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article:

pillars of virtual enterprise: leveraging physical assets in the new economy

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Once it was thought e-commerce would wipe out local communities and businesses. Now it seems the old economy is fighting back, with established companies developing 'hybrid' strategies that exploit their physical assets and capitalise on customer loyalty. E-commerce is even making traditional business leaner and fitter, automating routine functions and leaving staff to concentrate on higher-margin activities. The internet 'pure plays' might have the bright ideas, but can they survive without a presence on the high street?

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A recent trend in electronic commerce is the recognition that, at least in many traditional product markets, some kind of physical infrastructure is vital to meeting customer needs.¹ Indeed, as the so-called internet 'pure-plays' continue to rack up large losses, many e-commerce observers are refocusing their attention on hybrid strategies (or 'clicks and mortar') as the likely winner in the competition between traditional and virtual firms. This stands in stark contrast to the initial expectations that surrounded the emerging internet-based economy. Then, it was assumed that older firms would face stiff competition from more nimble 'virtual' players who were not saddled with buildings, large and duplicated inventories, or other vestiges of the 'old economy'.²

To date there have been only a few papers published on 'clicks and mortar' companies.³ We suggest here that hybrid e-commerce strategies can take many forms, ranging from approaches with limited interaction between the physical and virtual entities, to those where the two modes are inseparable: we refer to these tightly coupled approaches as 'synergy models'. In this paper, we investigate the theoretical strengths of synergy models and present a series of case studies illustrating some of the hybrid strategies used by different companies and industries.

Electronic commerce models

In their internet strategies, some firms make an explicit connection to their existing physical presence in a market, while others do not. After Venkatesh, in this section we introduce six types of internet strategies.⁴ This categorization is useful, in that it highlights the main differences between strategies that exploit complementarities between physical and virtual activities (synergy, mirror, anti-mirror) and those that do not (parallel, virtual). The six categories are:

1. 'Something old, something new', *The Economist*, <http://www.economist.com/editorial/freeforall/20000226/su3796.html>, 2000; G. Lindsay, 'Building businesses with clicks and mortar', *Fortune*, <http://www.fortune.com/fortune/clicks/index.html>, 10 August 1999.

2. C. Steinfield, A. Mahler and J. Bauer, 'Electronic commerce and the local merchant: opportunities for synergy between physical and Web presence', *Electronic Markets*, Vol 9, Nos 1/2, 1999, pp 51–57; J. Otto and Q. Chung, 'A framework for cyber-enhanced retailing: integrating e-commerce retailing with brick and mortar retailing', *Electronic Markets*, Vol 10, No 4, 2000, pp 185–191.

3. C. Steinfield and S. Klein, 'Local versus global issues in electronic commerce', *Electronic Markets*, Vol 9, Nos 1/2, 1999, pp 45–50, http://www.electronicmarkets.org/netacademy/publications.nsf/all_pk/1336; C. Steinfield and P. Whitten, 'Community level socio-economic impacts of electronic commerce', *Journal of Computer-Mediated Communication*, Vol 5, No 2, 1999, <http://www.ascusc.org/jcmc/vol5/issue2>.

4. A. Venkatesh, 'Virtual models of marketing and consumer behaviour', paper presented to the ESRC Virtual Society Program Workshop, 'E-Commerce and the Restructuring of Consumption', London, 10 December 1999.

5. Businesses selling luxury goods have only recently begun to relax this policy.

Pre-internet: Firms that explicitly choose to avoid developing an internet-based channel to their customers or other trading partners fall into this category. This may be due to lack of resources, but can also be a rational strategy for firms that believe that having a Web channel adds little value to their current systems of distribution. There may be little added value for those firms that cater to a geographically local market (with a service consumed on the premises, such as hairdressing), or if there is low internet penetration among their target market (as in some countries). Some firms may also wish to differentiate themselves by emphasizing personal attention or service, and consider that a Web channel would be detrimental to this image.⁵

Mirror: Often, firms that do develop a Web channel for their customers or trading partners try to make it resemble their physical channel as closely as possible. For example, a firm might establish a Web store that has the same 'look and feel' as their physical outlets, offering identical goods and services. It is, in essence, a mirror image of their physical outlets, but does little to exploit the new capabilities of the

Web or seek out any synergies that might exist between virtual and physical channels. Typical of this are catalogue firms whose Web channels merely duplicate their existing mail order and phone channels.

