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**SWP 3/98 THE DEVELOPMENT AND IMPLEMENTATION  
OF CO-MANAGED INVENTORY AGREEMENTS  
IN THE UK BREWING INDUSTRY**

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**THE DEVELOPMENT AND IMPLEMENTATION OF CO-MANAGED  
INVENTORY AGREEMENTS IN THE UK BREWING INDUSTRY**

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## **ABSTRACT**

This paper reviews some of the existing literature on the subject of co-managed inventory and its antecedents, placing Co-Managed Inventory (CMI) within the wider lexicon of Efficient Consumer Response (ECR). It then moves on to consider the background and circumstances of the adoption of CMI by a number of leading players in the UK brewing industry, before outlining in more detail two of the programmes currently underway. Drawing on the experiences of these early adopters as they pass through the initial stages of implementation, it identifies some of the wider business implications ensuing from the introduction of these cooperative inventory management agreements.



## **INTRODUCTION - ENVIRONMENTAL CHANGE AND ORGANISATIONAL EVOLUTION.**

The closing years of the twentieth century have been turbulent times for corporate communities of the developed world. Changes to the geopolitical landscape and the relentless advance of information technology have hastened the deregulation of world markets and intensified global competition. The world is becoming a buyers' market where value conscious customers are freer than ever to select from the global marketplace. These forces have and continue to change the dynamics of marketplace competition, precipitating shifts in channel power and raising the profile of time-based competition.

Some of the most far-sighted companies are looking beyond the confines of their own value chains, extending the logic of core process re-engineering upstream to their suppliers and downstream through distributors to end-users. These companies have gone beyond the notion of simply contracting out activities that do not directly add value. They are re-examining and re-engineering entire supply chains, forming innovative partnerships and strategic alliances with customers, suppliers and competitors in order to exploit their core capabilities, reduce costs and improve quality at every stage. In doing so these companies are moving along an evolutionary continuum towards the type of network structures thought by a growing number of authoritative writers to be ideally suited to the creation of customer value in today's changing environment [Miles and Snow 1986; Johnston and Lawrence 1988; Archol 1991; Webster 1992]. Whether these networks emerge by chance or by design, establishing and sustaining the cooperative relationships on which they rest will

fundamentally challenge the way trading relationships are managed and impact further upon the internal dynamics of the organisations involved.

Long established competitive norms have dictated that trading relationships between adjoining parties within a supply chain were transactionally-based and steeped in mistrust. Communication between the organisations was channeled through a single pivotal point of contact; the buyer-supplier interface. Negotiations were adversarial, with each party attempting to defend and strengthen their own bargaining position within the supply chain (and therefore their ability to control profits) while weakening the position of the others [Johnston and Lawrence 1988]. The rivalries have produced fragmented and inefficient supply chains. In the past the costs of these inefficiencies have been passed on to the consumer, but not any more. In the mature marketplaces of the Western world the balance of power has tipped firmly in the consumers' favour. Suppliers, manufacturers and retailers have no choice but to find faster and more cost-effective means of meeting end consumers' requirements.

The application of tools such as value chain analysis and activity based costing have led to a better understanding of the cost-drivers within the supply chain as a whole. Moreover, they highlight costly non-value-adding time, when inventory is left to languish in the wrong places or the wrong quantities, losing its value and clouding the picture of demand. Shared information on sales, inventories and supplies clarifies that picture, providing visibility up and down the supply chain and allowing inefficiencies which could be eliminated through joint action to be readily identified.

## **EFFICIENT CONSUMER RESPONSE**

Efficient Consumer Response (ECR) was launched as a logistics management concept in 1992, by management consultants Kurt Salmon Associates. The concept emerged from a study of supply chain management in the grocery retailing sector, commissioned by the US Food Marketing Institute, at a time when the profitability of established grocery chains were being undermined by the emergence of new price-competitive mass-merchants and warehouse clubs [Kurt Salmon Associates 1993].

In essence ECR takes the principles of demand driven logistics, developed in the motor manufacturing and apparel industries under the banners of Just-in-Time and Quick Response, and applies them to the distribution of fmcg products, adjusted to accommodate the essential differences in consumption patterns and production economics between the sectors<sup>1</sup>. ECR is in fact an umbrella concept, encompassing both supply and demand side management techniques. On the supply side it is concerned with the mechanics of supplier integration, where its remit extends from improved forecasting, through sales-based ordering, to cross-docking and the introduction of continuous replenishment or its derivatives, Vendor Managed Inventory (VMI) and Co-Managed Inventory (CMI). On the demand side ECR covers new product development and introductions, trade and consumer promotions and all aspects of category management, including product ranging and store assortment.

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<sup>1</sup> See Fernie 1994 and Arndel 1995 for explanations of the differences between QR and ECR.

