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Understanding Click and Mortar E-Commerce Approaches: A Conceptual Framework and Research Agenda

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Abstract

In this post dot-com era, much e-commerce activity now arises from established firms with traditional physical outlets. Despite the growth in such click and mortar approaches to e-commerce, little research has specifically addressed this common business model. This article focuses on the underlying dynamics of click and mortar e-commerce businesses using a framework that outlines the potential synergies arising from the integration of e-commerce with traditional channels. Research and theory from such areas as transaction cost economics, interorganizational systems, competitive strategy, and economic sociology are used to develop the click and mortar framework. It details the sources of synergy, the management interventions that can help firms avoid damaging channel conflicts, and the types of benefits yielded by integrated click and mortar approaches. The framework is applied to a specific click and mortar case, an electronics retailer, in order to demonstrate its explanatory value. The heuristic value is demonstrated by deriving several example propositions to guide future empirical work.

Introduction

The advent of Internet-based electronic commerce over the past eight years has given businesses an unprecedented marketing opportunity. As the Internet-using population has grown, so too has the potential market size for any business that sets up a shop on the Web [1]. An increasing number of Americans are shopping online. The U.S. Commerce Department estimates that the number of people who have purchased a product or engaged in banking online more than doubled in the past year, growing from 13.3% of the U.S. population in August 2000 to more than 29% in September 2001 (NTIA 2002). Additionally, more than a third of Americans, and fully two-thirds of the Internet users, now use the Internet to obtain product information. Not surprisingly, despite the economic slowdown, this increased e-commerce activity has translated in growing online sales revenue. Fourth quarter 2001 e-commerce sales increased by 13.1% over fourth quarter 2000, reaching more than \$10 billion (U.S. Census Bureau 2002) [2]. Total retail sales only increased by 5.3 during this same period. The continuing growth of Internet use in general, and especially use for product search and online shopping, has not gone unnoticed by firms in the U.S. One recent study of Internet use by business estimates that more than 90% of U.S. firms are using the Internet to reach customers in some way, with half reporting that they actually sell products and services over the Internet (eMarketer 2002).

Despite this rather optimistic data, there was a dramatic change in e-commerce in 2000 and 2001, resulting from the loss of confidence in Internet-only businesses (the so-called dot-coms). With each new reported dot-com failure, there is a growing recognition that the Internet is unlikely to displace traditional channels anytime soon, at least in the world of business to

consumer (B2C) commerce. Rather, a number of traditional enterprises have moved to integrate e-commerce into their channe mix, using the Internet to supplement brick and mortar retail channels (Pristin 1999; Tedeschi 1999a; Otto and Chung 2000; Rosen and Howard 2000; Steinfield et al. 2001b; Regan 2002; Steinfield, Adelaar, and Lai 2002). Indeed, the arrival of big retailers may have contributed to the collapse of many struggling dot-coms (Tedeschi 2000a), while others have recognized that they need a physical outlet in order to survive (Tedeschi 2000b). Electronic commerce researchers, using terms like "clicks and mortar," "bricks and clicks," "surf and turf," "cyber-enhanced retailing," and "hybrid e-commerce," now consider the combination of physical and web channels to be a distinct electronic commerce business model (Timmer 1998; Otto and Chung 2000; Rosen and Howard 2000; Afuah and Tucci 2001; Steinfield et al. 2001b).

for management. Marketing theorists have long recognized the potential for channel conflicts that can occur when there are alternative paths that products can take to the end consumer (Stern and Ansary 1992). Any manufacturer obviously risks damaging its relationship with an established retail channel when it agrees to sell through a new retailer. In the extreme case, the initial retailer may choose to retaliate by dropping the product and selling a competing one in its place.

Manufacturers must carefully coordinate their sales through a wide range of potentially competing downstream channels; some owned, such as factory outlet stores, catalog sales, and call centers, and some outsourced, such as boutique, chain and department stores (Friedman and Furey 1999). Today, e-commerce channels have been added to the channel mix, creating even more cross-channel conflict potential. Indeed, even when a retailer develops its own e-commerce capability, it potentially threatens to cannibalize sales from its own physical operations (Useem 1999; Ward 2001).

