Quick Response - The ultimate challenging way to success in fashion (clothing) business

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Abstract

Purpose - The purpose of this paper is to find out the necessity of quick response (QR) in clothing business, quick response implementation (QRI), highlight the present trend of QRI, illustrate the future of QRI, the relationship between QR and the supply chain and also the advantages and disadvantages of QR.

Methodology - This writing is based on the book “Quick Response - Managing the Supply Chain to meet Consumer Demand” by Bob Lowson, Russell King and Alan Hunter and some other articles.

Findings - Results point out that some companies have already implemented QRI systems and some others are in the way to use it. QR is the best policy to success in clothing business.

Limitations - Since this study was limited to a book and some other articles findings can only be used as a guide for further research into this area. The next stage of this research will be to gather more responses from different suppliers of fashion garments, as well as to undertake in-depth interviews with retail buyers in order to explore the criteria they now use for establishing supplier relationships.

Practical implications - The paper shows advantages that production management could achieve: namely to improve planning, diminish stockholdings, to enlarge production and to develop communication through establishing strong partnerships.

Originality - The suppliers must maintain competitive advantages for surviving in the present battle field of business. They must make sure that they have a competent stock management system. The fashion goods producers should increase the rate of production. At the same time, transportation costs should be counterbalanced against smaller amount of mark-downs and upper gross margins. So, QRI is a must for multiple fashion retailers who are promoting their own brand products. QRI provides them with competitive isolation in the high fashion end of the market. By the way, the suppliers must try to build relationships with the retailers and implement QR systems to be the survival of the fittest.

Introduction

Quick response (QR) is widely accepted and implemented by retailers of department store type merchandise. Lowson et al. (1999, p. 77) defined QR as: A state of responsiveness and flexibility in which an organization seeks to provide a highly diverse range of products and services to a customer/consumer in the exact quantity, variety and quality, and at the right time, place and price as dictated by real-time customer/consumer demand.

Many retailers have found that they can serve customers better by implementing QR without reducing profits. A QR strategy is reported to result in efficiencies, such as quicker deliveries, faster inventory turns, fewer stock-outs, fewer markdowns and lower inventory investment. QR strategy reduces the time between the sale and replacement of goods on the retailer’s shelf and it is possible to maintain retail inventories at levels to meet consumers’ demands more often than without QR. Most companies that have implemented QR have got positive impacts on their financial and operating data by increasing profits and/or imparting better pricing to consumers. The introduction and implementation of QR are gradually increasing.

Trouble within traditional supply chain - volatile demands

Different supply chains have been used by different firms. Normally, the fashion chain that leads to a new season takes near about 18 months. Designer shows taking place one year ahead of its related season and decisions are already taken on colors and fabrics months before these designer shows. But, the supply chain of the garments is very short. Near about sixty six weeks were taken as the average lead-time in the apparel industry from raw materials to consumers in the eighties.

For manufacturing, eleven weeks and for warehousing and transit forty weeks were considered. The garments were just waiting in the store for the final fifteen weeks. At present, it is common to use twelve months lead time that leads to sales forecast errors of about forty percent. This error margin is reduced to twenty three percent by shortening lead-time to nine months. An additional reduction of this error margin with about four percent is lead by each additional minimizing of the lead-time with three months. So near about ten percent errors is still evident at the beginning of the season.

Figure 1. A traditional supply chain.

For an important part of the value systems, most fashion firms rely on other partners. So, fine-tuning with these partners should be increased to shorten the supply chain. This is still the main objective for some firms that are dealing with only the fashionable short-season items. Different procedures, protocols, systems and structures that are designed to compete may increase very much complexity for the manufacturers. Unnecessary increase in manufacturer’s finished goods stock and markdowns may come forward due to increase problems of transfer of inventory holding from the retailers to the suppliers. So, long term strategic planning should be developed for re-shaping the supply chain pipeline and at the same time new and revolutionary ways should be found out to adjust to the paradigm shifts.

QR implementation - elements, FMS, POS tracking

The retailers are using QR in different segments. Retailers and vendors are developing QR partnerships very quickly between each other. Some retailers are implementing QR during using EDI (electronic data interchange) for the transmission of purchase and shipping information, while a few are using QR throughout their products logistics.

The concepts of partnerships, bar-coding, EDI, PoS (point of sales) tracking, flexible manufacturing system, seasonality and benchmarking with their flexible adaptation in the supply chain – must be combined together for the useful implementation of QR. Equal Added Value Assessment (AVA) for pipeline integration, minimum order rescheduling of minimum order, collaboration of upstream supply chain agents, more elastic retail control, data storage, EDI and interfacing formats, fundamental change in business attitude and Quality Management (QM) with better
code of behavior development and standards – these are some important factors that must be obtained in the pipeline for holistic QR implementation.