Parallel: Firms that develop an internet channel that is explicitly separate from, and unrelated to, their physical channels, are said to be following a parallel strategy. Firms may choose this approach because they believe that the internet enables them to offer a different set of goods and services, or to reach an entirely distinct customer base (whether geographically or demographically). By avoiding explicit reference or linkage to their physical outlets they are able to experiment with new or different images. This can also be a way for small firms to mask their limited size, or develop an internet brand to compete against larger, more established firms.

Synergy: A synergy strategy is one where firms explicitly link their virtual and physical presence, exploiting each channel's strengths. Firms may, for example, rely on their physical outlets to establish trust, while extending service and convenience through their virtual channel. In true synergy models, the two channels interact and complement each other in various ways. For example, a firm may allow customers to gather information and order products online, and then collect them or obtain after-sales service at the physical store.

Virtual: In virtual models, firms forsake their physical presence and pursue an all-virtual channel strategy (perhaps outsourcing the distribution of physical goods to courier services). Although it is typically new digital actors that start with this approach, there are examples of firms that have relinquished their physical presence for the lower costs they believe they will find on the internet.⁶

Anti-Mirror: An anti-mirror strategy is one in which firms develop an internet channel, and remake their physical presence to take better advantage of the capabilities of the internet. This may involve restructuring business processes in their physical outlets to make them more 'Web-aware'. The important distinction here is that the physical presence is fundamentally altered as a result of the firm's virtual channel development.

Of the strategies identified by Venkatesh, three aim to leverage firms' prior investments in their name or physical assets through their virtual presence. At the simplest level, a mirror strategy exploits a website's similarity to an established physical entity. Essentially, this uses consumers' familiarity with an existing physical entity to inspire trust and reduce the perception of risk. Synergy and anti-mirror models are more sophisticated strategies, which not only gain from greater trust and reduced perceived risk, but also use their combined physical and virtual presence to add value for customers in ways that the two channels could not achieve separately. In the following section, we develop the theoretical rationale behind these hybrid approaches.

6. A good example of a firm with physical outlets that moved entirely to the Web is Egghead Software, which abandoned its retail shops for an all-internet sales approach. It has since retreated from the strategy, however.

Transaction cost economics and electronic commerce

Analyses of the economics of electronic commerce often rely on *transaction cost economics* to identify the advantages virtual firms have over physical/traditional firms.⁷ Transaction costs include those associated with pre-purchase (eg search and evaluation), purchase (eg negotiation and settlement), and post-purchase (eg after-sales service). Networks reduce the constraints imposed by distance by permitting rapid exchange of information between distant buyers and sellers.⁸

For many economists, the lower transaction costs associated with electronic commerce in particular make it easier for buyers to find new sellers, and for sellers to access new markets.⁹ As a result, according to the prevailing wisdom, the internet is reshaping all industries by stimulating the rise of electronic marketplaces. These new marketplaces are characterized by strong price competition and greater choice for buyers.¹⁰

At the same time the internet enables the producers of goods and services to develop more direct relationships with their buyers, bypassing most former intermediaries.¹¹ Moreover, it supports the provision of goods and services at a lower cost, and allows them to be more easily customized to the needs of individual buyers.¹² As the argument typically goes, physical proximity to buyers becomes irrelevant for goods and services that can be produced anywhere and delivered either electronically or physically by courier to buyers. Ultimately, it is argued that the relatively low cost of creating a Web presence, which is then accessible to those connected to the internet worldwide, enables firms to use their electronic site as a substitute for establishing a physical presence in a local market.