Even with the growing reliance on the click and mortar business model in e-commerce, little theoretical and empirical research

However, the integration of e-commerce with existing physical channels is a challenging undertaking that can create problems

exists on the topic. The Internet business model literature focuses much more on the economics and strategy of pure Internet firms than it does on traditional firms that develop an e-commerce capability (Timmer 1998). In practice, many traditional firms create e-commerce channels that operate quite independently from their existing physical outlets, in an attempt to gain the economic advantages from the Internet without the extra costs, lack of innovativeness, or other burdens from their old way of doing business (Steinfield, Mahler, and Bauer 1999; Useem 1999; Venkatesh 1999). The purpose of this article is to develop an alternative approach - one that emphasizes the integration of online channels with existing physical infrastructure. The central thesis is that the integration of physical and online channels enables firms to capitalize on potential synergies betweer the two, yielding competitive advantages over pure Internet firms, or firms that offer e-commerce channels in a more parallel (non-integrated) fashion. A conceptual framework derived from competitive strategy and economic theory is provided that identifies the underlying sources of potential synergies in click and mortar enterprises. Moreover, competitive strategy and marketing research related to channel coordination and channel conflict is used to highlight the means by which firms can more effectively integrate across physical and e-commerce channels, avoiding destructive channel conflicts. Finally, the framework directs attention to a number of potential synergy-driven benefits that click and mortar firms may ultimately gain by

The remainder of this article is organized as follows. First, a review of literature provides the basis for the click and mortar e-commerce conceptual framework. The next section describes a click and mortar case firm that illustrates the empirical relevance of the framework. We then provide several propositions that illustrate the potential heuristic utility of the framework for future e-commerce research. Finally, the article concludes with a call for further empirical work to enhance our understanding of the complex relationship between physical and virtual channels, and provide guidance to firms in this critical era when e-commerce strategies are still being defined.

taking a more integrated approach to e-commerce.

Theoretical Foundations

In the early years of Web-based commerce, much emphasis was placed on sources of competitive advantage that Internet firms had over traditional ones, primarily using transaction cost logic (Bakos 1997; Choi, Stahl, and Whinston 1997). Transaction cost economics emphasizes the nature of costs that firms incur in the process of conducting transactions with buyers or sellers (Williamson 1975, 1985). Such costs include information gathering and search costs, negotiation and settlement costs, and monitoring costs to ensure that trading partners adhere to the terms of any agreements made. Initially,

settlement costs, and monitoring costs to ensure that trading partners adhere to the terms of any agreements made. Initially, transaction cost economics focused on business-to-business trading, and directed our attention to how such costs exert an

influence on market structure. The classic question was whether high transaction costs caused firms to avoid the market altogether, and develop an in-house production ability in order to avoid being taken advantage of by opportunistic sellers (Williamson 1975, 1985). Information systems researchers relied heavily on transaction-cost theory to predict that a major effect of the Internet would be to lower critical transaction costs, such as search and monitoring costs (Malone, Yates, and Benjamin 1987; Bakos 1997). Once search costs were reduced, buyers could then find sellers in distant geographic markets who had lower prices, provided better service, offered higher quality, or had products that better matched needs (Malone et al. 1987; Wildman and Guerin-Calvert 1991; Wigand and Benjamin 1995; Bakos 1997; Cairncross 1997; Choi et al. 1997; Wigand 1997). Hence, even though first applied to inter-firm relationships, transaction cost economics also provided the conceptual underpinnings for explaining how distant Internet firms may be able to compete with local, physically present businesses (Choi et al. 1997). That is, it enables us to conceptualize the transaction costs that are incurred in a B2C relationship, such as the costs consumers incur in their search and information gathering activities. Indeed, some have argued that, because of the ease of product information search on the Internet, the basic raison d'etre for many local retailers - the fact that they had a geographic monopoly and could therefore charge high enough prices to overcome their inefficiencies and limited selection - no longer applied (Cairncross 1997).

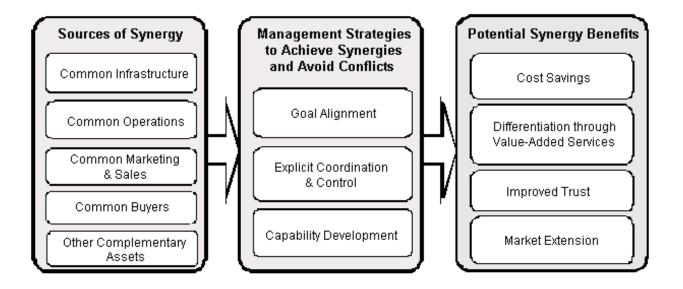
In addition to the transaction cost advantages offered by e-commerce, researchers have spelled out numerous economic advantages that virtual firms enjoy over physical firms. Web-based businesses are perceived to hold many operational, cost, scale, and scope advantages over firms confined to physical channels. These advantages include access to wider markets, lower inventory and building costs, flexibility in sourcing inputs, improved transaction automation and data mining capabilities, ability to bypass intermediaries, lower menu costs enabling more rapid response to market changes, ease of bundling complementary products, ease of offering 7X24 access, and no limitation on depth of information provided to potential customers (Wigand and Benjamin 1995; Choi et al. 1997; Wigand 1997; Bailey 1998; Anonymous 2000; Afuah and Tucci 2001).

