

E-Commerce and Small Business
- Finding the Right Products to Sell on the Internet

Melody Y. Kiang

Associate Professor

Information Systems Department
College of Business Administration
California State University, Long Beach
1250 Bellflower Blvd.
Long Beach, CA 90840-8506
Tel: (562)985-8944
Fax: (562)985-4080
Email: mkiang@csulb.edu

Robert T. Chi

Professor

Information Systems Department
College of Business Administration
California State University, Long Beach
1250 Bellflower Blvd.
Long Beach, CA 90840-8506
Tel: (562)985-4238
Fax: (562)985-4080
Email: rchi@csulb.edu

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Abstract

The Internet has provided a rare opportunity especially for small to medium sized enterprises. It moves organizations beyond the physical constraints of their traditional distribution channels and creates a world wide virtual community in which small and medium sized companies can compete with large enterprises. The potential of the Internet as a commercial medium and market has been widely documented in a variety of media. However, the literature to date on electronic commerce is by and large anecdotal. Both successful and unsuccessful cases of Internet marketing have been reported. There are no proven successful models that can help the management to determine how beneficial the Internet marketing could provide for their business. In this research, we focus on the use of the Internet as a virtual storefront where products are offered directly to customers. Our contention is that product characteristics play a major role in the successfulness of its marketing on the Internet. If we can identify the factors that impact the use of on-line marketing approach, we can build a framework to help evaluate the chance for a company to succeed in e-commerce.

Keywords: Internet marketing, product category, SME.

1. Introduction

The tremendous growth of the Internet has created opportunities for consumers and firms to participate in an online global marketplace. It is conceivable that in the future every person with access to a computer will interact with firms marketing on the Internet. The Internet has provided a rare opportunity especially for small to medium sized enterprises (SMEs). It moves organizations beyond the physical constraints of their traditional distribution channels and creates a world wide virtual community in which SMEs can compete with large enterprises. The potential of the Internet as a commercial medium and market has been widely documented in a variety of publications [Haffman et al., 1995; Jarvenpaa & Todd 1997]. However, the literature to date on electronic commerce is by and large anecdotal. Both successful and unsuccessful cases of Internet marketing have been reported. There are no proven successful models that can help the management to determine how beneficial the Internet marketing could provide for their business. A Web site gives direct contact between the organization and

the consumer. The rapid developments of on-line computing technology, some especially targeted at SMEs [Asian Business 2000], make it inevitable for businesses not to seriously consider the Internet as an alternative distribution channel to avoid losing competitive advantage.

Since 1993, the Internet has been used to support conventional sales and marketing activities; it matches buyers and sellers in a more cost-effective manner, compared with traditional advertising and marketing. While transactions are taking place on the Internet, the current level of commerce is small relative to overall commerce in the United States. The phenomenal growth of the Internet community has begun to alter the way buyers and sellers exchange information and the structure of distribution. It breaks through the physical barriers traditionally placed on commerce and moves firms to a new commercial marketplace. In addition, the opportunity for buyers to examine or test the product or service and interact with the seller to receive additional information or support can be provided through the online service.

While many successful cases of the on-line marketing approach have been recorded in electronic commerce literature, a handful of failed cases has also been reported. The industries that have benefited most from on-line marketing such as on-line brokerage services, travel agencies, and real estate services, are also the ones that were predicted to be most threatened by the new Internet marketing. Although the history of electronic commerce is not long, especially the use of the Internet as a virtual storefront. We believe lessons can be learned from previous cases. Previous research has identified common problems of e-marketing strategies include: failure to classify product characteristics, inappropriate channel selection, pricing, and promotion strategies [Larson 1998]. In this research, we focus on the use of the Internet as a virtual storefront where products are offered directly to customers. We contend that product characteristics play a major role in the successful marketing of a product on the Internet. If we can identify the factors that impact the use of an on-line marketing approach, we can build a model to help evaluate the chance for a particular kind of product to succeed in online marketing.

In the following, we first review the advantages of using the Internet as a new distribution channel for retailing verses traditional distribution channels. This is done through a

thorough review of the literature in both traditional marketing channel selection and the new online marketing approach and identification of the key benefits of Internet marketing, especially for SMEs. A summary of the review is presented in Section 2. To better understand the type of products or services selling on the Internet, Section 3 gives the classification of retailing on the Internet. Then, we determine the product characteristics that can benefit the most from those e-commerce advantages. Section 4 concludes the research and suggests directions for future research.

