Efficient Consumer Response: Some Global Issues

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ABSTRACT

Efficient Consumer Response is an approach to replenish products by increasing efforts on inventory control to lower costs and improve customer service and is based on several initiatives namely integrated EDI, demand management, continuous product replenishment and enabling technologies in ordering and tracking product, and information flows. The focus of this paper is to identify the global issues faced by Efficient Consumer Response implementers.

BACKGROUND

The past decade has seen several industry wide attempts to create efficiency in the supply chain by integrating process activities throughout the supply chain, involving both techniques and tools. The technique is how managers define their control system that determines supply chain performance and is relation-specific asset through which the implementation of one or more supply chain technique(s) can be supported. (Cigoloni et al., 2004).

Efficient Consumer Response is a supply chain management technique that defines the control system for the supply chain system and requires real time exchange of accurate data and information. This leads to lowering transactions costs to the supply chain partners and providing end customers with cost effective products. The framework for ECR as a supply chain management technique (Figure 1) is defined by four initiative (discussed in the next section). The supply chain management tool (such as EDI) is then used to implement these initiatives. As with any tool, barriers exist that delay or prevent successful implementation.

ECR has been defined as “a strategic initiative working to overcome traditional barriers between trading partners, thus eliminating internal barriers that result in adding little or no value to the customer” (ECRE, 1996).

ECR INITIATIVES

ECR uses four basic initiatives to accomplish its objectives: efficient store assortment, efficient replenishment, efficient promotion, and efficient product introduction. The following brief descriptions are based on an extensive literature review by Reyes et al. (2004).

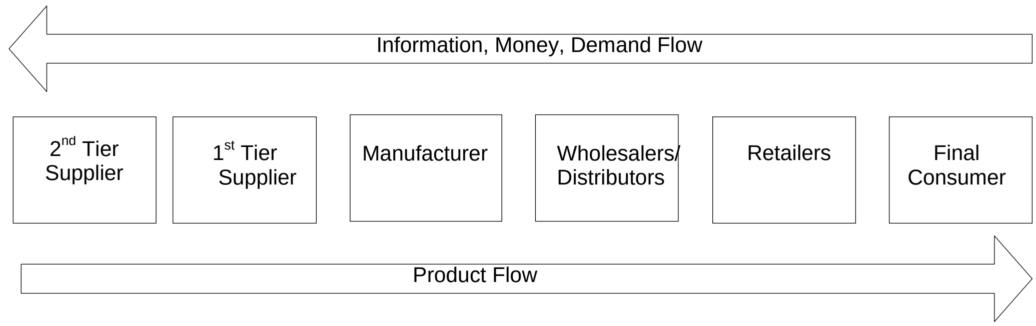

Figure 1: Efficient Customer Response Model

Efficient store assortment focuses on the objective to optimize the productivity of inventories and the efficiency of store-space utilization by eliminating duplicate products. This practice is based on category management (CM) techniques to meet the specific needs of a store's customers.

Efficient replenishment focuses on delivering the correct product mix to the store's shelves. This is based on a customer demand-pull automated system for inventory control and ordering processes. This strategy contributes to cost savings by minimizing the amount of inventory in the supply chain while meeting targeted service levels, using point-of-sales data to keep track of product flows. Efficient promotion is a call to eliminate forward buying and diverting practices. This focuses on maximizing the total supply chain system trade and consumer promotions by encouraging somewhat constant manufacturing prices in return for a steady stream of retailers' purchases. This initiative would reduce inventory holding costs associated with volume forward buying practice and reduced logistics costs associated with diverting practice.

Efficient product introduction focuses on reducing the number of "me too" products and the unnecessary costs associated with the introduction of new products that eventually fail. This efficiency is achieved by involving the complete supply chain system early in the life of the new product development.

Successful adoption of ECR lies in the ability to maintain manufacturing flexibility that enables channel partners to match supply with demand.(Weeks, Crawford 1993). Key to this flexibility is a process tightly integrating demand management, production scheduling, and inventory deployment. ECR is thus an initiative helping to enhance the flow of information between trading partners. The ECR initiatives (strategies) mentioned above seek to provide a concerted approach to integrated planning among the trading partners in the supply chain system. The overall objectives are cost minimization and supply chain system optimization that avoids activities that magnify variation in demand.

ECR is based on integrated Electronic Data Interchange (EDI), demand management and forecasting, continuous product replenishment and computer assisted technologies in ordering and tracking product and information flows. EDI is the inter-company exchange of business data in standardized format using telecommunication systems. The direct computer-to-computer exchange between two organizations of standard business transactions documents such bill of lading, accounts payable, invoices etc. EDI provides a cost effective and efficient way for this exchange of data. The ECR initiatives are simply measures to help realign activities and management practices in a cohesive manner to achieve value to the customer (Pearce, 1997).