These analyses, however, mainly contrast traditional firms with Internet firms. They ignore the potential synergies that arise when firms have a combination of physical and e-commerce channels. Indeed, recent conceptual and empirical work has sharply criticized the early expectations that virtual firms will drive out physical ones and make distance irrelevant (Friedman and Furey 1999; Steinfield and Klein 1999; Otto and Chung 2000; Rosen and Howard 2000; Steinfield, Bouwman, and Adelaar 2001a; Steinfield et al. 2001b; Ward 2001; Steinfield et al. 2002). In these works, the authors emphasize the theoretical advantages of hybrid approaches to e-commerce. Importantly, these works suggest that advantages arise not only from the ability that a multi-channel approach offers for reaching new customers and offering new services, but also because each channel can have spillover effects that result in increased purchases and reduced costs in the other channel (Ward 2001).

Towards a New Framework for Click and Mortar Firms

Importantly, many of the same theories that have been used in the past to predict the dominance of Internet firms over traditional ones can be applied to help understand the dynamics of click and mortar e-commerce approaches. Classic theories of competitive strategy emphasize the importance of exploiting inter-relationships among various tangible and intangible assets as important sources of synergies that can drive competitive advantage (Porter 1985). These works, along with marketing theories focusing on channel coordination, further point to management strategies that can help bring out the benefits from potential sources of synergy, as well as help to avoid damaging channel conflict (Stern and Ansary 1992; Friedman and Furey 1999). Information systems research has a long history of emphasizing how electronic networks can be used to realize competitive advantages, particularly to achieve cost, differentiation and geographic expansion benefits (Porter and Millar 1985; Bakos and Treacy 1986; Johnston and Vitale 1988). It is a small step to show how these classic competitive advantages can be derived from a successful exploitation of synergies between physical and virtual channels. Click and mortar firms also have an opportunity to avoid one of the most difficult problems facing Internet-only businesses - lack of trust. Here, again, classic transaction cost theories, as well as research in the field of economic sociology, can be brought to bear to shed light on why integration among channels can be a more successful strategy (Granovetter 1985; DiMaggio and Louch 1998; Steinfield and Klein 1999; Steinfield et al. 1999; Steinfield and Whitten 1999). The general framework is depicted in Figure 1, and each topic is elaborated upon below.

Figure 1. Sources, Management Requirements, and Benefits of Click and Mortar Synergies



(Adapted from Steinfield, Adelaar and Lai 2002)

Sources of Synergy

Click and mortar firms have a number of potential sources of synergy not necessarily available to pure Internet firms or traditional firms without an e-commerce channel. Among the sources spelled out in classic competitive advantage theory are common infrastructures, common operations, common marketing, and common customers (Porter 1985) (see Figure 1). An example of the use of a common infrastructure is when a firm relies on the same logistics system (warehouses, trucks, etc.) for handling distribution of goods for e-commerce activities as well as for delivery to its own retail outlets. Another critical infrastructure that can be shared is the IT infrastructure. Recent empirical work suggests, in fact, that the more firms build their e-commerce capability in conjunction with an existing IT infrastructure the more likely they will see performance improvements (Zhu and Kraemer 2002). An order processing system shared between e-commerce and physical channels is a good example of a common operation as a source of synergy. This can enable, for example, improved tracking of customers' movements between channels, in addition to potential cost savings. E-commerce and physical channels may also share common marketing and sales assets, such as a common product catalogue, a sales force that understands the products and customer needs and directs potential buyers to each channel, or advertisements and promotions that draw attention to both channels. Finally, an alternative perspective on the cannibalization issue is the fact that e-commerce and physical outlets in click and mortar firms often target the same potential buyers. This enables a click and mortar firm to be able to meet customers' needs for both convenience and immediacy, enhancing customer service and improving retention. Hence, to the extent that virtual and physical channels are able to share these various assets in a coordinated fashion, a variety of benefits can emerge.

Another way to view these various sources of synergy is represented in the many forms of complementary assets that click and mortar firms possess, that purely Internet firms may not. Established firms have existing supplier and distributor relationships, experience in the market, a customer base, and other complementary assets that can enable them to take better advantage of an innovation like e-commerce (Teece 1986; Afuah and Tucci 2001).