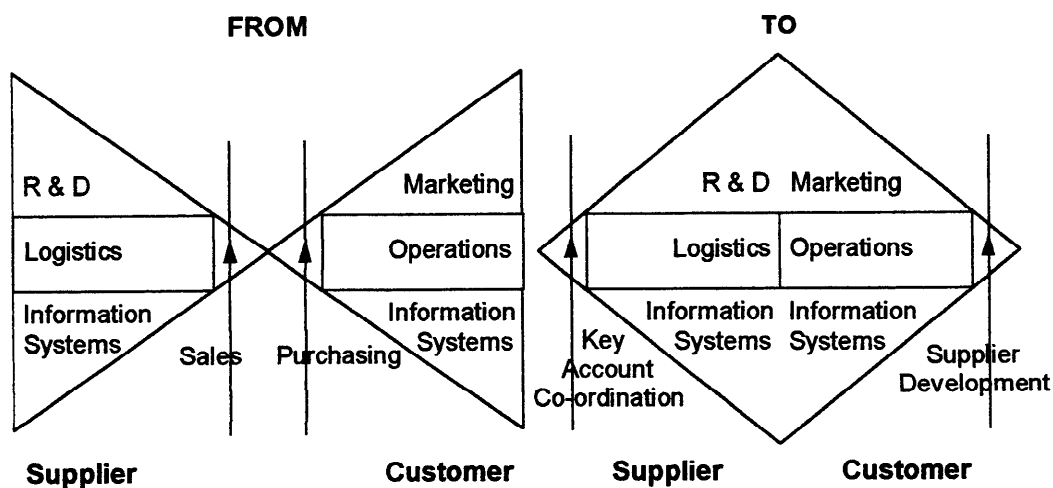
Within the literature, practitioner articles abound, many of them extolling the virtues of ECR or its supply and demand-side management techniques. Conceptually however, there is confusion. The concepts are ill-defined and the terminology is imprecise, with many of the terms used interchangeably. To date the literature offers the curious little guidance on the precise natures of these emerging and seemingly overlapping logistics concepts. It is not the purpose of this paper to attempt to provide the precise definitions, though their apparent absence should not be ignored. Nor should other pitfalls for the unwary reader, relating to the geographic origins of the literature, be passed over without mention. The latter arise because many of the articles and the solutions they prescribe are based on implicit assumptions, reflecting the relative capabilities of leading players, as well as the prevailing balance of power and overall evolutionary state of the grocery industries, of their place of origin. These factors have created important differences in the way ECR has unfurled in the US and parts of North-West Europe.

In the US, companies have tended to concentrate on the supply side first, knocking down excessively high inventory levels and cutting out non-value-added logistics activities [Ferne 1994; Logistics Manager 1996]. In Europe the tendency has been for ECR initiatives to focus more on the sensitive demand side issues [Booth 1996]. The reasons behind these alternative foci is that in the early 1990s, the time of ECR's US debut, North American supply chain management techniques lagged some way behind European best practice [Ferne 1994; Logistics Manager 1996]. Leading European grocery retailers were already implementing many of the supply-side techniques (including electronic links to key suppliers, cross-docking and direct store

deliveries) on a tactical basis. However, most of their North American counterparts had yet to develop such expertise. This opened up opportunities for pro-active US suppliers to take the initiative, identifying major inefficiencies in the supply chain and offering stable, long-term 'partnership' solutions to their customers: the logic being that only a partnership framework could manage the multiple communication flows required for supply chain and other key process integration [Booth 1996]. The traditional adversarial sales/purchasing interface is a wholly inappropriate way to manage such a task, and would be unlikely ever to effect the complicated analysis and iterative process of trade-offs required to establish a basic cost model (the starting point in determining how the benefits of process integration should be shared). By contrast the partnership framework, with its regular face-to-face contacts across a wider organisational interface can establish the basis of cooperation and maintain the on-going relationship [see Figure 1].

**Figure 1.**

### **Creating closer relationships with supply chain partners**





Such highly integrated partnerships are however time-consuming to establish, restricting the number that a company is likely or even wise to pursue at any given time<sup>2</sup>. This in turn leads to a consolidation of the supplier bases and consequently higher and more stable volumes of trade between the participating companies, improving operating efficiencies and lowering unit prices.

### **CONTINUOUS REPLENISHMENT PROGRAMMES AND VENDOR MANAGED INVENTORY**

One of earliest examples of a vendor instigated partnership between a manufacturer and retailer is the link-up between Procter & Gamble and a medium-sized grocery retail chain in the US. In the late 1980s, when branded manufacturers were having to fight harder than ever before to secure shelf space for their products, P&G started using Electronic Data Interchange(EDI) to monitor and replenish daily shipments from the retailer's warehouses to each of its stores. It was the first in a series of cooperative continuous replenishment initiatives which P&G hoped would provide a demand-based forecasting system, based upon previous demand patterns, rather than best-guess forecasts supplied by the salesforce after discussions with in-store buyers. The overall objective was to improve P&G's own operating efficiency by anticipating demand more accurately and incorporating it into production scheduling, thus allowing P&G to deliver better customer service and lower prices through its Continuous Replenishment Programme(CRP). The widely cited partnership initiative between P&G and US mass-merchandiser, Wal-Mart, began a year later. This time P&G was given access to incoming orders placed on Wal-Mart's warehouses by each of its

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<sup>2</sup> see Lambert, Emmelhainz and Gardner (1996) for discussion and taxonomy of partnership types.

stores, allowing P&G to manage warehouse inventory levels and maximise transport efficiencies [Clark 1995]. In the process, P& G completely overhauled its customer's procurement practices, significantly reducing Wal-Mart's acquisition costs. The partnership was so successful that with the launch of ECR, other leading manufacturers of branded goods followed P&G's lead, using them as a benchmark for their own CRP programmes [Brynes 1993].