2. Pros and Cons of E-Marketing Approach

Channel selection is a complex task for both researchers and practitioners in marketing. Although Internet marketing has boomed in recent years, most companies have used it mainly for advertising or promoting corporate images. Not many companies have fully utilized the power of Internet marketing as a new channel for making transactions on the Internet. Besides the various technical obstacles, issues such as security of online trading, authentication, tax policies, etc., have yet to be overcome, the main reason that has prevented companies going online is the uncertainty involved as the Internet is an entirely new transaction channel. The existing research in channel design and selection has only considered the traditional channels, including direct and indirect marketing approaches. There is no documented results or research that provide a systematic method to guide evaluation, planning, and execution of the channel choice decision when it comes to Internet marketing. Although the Internet is an entirely new channel, it has many of the same characteristics as those of conventional channels. We believe studying the factors considered significant in conventional channel selection can also help in analyzing the behaviors of Internet marketing.

In the following, we identify the key advantages of Internet marketing recognized by companies participating in Internet marketing.

The Advantages of Internet Marketing

Marketing activity occurs through three types of channels: communication, transaction, and distribution channels [Peterson 1997]. Although this study focuses on using the Internet as a new transaction and/or

distribution channel, there are substantial interactions and overlapping among the activities performed by the three types of channels. Therefore, we need to consider the effect of Internet marketing on all aspects of marketing activities to be able to recognize the true benefits of Internet marketing. The extant literature in Electronic Commerce has documented various advantages for companies to sell directly on the Internet. These advantages can be classified into three channels based on the functions performed: communication, transaction, or distribution.

Communication Channel: Exchange information between sellers and buyers. The Internet is an extremely effective medium for accessing, organizing, and communicating information. Peterson et al. [1997] have identified several unique characteristics of the Internet regarding communication: (1) the ability to store vast amounts of information that can be searched and disseminated in a cost-effective manner which is accessible by virtually everyone on the Net, (2) interactivity and the ability to provide information on demand, and (3) provide perceptual experiences that are superior to a printed catalog.

The Internet can provide timely information to customers because of its ability for instant communication and its availability 24 hours a day, 7 days a week [Lane, 1996]. This means more interaction [Connolly, 1998], better customer services and quicker responses [Isaac, 1998]. The Internet can be used for both internal and external communications. For external communication, it can be used to communicate with both suppliers and customers. The ways of communication on the Internet range from the most basic form of electronic mail (e-mail) service, mailing list, and newsgroups, to participating in chat-room activities. It also allows for easy follow-up on customers' needs and for expanding and adjusting marketing strategy accordingly [Marks, 1998]. As a plus, greater reliance on Internet communication usually results in lower long-distance phone and fax costs [Malazdrewics, 1996].

Another potential benefit of using the Internet is the ability to gather information about your customers via surveys and contests [Hawn, 1996]. The information can be used to assist new product development and introduction [Gardner and Roos, 1997]. Companies can design and personalize advertising for each customer through "push" technology [Peterson, et al., 1997].

The communication also helps with identifying prospects [Hawn, 1996], sales and relationship building [McKim 1997] and deepening customer loyalty [Davy, 1998].

Another factor that may consider advantageous to certain types of products but disadvantageous to others is the fact that there is no actual face-to-face contact involved in the Internet communication. For the types of products that relies heavily on building personal relationship between buyers and sellers such as the selling of life insurance, and the type of products that requires physical examination, Internet marketing maybe less appropriate. On the other hand, the types of products that people feel embarrassed to purchase at traditional retail stores such as pornography tend to sell well online.

Transaction Channel: Generate sales activities. The Internet offers small businesses many potential benefits to help them compete more effectively against larger companies with improved visibility. For example, small companies that play in niche markets (i.e., sell specialized or unique products or services) in which buyers and sellers are small and geographically dispersed, can use the Internet to reach a much bigger customer base [Long, 1997]. One successful case is the Virtual Vineyards, a wine and specialty-food shop that exists only on the Internet (www.virtualvin.com). Cross-selling opportunities offered by the Internet has great potential for generating more sales transactions [Eichhorn and Helleis, 1997].