Avoiding Channel Conflict

As noted earlier, firms with multiple channels may fall prey to channel conflict. Channel conflicts can occur when the alternative means of reaching customers (e.g. a Web-based store) implicitly or explicitly competes with or bypasses the existing physical channels, and are nothing new to e-commerce (Stern and Ansary 1992; Balasubramanian 1998). One danger is that these conflicts result in one channel simply cannibalizing sales from the other. Perceived threats caused by competition and conflict across channels can have other harmful effects, including limited cooperation across the channels, confusion when customers attempt to engage in transactions using the two uncoordinated channels, and even sabotage of one channel by the other

(Friedman and Furey 1999; Useem 1999; Ward 2001). Management must act to diffuse conflicts and ensure the necessary alignment of goals, coordination and control, and development of capabilities to achieve synergy benefits (Porter 1985; Stern and Ansary 1992; Friedman and Furey 1999) (Figure 1).

Aligning goals across physical and virtual channels implies that all employees involved realize that the parent firm benefits from sales originating in either channel. One problem faced by click and mortar firms is that the contributions made by the Internet channel may be intangible and hard to measure (Tedeschi 2001). Managers have to be open to such intangible benefits and not, for example, evaluate e-commerce divisions purely on the basis of their own sales and profitability. Moreover, there must be agreement on what types of customers (e.g. existing vs. new) are targeted by the new e-commerce channel.

Coordination and control mechanisms include interoperability across channels so that customers may move freely between channels, the use of each channel to promote the other, incentives encouraging cross-channel cooperation, and coordinating customer services to ensure that the unique strengths of each channel are utilized (Steinfield et al. 2001a; Steinfield et al. 2002).

In many situations, traditional firms may lack important competencies needed to achieve synergy benefits with e-commerce. For example, traditional firms may lack Web development skills or logistics skills needed to serve distant markets. In these situations, alliances may be more useful than attempting to develop a virtual channel in-house.

Potential Benefits of an Integrated Channel Approach

The final component of the framework in Figure 1 focuses on the potential benefits that click and mortar firms may achieve when synergies between the Web and existing physical assets are exploited. Four broad areas of benefit include: 1) lower costs, 2) increased differentiation through value-added services, 3) improved trust, and 4) geographic and product market extension. We elaborate on these potential benefits from physical and virtual integration below.

Lower costs. Cost savings may occur in a number of areas, including labor, inventory, marketing/promotion, and distribution. Labor savings result when costs are switched to consumers for such activities as, looking up product information, filling out forms, and relying on online technical assistance for after-sales service. Inventory savings arise when firms find that they can avoid having to stock infrequently purchased goods at local outlets, while still offering the full range of choices to consumers via the Internet. Marketing and promotion efficiencies are garnered when each channel is used to inform consumers about services and products available in the other channel. Delivery savings may result from using the physical outlet as the pick-up location for online purchases, or as the initiation point for local deliveries.

Differentiation through value-added services. Physical and virtual channel synergies can be exploited at various stages in a transaction in order to help differentiate products and add value. Examples of pre-purchase services include various online information aids to help assess needs and select appropriate targets, or, conversely, opportunities in the physical environment to test out products. Examples of purchase services include ordering, customization, and reservation services, as well as easy access to complementary products and services. Post-purchase services include online account management, social community support, loyalty programs and various after-sales activities that may be provided either online or in the physical store. Typical opportunities are in the areas of installation, repair, service reminders, and training. Although many of these value-added services are potentially available to single-channel vendors, combined deployment of such services (e.g. online purchase of computer with in-store repair or training) can enhance differentiation and lock-in effects (Shapiro and

Improved trust. Three reasons for improved trust, relative to pure Internet firms, derive from the physical presence of click and mortar firms, including reduced consumer risk, affiliation with and embeddedness in recognized local social and business networks, and the ability to leverage brand awareness. Lower perceived risk results from the fact that there is an accessible location to which goods can be returned or complaints can be registered (Tedeschi 1999b). Affiliation and embeddedness in a variety of social networks can facilitate the substitution of social and reputational governance for expensive contracts or legal

Varian 1999).

fees (Granovetter 1985). DiMaggio and Louch (1998) show that, particularly for risky transactions, consumers are likely to rely on social ties as a governance mechanism. Such ties are more likely to exist between geographically proximate buyers and sellers, suggesting that there may indeed be a preference for doing business with firms that are already physically present in the local market. Finally, marketing theorists have long recognized the power of branding as a means of building consumer confidence and trust in a product (Kotler 1999). Established firms are able to leverage their familiar name to make it easier for consumers to find and trust their affiliated online services (Coates 1998).