SALIENT GLOBAL ISSUES

A review of literature and discussions with global managers lead the author to list the following issues of concern in the implementation of ECR. Numerous issues and points of concern and frustration have been voiced by ECR managers especially while implementing on a global scale. Table 1 provides a summary of the salient global issues and a list of selective academic researchers who have focused on these issues.

Global Issues/Impediments	Selective Researchers/Authors (Year)
Ownership issues	Kurnia et al. (2001)& (2003); Borchert (2002)
Quantification of Benefits	Collins (1997); Pearce (1997).
Copyright/Privacy	Poynder (2004)
Technology	Senn (1998); Lee et al. (2000)
Political/Economic/Cognitive/Cultural	Alexander et al. (2002)
Regulatory	Cateora et al. (2002); Bello et al. (2004)
Partnerships	Borchet (2002); Bhutta (2003); Kurnia et al. (2003)
Transaction Costs	Williamson (1996)
Brand Integration Issues	Burt et al. (2003).
Forecasting Issues	Harty (2001).
Inventory Issues	Holmstrom (1998)
Uniformity in Codes & Standards	Carson et al. (1999)
Normative elements	Scott (2001); Bello et al. (2004)

Table 1: Salient Issues relating to Global ECR Implementation

As depicted in Table 1, the salient issues in global implementation of ECR are numerous and range over a broad spectrum of business decision making and operations. These issues are presented in brief below.

Ownership issues: one of the primary concerns is who owns the product. Ownership issues become even more important in the global context as they define who takes control of the product/service as it crosses borders and comes under different jurisdictions. Though in the recent past financial institutions and the role of “buyers” has greatly reduced this issue, but it still exists especially when considering proprietary information etc. (Borchert, 2002). The concept of ownership spills into profit/risk sharing. The amicable division of savings/profits can also be a problem (Kurnia and Johnson, 2001). Actually this problem is faced under any cost saving scheme, and can be over come by building trust and or setting out detailed profit sharing plans in the contractual agreements. (Kurnia and Johnson 2003)

Quantification of benefits: Division of profits usually hinges around some formula worked out in contracts. However when the benefits of a deal cannot easy be quantified, this division becomes difficult. When considering the less technological advanced regions around the world, measuring and keeping tack of benefits and their quantification becomes a greater burden and is often neglected, hence leading to suspicion among partners. (Collins 1997; Pearce 1997).

Privacy/copyright issues: Dealing in different legal jurisdictions also leads to problems in protecting and enforcing privacy and copyrights. The difference between Europe an dUSA in terms of “opt-in” and “opt-out” clauses when companies deal with consumers is an excellent example. Furthermore in many parts of the world the lax rule enforcement of copy right/patents makes doing business a risky process. For further details the reader is encouraged to peruse Poynder (2004).

Technology*:* EDI requires firms to be able to communicate with each other using standardized technologies and data formats, however many organizations lack the required infrastructure to support these technologies, in addition many regions around the world lack these infrastructures, creating barriers and hindrances to the companies use of EDI. Though it is conceded that with the introduction of internet-based EDI many of the barriers to implementation of EDI maybe overcome. Research shows that EDI adopters have had only mixed success (Senn, 1998). Further it has been argued that for EDI to achieve its full potential, complete implementation is imperative, the level of EDI implementation has been linked with the performance of an organization, and that the full potential of EDI is achieved only when complete implementation of EDI (Lee et. al. 2000). Perhaps this initiative faces the most hurdles in terms of implementation due to the numerous technologies that are used and the standards that are adopted in various regions around the world. Especially when one considers the difference in technology infrastructure between the west, and the developing countries of Asia, Latin America or Africa, one has to consider not only availability of technology but also that the technology used has the required characteristics that may be taken as a norm in the more developed nations. (e.g. encryption technologies).

Another important aspect is the desire and perhaps lack of understanding of the need to innovate and upgrade. Several researchers have identified this barrier among them Pearce (1996) and Collins (1997). ‘Why upgrade as it is not broken’ is very often the philosophy. Other considerations for most suppliers may include what would happen to the investment in technology (especially if it is unique) if the buyer or partner decides to withdraw from the relationship, voluntarily or forcibly (e.g. under government sanctions).

Political/Economic/Cognitive/Cultural Issues: These issues are part and parcel of any multi-national/global firm. Sensitivity training to cultural/social norms is a big part of success by companies operating globally. Alexander and Silva (2002) provide an excellent insight into the cultural/social aspects of a firm as it operates globally. The authors cite a Brazilian experience to illustrate the hazards of internationalization of the retailing industry and the issues they face in different political and cultural norms. Bello et al. (2004) also illustrate the important of understanding cultural and economic norms in various countries; they cite examples from China to drive home their arguments.