QR evaluation largely depends on partnerships and alliances. In order to create supply chain synergy all process duplications must be eliminated and infrastructures should be reformed which will lead to attain amplified profitability, efficiency and market share. For energetic involvement of all the agents in the pipeline with controlled QR element execution it is necessary to apply special QR programs.

Merchandise bar-coding is also very indispensable. UPC (Universal Product Code) and NRF (National Retail Federation) ensure proper transaction and inventory management. PoS scanning at the tear-off sections of the retail make certain speedy communication. It is possible to exchange of business documents like purchase orders, invoices and schedules - under a common web platform by using EDI. It is very much essential for QR as it saves time, cuts error and improve chance to form deliberate relationship.

The complexity of dealing can be minimized by using Value Added network (VAN) as it provides innumerous computer systems and software, security and conformance to standards. PoS Tracking has greatly been expanded in the recent years which is helping in the progress of QR with better inventory control, reorder processing, SKU management and reduction of cost. There should be a connection between QR responses and the production system to make it more flexible. Modular production system or Vendor Managed Inventory (VMI) may be the example of flexible manufacturing system, which is crucial to react to the requirements of QR ensuring minimum order lead-times, additional productivity and effective use of resources.

In order to have complete system redesigning, rapid designing and product development process, process simulators and Line Balancing Decision Trainers - 3-Dimensional Concurrent Engineering can be followed. The product seasonality should be understood for the better implementation of QR philosophies. Depending upon the shelf life, products could be ‘Basic’, ‘Seasonal’ or ‘Fashion’. As these merchandise have different characteristics they have unlike QR requirements. There seems marginal demand variation with firm requirement throughout the year in case of ‘Basic’ products. This scarcely caters the necessity to apply QR responses for such products although the growth of PoS tracking, inventory management and sharing of information are rather fundamental to be implemented. The organizations require to go for multi season assortments in case of ‘Seasonal’ products that indicate the necessity of QR management.

QR implementation is difficult for single season goods as it requires spreading out of manufacturing schedule and inventory procedures. On the other hand, inventory management requirements and spaced product sales have made the QR application easy for multi product lines. A lot of research is to be expected to correctly determine the strategies for ‘Fast Fashion’ products. In order to fulfill the high speed changing customer demand, QR is an essential requirement to streamline the design, manufacturing and logistics-processes. Full QR implementation also requires benchmarking that helps to alter corporate mindset and measure as per the standards. ATC and AAMA benchmarking may be the best example for sustaining QR.

Advantages and disadvantages of QR Implementation

Implementation of QR strategies provides a lot of advantages. It is evident from the previous research that all of the below economic benefits and advantages to both the retailers and to the supply chain members have been obtained because of QR implementation. The typical disadvantages of implementing QR systems for the suppliers are:

- Installing of IT systems increases the cost.
- Increased retailer demands may erode the margin.

<p>| Table 1: Benefits of QR Implementation |</p>
<table>
<thead>
<tr>
<th>Suppliers’ benefits</th>
<th>Retailers’ benefits</th>
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<tr>
<td>Reduction of buying mistakes.</td>
<td>Improvement of communication.</td>
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<tr>
<td>Minimization of stock holding.</td>
<td>Improvement of planning systems.</td>
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<tr>
<td>Quick tracking of merchandise.</td>
<td>Quick access to sales information.</td>
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<td>Higher stock turnover.</td>
<td>Easy tracking of products.</td>
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<td>Improvement of cash flow.</td>
<td>Security of getting more orders.</td>
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<td>Increment of customer service.</td>
<td>Improvement of manufacturing systems.</td>
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<tr>
<td>Very higher level of profit.</td>
<td>High volume of production.</td>
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<tr>
<td>Enhanced competitive advantage.</td>
<td>Reduction of stock holding.</td>
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<tr>
<td></td>
<td>Higher level of sales.</td>
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<td>Good profit margin.</td>
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<td>Getting of competitive advantage.</td>
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<td></td>
<td>Enhanced customer satisfaction and loyalty.</td>
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QR as a strategy and culture for operations

The implementation of efficient consumer response (ECR) systems and demand driven supply chains in the grocery area and QR in the apparel field provide advantages across the supply chain, both for its members and the consumers. In recent years, firms have implemented different types of automatic replenishment (AR) systems. AR systems generate inventory restocking by identifying the sales and the demand of the store. The suppliers may reduce costs and build their brands and retailers may get profit from having lower stock holdings and fewer stock-outs if partnerships are developed between them through collaboration, planning, forecasting and replenishment (CPFR).