Geographic and product market extension. Adding a virtual channel can help extend the reach of a firm beyond its traditional physical outlets, addressing new geographic markets, new product markets, and new types of buyers. Those in other geographic markets may be new or former customers who have moved away (Steinfield et al. 2001a). Virtual channels can also extend the product scope and product depth of physical channels by enabling firms to offer new products that they do not have to physically stock locally. Moreover, firms may add new revenue generating information services online that would not be feasible to offer in physical outlets. Finally, the Internet may help reach customers within an existing market who may not have visited the physical outlet, but are otherwise attracted to the virtual channel due to its special characteristics (Anderson, Day, and Rangan 1997)

Exploring the Framework with a Click and Mortar Case

To date little empirical research has been conducted that specifically examines click and mortar business models. One exception is a series of case studies undertaken in the Netherlands and the United States, as part of an analysis of how firms can best leverage their existing physical presence when they develop online channels (Steinfield et al. 2001a; Steinfield et al. 2001b; Steinfield et al. 2002). In these analyses, researchers selected firms that were explicitly following a click and mortar approach, and interviewed business and e-commerce managers. Their goal was to understand better the sources of synergy, management strategies, and benefits from e-commerce and traditional business integration experienced by these firms. Here we illustrate the explanatory power of the framework through one of the cases reported in Steinfield et al. (2002).

The firm is one of the largest volume specialty retailers of consumer electronics, personal computers, entertainment software, and appliances in the U.S. with over 400 stores. After several less than successful experiences with a Web channel, the firm recently rolled out a new e-commerce site that featured both a deeper selection of products and a tighter integration with its traditional physical stores. The click and mortar design strategy enables the firm to benefit from a range of synergies between their virtual and physical channels. The goal is to be "channel agnostic," letting customers choose whatever channel or combination of channels best suits their needs.

A number of sources of synergy are available to the firm. One key source is the firm's exploitation of a common IT infrastructure between their e-commerce and store channels. They accomplished this by tightly integrating the Internet operations with existing databases and other legacy systems. The firm also consciously capitalized on common operations, especially in terms of purchasing, inventory management, and order processing. That common marketing and common buyers were a source of synergy is evident in their emphasis on replicating and leveraging the store brand in their online services.

Among the services enabled by the tight IT integration, is the ability of online customers to check out the inventory of individual stores, so that they might order merchandise for immediate pickup in the nearest store. In order to achieve this value-added service and derive the differentiation benefit from it, the service had to be supported by a change in business processes that ensured interoperability across the two channels. For example, if only one or two items desired by an online purchaser are in stock, in-store customers might claim them by the time the Web customer arrived for pickup. To avoid this situation, store personnel must be notified that an online customer has requested an item for pickup. Then employees remove the item from the shelf, and send an email confirmation to the online customer. In order to ensure that stores cooperated with this new capability, management incentives were also considered to avoid or diffuse potential channel conflicts. In particular, the company included performance in fulfilling online orders as one of the parameters influencing store manager compensation.

This seemingly simple service thus reflects the main components of the framework. Several sources of synergy come into play.

First, the firm built the service by tying the Internet to a common, integrated IT infrastructure. Second, it supports the service by utilizing existing store inventory that was warehoused and delivered using common logistics infrastructure. Third, the shoppers can provide payment that is credited to the store, using existing operational systems such as credit card verification and approval systems already in place. Finally, the service targets common buyers - that is people living near existing physical stores.

Management initiatives to achieve synergy and avoid conflict are also evident in this simple example. The online service depended upon the cooperation of store personnel, reflecting a need for goal alignment. This was achieved by developing a service that brought traffic into the store, rather than simply bypassing it altogether. Moreover, management recognized that the Internet could assist in pre-purchase activities, even if the eventual sale was consummated in the store. They did not require the e-commerce channel to generate its own profits. Additionally, they attended to the need for explicit coordination and control by developing a business process that ensured cross-channel interoperability. Finally, they created an incentive system that rewarded store personnel for their cooperation with the e-commerce channel.

Finally, the benefits of this one service are also captured well by the framework. Consider the cost savings in labor that stores accrue when customers search for products online, conduct research, order the product, and even make payment ahead of time, all without needing the assistance of a single employee. In terms of differentiation, this represents a pre-purchase and purchase service that would be difficult for a non-click and mortar firm to offer. Because of the tie-in to the local store, which is also part of a well-known national chain, customers perceive much lower risk than they would if ordering from a less familiar, non-local Internet business.

The tight integration between the e-commerce and existing retail infrastructure offers this firm many other advantages that are derived from the same sources of synergy and enabled by many of the same management strategies. For example, because of their integrated approach, customers who order products online with home delivery are able to return products to their local store, enhancing trust and reducing perceived risk. Moreover, the integration of IT systems enabled store employees to access customer and order data to improve customer assistance, such as finding complementary goods.

Channel cooperation extends in both directions. In-store customers who are unable to find a product on the shelf can search the firm's online site through kiosks available in the store. Because of the integrated approach to marketing, the firm is also able to undertake promotional campaigns, such as sales and contests that customers can access in the store and on the Web In addition, the Web channel also enabled value added services geared towards improving customer relationship management. In particular, the Web site allowed customers to store items under consideration in a 'Think About' folder. This provides useful marketing information to the firm, as they can provide more targeted promotions related to desired products.

