



Grocery E-Commerce

Consumer Behaviour and Business Strategies



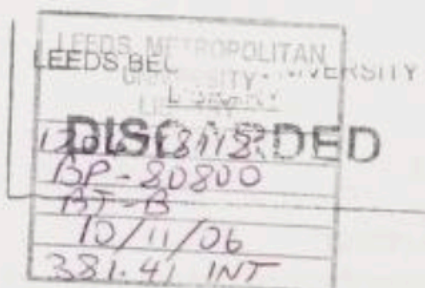
Edited by Niels Kornum and Mogens Bjerre

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WHY LOGISTICAL EFFECTIVENESS IS CRUCIAL IN E-GROCERY

From E-Business Hype to Collapse and Revival

The history of electronic grocery shopping (EGS) is quite short but dramatic. At the end of last decade several online players challenged the old brick-and-mortar groceries, especially in the USA. For example Webvan, Streamline and Peapod invested billions of dollars in the new business models, believing in a fast victory over the established supermarkets. Also numerous old players in the grocery retailing business all over the world introduced electronic shopping channels. However, most of the old players were very cautious in their e-channel development, fearing the new channel would cannibalize their established business. The different competence requirements of e-grocery compared to supermarkets and ambivalence about customer reactions also slowed down development. Only a few old players really forcefully invested in and developed e-shopping models for consumers.

Most of the purely online players quite soon ran into serious troubles and were forced to cease their operations. The old brick-and-mortar retailers took over the best parts of their former challengers businesses and continued the development of the e-grocery business from a new basis. Examples in the USA are Ahold with Peapod and Safeway and Tesco with GroceryWorks. Also most of the old players struggled to make the electronic channel profitable, and many have closed their e-stores. The most successful old player has been Tesco, which is currently (2004) the biggest e-grocer in the world, and which claims to be profitable. After the e-boom years of the late 1990s, the beginning of this century has been a period of gradual development. The growth of electronic retailing has continued with less bluster, and recently there have been signs of a wider rebirth of e-grocery. Many online retailers turned profitable in 2003, and continued a rapid

growth (Tedes, hic 2004). New players have also again entered the markets. In 2002 Ocado, a pure electronic grocer was founded in the UK and is partnering with an established supermarket Waitrose. It has grown fast but has not yet reached profitability (www.Hoovers.com). Also one of the oldest and biggest e-retailers, Amazon, has started to sell also groceries online.

Logistics - the Profit Killer of E-Grocery

Overall, electronic grocery retailing has turned out to be extremely difficult to operate profitably. Numerous reasons can be identified for the difficulties and failures ranging from difficulties in changing customers' buying habits to poor purchasing power of the new entrants. It is, however, clear that logistics is an important reason for poor profitability for all players. There have been serious problems in managing both information and material flows, leading to skyhigh logistics costs and low value to customers. Difficulties have appeared in many ways in all parts of logistics. This is discussed in the following sections.

Order Assembly

The e-channel solutions of the old brick-and-mortar supermarkets have mostly been based on picking from store, while many pure players started with dedicated order assembly and distribution centres. At the beginning of the e-grocery business, store picking seemed to be more efficient, even though only Tesco has reported it to be profitable. The biggest failure was Webvan, which invested hundreds of millions of dollars in highly automated distribution centres that were never even close to breaking even before the company ran out of money and closed its operations. Ahold/Peapod, which recently has been the most successful e-grocer in the USA, has combined different order assembly and distribution concepts. In addition to dedicated warehouses that serve customers in high selling markets they use *warerooms*, which are dedicated areas attached to Ahold stores. Warerooms are used as business is developing in new markets and they leverage the stores' infrastructures.

All options for organizing order assembly have involved difficult problems:

- Order picking in stores has been ineffective, because supermarkets are not designed for fast picking. On the contrary, stores are often designed so that customers must walk a long way, during which they do impulse purchases.
- The distribution centres that deliver to supermarkets cannot be used for order assembly of individual shopping baskets, because their

logistics systems are designed for handling big batches.

- Building a dedicated distribution centre for home deliveries of groceries is a huge investment. It is difficult to automate the order assembly of a shopping basket, and the high requirements for temperature control increase the costs. Therefore high volumes are required to break even. Also the peaks in demand on certain days of the week and at certain times of the day make it difficult to utilize capacity effectively.

The stock-outs that are common in supermarkets also create problems and additional costs in the order assembly. According to a recent study (Corsten and Gruen, 2004), stock-out rates in supermarkets are around 8%, worldwide. In electronic grocery shopping, stock-outs are much more visible to customers compared to supermarket shopping. In a supermarket the seller do not usually know if a customer missed some item because it was out of stock. In EGS the customer has identified each item she wants to buy, and a missing item always needs some kind of exceptional handling. This problem could potentially be turned into an advantage, because the e-grocer receives systematic information about customers' real needs.

Home Delivery and Goods Reception

The most common home delivery modes in EGS have been next day delivery, a two hour delivery window and manned goods reception. Yet, there are different operating modes as well as different home delivery fees; Table 8.1 summarizes some examples of existing e-grocers. In many companies the practices and service fees have been changed several times over time. Let us use Webvan as an illustrative example about the importance of home delivery mode.

Webvan launched its e-grocery business in June 1999. To reach market dominance, Webvan offered home delivery with attended reception and delivery time windows of 30 minutes, free of charge, for orders above \$50. However, Webvan was unable to create sufficient demand to reach economically viable home delivery operations. Low customer density, attended reception, and short delivery time windows together resulted in extremely high delivery costs. In November 2000 Webvan started to charge \$4.95 for deliveries less than \$75. In December 2000 Webvan tried to decrease the home delivery costs by cutting down its service level to 60-minute delivery time windows. Then again in May 2001 Webvan raised the delivery fees for orders under \$75 from \$4.95 to \$9.95 and imposed a new fee of \$4.95 for orders between \$75 and \$100, leaving free delivery only for orders over \$100. Later, in June 2001, it offered a home delivery scheduling

system whereby the customer earned bonus points by selecting the same delivery timetable as had already been selected for the neighbourhood. Even rationalizing and pricing its home delivery service was not enough to prevent Webvan from running out of money as a result of an unexpected drop-off in incoming orders when delivery fees were introduced. Finally, in July 2001 Webvan ceased operations.

Table 8.1 Delivery concepts of some existing e-grocers

	Tesco UK	Peapod/Ahold USA	Ocado UK	Ruokavarasto Finland
Minimum delivery time	Varies depending on available delivery slots 6 days a week	Next day 7 days a week	Next day 6 days a week	Same day if order placed before 2 p.m. 6 days a week
Delivery window	2 hour	2 hour	1 hour	2 - 4 hours
Reception	Attended	Attended	Attended	Attended and reception box
Delivery fee	Between £3.99 and £5.99 in UK €7.62 in Ireland	As low as \$4.95; fees vary according to basket size and location	£5 for orders less than £75 others free of charge	7 or 9 Euros in attended delivery Reception box customers pay 36 Euros rent per month, no separate delivery fee
Order assembly	In Tesco stores	2 dedicated warehouses 8 warerooms	1 dedicated distribution centre	In stores

The basic problem with home delivery transportation has been that short delivery times and short delivery windows (= time between earliest and latest possible delivery) have in many cases inhibited effective combining of home deliveries. Delivering a single shopping basket by a delivery van is very expensive. In many urban areas traffic jams create additional problems for home deliveries as they increase transportation times and create uncertainty that makes transportation planning difficult. Also daily changes in the amount of orders make it difficult to effectively utilize transportation