As the levels of trust increased between trading partners, so did the level and quality of the information exchanged electronically between them, with retailers increasingly willing to allow suppliers to ship just-in-time deliveries based on real sales data. Clearly, new technology did not itself bring about the changes in working practices or the willingness to share management information, nevertheless developments in information and communication technologies have done much to facilitate them. In the US many large retailers were happy to let their most capable suppliers assume total responsibility for the entire replenishment process, allowing them take over the forecasting and ordering functions as well as all aspects of handling from factory to distribution centre and, in some instances, to the stores themselves. Hence the evolution of full Vendor Managed Inventory (VMI) programmes.

Assuming responsibility for raising the order enables the vendors to exercise a greater degree of demand management and control (within predetermined parameters), allowing them to calculate optimum replenishment quantities based on full-truck load and best-price models. The retailers were willing to go along with this because of the benefits they received: improvements in service and reductions in inventory carrying

costs and, importantly, substantial savings in resources. If the vendors were assuming responsibility for the inventory then there was for no need for their retailer customers to maintain the assets, labour and other resources required for storing and handling it.

In the US, supply-side ECR measures resulted in spectacular savings amounting to 10.8% of sales, largely from reduced operating costs and significant improvements in inventory management, the latter brought about by tackling inventory levels that were in excess of 100 days for dry packaged goods [Kurt Salmon Associates 1993].

Antitrust legislation in the US states that these benefits should be passed down to the customer, though in reality they may accrue anywhere within the extended value chain.

In the event retailers have been the principle beneficiaries of the cost savings arising from VMI, realising immediate gains from well managed programmes. For the suppliers the benefits have taken longer to filter through. The potential gains from better forecasting and production planning were unlikely to be realised until a 'critical mass' of customers were involved in either VMI or other EDI-driven replenishment programmes. In the short-term, many vendors experienced a sharp increase in costs as inventory shifted up the supply chain.

Some US industry observers have cautioned vendors not to be too hasty in their pursuit of critical mass, but to choose their retail partners carefully. The advice was to avoid those retailers who simply wished to shift costs to the manufacturers or those that were willing to cooperate only on replenishment issues [Fox and Moore 1994; Andel 1996]. Vendors were advised to conserve their resources for VMI relationship only with those retailers who were willing to share current, point of sale (POS) data

and cooperate on demand-side measures - such as pricing, promotions, new product introductions - within exclusive category management agreements. The concern was that without the exclusive partnerships agreements, the vendor would be unlikely to off-set the higher costs against greater volumes of trade between the participating companies.

Shared POS data is the pivotal issue here. Most VMI programmes are run off warehouse withdrawals and current balances rather than the more commercially sensitive POS data. The reasons for this are two-fold. Firstly, there are data handling practicalities. POS and ordering systems tended to record data in different units of analysis, i.e. single items sales vs. orders and deliveries by the case. Raw POS data has been finding its way into suppliers' marketing department (usually for a substantial fee) for some years. But without specialist computer assisted ordering systems to convert and integrate store-by-store POS into formats recognised by order and delivery scheduling systems, the data rarely permeated beyond the domains of the marketers. Secondly, there is the forecast accuracy issue<sup>3</sup>. Forecasts made on demand data aggregated at the distribution centre level tend to be more accurate than those calculated on a store by store basis [Andel 1995]. The nub of the situation is that access to POS data is essential for the implementation of the demand-side ECR measures, but VMI can be introduced without the need for the retailer to share the valuable POS data. If, as some writers suggest, VMI is indeed to be the foundation upon which wider ECR growth and evolution will be based, then vendors have to be given timely access to POS data.

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<sup>3</sup> See Fisher *et al* (1994) for suggestions on gauging and improving forecast accuracy.

## **ECR IN THE UK**

The big supply chain savings enjoyed by the US retail industry fanned interest in VMI and ECR in general on this side of the Atlantic and prompted major players in the European grocery industry to come together to establish their own industry working parties under the auspices of the ECR Europe initiative. Value chain analysis commissioned by the ECR Europe board indicated that there were industry-wide cost savings of up to \$33 billion per annum to be made if ECR techniques were to be adopted across the sector. Moreover, it identified supply chain inefficiencies as the Achilles heel of the grocery sector. Widespread participation by existing players would enable them to defend their competitive positions from competitors who might otherwise move in to exploit this weakness.

Clearly the views and experiences of US-based practitioners and observers offer some useful pointers to those who seek to establish ECR within the UK fmcg industry. However, it is important to remember that both the magnitude of the gains associated with VMI, and the nature of the ECR partnerships described by North American writers owe much to the structure of grocery retailing in the US. There, grocery retailing remains fragmented and regionally based, with own label development still in its infancy, leaving a balance of power between the retailers and the largest of the branded goods manufacturers. Consequently, the ground-breaking VMI partnerships between retailers and large resource-rich branded goods manufacturers were marriages between equals. Not so in Britain and other parts of North-West Europe, where the influence of the branded goods manufacturers has been waning for some time. Here the aggressively short-term trading mentality that has permeated the retail trade in

recent decades and the upstream encroachment of the large national (and increasingly transnational retailers) have made partnering particularly difficult. This is not to say that there have not been instances of the successful implementation of VMI within the UK grocery sector - there have - but these were usually between grocery manufacturers and their suppliers [see for example Gregory 1996a; Gregory 1996b].