Discussion

The click and mortar case described above provides a concrete illustration of the various components in the framework outlined in Figure 1. Other cases reported in Steinfield et al. (2001a) and Steinfield et al. (2002) provide many other examples of the synergies between physical and e-commerce channels. The model directs our attention to a number of potential variables that may influence the success of click and mortar e-commerce. In this section, we illustrate the heuristic value of the framework by developing a few illustrative propositions to guide future research.

First, central to the model is the expectation that firms, which tightly couple e-commerce with existing assets in their traditional business infrastructures, are likely to experience more benefits from e-commerce than firms that do not. Hence, a basic proposition is:

P1: The tighter the integration between a firm's e-commerce and physical channels, the more the firm will benefit from its e-commerce investment.

A number of related propositions in this area would examine particular forms of integration for particular types of outcomes.

Moreover, using the notion from complementary asset literature (Teece 1986), we would expect that the more capable the

existing infrastructure from which synergies are sought, the more powerful the potential synergies. For example, following the research on IT integration by Zhu and Kraemer (2002), we might expect:

P1a: The more capable a firm's existing IT infrastructure, the more likely it will experience benefits from integration with its ecommerce channels.

The framework also has the potential to elicit counter-intuitive expectations. For example, the focus on common buyers as a source of synergy suggests that firms should not necessarily use e-commerce primarily to extend their reach into new markets. Rather, it positions e-commerce as a tool for enhancing existing customer relations, yielding greater retention as a benefit. This relationship can be expressed in the following proposition:

P1b: The more a click and mortar firm targets existing customers with its e-commerce channel, the greater the effect of e-commerce on customer retention.

Of course, to subject this basic proposition to an empirical test, researchers will have to focus on measurable outcomes of e-commerce investment. This raises a number of issues, however, stemming from the difficulty in measuring outcomes due to e-commerce in channel-integrated firms. For example, if much of the use of the e-commerce channel is to support in-store sales and enhance in-store traffic, as in the case mentioned above, then simple online sales data will vastly underestimate the contributions made by e-commerce. New metrics will have to be developed to better estimate the contributory role played by e-commerce in such situations, perhaps requiring new forms of data capture at the point of sale (Straub et al, 2002).

Another important set of propositions embedded in the framework relates to the role of management interventions. In particular, the model posits that such interventions mediate between sources of synergy and eventual payoffs from integration. For example:

P2a: The more that traditional firm employees stand to gain from e-commerce generated activity, the less the likelihood of channel conflicts, and the greater the likelihood that a firm will benefit from its e-commerce investments.

P2b: The easier it is for a consumer to move between e-commerce and traditional channels throughout the stages of a transaction, the greater the effect of e-commerce on customer relations and customer retention.

These are only a small subset of the many expected relationships implicit in the framework. Many specific hypotheses can be tested, focusing on such issues as the effect of channel integration on various outcome measures such as costs, revenue from value-added services, perceived quality of service, trust, and penetration into new geographic and product markets.

Conclusions

In this paper, a conceptual framework describing the dynamics of click and mortar businesses is provided. It directs our attention to the many potential sources of synergy that are available to firms that choose to integrate e-commerce with their existing traditional forms of business. It further emphasizes the many actions that firms can take to minimize channel conflicts and help achieve the benefits of synergy. Finally, it describes four categories of synergy-related benefits from the integration of e-commerce with traditional businesses, including potential cost savings, gains due to enhanced differentiation, improved trust, and potential extensions into new markets.

The utility of the framework was demonstrated using the case of an electronics retailer that has chosen to tightly integrate its large chain of retail stores with its Web-based electronic store. The framework was also used to develop a series of propositions that can guide future empirical research.

The discussion points to the need to develop new types of metrics to better judge the contributions of e-commerce channels, and provides some guidance for future empirical research that can test whether, and under what conditions, integrated click and mortar business models work well.

