable measure of this dimension. Since reliability addresses the issue of the extent to which a measure yields consistent results when the process is replicated, one of the statements asked for the use of EDI universally while the other addressed EDI in transmitting purchase orders. However, both measured a similar construct about transmitting information electronically. It appears from these data that retailer buyers are mainly using EDI to transmit purchase orders rather than transmission of other documents:

Buyer comments regarding the technological infrastructure required by QR systems are presented here.

Most problems I've heard have been with vendor software receiving QR and EDI. Also, this is their largest expense. More consistency would help. Also, vendors want sales and inventory information, which we will gladly give but their software to capture this does not always work well or comes in a form difficult to analyze (e.g., sales and inventory are on separate reports).

QR will only be successful if basic replenishment is implemented without error. Problems I have at my store are incorrect initial store counts, incorrect ticketing from the distribution center, and problems with scanning. If the data is incorrect the orders will be incorrect.

Quick Response and accurate information are not the same thing, which is often a misunderstood concept. You must have a strong information system to provide QR. Without accurate information QR is pointless. This result is an overstocked situation with no perceptible increase in sales.

QR system impact

While it is not possible to attribute the causality of QR systems to the technological requirements, it is known that QR requires the implementation of technology to be efficient and effective. Therefore, it is important to look at the impact of these QR systems on the retail buying function (see Table V). Fifty-three percent of buyers indicated QR systems would save them time. Twenty-seven percent indicated QR would save them from 1-7 hours per week. Another 17 percent knew it would save time but did not indicate the amount. Finally, 6.5 percent indicated a savings of 8-10 hours per week. Thus, it appears there are time efficiencies associated with QR. However, these efficiencies will not result in a reduction in the number of buyers. Sixty-nine percent of the respondents indicated there had been no change in the number of buyers in their firm. It appeared though, that QR systems would allow buyers to gain more control over their buying decisions since the various technologies allow for improvement in the accuracy and timeliness of information. The following two comments from buyers illustrate their perceptions about work load:

The work load had not decreased with QR. We are just better focused; we spend our time analyzing different things that are now available to analyze.

My assistant's work load is increased due to QR. We must key vendor's order report into a system, manually to create POs and receivers.

Table V Quick response system impact

Situation	N	Percent
<i>1 Quick response will save you time</i>		
Yes	115	53.0
Not sure	71	32.7
No	31	14.3
<i>2 The amount of time saved by quick response systems</i>		
Not sure	37	17.1
1-3 hours/week	33	15.2
4-7 hours/week	26	12.0
8-10 hours/week	14	6.5
Less than one hour a week	8	3.7
11 hours/week or more	5	2.3
<i>3 Retail buyer headcount after quick response systems</i>		
The number of buyers had not changed	144	68.7
Not sure of changes	49	22.6
Decreased the number of buyers	4	1.8
Increased the number of buyers	3	1.4
<i>4 Degree of control over buying decisions under quick response systems</i>		
Have more control	95	43.6
Have no change on control	63	28.9
Am not sure	39	17.9
Have less control	22	10.1

Since QR's technologies affect a number of functions it becomes very important that all employees understand QR systems. Interestingly, 57 percent of these retail buyers felt that only one of four employees in their corporation understood what QR meant. It appears buyers feel they are ahead of other non-management employees in understanding QR. Buyer training about QR was supported by management as 56 percent of the buyers were required to attend QR training classes. Fifty-two percent of the respondents indicated training was done either by: word of mouth (52 percent); printed literature (46 percent); in-store meetings (29 percent); or through company newsletters (14 percent). One buyer commented:

Most companies I've been involved with need stronger education for their employees in Quick Response. This will help implementation and success.

Management was, for the most part, aware of QR's potential since that part of the buyer's optimism about the system was driven by innovative attitudes of management. Fifty-six percent said that their managers were positively attuned to new technologies and another 27 percent indicated management continually searched for new technologies that would

increase efficiency. While 17 percent indicated their management was hesitant to adopt new technologies, none of the respondents indicated management was not interested in new technologies. This perception that managers were open to new technologies is important since approximately 60 percent of the sample indicated that managers alone made decisions on new ideas. The remaining 40 percent of respondents indicated they took an active part in the decision-making process concerning new ideas. However, one of the following comments from a buyer did relay his/her management's hesitation about QR:

I think our management is hesitant to implement any of this (even EDI) because of initial cost output (i.e. new terminal, training, etc.). I think they talk big about it with little or no actual plan to implement. Please bombard the CEO, and GMMs with positive information continuously!