In the UK where retail infrastructures are as sophisticated as any in the world, the incremental savings associated with ECR are proving to be far more modest than those realised in the US. Industry leaders, Tesco, Sainsbury and Asda were already enjoying stock turns of around 30 turns a year as long ago as 1994, with inventory levels across the industry averaging less than 30 days [Ferne 1994]. Here, vendors seeking exclusive partnerships with leading retailers cannot dangle the same prospects of reduced prices, transaction and inventory costs together with better customer service, as incentives in the way that their US counterparts have been able to do. Added to this are the issues of customer intimacy and supply chain control. After years of own-label brand building, the retailers are in no hurry to surrender control of the channel of distribution to the branded goods manufacturers. Not least because of the view that being closest to the consumers, they are best placed to understand consumers' requirements. Consequently, while some of the largest UK grocers are actively involved in promoting the benefits of ECR for the industry as a whole, stressing their willingness to enter into cooperative agreements with major suppliers, few are willing to leave inventory management or category management totally within the hands of privileged suppliers [Logistics Manager 1996]. Co-Managed Inventory would therefore appear to be a more palatable way forward for the UK's leading grocers.

## **CO-MANAGED INVENTORY**

'Co-Managed Inventory' (CMI), is a form of VMI which, rather than simply handing the responsibility for inventory management over from the customer to the supplier, involves a more actively collaborative approach between supply chain partners. CMI is therefore characterised by the sharing of responsibility for inventory management, in a way that combines the existing expertise of the retailers or distributors with that of the manufacturers to maximise supply chain efficiency, supposedly to the mutual benefit of both parties.

The Somerfield project, conducted between grocery retailer Somerfield and twelve suppliers of ambient branded products is currently the most frequently quoted example of a CMI programme in the UK. The project is believed to be the first significant multi-organisation trial of CMI in Europe. Unlike many of the well known North American VMI initiatives, the Somerfield project was undertaken at the instigation of the retailers who were anxious to reduce the performance gap between themselves and the industry leaders. With the help of network supplier GE Information Systems, the retailer managed the world's fastest implementation of an electronic trading community.

The CMI trial used daily updates from Somerfield's distribution centre, together with the last two years' sales data to produce rolling 39-week forecasts for each product, with some promotions and advertising activities factored into the equations. Unusually service was measured at the store level (rather than distribution centre), which forced

suppliers to take a total supply chain view, focusing minds on the total process rather than the execution of a single activity.

The Somerfield trial showed that CMI can deliver many of the benefits associated with successfully implemented VMI initiatives, including lower inventories (the limiting factor on inventory reductions was frequency of delivery - most suppliers only delivered on a weekly basis), improved availability and customer service<sup>4</sup>. However, CMI programmes appear to have the potential to produce benefits above and beyond those realised through VMI. The closer collaboration between supply chain partners can lead to a better understanding of the whole supply chain and a sharper focus on key business process, not least a thorough re-examination and possible restructuring of the logistics management and planning process [Davies 1996; Kavanagh 1996].

Equally important are the wider relationship issues which supply chain collaborations will raise. If properly managed they should lead to a clearer understanding of each party's motivations, objectives and constraints, with the parties working constructively to accommodate competing demands. These will likely include the customer's desire for better service, reduced prices and operating costs, and a further reduction in inventory costs through more frequent order reviews and deliveries. The customers' objectives must be offset against the constraints and costs to the manufacturer. These may include constraints imposed upon a manufacturer by relatively recent capital equipment expenditure, or the post-production delay needed for some products to mature sufficiently before they are dispatched [Whiteoak 1994].

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<sup>4</sup> See Winters and Lunn 1996, for a summary of results.



Practitioners are gradually edging towards a better understanding of the supply chain benefits which CMI can deliver, but to date little attention has been paid to the wider implications for trading relationships which follow from these inventory management programmes.

## **THE UK BREWING INDUSTRY**

The UK brewing industry has been experimenting with CMI programmes for approximately two years. The apparent success of these early initiatives and the structure of the industry itself make it a particularly interesting and appropriate context for this paper.

The industry has gone through several cycles of consolidation in recent years, to the point where over 80% of the UK beer market is dominated by a handful of major brewers. These companies are operating in a mature and in some respects declining marketplace. Nationally and globally there is over capacity in the industry and although sales are currently rising in some sectors (such as stouts and Irish ales), overall beer consumption continues to fall, as variety seeking customers switch away from traditional beers to enjoy a repertoire of favoured drinks [Euromonitor 1996].

In the marketplace, sales through the traditional on-trade outlets (licensed pubs, clubs and restaurants) have been declining for decades, but continue to account for approximately 80% of all beer consumed in the UK. The decline in the on-trade has been offset to some extent in recent years by a steady rise in sales through the lower margin off-trade retail sector, dominated by the large grocery retailers. Social and

demographic trends, together with changes in social attitudes towards some forms of drinking are all factors behind the decline in on-trade consumption. Meanwhile, improvements in the range and quality of canned products and the growing popularity of premium and specialist bottled beers has also played a part, further accelerating the shift towards the take-home trade. These factors, together with gradual encroachment by a number of large international brewers, have forced the remaining UK-based brewers to improve operating efficiency, while endeavoring to secure their customer bases. It is against this background that the brewers are embracing CMI.