References

- Afuah, A. and C. Tucci (2001), Internet Business Models and Strategies: Text and Cases, New York, NY: McGraw-Hill Irwin.
- Anderson, E., G. S. Day, and V. K. Rangan (1997), Strategic Channel Design, *Sloan Management Review*, 38 (4), 59-69.
- Anonymous (2000, March), The 10 Driving Principles of the New Economy, *Business 2.0*,
- http://www.business2.com/articles/mag/0,1640,13513,00.html.
- Bailey, J. (1998), Internet Price Discrimination: Self-Regulation, Public Policy, and Global Electronic Commerce,
- Telecommunications Policy Research Conference, Washington, D.C., September.
- Bakos, J. Y. (1997), Reducing Buyer Search Costs: Implications for Electronic Marketplaces, *Management Science*, 43 (12), 1676-1692.
- Bakos, J. Y. and M. E. Treacy (1986), Information Technology and Corporate Strategy: A Research Perspective, *MIS Quarterly*, 10 (2), 107-119.
- Balasubramanian, S. (1998), Mail versus Mall: A Strategic Analysis of Competition between Direct Marketers and Conventional Retailers, *Marketing Science*, 17 (3), 181-195.
- Cairncross, F. (1997), The Death of Distance, Boston, MA: Harvard Business School Press.
- Choi, S., D. O. Stahl and A. Whinston (1997), The Economics of Electronic Commerce: The Essential Economics of doing Business in the Electronic Marketplace, Indianapolis, IN: MacMillan.
- Coates, V. (1998), Buying and Selling on the Internet: Retail Electronic Commerce, Washington, D.C.: The Institute for Technology Assessment.
- Cyberatlas (2002), The World's Online Populations,
- <http://cyberatlas.internet.com/big_picture/geographics/article/0,1323,5911_151151,00.html>.
- DiMaggio, P. and H. Louch (1998), Socially Embedded Consumer Transactions: For What Kinds of Purchases do People Most Often Use Networks?, *American Sociological Review*, 63 (5), 619-637.
- eMarketer (2002, March 13), Worldwide Businesses Branching Out Online, eMarketer Stats & News,
- <http://www.emarketer.com/Feeds/NumbersInTheNews/Story02.html?ref=ebusiness>.
- Friedman, L. G. and T. R. Furey (1999), The Channel Advantage: Going to Market with Multiple Sales Channels to Reach More Customers, Sell More Products, Make More Profit, Boston: Butterworth Heinemann.
- Granovetter, M. (1985), Economic Action and Social Structure: The Problem of Embeddedness, *American Journal of Sociology*, 91 (3), 481-510.
- Johnston, H. R. and M. R. Vitale (1988), Creating Competitive Advantage with Interorganizational Information Systems, MIS Quarterly, 12 (2), 153-165.
- Kotler, P. (1999), Marketing Management, 10th Edition, Upper Saddle River, NJ: Prentice Hall.
- Malone, T., J. Yates, and R. Benjamin (1987), Electronic Markets and Electronic Hierarchies: Effects of Information Technology

- on Market Structure and Corporate Strategies, Communications of the ACM, 30 (6), 484-497.
- NTIA (2002), A Nation Online: How Americans are Expanding their Use of the Internet. Washington, D.C., National Telecommunications and Information Administration.
- Otto, J. and Q. Chung (2000), A Framework for Cyber-Enhanced Retailing: Integrating e-commerce Retailing with Brick and Mortar Retailing, *Electronic Markets*, 10 (4), 185-191.
- Porter, M. E. (1985), Competitive Advantage: Creating and Sustaining Superior Performance, New York: Free Press.
- Porter, M. E. and V. Millar (1985), How Information Gives you Competitive Advantage, *Harvard Business Review*, 63 (4), 149-160.
- Pristin, T. (1999, December 25), Increasingly, Traditional Retailers take the Internet Plunge, *New York Times*, http://www.nytimes.com/1999/12/25/technology/25brick.html.