The transaction costs perspective impels many firms to move to the internet as their distribution channel. Steinfield and Whitten identify a number of advantages that Web-based businesses enjoy over those confined to physical channels:¹³

- access to a wider potential market;
- lower costs, because premises are not required for each market place;
- a wider range of product lines with less or no inventory;
- greater economies of scale arising from a larger customer base, and consequent volume discounts on inputs;¹⁴
- the ability to set up facilities near production sites;
- lower costs, by 'taking out the middle man' from the retail distribution value chain;¹⁵
- a higher degree of transaction automation, leading to improved service and lower labour costs;
- the ability to respond rapidly to changes in the market, through near-real-time price adjustments as well as changes in product mix and marketing;¹⁶
- the ability to easily capture and use market-relevant data generated during routine interactions with customers;¹⁷

7. S.Y. Choi, D. Stahl and A. Whinston, *The Economics of Electronic Commerce*, Macmillan Technical Publishing, Indianapolis, IN, 1997.

8. T. Malone, J. Yates and R. Benjamin, 'Electronic markets and electronic hierarchies: effects of information technology on market structure and corporate strategies', *Communications of the ACM*, Vol 30, No 6, 1987, pp. 484–497.

9. Malone *et al*, *ibid*; S. Wildman and M. Guerin-Calvert, 'Electronic services networks: functions, structures and public policy', in M. Guerin-Calvert and S. Wildman, eds, *Electronic Services Networks: A Business and Public Policy Challenge*, Praeger, New York, 1991, pp 3–21.

10. J.Y. Bakos, 'Reducing buyer search costs: implications for electronic marketplaces', *Management Science*, Vol 43, No 12, December 1997, pp 1676–92;

J.Y. Bakos, 'The emerging role of electronic marketplaces on the internet', *Communications of the ACM*, Vol 41, No 8, August 1998, pp 35–42; M. Smith, J. Bailey and E. Brynjolfsson, 'Understanding digital markets: review and assessment', in

E. Brynjolfsson and B. Kahin, eds, *Understanding the Digital Economy*, The MIT Press, Cambridge, MA, 2000; 'Survey e-commerce: in the great Web bazaar', *The Economist*, 26 February 2000,

<http://www.economist.com/editorial/freeforall/20000226/su1876.html>;

'TheLandgrab.com', the *New York Times*, 18 January 2000,

<http://www.nytimes.com/library/opinion/friedman/011800frie.html>.

11. R. Wigand and R. Benjamin, 'Electronic commerce: effects on electronic markets', *Journal of Computer Mediated Communication*, Vol 1, No 3, 1995, <http://www.ascusc.org/jcmc/vol1/issue3/vol1no3.html>; Choi *et al*, *op cit*, Ref 7.

12. Choi *et al*, *op cit*, Ref 7; R. Kalakota and A. Whinston, *Electronic Commerce: A Manager's Guide*, Addison-Wesley, Reading, MA, 1997.

13. Steinfield and Whitten, *op cit*, Ref 3.

- the ability to add value to products and services by offering links to complementary producers;¹⁸
- the ability to offer 7 day/24 hour access at little additional cost; and
- no limitation on the depth of information provided to customers, which can aid in product selection and thereby reduce return rates.¹⁹

These economies offer Web-based retailers the chance to easily undercut the prices of local retailers, many of whom will previously have faced little or no competition. Despite some empirical evidence to the contrary,²⁰ there is a general expectation that prices will be lower on the Web.²¹

It might appear from this analysis that all-virtual firms enjoy all the advantages, but in fact there are many dimensions to consumer behaviour. As is often pointed out, lack of trust is a significant obstacle to the growth of electronic commerce.²² The risks associated with opportunistic behaviour by suppliers may be hard for consumers to quantify but add nevertheless to their perception of potential transaction costs. The previous analysis also overlooks consumers who need immediate gratification, and so may be reluctant to rely on e-commerce vendors who ship goods by courier. The next section elaborates the theoretical advantages of hybrid (ie physical *and* virtual) approaches to electronic commerce.

Hybrid electronic commerce approaches

As discussed earlier, hybrid electronic commerce involves the use of both virtual and physical presence to meet the needs of buyers. By 'physical presence', we mean any assets that enable potential buyers to interact in person (ie not via the internet, although perhaps at a call centre) with a firm's personnel or on a firm's premises in support of an economic exchange.