The involvement of Bass in the Somerfield project is already well documented [Winters and Lunn 1996; Supermarketing 1997], so this paper concentrates instead upon an examination of the CMI activities of two of the UK's other major brewers, Whitbread Beer Company and Guinness Brewing G.B. These two companies, though smaller in absolute terms than industry leaders Bass and Scottish Courage have recently outperformed the rest of the industry in terms of growth, in both the on-trade and off-trade retail sectors [Mintel 1996].

## **IMPLEMENTING CMI AT THE WHITBREAD BEER COMPANY - A CUSTOMER PERSPECTIVE**

### **Company Profile and Background**

The Whitbread Beer Company is the brewing division of Whitbread Plc, the brewing, leisure and drinks retailing group. The group is one of the country's leading brewers, with an extensive portfolio of pubs, restaurant chains and hotels. It is also the largest

owner of high-street off-licences in the UK. Its brewing interests were formally separated from the group's extensive on-trade retailing interests in response to the 1991 Beer Orders. Nevertheless, the Beer Company continues to manage the supply of its own beers and a range of third-party produced drinks to the group's on-trade and off-trade retail networks, as well as to other third party retailers - mainly the large grocery multiples.

The changing demands of the marketplace have meant that The Whitbread Beer Company, like most of its competitors, has expanded its product range in recent years, resulting in more and more low-volume products. The diversity of its product portfolio and the proliferation of new brands has created complications for the manufacturing side of the brewing business, which is geared to large batch runs. Pressure to optimise production could lead to high stocks of finished product, which became difficult to manage when dispersed through an extensive distribution system. This in turn could threaten product quality, resulting in problems with shelf life, particularly for the low-volume premium brands.

Whitbread had been progressively reorganising and rationalising its drinks logistics structure since the early 1990s, gradually developing a more efficient and flexible network (Cunningham 1997). Wherever possible Whitbread's own product inventory was consolidated and holdings moved back upstream within the network, meanwhile just-in-time deliveries were introduced from the group's own manufacturing sites to its 3850 pubs and inns, and to its 1524 high street off-licences (Shearer 1995; Callingham 1997).

In 1995, falling beer prices in the off-trade led Whitbread to investigate the possibility of further reducing stock holdings within its own distribution network by moving major third party suppliers of drinks for resale onto CMI. It was believed that the introduction of CMI could ease the stress on Whitbread's own business, while improving stock availability and effecting a step change in lead-time and order cycle reduction.

### **CMI - The Pilot Programme**

As a first step overtures were made to Whitbread's largest volume off-trade supplier, US-based Anheuser Busch. Anheuser is the Goliath of the international brewing industry, controlling a massive 45% of its domestic market. It is widely recognised as having the lowest inventories of any major US brewer and prides itself on the freshness of its products (Business Wire 1997). Whitbread is Anheuser's largest customer in the UK, with four of its products accounting for 9% of Whitbread's off-trade sales. There was the potential for critical mass benefits for both sides. Anheuser's expertise and the fact that its trade with Whitbread was relatively predictable, involving high volumes and low SKUs made the US brewer an ideal pilot partner. The two companies adopted an EDI facilitated partnership approach for the project (refer to Figure 1), with GE Information Services as its network supplier.

Under the pilot programme Whitbread provided Anheuser with a 13-week rolling forecast, along with daily updates of Anheuser's stock holdings at each of Whitbread's distribution centres. These told Anheuser what Whitbread was planning to sell and let

the supplier know what had actually been sold on a day-by-day basis. Anheuser was then allowed to determine what to ship in terms of mix and quantity, provided that stocks stayed within predetermined stock bands (usually 2-4 days) and in line with an agreed overall product mix. This flexibility allowed the supplier to manage its production and transport planning to best effect. Whitbread required 24 hours notice ahead of delivery as a safeguard, but were pleased to discover that on no occasion throughout the first year of CMI trading was it necessary to amend a supplier-raised order.

The pilot proved to be successful, reducing Whitbread's stock of Anheuser products from 8 to 4 days (a saving of £300k), while service levels rose from 98.6% to 99.3%.

The fact that Whitbread produces a number of substitute products gave Anheuser a strong incentive not to allow stock-outs to occur. Some inventory was displaced to the supplier, but inventory levels within the system as a whole were reduced.

Anheuser benefited from access to better forecasting and sales information, and better utilisation of assets. As a CMI supplier it received preferential treatment in the allocation of prime-time overnight delivery slots and was allowed to deliver mixed consignments in full truck-loads. The regularity and volume of the shipments - three per day to each of Whitbread's five distribution centres - meant that further transport efficiencies could be realised by back-loading vehicles. The Anheuser pilot was fully fledged and trading live by March 1996.