The retailer may buy and stock more of the producers’ goods in case of successful partnerships. QR is a form of AR system that is predominantly suitable for the clothing industries. ECR systems have been developed for the industries dealing with fast moving consumer goods (FMCG) and they have considerably changed functions within these divisions. Fashion retailers and their suppliers have accepted QR response to the fast fashion trend. Retailers are allowed to store and replenish stock using customer demand. Production is also made as demand driven.

But, information should be shared between retailers and suppliers about sales data based on stock keeping units with specifications about order schedules and deliveries. At the same time, the suppliers must be of the same mind to keep this information secret (Fiorito et al., 1995). The principle of introducing a QR strategy is to lessen surplus stock holding in the supply chain and to diminish the risk in forecasting about the type and quantity of the product that to be produced to meet the consumer demand. Forecasting risks can be decreased by reducing dependency on forecasts. Lead time management may be improved to get better response to consumer demand which ultimately reduces the forecasting risk.

Building the infrastructure to support the growth of QR

In order to maintain and support the expansion of QR the construction of infrastructure is essential. The hierarchical procedure of QR adaptation as an basic part of QR as business process...
reengineering has been summarized by Giunipero et al. (2001) to support the growth as discussed below:

1. **Step 1.** Introduction of Basic QR technologies may be introduced, such as SKU level scanning, JAN (standard) barcode and application of standard EDI.
2. **Step 2.** Internal process reengineering may be utilized via technological and organizational development, such as:
   - electronic communication methods must be implemented for replenishment;
   - cross-docking may be used;
   - application of small amounts of inventory in the system;
   - lot size order may be kept smaller in size;
   - ARP (automatic replenishment program) can be introduced;
   - JIT (just-in-time) delivery should be confirmed;
   - SCM (shipping container marking) should be done.
3. **Step 3.** Understanding of a two-way supply chain and win-win relationship must be expanded by:
   - real-time sales data and stock out data sharing;
   - meeting of QR team with partnerships for suitable material resource planning.

This model is most correct for the apparel-retail connection in basic clothing. It can be said that it has become a role model for QR programmes in other advanced countries including Japan and USA.

**Current position of QR in different industries**

It is understandable by all sectors that PoS information should be made the entire system in such a way that it seems to be consumer-driven. The major retailers have taken leadership role in implementing QR.

Now, it is the EDI that is the condition of running a business. So, most vendors are trying to acquire EDI technology. But, the big manufacturers are already equipped with it. Reduction of inventory at the departments and stores is the forceful reason behind this movement. Garments of every seasonality will be affected if EDI is employed.

As PoS data is supplied to the vendor with accuracy, he/she is the responsible individual for the replenishment of basic goods. A large complexity is apparent between the interface of EDI and merchandise (both seasonal and fashion).

In order to full implementation of QR for seasonal goods it is required to re-establish the reorder procedures in addition to orders, invoices, and advance shipping notices. This will lead to formulate the exact volume and to combine the SKUs on the shelf both in season and out of season. It will maximize customer service and also diminish the markdown effect.

Fashion goods are less affected by QR than the basics or seasonal products. In spite of improving the forecasting and order accuracy of styles and colors by shortening pipe lines, there is lacking of time for correcting design or buying errors during the selling season.

Previously, it was anticipated with QR that the domestic time narrowing would assist to offset offshore cost advantages but practically it was not happened.

**Future of QR that may change the future of supply chain**

(a) **Short term**

It is thought that within the next one to two years, the industry will be pushed to extend the use of EDI to all producers, retailers and other suppliers for establishing better linking among them. Value Added Networks (VANS) may have a vital role in resolving problems lying in the QR supply chain with the technical expertise to achieve modification among the suppliers.

The competitive environment among the VANS will intensify the trafficking of electronic data. It will help to establish a price-commodity business. In the future, VANS will supply quality information products with high delivery speed. The present training approach to software and solutions will have to be altered to an educational approach for proper utilization of VANS. In 1991, Commerce Institute was started by Sterling to offer educational courses in supply chain business matter. These courses are dealing with themes that are not offering any IT solution but are giving ideas and an image of changed business practices leading to operational payback.

By the way, there must be a champion ownership in the supply chain through the value added applications to support the proper application of VANS. This type of ownership will be needed more if the new coordinating technologies are not able to open the door to a different kind of competitor who will blend computers and telecommunications. VANS are offering different software packages such as, the bar-code detector which is very much helpful to reduce UPC errors.

The lessening in retail inventories is arising problems for both the short and the long term. The reason of the problems is not understood properly. But development is going on to solve the problems and contribution to retail profits has already been obtained. So, the idea of an information field should be employed as it will be more and more vital as QR widens in future. For claiming as security reason, textile producers and the better dye houses do not supply CIE co-ordinates of colors. But they will have to assess the color of their fabrics in routine basis and they should deliver CIE co-ordinates.