14. The early popular wisdom suggested that the size of firm has less relevance for Web retailing, given the relatively low costs involved in establishing a Web presence (Steinfeld *et al*, *op cit*, Ref 2). Nonetheless, there is clear potential for a large retailer who then goes on the Web to use its buying clout to acquire products at a lower per unit cost than either small Web retailers or small physical retailers.

15. R. Wigand, 'Electronic commerce: definition, theory and context', *The Information Society*, No 13, 1997, pp 1–16; Wigand and Benjamin, *op cit*, Ref 11. However, Sarkar, Butler and Steinfeld present arguments for increasing rather than decreasing numbers of intermediaries in the electronic commerce environment. (M. Sarkar, B. Butler and C. Steinfeld, 'Intermediaries and cybermediaries: a continuing role for mediating players in the electronic marketplace', *Journal of Computer Mediated Communication*, No 1, Vol 3, <http://www.ascusc.org/jcmc/vol1/issue3/vol1no3.html>; M.B. Sarkar, B. Butler and C. Steinfeld, 'Cybermediaries in the electronic marketplace: towards theory-building', *Journal of Business Research*, Vol 41, No 3, 1998, pp 215–221.

This is similar to, but slightly broader than the definition of local electronic commerce developed by Jupiter Communications,²³ which includes any exchange where the fulfilment of either local or national brands is handled within ten miles of a consumer's home or workplace. Our broader definition of physical presence can include, for example, instances such as catalogue firms or travelling sales representatives, which may not involve local fulfilment but do utilize existing (pre-internet) physical assets as sales channels.²⁴

There are a number of reasons why we might expect hybrid electronic commerce to be more successful than exclusively physical or virtual approaches to the market. An earlier analysis by Steinfeld and Whitten²⁵ focused on the opportunities for firms to combine their physical presence with e-commerce channels to (i) build trust, (ii) meet diverse consumer needs and preferences, (iii) exploit the natural complementarity between virtual and physical capabilities to enhance value for buyers, and (iv) use their greater knowledge of the local community to offer more targeted products and services. The various strategies can be broadly categorized into four groups:

Cost-reduction strategies: When virtual and physical channels are harmonized effectively, a number of potential savings become possible,

particularly involving labour costs. For example, many pre- and post-purchase activities that formerly required the time of a sales person can be handled via the internet. In essence, these labour costs are switched (or 'outsourced') to consumers for such activities as looking up product information on their own, filling out forms, and relying on online technical assistance for after-sales service. Customers are willing to take on these tasks for the increased convenience and control that the virtual channel offers. Sales personnel can then shift their activities from order-taking (as in typical call centres) to order-generation or higher-margin sales activities.

For catalogue firms, shifting to the internet can offer very real cost savings, since internet orders are far cheaper than telephone orders and fewer catalogues need to be printed.²⁶ Another area of cost savings includes opportunities to reduce local inventory for infrequently purchased goods, while still offering them on a back-order (ie via the internet) basis. Finally, in terms of delivery costs, hybrid firms have a cost advantage over all virtual firms, as their physical outlet in the community eliminates onward delivery charges. If they do offer delivery to customers, it is initiated from the local point of presence and therefore likely to be cheaper.

Trust-building strategies: The legitimacy of Web stores is a commonly cited impediment to online shopping.²⁷ Hybrid firms have enhanced opportunities to build trust, due to their physical presence in the markets they serve. A recognized physical entity reduces the perceived risk that the virtual site is a fake, and gives consumers an easy-to-access location where goods can be returned or complaints registered.

Additionally, businesses in the community can be embedded in a variety of social networks (eg Chambers of Commerce, sponsors of youth organizations), which serve to enhance trust.²⁸ According to Granovetter,²⁹ many economists believe that this linking of economic exchange to social relations can result in an inefficient allocation of resources.³⁰ However, he also notes that social relations facilitate trust, permitting exchanges without expensive contracts or legal fees, thereby reducing costs.