## **Extending the Programme**

In July 1996 Whitbread held a supplier conference for the top seven of its 72 suppliers, to share the knowledge gained from the CMI pilot and discuss the extension of the programme. These top 10% of suppliers account for around 50% of Whitbread's inventory costs, 60% of sales by volume, 55% of invoice volume and 80% of invoice value (there are just over 500 product lines between the entire supplier base).

Whitbread estimated that rolling the CMI programme out to include the other six top suppliers would achieve a one-off stock reduction of £1.4m. Moreover, lower inventories meant smaller depots and fewer distribution centres, resulting in substantial savings in the longer term.

By late 1996, two of Whitbread's other leading suppliers, soft drinks manufacturer Britvic and rival brewers Guinness, were well on the way to joining Anheuser with full CMI between themselves and Whitbread. Bass is also among Whitbread's group of seven largest suppliers and interestingly its own brewing, pub and leisure interests means that it is at once a supplier, competitor and customer of the Whitbread group. Nevertheless Bass is also working towards full CMI supplier status with Whitbread. The remaining core suppliers are all expected to be fully involved by June 1998.

Aligning its core suppliers of drinks for resale is Whitbread's top priority, but the company is also investigating the possibility of extending the CMI programme to include suppliers of raw materials, bumping the number of CMI suppliers up eventually to around a dozen. In the meantime, in the interests of efficiency, EDI links are to be extended to a further 32 suppliers during 1997. The investment required to establish

these kind of trading links means that Whitbread has agreed to extended contracts with all CMI and EDI linked suppliers. There is no intention to develop EDI based trading links with suppliers that are only likely to be involved with the company on a short-term basis.

Taking this long-term perspective on supplier relations, the Whitbread Beer Company is well aware of the conflict of interests that is inherent in its capacity as in-house logistics contractor. It is in a position to determine the service levels for its main competitors to the group's retail sites. However, the Beer Company recognises that, in the longer term, it does not help to undermine its rivals' brands. Nevertheless, Whitbread does not give suppliers warnings of promotions on competing brands. It does not 'share' the information one week ahead of a promotion in the same way as Somerfield has been willing to do, although suppliers will inevitably pick up indications of forthcoming promotional activities through reduced order forecasts.

On the customer side and outside its own estate, Whitbread has been EDI linked to some of the large grocery multiples (at the retailer's requests) since 1989, although the EDI facilities used - delivery notes, payments or tracking facilities etc. - vary from customer to customer. More recently Whitbread has encountered difficulties in dealing with some of the larger grocery multiples owing to the absence of a common systems network between it and the grocers. CMI alliances with this group may be a possibility for Whitbread in the future, but for the time being it has elected to reap the benefits of being the customer by concentrating on developing the trading relationships with its suppliers. Other brewers are developing EDI to improve the efficiency of

traditional trading, but for the moment Whitbread appears to lead the UK brewing industry in supplier integration.

### **Implications for Trading Relationships**

Whitbread's progress in establishing its CMI network owed much to the way the relationships have been handled between and within the participating organisations. Between the companies CMI programmes were initiated by logistics professionals from each company and developed between the respective logistics and IT systems specialists in accordance with the inverted bow-tie partnership model [see Figure 1]. Sales and purchasing people were informed of events and had a role to play in the commercial negotiations, but otherwise remained on the edge of the project. Though this made for cordial relations between trading partners, it was greeted with less enthusiasm from within. Whitbread's own buyers, who had traditionally bought on price (rather than taking a wider view of costs), were initially unhappy with the initiative, but are gradually coming round as they work with logistics to develop a wider procurement strategy. Systems expenditure is another issue of cross-functional concern. Substantial investment was needed to integrate and upgrade forecasting and planning systems, but the pay-back from the investment was almost immediate. The company has subsequently pressed ahead with the implementation of systems to improve its management of the volatile off-trade, where approximately 40% of volume is promotionally driven. Furthermore as developments in electronic trading between the CMI partners moves on to include self-billing as well as logistics messages, Whitbread is placed to gain from substantial savings in order processing and invoicing costs. But as Whitbread discovered, the financial implications of live paperless systems



cut both ways. They also eliminate excuses for habitually late payments, which help suppliers' cash flows. Pulling payment dates back into line by six days presented Whitbread with the prospect of a one-off financial correction which would leave a massive hole in its own finances. Such a move required board-level approval, and in the event a renegotiation of payment terms.

While the logistics department continues to work towards greater acceptance of the benefits of CMI among colleagues in other business functions, the programme has raised the profile of logistics within the organisation. Logistics is now seen as a strategic concern in Whitbread and increasingly within the beer industry as a whole.

## **IMPLEMENTING CMI AT GUINNESS BREWING GB - A SUPPLIER PERSPECTIVE.**

### **Background and Company Profile**

Guinness Brewing GB is the brewing arm of Guinness Plc, one of the world's leading drinks companies. The brewer produces a range of premium beers and lagers, although the famous Guinness Original stout, brewed by the company since the end of the eighteenth century, continues to be the anchor of its widening portfolio of brands. Guinness' products are distributed to every corner of the globe, but the UK remains the brewing division's single most important market. The company is unique among the large UK-based brewers in that the group owns none of the outlets through which its products are sold. Consequently it has no guaranteed routes to market for its beers, but has instead relied successfully on consumer demand to persuade its customers (mostly competitor-owned pubs and off-licences, or large grocery multiples) to stock

Guinness products. The brewer's business is approximately 60% on-trade, 20% off-trade and 20% export, though the balance of trade is following overall industry patterns, tipping away from the on-trade towards the off-trade.