Size and QR system adoption

It was informally hypothesized that the size of the firm (as measured by annual sales volume) would have an impact on QR systems. Reports in trade publications, such as *Bobbin*, *Chain Store Age Executive*, *Discount Merchandiser*, *Discount Store News*, and *Stores*, plus *Wall Street*

Journal and *New York Times*, report enthusiastic top management support of QR. This support appears especially strong among firms that have had more experience with implementing QR systems over a longer period of time, such as Dillards, Penneys, and WalMart. The reason why larger firms have adopted and supported QR systems may be due to top management support or access to capital to fund the technology required. Pearson's correlations were run to determine the degree of association between organizational size and several variables measured in this study.

Results of correlation analyses between annual sales volume and QR system adoption appear in Table VI. These results revealed that top management support was significantly and positively correlated to the size of the firm.

Buyers at large firms were significantly more likely to perceive greater competitive advantages, service, and profitability benefits from pursuing a QR strategy. Specifically, the larger the retail firm the more encouragement it provided buyers toward developing partnerships with vendors. Respondents at larger firms were significantly more likely to insist that vendors be required to print barcodes on merchandise to facilitate QR. Thirdly, QR was not perceived as a program to shift inventory costs to vendors. Buyers at larger firms also felt that they had cooperation of their vendors in establishing QR systems.

Buyers at larger firms felt that technology was critical to QR systems. All three technologies cited (barcode scanning, EDI, and automatic replenishment systems) were significantly more important to retail buyers at larger firms.

Finally, buyers within larger organizations see QR systems as providing better forecasts for staple year round merchandise increasing their ability to buy the correct mix of items. In QR systems, management will be able to evaluate buyer job performance with perhaps even more accuracy than prior to QR.

Summary and conclusion

It was the purpose of this study to identify what buyers thought about QR and how they perceived QR systems would affect them. The results indicate that buyers generally agreed that QR is a strategy that is needed. Furthermore, they said they believed that adoption of QR is necessary for survival in retailing today. They also stated that QR will improve both their department and store profits.

Table VI Pearson correlation. Annual sales dollars and quick response systems

Quick response attributes	Correlations
1 Top management support	
Has the support of most senior management in my company	0.23**
2 Profitability and service levels	
Is necessary strategy in order to survive in the retail industry today	0.16*
Will help my store gain more market share	0.17*
Will give my store a competitive advantage	0.17*
Will be successful at my store	0.18*
Will improve the profitability in the department I buy for	0.17*
Will increase operating expenses	-0.18*
3 Vendor relationships	
Is a way to shift inventory costs to vendors	-0.14*
Will encourage the development of partnerships with vendors	0.23**
Will eventually result in all our vendors being required to print barcodes on merchandise	0.19**
Will not hinder me from buying merchandise from a vendor that does not barcode merchandise	-0.17*
Is difficult to achieve because I lack the cooperation of many vendors	-0.15*
4 Job related issues	
Will allow me as a buyer to forecast better what merchandise to buy	0.15*
Will be used primarily for staple, year round merchandise	0.14*
Will require more time on the computer which may result in a decrease of customer services	-0.17*
5 Technology (QR aspects important on the job)	
Barcode scanning	0.17*
Electronic data interchange (EDI)	0.29***
Computerized automatic replenishment systems	0.19**
Sending purchase orders via EDI	0.19**

Notes:

* = $P \leq 0.05$; ** = $P \leq 0.01$; *** = $P \leq 0.001$

The buyers reported that QR would save them time on their job. They believed that only a few, if any, would lose their jobs as a result of adoption of QR, because their time would be shifted to more professional and profit enhancing tasks such as pre-planning and vendor analysis.

Most buyers believed that QR will provide tools that will allow them to better forecast merchandise trends, reduce their buying mistakes, buy closer to the selling season, and reorder more often during the selling season. Thus, from the buyers' perspective, with QR,

they would be able to respond more quickly and more effectively to their customers' needs.

Furthermore, it was reported by the buyers that the training and other education on QR can be improved. They said that organized information about QR must come from senior management. With such information, the buyer would be supported and aided in their implementation of QR. There seemed to be a level of wariness, however, among the buyers about the impact of QR on them and their function, even though presumably all the respondents had some involvement with QR systems. Much of this wariness stems from the perception that most other functions do not understand QR and that in some cases management must provide more training resources to show its support for QR.