Regan, K. (2002, March 6), How Bricks Conquered the Net, *E-Commerce Times*,

- http://www.ecommercetimes.com/perl/story/16631.html.
- Rosen, K. T. and A. L. Howard (2000), E-Retail: Gold Rush or Fool's Gold?, California Management Review, 42 (3), 72-100.
- Shapiro, C. and H. R. Varian (1999), Information Rules: A Strategic Guide to the Network Economy, Boston, Mass.: Harvard Business School Press.
- Steinfield, C., T. Adelaar, and Y.-j. Lai (2002). Integrating Brick and Mortar Locations with E-Commerce: Understanding Synergy Opportunities. Hawaii International Conference on Systems Sciences, Big Island, Hawaii, January 7-10.
- Steinfield, C., H. Bouwman, and T. Adelaar (2001a), Combining Physical and Virtual Channels: Opportunities, Imperatives and Challenges, 14th Bled Electronic Commerce Conference, Bled, Slovenia, June 25-26.
- Steinfield, C., D. DeWit, T. Adelaar, A. Bruin, E. Fielt, A. Smit, M. Hoofslout, and H. Bouwman (2001b), Pillars of Virtual Commerce: Leveraging Physical and Virtual Presence in the New Economy, *Info*, 3 (3), 203-213.
- Steinfield, C. and S. Klein (1999), Local vs. Global Issues in Electronic Commerce, *Electronic Markets*, 9 (1/2), 45-50, http://www.electronicmarkets.org/netacademy/publications.nsf/all_pk/1336.
- Steinfield, C., A. Mahler, and J. Bauer (1999), Electronic Commerce and the Local Merchant: Opportunities for Synergy between Physical and Web Presence, *Electronic Markets*, 9 (1/2), 51-57.
- Steinfield, C. and P. Whitten (1999), Community Level Socio-Economic Impacts of Electronic Commerce, *Journal of Computer Mediated Communication*, 5 (2), http://www.ascusc.org/jcmc/vol5/issue2/steinfield.html.
- Stern, L. W. and A. I. Ansary (1992), Marketing channels, Englewood Cliffs, NJ: Prentice Hall.
- Straub, D., D. Hoffman, B. Weber, and C. Steinfield. Measuring e-commerce in net-enabled organizations: An introduction to the special issue. *Information Systems Research*, forthcoming.
- Tedeschi, R. (1999a, August 16), Conventional Retailers Use Web to Improve Service, *The New York Times*, http://www.nytimes.com/library/tech/99/08/cyber/commerce/16commerce.html.
- Tedeschi, R. (1999b, August 23), Dealing with those Pesky Returns, *New York Times*,
- <http://www.nytimes.com/library/tech/99/08/cyber/commerce/23commerce.html>.

- Tedeschi, R. (2000a, December 18), Internet Merchants Adapt to Survive, *New York Times*,
- http://www.nytimes.com/2000/12/18/technology/18ECOMMERCE.html.
- Tedeschi, R. (2000b, November 20), Retail Battle Returns to the Bricks, *New York Times*,
- <http://www.nytimes.com/2000/11/20/technology/20ECOMMERCE.html>.
- Tedeschi, R. (2001, September 3), Bricks-and-Mortar Merchants Struggling to Assess Web Sidelines, *New York Times*,
- http://www.nytimes.com/2001/09/03/technology/ebusiness/03ECOM.html.
- Teece, D. J. (1986), Profiting from Technological Innovation: Implications for Integration, Collaboration, Licensing and Public Policy, *Research Policy*, 15, 285-306.
- Timmer, P. (1998), Business Models for Electronic Markets, *Electronic Markets*, 8 (2), 3-8,
- http://www.electronicmarkets.org/netacademy/publications.nsf/all_pk/949>.
- U.S. Census Bureau (2002, February 20), Retail e-commerce Sales in Fourth Quarter 2001 were \$10.0 billion, up 13.1 percent from Fourth Quarter, 2000, Census Bureau Reports, U.S. Department of Commerce News,
- http://www.census.gov/mrts/www/current.html.

by eMarketer to be 445 million (Cyberatlas 2002).

- Useem, J. (1999, September 6), Internet Defense Strategy: Cannibalize Yourself, Fortune, 140 (5), 121.
- Venkatesh, A. (1999), Virtual Models of Marketing and Consumer Behavior, *ESRC Virtual Society Program Workshop: E-Commerce* and the Restructuring of Consumption, London, December 10.
- Ward, M. R. (2001), Will Online Shopping Compete more with Traditional Retailing or Catalog Shopping?, *Netnomics*, 3 (2), 103-117, http://www.baltzer.nl/journalhome.htm/1385-9587.
- Wigand, R. (1997), Electronic Commerce: Definition, Theory, and Context, The Information Society, 13, 1-16.
- Wigand, R. and R. Benjamin (1995), Electronic Commerce: Effects on Electronic Markets, *Journal of Computer Mediated Communication*, 1 (3), http://www.ascusc.org/jcmc/vol1/issue3/wigand.html.
- Wildman, S. and M. Guerin-Calvert (1991), 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, New York: Praeger, 3-21.
- Williamson, O. (1975), Markets and Hierarchies: Analysis and Antitrust Implications, New York: Free Press.
- Williamson, O. (1985), The economic institutions of capitalism, New York: Free Press.
- Zhu, K. and K. Kraemer (2002), Electronic Commerce Metrics: Assessing the Value of e-commerce to Firm Performance with Data from the Manufacturing Sector, *Information Systems Research*, forthcoming.
- [1] In the United States, the NTIA (NTIA 2002) now estimates that as of September 2001, more than half of the population (approximately 143 million Americans) were using the Internet. They further reported that almost a quarter of Americans were using the Internet both at home and in other places (e.g. schools, libraries, work), suggesting that Internet access is
- becoming more ubiquitous for people throughout the day. Globally, the number of Internet users has been estimated recently
- [2] Note that this underestimates total consumer-oriented e-commerce activity, since the Census does not include online travel, financial services, and ticket agencies in their retail sample.

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