Comparatively speaking, Guinness has held its ground well within the declining beer market, but in recent years has faced mounting competition with the launch of a number of rival stouts and the rising popularity of imported bottled beers.

Nevertheless, it is preparing for the onset of ever more intense competition and further swings in consumption patterns towards the low-margin on-trade, by attempting a gradual overhaul of its entire supply chain strategy. The strategic approach follows Treacy and Wiersema's [1993] three value disciplines of customer intimacy, operational excellence and product leadership. On the dimension of customer intimacy, Guinness is aiming to become the supplier of first choice. In terms of operational excellence, it strives to deliver outstanding customer service, low cost supply and superb quality - in line with and beyond rising customer and consumer expectations. On the product leadership front, it wants its products to be the best available, which in turn will generate customer leadership. Guinness sees CMI as a bridge towards this vision, which could be delivered in the longer term through the full spectrum of ECR. Logistics professionals within the company acknowledge that full ECR implementation is an ambitious goal, but seem to be of the opinion that this may well be the way the industry is moving.

## **CMI - Getting Started**

On the CMI front, Guinness became involved at Whitbread's invitation and was of course in the vanguard of Whitbread's programme. Intellectually, logistics professionals at Guinness already believed in the concept of CMI, but the Whitbread experience demonstrated that CMI could work well in practice. The success of that initiative has given Guinness the impetus to extend its own CMI activities downstream through a customer development programme to its other major customers, so that the benefits from critical mass can be realised in the longer term.

The customer development programme is being implemented in three phases. Phase One involved shared learning, clarifying processes, easing the flow of accurate data, and running pilots with customers in the on-trade and off-trade. Reviews of forecasting procedures, the impact of promotions and exploring how stock holdings could be reduced were also important aspects of this initial phase. Internally, key members of the sales team had to be persuaded to buy-in to the project at this stage. Phase One of Guinness' customer development programme was completed in the earlier part of 1996.

Phase Two of the programme was about actually implementing CMI. During this phase the level of customer involvement was increased, as was the number of customers involved. At this point, however, resource issues and capital expenditure requirements came into play. The manual pilot systems had to be upgraded to fully automated EDI, requiring full-board buy-in and a coordinated approach from other

functional groups within the business. Persuading the rest of the business to buy-in demanded a very clear level of communication to create a widespread understanding of the costs and benefits for Guinness and its customers. Phase Two is likely to have been realised by the end of 1997, when Guinness hopes to have secured the involvement of most of its major customers (a mixture of brewers, off-trade wholesalers and retailers), although some of these customer relationships are definitely more advanced than others. In addition to its on-going relationship with Whitbread, Guinness is already managing draft Guinness on a CMI basis into all Bass on-trade depots. Meanwhile, in the off-trade, a well established relationship between Guinness and Somerfield is paving the way for CMI between the brewer and the grocery multiple. Somerfield has been sharing stock and issues-out data with Guinness for some time and the grocer has been instrumental in Guinness's efforts to build a database to model the impact of its own below-the-line promotions. Guinness was not involved in the original Somerfield CMI experiment, but was nevertheless awarded Somerfield's Supplier of the Year Award (1996) in recognition of the brewer's performance against both quantitative and qualitative service measures.

The results of the CMI programme to date continue to be encouraging. One year in, an analysis of customers' stock holdings showed that CMI had reduced stock with the customers concerned by around 30%, with a further 10% reduction anticipated during the second year of operation. Meanwhile customer service levels had been maintained and in some instances improved. Further stock reductions are being sought, but these are largely dependent upon improved forecast accuracy, as is the move to Phase Three, which tackles the broader ECR agenda, primarily in the demanding off-trade sector.

## **Extending the Programme**

In the brewing industry the nature of the brewing process means that production lead-times are far in excess of customers' required delivery times, so Guinness has had to carry relatively high levels of safety stock to maintain cover for its customers. Given that high stock levels can also compromise quality, improved forecast accuracy has become a critical concern at Guinness, but forecast accuracy must be measured before it can be improved. The brewer therefore sees the measurement of forecast accuracy as an essential element underpinning the implementation of CMI, but has been surprised to discover how few companies in the UK seem to be actively tackling this issue.

In the on-trade, where demand is relatively stable and promotional activity tends to be related to annual events (e.g. St. Patrick's Day), forecast accuracy is only really undermined by fluctuations in the weather. Forecasting demand in the off-trade is much more problematic. Here competitors' price promotions can cause havoc higher up the supply chain. Nevertheless, Guinness has found that forecasts for off-trade customers that are cooperating by sharing data are significantly more accurate than forecasts for the rest of the off-trade sector. The brewer believes that this is in itself important, because better forecasting raises customer service and enhances a supplier's reputation with its customers, thus increasing the likelihood of their eventual involvement in Phase Three of the programme - the move on from efficient replenishment towards the other elements of ECR - efficient promotion, assortment and new product launch.