The Internet can also ease transaction processing, especially for handling complex orders [Andrews and Trites, 1997], thereby reducing paperwork, increasing efficiency [Long, 1997], replacing professionals tasks [Sandilands, 1997], hence reducing the transaction cost [McKim, 1997]. The online payment system minimizes the processing fee hence allows for small-fee transactions for micro-services. This is especially advantageous for SMEs because most of their business are generated from low-volume orders thus allows them to better compete with large cap companies.

For business-to-business transactions, shortening the processing time also means the buyer can maintain a lower inventory level and reduce other related overhead for handling excessive inventory. The Internet allows for quick adjustment to market conditions which means it is possible to customize promotion and sales to individual customers [Hawn, 1996] and allows for flexible pricing (e.g., permits prices to change faster). The relatively low

entry and establishment costs for sellers getting into on-line marketing is another important reason for considering the Internet as an alternative channel for SMEs [Peterson et al., 1997].

Distribution Channel: Physical exchange of products/services. On-line marketing offers more choices and flexibility [Lamoureux, 1997] and, at the same time, eliminates huge inventories, storage costs, utilities, and space rental, etc. [Avery, 1997]. People tend to associate Internet marketing with direct marketing because companies participating in on line marketing usually shortened the supply chain [Edwards, et al., 1998] and reduced commission and operating costs.

The ability to serve as both a transaction medium and a physical distribution medium for certain goods is a unique feature of Internet marketing. Such advantages can be best realized by companies provide digital products/services such as software, music, news, and consulting services, on-line ticketing and reservation, tele-medicine, insurance, banking, stock brokerage, tax, and other financial service industries. Using the Internet as the distribution channel can reduce not only the delivery cost substantially, but also ensures instant delivery of products/services.

A recent survey revealed that the seven most important competitive priorities of SMEs in Taiwan are: quality, dependability, cost, flexibility, innovation, service, and time [Chen 1999]. Based on above review, using the Internet can enhance business competitive advantage on all seven priorities through different channel functions. Table 1 summaries the advantages of the Internet grouped by the three channel functions.

Table 1. Advantages of the Internet marketing approach grouped by the three channel functions

Channel Functions	Advantages
Communication	Improved product information Improved price information Availability of service, 24 hours a day, 7 days a week Lower cost of communication Interactivity and the ability to provide information on demand Real-time inventory update On-line technical support Quick response of inquiries Customized orders Post-sale service

	No personal contact
Transaction	Virtual storefront can be reached by all Internet users Lower cost of transaction Allow microtransactions Reduce human errors Reduce procurement cycle time Lower inventory level and other related overhead Possible to customize promotion and sales to individual customers Flexible pricing Relatively low entry and establishment costs
Distribution	Reduced waiting time to receive product for digital products/services Lower cost of delivery for digital products/services

3. Classification of Products/Services Selling on Internet

There is a broad range of products and services marketed on the Internet that range from consumable goods to durable goods. Services marketed on the Internet also range from on-line newspapers to business-wide consultation. Instead of modeling the problem at individual product level, we group the products into categories and analyzing the advantages of Internet marketing along each product group. This will provide a general picture regarding the effect of each factor (advantage) to the particular type of product. Once the classification grid is established, it can be used as the basis for analyzing individual product.

The classification criteria of different products or services are still controversial. According to Peterson et al. [1997], one way to group products or services on the Internet is by separating them into search or experience goods. Search goods are the kind of goods that can be evaluated using external information whereas experience goods have to be personally evaluated. If a product is a search good, it is more suitable and likely to be marketed on the Internet. On the other hand, if a product is an experience good, then marketing this product on the Internet is less possible. This kind of classification gives us a clear and basic picture of product suitability for marketing on the Internet. Peterson et al. [1997] also suggested that when products are expensive and infrequently purchased, an Internet marketer is more likely to carry such a product. However, the traditional retailer is favored when there is a need to personally inspect the product prior to purchase. Production customization considers factors such as adjustment, customization, and customer importance. As Peterson et al. [1997] stated, Internet-related marketing can result in extreme price competition when products or services are incapable of significant differentiation.