DiMaggio and Louch show that for transactions they consider to be risky, consumers are likely to be influenced by social ties.³¹ Social ties create obligations that can be a powerful force in controlling opportunistic behaviour. In DiMaggio and Louch's study, customers making 'high-risk' purchases preferred to limit their choice of supplier to people they knew or who had been recommended by someone they knew.

To the extent that such personal relationships are more likely to exist between geographically proximate buyers and sellers, they may be a countervailing force in electronic commerce, resulting in a preference for doing business with firms that are already physically present in the local market. Hence, hybrid firms that pursue this approach would rely extensively on their physical presence and social embeddedness

16. J. Bailey, 'Internet price discrimination: self-regulation, public policy and global electronic commerce', paper presented to the Telecommunications Policy Research Conference, Washington, DC, September 1998.

17. C. Steinfield, L. Caby and P. Vialle, 'Internationalization of the and the impacts of Videotex networks', *Journal of Information Technology*, Vol 7, 1993, pp 213–222.

18. *Ibid.*

19. 'Dealing with those pesky returns', the *New York Times*, 23 August 1999, <http://www.nytimes.com/library/tech/99/08/cyber/commerce/23commerce.html>.

20. J. Bailey, and E. Brynjolfsson, 'In search of "friction-free markets": an exploratory analysis of prices for books, CDs, and software sold on the internet', paper presented to the 25th Annual Telecommunications Policy Research Conference, Washington, DC, October 1997; J. Palmer, 'Electronic commerce in retailing: the difference across retail formats', *The Information Society*, Vol 13, 1997, pp 75–91. Bailey and Brynjolfsson report that in their empirical analyses the prices of books, CDs and software were higher on average on the Web than in Boston area stores. Palmer found no significant difference between in-store prices and prices in Web stores, catalogues or cable TV shopping channels across a variety of products. One plausible explanation is that Web-merchants were simply using a price discrimination approach that allowed them to find buyers willing to pay extra for the added convenience of Web shopping.

21. E. Brynjolfsson and M. Smith, 'Frictionless commerce: a comparison of internet and conventional retailers', working paper, Sloan School of Management, MIT, Cambridge, MA, 1999, <http://ecommerce.mit.edu/papers/friction/friction.pdf>.

22. J. Palmer, J. Bailey and R. Smith, 'The use and prominence of trusted third parties and privacy statements', *Journal of Computer Mediated Communication*, Vol 5, No 3, March 2000, <http://www.ascusc.org/jcmc/vol5/issue3/>.

23. F. Swerdlow, H. Kim, K. Cassar and M. Johnson, 'Local commerce: internet threat mandates brick-and-mortar reconstruction', *Vision Report*, Jupiter Communications, Vol 11, <http://www.jup.com/>, 24.

Consider, for example, the case where a supplier maintains a showroom to allow physical inspection of merchandise as well as face-to-face interaction with a sales representative, but where all orders are shipped directly to customers from a central warehouse. This clearly exploits physical presence in a given market without involving local fulfilment.

25. Steinfield and Whitten, *op cit*, Ref 3.

26. 'Catalogue companies exploit the web', *New York Times*, 15 May 2000, <http://www.nytimes.com/library/tech/00/05/cyber/commerce/15commerce.html>.

to build trust, and would feature these forms of community connection prominently on their virtual channels.

Value-adding strategies: Physical and virtual channel synergies can be exploited in various ways to help differentiate products and add value without increasing costs. Many opportunities for differentiation arise from the use of the virtual channel to offer information and services that complement the goods and services offered in physical outlets. Conveniences such as the opportunity to make advance orders or reservations can help to enhance value for customers. Moreover, allowing customers to have virtual access to their account information (online account management) creates transparency, and so builds trust.

Virtual channels can also offer complementary new services based on organizing and synthesizing data on purchase histories ('If you liked that, you'll also like this...'). This not only makes it easier for customers to manage their own activities, but brings in more revenue. There are many other ways to use each channel actively to promote traffic in the other. Cross-promotions can include advertising, as well as the provision of incentives (eg coupons, credits towards future purchases) to use the complementary channel. Various forms of after-sales service (eg installation and repair, accessories, instructions and tutorials) and loyalty programmes also differentiate one provider from another, while increasing lock-in.