## **Implications for Trading Relationships**

At Guinness the project is also logistics led and has been conducted separately from the wider commercial debate, although within Guinness, senior sales people who have been involved in the project are among its strongest supporters. They believe that CMI will deliver longer term benefits for customer relationships and recognise that this is the way the industry is moving. On a more immediate level they also see the benefits of being able to cost and evaluate promotional effectiveness in the heavily price promoted off-trade sector. Some other parts of the organisation, including members of the sales team who were not so directly involved, have greeted CMI less warmly. They are concerned about some of the short-term implications of the project, including the immediate impact on sales targets as inventory is stripped out of the system. There are other marketing considerations too.

In the on-trade, where Guinness is a high volume supplier, CMI allows the brewer to realise the benefits from better transport planning. In the off-trade however, where large retailers are demanding daily deliveries to regional distribution centres to minimise their own inventory holding, Guinness is among the many grocery manufacturers whose volumes are not large enough to make full-truck loads. The retailers are therefore asking Guinness to cross-dock and consolidate loads with other suppliers to achieve the daily deliveries. Guinness is actively seeking cross-docking partners among some of the grocers' other (non-brewing) suppliers. However, the costs associated with cross-docking and continuous replenishment make low-volume SKUs more difficult to justify, putting pressure on some of the lower volume brands.

On the systems integration front, Guinness has also encountered complications. Different customers have different views on how to take EDI forward, each wishing to do things differently in accordance to what suits their business best. Therefore, Guinness has had to adopt a flexible approach, tailored to suit each customer, who themselves display varying degrees of competence in this respect. All of these factors create extra work and complexity for customer-focused Guinness.

## **CONCLUSIONS**

Within the context of ECR, CMI sits on the supply-side, among its antecedents - VMI and the numerous other permutations of continuous replenishment - as an efficient replenishment method. In the intensely competitive environment of the brewing industry, the UK-based brewers are embracing CMI as they endeavor to reduce costs and secure increasingly disloyal customer bases. Here, CMI has emerged as a variant form of VMI, evolving to accommodate the characteristics of the local trading environment, in a way that exploits the existing skills sets, experience and capabilities of the brewers and their customers, and reflects the balance of power between them. These issues of relative power and competencies have been underplayed in much of the early supply chain partnering literature, which tends to suggest that the vendor will be willing, ready and able to perform these inventory management activities more efficiently and effectively than the customer. Whitbread is in the happy position that its suppliers of drinks for resale were large, well resourced and sophisticated organisations, as indeed are many of the brewers' off-trade customers. This may not be the case for other companies wishing to follow a similar path.

In implementing CMI in the demanding off-trade, the brewers face all of the issues and dilemmas encountered by other grocery suppliers, but it is in the declining on-trade where they appear to be pursuing CMI initiatives most avidly. It is also in the on-trade where the trading relationships are most complex. The legacy of the tied house and guest beer systems means that a direct competitor may also be a supplier and a customer. Far from deterring cooperative supply chain management initiatives, these multi-faceted relationships between similarly matched rivals appear to be speeding the adoption of CMI.

The CMI agreements the brewers are forming among themselves are not exclusive partnerships or cartels. They build upon existing, well-established and cordial trading relationships, by sharing information that allows the protagonists to compete more efficiently, not prevent them from competing at all. Here the benefits of raising the efficiency of the sector as a whole certainly appear to outweigh the disadvantages of cooperating across competing supply chains. Significantly, however, the brewers see little benefit in extending these on-trade CMI programmes to embrace the demand-side measures of ECR.

The brewers' CMI agreements, like other forms of efficient replenishment, harmonise logistics and operating systems. They also shift some of the cost burdens up the supply chain, requiring adjustments to the terms of trading relationships as well as the manner in which they are conducted. In practice, the agreements have important implications for internal as well as external relationships. Their impact ripples on throughout the organisations involved. The streamlining and extension of core processes across



organisational interfaces deflects some of the antagonism away from the supplier-customer interface, but if care is not taken, that antagonism may simply re-emerge internally, as competing functional concerns and objectives are brought back into play. The influence and roles of some functional groups, such as sales and purchasing, will almost certainly be reduced and redefined, while others may simply wax and wane as activities and resource requirements shift between the cooperating parties. These changes can be considered to be one-off, structural adjustments, but other on-going conflicts of interest are also likely to occur.

With the kind of multi-faceted relationships that exist between the brewers in the on-trade 'Chinese walls' may be needed to separate and protect supply chain cooperation from other aspects of the commercial relationships (e.g. brand competition).

Similarly, as the brewers become more firmly enmeshed in CMI agreements in the promotionally-driven off-trade, the desire for operating efficiency and smoothness in the supply chain cannot be allowed to override legitimate marketing concerns, disadvantaging the brand in the longer term. Production planning for the small but increasingly significant proportion of difficult-to-predict off-trade sales remains a problem and the long production lead-times necessary in the brewing industry mean that it will always be forecast dependent. Furthermore, while product proliferation has undoubtedly raised difficulties with the manufacturing and distribution of low-volume products, drinking habits have changed. If the industry analysts are to be believed, the brewers must continually launch new products to maintain consumer interest. If this is indeed so, then the arguments for them pursuing CMI agreements in the off-trade to

ease the way for the adoption of the other elements of ECR - efficient promotions, efficient assortment and efficient product launch - could not be stronger.

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