When the value proposition is intangible or informational (digital products), the Internet marketer is favored. In this study, we follow Peterson et al.'s suggestion to arrive at the classification for search goods as shown in Table 2.

We label each product group using a three-letter acronym that represents the values of the three dimensions. For example, the first category, DHF, stands for digital, high differentiation, and frequently purchased products.

Table 2. Product and Service Classification Grid (Adapted from Peterson et al., [1997])

<i>Dimension 1 Value Proposition</i>	<i>Dimension 2 Degree of Differentiation</i>	<i>Dimension 3 Frequency of Purchase</i>	<i>Examples of Products and Services</i>	<i>Category</i>
Digital	High	Frequent	On-line newspapers and Magazines	DHF
		Infrequent	Software packages	DHI
	Low	Frequent	Stock market quotes	DLF
		Infrequent	Automobile financing, insurance	DLI
Tangible	High	Frequent	Wines, soft drinks, cigarettes	THF
		Infrequent	Stereo systems, Automobiles	THI
	Low	Frequent	Milk, eggs	TLF
		Infrequent	Precious metal ingot of Known weight and purity	TLI

Table 3 links the advantages of the Internet marketing demonstrated in Tables 1 to the product/service category shown in Table 2. A check mark (x) in the box means the product group can benefit from that particular advantage of e-commerce. A question mark (?) means undetermined (could be either way depends on individual product). Among the three dimensions, value proposition has the dominant effect because digital products can take advantages of using the Internet for all three channel functions. The second important factor is the product customization potential of the products or services, and that is followed by the

importance of product availability. According to Table 3, products belong to TLF group, tangible, low differentiation, and frequently purchased, will gain limited competitive advantage and hence has least chance for success on the Internet. It is followed by TLI group, tangible, low differentiation, and infrequently purchased products. All in all, for a given product or service, Table 3 can help to evaluate the chance of survival on the Internet by analyzing the product characteristics associated with the advantages of Internet marketing.

Table 3. Classification grid for analyzing the potential benefits of Internet marketing

Channel Functions	Advantages	DHF	DHI	DLF	DLI	THF	THI	TLF	TLI
Communication	Improved product information	X	X			X	X		
	Improved price information	X	X	X	X	X	X		X
	Availability of service	X	X	X	X	X	X	X	X
	Lower cost of communication	X	X	X	X	X	X	X	X
	Interactivity	X	X			X	X		
	Real-time inventory update	X	X			X	X		
	On-line technical support	X	X	X	X		X		X
	Quick response of inquiries	X	X	X	X	X	X	X	X
	Customized orders	X	X			X	X		
	Post-sale service	X	X	X	X				
	No personal contact	?	?	?	?	?	?	?	?
Transaction	Virtual storefront	X	X			X	X		
	Lower cost of transaction	X	X	X	X	X	X	X	X
	Allow microtransactions	X	X	X	X				
	Reduce human errors	X	X	X	X	X	X	X	X
	Reduce procurement cycle time	X	X	X	X				
	Lower inventory level	X	X	X	X	X	X	X	X
	Customize promotion and sales	X	X			X	X		
	Flexible pricing	X	X	X	X	X	X	X	X
	Low entry costs	X	X	X	X	X	X	X	X
Distribution	Reduced waiting	X	X	X	X				
	Lower cost of delivery	X	X	X	X				

Table 3 gives us a general picture about the suitability of each product group to the Internet marketing approach. The purpose of this framework is not to provide universal rules to be applied to all products within same product category. Although products belong to the same

category share most of the same characteristics but may still differ in certain aspects. The factors (advantages) identified in our framework can be used as the basis for evaluating each individual product.

3. Conclusion

The rapid developments of on-line computing technology make it imperative for SMEs to seriously consider the Internet to avoid losing competitive advantage. A Web site gives direct contact between the organization and the consumer. However, product characteristics play an important role in whether the organization may benefit from utilizing the Web as a means of direct sales [Shanklin and Griffith 1996].