Market extension/reach: A particular set of value-adding strategies emphasizes the use of the virtual channel to help extend the reach of a firm beyond its traditional physical outlets. The role of the internet in accessing new geographic markets is widely recognized. But virtual channels can also extend the product scope and depth of *physical* channels, allowing firms to make offers to new customers, or offer new products to existing customers. Virtual channels also enable firms to continue serving customers when they relocate beyond the reach of existing physical channels.

An empirical analysis of several firms that demonstrate a synergy approach between their virtual and physical channels was made by the PLACE project (Physical presence and Location Aspects of e-Commerce Environments) of the Dutch Telematica Instituut in Enschede. The results are presented here.

Case studies

In the spring of 2000 we conducted several case studies of firms in the Netherlands that had established an electronic commerce channel with the goal of exploiting synergies with their existing physical market presence. We chose three firms to illustrate the various 'clicks and mortar' approaches.

27. D. Bollier, *The Future of Electronic Commerce: A Report of the 4th Annual Aspen Roundtable on Information Technology*, The Aspen Institute, Washington, DC, 1995; V. Coates, *Buying and Selling on the Internet: Retail Electronic Commerce*, The Institute for Technology Assessment, Washington, DC, 1998.

28. Steinfield *et al*, *op cit*, Ref 2; Steinfield and Whitten, *op cit*, Ref 3.

29. M. Granovetter, 'Economic action and social structure: the problem of embeddedness', *American Journal of Sociology*, Vol 91, No 3, pp 481-510.

The firms were selected on the basis of news and trade journal reports highlighting their e-commerce activities. Interviews with executives in charge of internet strategy in each firm were conducted during March, April and May of 2000, and company websites monitored to confirm that hybrid e-commerce strategies were being implemented. In each case, we briefly describe the firm, its e-commerce strategy, and the ways in which it is attempting to leverage its physical and virtual presence.

Bruna

Bruna is a large book retailer selling general interest books, magazines, newspapers, software and assorted writing supplies. Brunas bookstores are located in all major Dutch cities. The company is affiliated to the Dutch Post Office, and all major train stations in the Netherlands have Brunas bookstalls, with many of them offering postal services as well. This location strategy means that Brunas picks up business from all those using rail and post services. Other stores are generally in the shopping areas of city centres, also in areas with high pedestrian traffic.

An important aspect of the Brunas organization is that shops are normally franchises, managed by independent shopkeepers. Hence a parallel e-commerce approach (where the virtual and physical channels are separate and in competition) would be hard to sustain, due to the potential cannibalism of franchise sales by the Web channel. Indeed, when Brunas launched its website in 1996, there was some resistance from shopkeepers. However, Brunas has been careful not to take the branch network out of the loop and has even found ways to increase traffic at its physical points of presence.

First, all books ordered on the Brunas website (<http://www.bruna.nl>) can be picked up and paid for at any Brunas shop. This is particularly useful for people passing by Brunas shops in train stations on their way to and from work. Approximately 50% of the book orders made on the Brunas site are picked up at a local Brunas shop. This has two benefits. Not only does it attract purchases even from those who are reluctant to make payments over the internet, it brings additional customers into the stores – where many will purchase other goods at the same time.

A second hybrid strategy explicitly integrates the physical shop with the virtual service. Electronic kiosks have been installed at a number of Brunas shops, where customers can search for and order books from a larger inventory than is held in stock.

The third hybrid strategy is the use of mobile e-commerce. Brunas offers its Web services through the Wireless Application Protocol (WAP), to reach customers with suitably equipped mobile phones. Not only does this allow customers in transit to order books more easily, but it sends a text message when the book is ready to be picked up at the preferred shop. All three access methods rely on the same back-office system, and so represent an integrated channel to the customer.

A fourth strategy is being developed that will further enhance the integration of e-commerce and the physical Brunas shops. Brunas plans to offer 'print-on-demand' services for on- and offline patrons. This can be particularly useful for out-of-print books. Excerpts may be offered online as a marketing strategy.