Regulatory: global commercial systems are faced with numerous regulatory and legal challenges. Generally speaking legal systems are based on Common, Islamic, Socialist/Marxist or Civil codes or laws (Cateora et al., 2002). And thus when trading globally firms have to shape their partnerships and operations to meet the requirements and tenets of these law systems while providing a source of investment and motivation to the parent company and the partners. These barriers impede efficient systems introduction at many levels and in many areas, for example in their paper (Bello et al., 2004) lament the regulatory restrictions in China and citing an example:

> "while supply chain costs can be up 40% of the whole sale prices in China, compared to 20% or less in the US, regulatory restrictions continue to inhibit the introduction of cost-efficient logistic innovations" (Bello et al., 2004).

However as countries sign on and are accepted into WTO (world trade organization), it can be expected that the logistics and other barriers will be reduced as evidenced in the case of China.

Partnerships: when a global supply chain undergoes changes as it often does finding and maintaining partners becomes an increasingly complex and important decision. Much work exists in literature that considers partnership identification, evaluation and retention. Bhutta (2003) provides an excellent literature review of supplier selection problems. Borchet (2002) among others identifies this as a barrier to ECR implementation

Transaction costs**:** it is widely held that transaction cost will increase for a firm operating globally. Introduction of Internet based technologies have mitigated the cost significantly. However specific investments still raise issues of transferability and sale when operation globally, there are significant "lock-in effects" Williamson (1996). Risk management principals would dictate the mitigation of such effects by diversifying ones partners or proactively avoiding such risks. This in turn undermines the ECR initiatives geared towards better partnerships to provide better information exchange between trading entities. Significant upfront trust and handholding is required to overcome these problems.

Brand integration issues: Category management glazes over brand issues and hence, brand integration, or mix of brands becomes bigger issue especially in cases where brand advertising and brand recognition is at stake. Past research has focused on the barriers that exist between category management and product replenishment initiatives. Some of the barriers are internal to the firm and some more importantly to this paper, are due to trading partner issues. These issues are aggravated when the partners are not operating under the same legal and geographical jurisdiction. (Burt et al., 2003).

Forecast Issues: Another barrier to globalization of this initiative is inaccurate forecasts. the fact that when looking at inventory at manufacturers, wholesalers, retailers etc. Inaccurate forecast translate to inventory sitting at the various echelon longer, leading to higher cost and in the case of perishable goods/good with short shelf life, to wastage. Technological fixes usually work for large companies as scale and scope play a critical role in this. Also complicating this issue are situations where the quantities are small and the infrastructure weak. (Harty, 2001).

Inventory Issues: In global environments it becomes difficult to share detailed information and maintaining the type of interactive information sharing that may be required for effective inventory control. Holmstrom (1998). Distribution chains become more complicated in the global context. Not only do companies have to involve 3PL's, but they also have to contend with informational barriers, trade laws, tariffs, and payment difficulties to name a few.

Uniformity in Codes and Standards Difficulty in using a standard code. Often larger companies may impose their UCC on other firms that may be ill informed of these standards perhaps not applicable in the host country, requiring training and familiarization with standards of the importing region. (Carson et al. 1999)

Normative elements: Normative expectations are defined as the social beliefs, values and behaviors of indigenous peoples. Normative expectations play a crucial role in the success of the firm in the global context. (Scott 2001, p55). Supply chain and other operational/logistical efforts can be adversely affected if the domestic elements are skeptical or unfamiliar to the efforts being introduced. Inefficiency or perhaps worse still ineffectiveness may be the result of mis-judged efforts. Bello et al. (2004) in their paper depict the impact of normative factors on the innovation efforts of a firm. And argue that the normative elements in many regions around the world maybe “inconsistent” with the innovative efforts thereby leading to less benefits globally to the firm from these innovations. The bottom-line is that when ever firms undertake to operate globally methods and the procedures of operation have to be customized based on the normative expectation of the respective regions.

SUMMARY

Within the national territories consistencies in laws, regulations systems etc., it is relatively easy to arrange ECR initiatives and management them under one system but when company’s operating globally, the global factors discussed in the paper complicate the management structure in several ways. This paper discussed the various ECR initiatives and the salient global barriers that are faced trying to implement ECR.

As a result of the literature review on ECR implementation, the author argues that several major issues exist that have a tremendous influence on its successful implementation. In this paper, an attempt was made to critically review the literature on ECR with an aim to formulate a framework for global ECR implementation.

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