The emphasis of this research is concentrated on practical decision problems that impact a wide range of companies. Due to the complexity of the problem, in this research we have limited the scope to focus only on the product characteristics and their effects on the success of Internet marketing. When making channel selection decisions, we need to consider all the factors in the marketing mix – product, promotion, price, and distribution – as a whole. Other factors that may impact the performance of Internet marketing include: 1) the firm's current distribution structure and channel relationships, 2) the size of the company, 3) the promotion strategies, and 4) the pricing structure, etc., that are specific to individual companies. Future research can study the cases of individual companies to evaluate and design channels that would help with the successful launch of new products.

REFERENCES

- Andrews, Jonathan; Trites, Gerald, "Net Sales." CA Magazine v130, n6 (Aug 1997):12-15.
- Asia Business, "Asia Online drops B2B barriers for small firms," Asian Business; Hong Kong; Oct. 2000, Vol. 36, Issue 10, Page 38.
- Avery, Susan, "Online tool removes costs from process.," Purchasing v123, n6 (Oct 23, 1997):79-81.
- Chen, Wen-Hsien, "The manufacturing strategy and competitive priority of SMEs in Taiwan: A case survey," Asia Pacific Journal of Management; Singapore; Dec. 1999, Col. 16, Issue 3, Pages 331-349.

- Connolly, Jim, "Regulators see promise of Internet", *National Underwriter (Life/Health/Financial Services)* v102, n4 (Jan 26, 1998): 13-18.
- Davy, Jo Ann, "Electronic commerce: Is going online the right road for your company?" *Managing Office Technology* v43, n5 (Jun 1998):20-23.
- Edwards, Nick; Handcock, Sarah; Mullen John, "Electronic commerce: reality bytes.", *Supply Management* v3, n8 (Apr 9, 1998):32-34.
- Eichhorn, Ole; Helleis, Sylvia, "Cyberspace cross-selling." *Credit Union Management* v20, n9 (Sep 1997):28.
- Gardner, Fred; Roos, Gina, "More distributors set up shop on the World Wide Web," *EDN, Distributors Joint the Design Team Supplement* (Aug 15, 1997): S27-S34.
- Haffman, D.L., T.P. Novak, and P. Chatterjee, "Commercial Scenarios for the Web: Opportunities and Challenges," *JCMC special issue on Electronic Commerce*, M. McLaughlin and S. Rafaeli (eds.), Dec. 1995.
- Hawn, Matthew, "Stay on the Web", *MacWorld*, v13, n4, (Apr. 1996): 94-98.
- Isaac, Peter, "Electronic commerce benefits is frictionless trading." *New Zealand Manufacturer* (Feb 1998):38-39.
- Jarvenpaa, S.L. and Todd, P.A., "Consumer Reactions to Electronic Shopping on the World Wide Web," *International Journal of Electronic Commerce*, winter 1996-97, v 1, n 2, pp.59-88.
- Lamoureux, Thomas, "IS goes shopping on the web," *Computerworld* v31, n46 (Nov, 1997):106.
- Lane, Andrea, "Success in sight... or site?" *Australian Accountant*, v66, n10 (Nov 1996):22-25.
- Larson, M., "Search for the secure transaction; Barriers to E-Commerce falling," *Quality* (Aug 1998): 61-63.
- Long, Johnny, "E-COMMERCE: Doing What's Best for Business," *Data Communications* v26, n16 (Nov 21, 1997): 77-80.
- Malazdrewicz, Michael A., "Navigating on the Net," *CA Magazine*, v129, n6 (Aug. 1996): 22-26.
- Marks, Michael, "The Internet: Rewriting the rules of business." *Supply House Times*, v40, n11 (Jan 1998): 63.
- McKim, Robert, "Dollars and sense on the Web", *Target marketing*, v 20, n7, (July 1997): 30-31.
- Peterson, R.A., Balasubramanian, S. and Bronnenberg B.J., "Exploring the Implications of the Internet for Consumer Marketing," *Journal of the Academy of Marketing Science*, Vol. 25, No. 4, PP. 329-346, 1997.
- Sandilands, Ben, "The Internet: A tool of the trade?" *Australian Accountant* v67, n11 (Dec 1997):14-17.
- Shanklin, W.L., and D.A. Griffith, "Crafting Strategies for Global Marketing in the New Millennium," *Business Horizons*, Vol. 39(5), pp. 11-16, 1996.