Free Record Shop

Free Record Shop (FRS) is the largest music and entertainment retailer in the Netherlands, with 162 shops under this banner, and several other store brands catering to diverse target markets. As with Brunas, many Free Record Shops are located at major train stations, due to a joint venture with the Dutch National Railway. Unlike Brunas, however, Free Record Shops are wholly owned by the parent organization and not franchises. Nevertheless, FRS is explicitly pursuing a hybrid e-commerce strategy.

30. Consider for example, the inefficiencies that would result from a producer buying raw materials from a family member rather than a lower-cost competing supplier.

31. P. DiMaggio and H. Louch, 'Socially embedded consumer transactions: for what kinds of purchases do people most often use networks?' *American Sociological Review*, Vol 63, October 1998, pp 619–637.

FRS began its e-commerce service in 1998, focusing on complementarities with physical outlets in various ways. As with Bruna, FRS uses its Web presence (<http://www.freerecordshop.nl>) to attract more customers to the shops. It also allows customers to place orders online, but with in-store payment and pickup. The website identifies the closest FRS by postcode. FRS ships all orders from a central distribution centre to the desired store on the following day. This incentive for customers to pick up the product and pay for it in the store benefits individual shop managers, whose bonuses are sales-related. There is an element of channel conflict, however, in that online orders that are delivered to the customer's home bypass the shops entirely. This is less of an issue, though, because the shops are owned by FRS.

FRS plans to integrate each local shop's inventory with its online database. This, it hopes, will speed up fulfilment without excluding the branch network. Customers can check online if a desired product is in their local shop. Even if they do not choose to collect it themselves, delivery will be faster and cheaper.

FRS also plans to introduce various 'on-demand' services in its shops in the near future, including CD recorders, so that customers can – whether *in situ* or remotely over the internet – legitimately assemble their own CD from FRS' available titles. The rights to use these titles will have been acquired by FRS from the music publishing companies. This has several advantages for the physical shops. It allows them to offer buyers a customized product, differentiating their store from others. It also enables stores to offer a wider and deeper selection, with less in-store inventory. In the long term, as technology permits, FRS hopes to provide the same on-demand service for video products.

FRS estimates that approximately 20% of its online shoppers come from outside the Netherlands. It notes, however, that many of these are purchasing Dutch titles, and so are likely to be Dutch expatriates living or working abroad. This suggests that an important effect of the internet for FRS is to retain customers who can no longer visit a FRS branch personally.

Rabobank

Rabobank is one of the Netherlands' largest banks. It has a particular structure, in that it is a cooperative banking network, with independently owned branches sharing the Rabobank brand name and supported by a central organization. These independent banks are owned by their members, who are not shareholders as in a traditional corporation. Profits are not redistributed to the members, but used to extend additional services and reduce the cost of banking to all clients. There are 439 local member banks, including 1789 branches, serving seven million clients in the Rabobank group.

A critical issue is that these banks have very strong ties to the communities in which they are located. Indeed, profits are reinvested into the communities to maintain their economic health. Rabobanks are often the only banks located in small farming towns, and were started by farmers who had been turned down for credit. This history explains the strong desire by the central Rabobank organization (Rabobank NL) to develop e-commerce in such a way that it does not endanger its branch network.

Rabobank has had a website since the early days of the internet (set up by its IT support department, Rabofacet), though in the past this has provided only information. The 'synergy' began when Rabofacet established a series of locally oriented portal sites, focusing on the

districts of member banks. These *Trefpunten* ('meeting points') highlight local activities, as well as providing a vehicle for business clients to establish a Web presence and so enhance their own e-commerce activities (<http://www.tref.nl>). In this Rabobank has functioned as an Internet Service Provider for its clients.

The goal of *Trefpunten* was to have an indirect revenue model, improve ties to the local community and strengthen relations with clients. A secondary goal was to derive direct revenue from the use of online banking services. Services such as direct payments from clients' bank accounts for online purchases were available. Yet *Trefpunten* were ahead of their time. Launched before there was significant internet penetration or e-commerce development, they were only marginally successful.