(b) **Long term**

It is really very tough to assume about the advancement of QR over the next five-plus years though the QR paradigm has become more and more clear and a number of proposals have already been taken into action. If the retailer can know the methods to balance lead times, stock outs and vendor lead times, he will be able to inspect the end-of-season markdown mix of seasonal goods with its margin loss. He will also be able to set up processes for re-estimation of demand and the correct reorder.

A number of problems are coupled with fashion merchandise and sometimes they create complexity. To solve these problems complicated techniques of fashion and color trends will have to be built up. A successful manufacturer will be able to use PoS data. He will have the talent to guess shifts from buyer projections and also he will look forward to seasonal demands by keeping inventory level to a minimum value. At the same time, he will keep other suppliers informed of own necessities. Computing costs and speeds will be improved. Within a short period, everyone will reach at the point where the clothing business will be more prominent on a high scale. The utilization of CAD will be extended and the customer with the retailer will be incorporated for the interactive designing of garments.

Now, it takes a long time and lots of efforts to make sample garments and to supply them to the buying offices. By reviewing and modifying the CAD images electronically as per style and color this time will be greatly minimized. Even the garments design will be added in the price-sales catalogue as a result of which sales preference data series to be established.

It will also increase the opportunity of true color and style forecasting to open up. The manufacturer/retailer systems will have to use reliable PoS data so that the industry can be attached into the very complicated up-stream systems to support the demand-activated production. Strategic mechanism will be required to increase the rate of acceptance of EDI in all industries.
QR and value chain management

QR plays a vital role in value chain management. It helps to link the supply side with the demand side efficiently as follows:

- The buyer-seller relationship is more prominent with the connection between distribution and purchasing.
- QR offers higher production, efficient packaging and proper distribution with quality in inventory management. The producers offer to supervise cautiously the customer’s inventory levels to be able to execute future demand more proficiently. This may lead to minimize the inventory costs of the customers.
- QR provides manufacturing with variety of planning. Consumer demand categories of the products are observed by the supplier and the retailer. The delivery performance of the suppliers has been increased due to this alliance which is expressed as CPFR (collaborative planning, forecasting and replenishment).

Now, the supplier can supply the product to the end consumer directly, as for example, Dell is selling computers in this way. It is followed not only by manufacturers-retailers but also by designer-retailers who do not have own production plants.

Conclusion

The idea of QR was invented because of very high competition not only in the field of fashion logistics, but also in all business. The protectionist theories of legislation and new technology could not work properly as the safeguard of the industry. QR culture introduces a typical enterprise with rising virtual networking for strong relationships that are devoted to consumers.

This enables the enterprise to be remarkably flexible and miscellaneous ensuring agile commitment. The business must be focused outwardly to form networks and coalition in-line with demand so that inter-organizational information can be moved to set up a permanent relationship. Information shows the way of gaining the knowledge of development, access, retrieval and sharing which can eventually encourage escalating the flexibility in the organization. But a decentralized, unwrapped network co-ordination with integration and cross-functional processes marked with leadership styles should be employed so that the management processes can be linked up with the involvement of QR strategy. It will lead to proficient dealings of the total system with the environment. At the same time, it will help to build the capacity for changes.

Though QR was first implemented as the continued existence policy of Japanese domestic manufacturers, it is utilized in both international and domestic markets in reply to changes in the worldwide fashion and apparel industries. Right now, the fashion industry of the industrialized economies must reassess the upcoming route of its domestic manufacturing as the advantages of QR in the fashion industry are diverged because of the leading fashion types and the production structure that is inbuilt to the patterns of requirement in a specific market. Finally, it should be taken into account that QR cannot solve all problems of all types of industries. This paper reveals QR applications to different industries and ensure a strategic fit in this point of view.

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SSM, Thies GmbH and Setex Schermuly Textile Computer joint Symposium in Aleppo, Syria

SSM, Thies GmbH and Setex Schermuly Textile computer GmbH held a symposium in Aleppo, Syria on October 26th, 2010. The symposium was held under the motto “Cost efficient yarn dyeing and new developments”. Over 75 visitors joined the event at the Riga Palace Hotel in Aleppo Syria.

The seminar was organized by their local agent H.A.K. Co. Mr. Nael Alwani (H.A.K.) guided through the evening and translated all presentations into Arabic. The symposium was opened by M. r. Robin Gutbrod (Product Manager of SSM) with an introduction of SSM and their products; especially in relation with the yarn dyeing process. M. r. Andreas Hüntemann (Sales Manager of Thies) showed the process of dyeing and the needed machines to the visitors. Finally M. r. Jürgen Jerzembeck (Head of Marketing of SETEX) presented software solutions for dyeing machines. At the end of the symposium, customers showed their interest by raising several questions about details of applications and machines of SSM, M. r. Joe Reichmuth (Sales Manager of SSM) explained in detail until customers were fully satisfied.