QR is here to stay. It is not a strategy that will come and go, as have many previously introduced management "fads." The impact from QR on the distribution chain is to improve productivity both on the part of the vendors but especially the retailer. The result reportedly will be higher levels of consumer satisfaction than could be attained without QR.

QR will be adopted by many more retailers. These retailers will develop different, stronger, and closer relationships with their vendors, and vice versa. Furthermore, the use of QR will become intensified, as will the benefits among those retail and vendor firms that have already adopted QR. The expansion of QR obviously will require more trust between vendors and retailers, changes both in the vendor and the retail organizations, more and better training and development of the personnel involved, and adaptable personnel in both organizations (Hartnett, 1993). The results of this study indicate buyers at larger firms felt QR had significantly more top management support, required increased use of technology and saw QR as a way to increase profits and gain competitive advantage. Thus, it might be prudent for smaller firms to study the implementation tactics of their larger competitors and realize that QR systems require a significant investment in technology, relationships, and training.

References

- Baker, T.L. and Hauers, J.M. (1993), "The relationship between strategy and structure within channel dyads", *Journal of Marketing Channels*, Vol. 2, pp. 83-97.
- Bowersox, D.J. and Closs, D.J. (1996), *Logistical Management*, McGraw-Hill, New York, NY.
- Carter, J.R. (1991), "Implementing supplier barcodes", *Production and Inventory Management Journal*, Fourth Quarter, pp. 42-7.
- Dahlstrom, R. and Dwyer, R.F. (1993), "The political economy of distribution systems: network projections and propositions", *Journal of Marketing Channels*, Vol. 2 No. 29, p. 41.
- Discount Store News (1997), "Panelists praise quick response for role in cutting shipping costs", Vol. 36 No. 6, May 5, p. 32.
- Fiorito, S.S., May, E.G. and Straughn, K. (1995), "Quick response in retailing: components and implementation", *International Journal of Retail & Distribution Management*, Vol. 23 No. 1, pp. 12-21.
- Gardner, J.T., Benoy, J.W. and Thach, S. (1993), "Modeling the continuum of relationship styles between distributors and suppliers", *Journal of Marketing Channels*, Vol. 2, pp. 1-28.
- Hammond, J.H. (1991), *Coordination as the Basis for Quick Response: A Case for "Virtual" Integration in Supply Networks*, Janice H. Hammond, Boston, MA.
- Hammond, J.H. (1992), "Quick response in retail channels", Janice H. Hammond, Boston, MA.
- Hartnett, M. (1993), "Buyers: endangered species?", *Stores*, September, pp. 53-4.
- Harvard Business School (1987), *Crafted with Pride in USA Council. Case No. 9-587-110*, HBS Publishing Division, Boston, MA.
- Harvard Business School (1990), *Quick Response in the Apparel Industry. Case No. 9-690-038*, HBS Publishing Division, Boston, MA.
- Harvard Business School (1991), *Sara Lee Knight Products: Quick Response at Hanes. Case No. 9-191-021*, HBS Publication Division, Boston, MA.
- Hunter, N. A. (1990), *Quick Response in Apparel Manufacturing*, The Textile Institute, Manchester.
- Johnsen, N. (1996), "Answering the tough QR questions", *Bobbin*, March, pp. 58-9.
- Kincade, D.H. and Cassill, N.L. (1993), "Company demographics as an influence on adoption of quick response by North Carolina apparel manufacturers", *Clothing and Textiles Research Journal*, Spring, pp. 23-30.
- Macbeth, D.K. (1994), "The role of purchasing in a partnering relationship", *European Journal of Purchasing and Supply Management*, Vol. 1 No. 1, pp. 19-25.
- Purchasing (1995), "Profile of a purchasing professional", Vol. 19 No. 1, July 13, pp. 57-72.
- Ryan, T.J. (1997), "Federated, VF Corp. laud quick response as vital cost cutter", *Women's Wear Daily*, Vol. 174 No. 95, November 17, pp.1, 22-5.
- Schnaars, S.P. (1991), *Marketing Strategy*, The Free Press, New York, NY, pp. 265-88.
- Women's Wear Daily (1995), "Manufacturers tout the QR advantage", Vol. 172, May 3, pp. 13, 27.