Today, Rabobank NL offers a variety of centralized online banking services (<http://www.rabobank.nl>). Its synergy strategy is based on cross-subsidising community-based branches with the profits from mass market online banking. These are services that are low in complexity (payments, deposits etc), cheap to administer and do not require the input of a financial advisor. The redistribution of profits goes right down the line. While Rabofacet administers online banking centrally, users remain clients of a particular Rabobank, and any revenue derived from their online business is shared with that bank. If someone wishes to open an online account, they are always directed to their local Rabobank (based on their address) to first establish an account there. Hence, local banks benefit from their ability to offer services at a lower cost, without losing income from their clients.

Because it is in the interests of all players to have most mass market transactions completed using automated channels, Rabobank offers incentives (in the form of better interest rates and lower fees) to encourage its clients to use online services. Bank personnel also cross-promote online banking services by showing customers how to make routine transactions by various direct channels (online and phone). This leaves physical branches able to concentrate on more advice-sensitive services such as estate planning and mortgages, where trust and complexity play a role. It also makes it easier to justify the salaries of branch personnel, for these services offer higher profit margins.

Lessons

We can derive a number of lessons from these cases. They each illustrate specific synergy strategies that fit the four categories provided above: cost savings, trust-building, added value and market extension.

Cost savings were evident in each of these cases. FRS plans to use e-commerce to lower local inventory without diminishing customers' access to the full range of products. Rabobank hopes to reduce its costs for handling mass market banking services by migrating high-overhead transactions to the internet. Bruna lowers costs by giving customers advice and access to book inventory without taking up the time of store personnel.

Trust-building is also clearly evident in each case. FRS and Bruna reduce customers' perceived risks by allowing online ordering, with payment and

pickup at the shop. Rabobank has clearly pursued a community involvement strategy, using e-commerce in its *Trefpunten* programme to strengthen customer relations. All the companies have exploited their highly visible brand names without establishing parallel Web brands.

Value-adding strategies include the expansion of inventory (in both the scope and depth of products) by FRS. The convenience of a 24-hour channel adds value for consumers, and can bring in new revenue. For Rabobank, this may be of particular importance for stock trading on global exchanges. The integration with WAP, both for ordering and pickup notification at Bruna, are value-added services with the potential to increase in-store traffic. New products, such as customized CDs by FRS, also illustrate how the virtual channel may be exploited directly by the physical shop.

Market extension has been achieved for each of these companies through the use of websites. All have been able to build upon a previously limited physical presence to serve new markets. We can see, particularly in the FRS example, however, that an important aspect of this market extension is the ability to retain former customers who have moved beyond the reach of physical outlets.

The cases, however, also suggest that synergy strategies must be planned carefully if channel conflicts are to be avoided. For example, the decision by Rabobank to require online customers to have an account in a local member bank, and the reallocation of fees back to the member bank, avoids the impression of a by-pass. Each company has recognized that the virtual channel offers cost savings, and thus provided some opportunities for differentiation of product offerings by channel.

Of course, this means that in the long run, it may be difficult to avoid conflicts. FRS, for example, may ultimately offer music and video over its Web channel for home downloading. More and more financial services may be handled by the Rabobank direct channels. In these cases, the smaller outlets may not survive. This is clearly a policy-relevant research issue.

The cases also suggest that synergy approaches may be more common with larger chains, who can capitalize on their convenient physical access. FRS and Bruna both illustrate the importance of having locations that are frequented by customers. It is not clear that the pick-up strategy would work without this accessibility.

Finally, some emerging synergy approaches depend on the development and deployment of new e-commerce infrastructures. The creative uses of mobile e-commerce will depend upon the continued deployment of internet-capable mobile networks and devices at costs that encourage widespread take-up.

Conclusions

In summary, it is clear that the e-commerce pendulum has shifted away from purely digital e-commerce actors and parallel internet strategies, to an increasing reliance on hybrid approaches. These approaches have strong advantages in terms of cost reduction, trust-building, the opportunity to offer value-added goods and services, and market extension. They illustrate that contrary to the former e-commerce rhetoric, distance is not dead and geography still influences much e-commerce retail activity. Electronic commerce therefore does not have to be a threat to local communities, but can be used in a way that enhances economic activity.