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E-COMMERCE RETAILING STRATEGIES FOR SMALL BUSINESSES: IT BARRIERS AND STRATEGIC DELIBERATION

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Abstract

Compared to their larger counterparts, small retailing businesses face different barriers and constraints when dealing with e-commerce issues. The objective of this case is to analyze these constraints as these businesses adapt their brick-and-mortar operations to embrace web technologies. Interviews were conducted with small businesses within the Gifts & Collectibles industry that have expanded their operations to encompass sales originating from a web presence. Findings suggest that the development of a transactional website is not the primary strategy that these businesses have devised to generate online sales. A comparison of these alternative strategies is presented and an analysis is provided to answer the question “why are these alternative approaches being adopted by small businesses?”

Keywords: IT strategies, IT resources, online retailing, small businesses, transactional Websites

Introduction

For 2001, retail e-commerce sales for United States businesses were over \$32.6 billion (US Census Bureau of the Department of Commerce 2002). With this rapid acceptance of the Internet and web technologies by consumers, virtually no industry remains unaffected by this growing marketplace. When over 94.7% of all retailing businesses in the United States have an employee count of less than 50 (US Department of Commerce 2000), even some of the smallest businesses have had to adjust to the new threats and embrace the new opportunities of this marketplace.

Legacy firms, although often overlooked by e-business analysts, represent the future of e-business, and thus, understanding e-business from the perspective of legacy firms will give researchers a clearer picture of how e-business will develop (Pinker et al. 2002). Many larger retailers have invested in technical and human components and have adjusted their business's operations to handle online transactions through their website. However, smaller businesses face different constraints and barriers, such as technical limitations and human capabilities, which have an influence on the way they embrace the new sales opportunities originating from the Web. As smaller retailers, such as your local ‘mom and pop’ shops, expand their brick-and-mortar operations to encompass sales generating from the Internet, they have not relied solely on transactional websites. Rather, they have used other strategies to generate online sales. It is important that researchers identify and evaluate the e-commerce strategies small business owners and managers have accepted into their operations.

Research Questions. The purpose of this study is to gain insight into the decision process behind small business owners' selection of an online sales strategy. Characteristics of each decision, such as the technical and human capabilities required, will be identified. Small business owners within the Gifts & Collectibles industry will share their experiences on how they have capitalized on the retailing opportunities arising from web technologies. Lastly, an analysis from these insights will be applied to address the following question: Why are small retailers, specifically those within the Gifts & Collectibles industry, adopting e-commerce strategies other than the mere creation of a transactional website to generate online sales? Results from the interviews provide us with a better understanding into the technical and human barriers that smaller businesses face when expanding their operations into an online marketplace.

Literature Review

Bharadwaj (2000) defines a firm's information technology (IT) capability as its "ability to mobilize and deploy information technology-based resources in combination with other resources and capabilities." Bharadwaj classified these resources into three categories: the tangible IT resources, the human IT resources, and the intangible IT resources. The tangible resources are those components that comprise the physical IT infrastructure (i.e., hardware and software resources). Human IT resources define the relative skills of the managers and employees (i.e., technical and managerial skills). The classification of intangible IT-enabled resources includes a business's knowledge assets, customer orientation, and synergy.

Mata et al. (1996) suggest that managerial information technology skills often can be a source of competitive advantage. A benefit derived from having strong human information technology resources is the ability to more effectively integrate the technology with business processes and applications (Bharadwaj 2000). Auger and Gallagher (1996) suggest that smaller businesses can be at a disadvantage because they commonly lack the human information technology, as well as the financial resources.

Since human information technology resources can be a source of competitive advantage for some businesses, the lack of such resources can become a barrier to innovation adoption. The results of a study conducted by Grover and Pradipkumar (1999) state that U.S. corporations would like to invest in information systems to compete more effectively, but the decision to adopt information technology is a difficult process. They accredit this difficulty to rapid changes in information technology and pressures of a competitive marketplace.

Nambisan and Wang (1999) have classified barriers associated with web technology adoption into three categories. The first category they identified is technology-related knowledge barriers. The lack of knowledge in hardware and software are examples of these types of barriers. The growth in web technologies, and the difficulty in choosing among alternatives is a common problem within this category. The second category they identified is project-related knowledge barriers. The inability to identify financial and human resource requirements for web application and development is an example of this type of barrier. The third category they identified is application-related knowledge barriers. An example for this type of barrier would be a lack in the understanding of the benefits derived from a web-based application. Nambisan and Wang (1999) state that any of these barriers can delay a business's adoption of Internet technology.

In their study on how organizations were preparing to enter the Internet economy, Pinker et al. (2002) identified four organizational paradigms used by legacy firms when transforming to e-business. However, their study was limited to 35 large companies (e.g., Kraft Foods, Kodak, Texaco), and did not incorporate the impact that e-business transformations have on smaller businesses. Larsen and Blonizarz (2000) suggest that smaller businesses can have more difficulty in overcoming project-related knowledge barriers, specifically the human resource skills. They claim that since web technology is new, small business owners and managers feel they lack the perspective and experience to properly develop a business plan that incorporates web technologies. These studies, and the areas left untapped by existing research, led to our desire to contact small business owners and managers to gain a better understanding of their e-commerce strategies and the barriers and strategic deliberations behind their businesses' e-transformations decisions.

Method

The target population for this study consists of owners and managers of small retailing businesses that have expanded their operations to include sales generated from e-commerce operations. Because the objective of this case study was to interview businesses with differing online experiences across various sales-generating strategies (i.e., transactional websites, online auction listings), the selected businesses would represent a range of electronic commerce experiences.

Since the research required the identification of the barriers that influence a business's selected sales approach, it was decided that all subjects should belong to the same industry classification to eliminate variations arising from different industry characteristics. We decided to focus on businesses within the Gifts & Collectibles industry. Items sold by these businesses include both products that are easily accessible regardless of geographic locations (e.g., candles) and collectible products that can be harder for collectors to locate in their local stores (e.g., limited edition Boyds BearsTM, retired Beanie BabiesTM). Businesses that were selected were limited to having less than 50 employees and only one store location.

E-mails were sent to managers/owners of businesses within this industry asking for their participation in this case study. Based on the online experiences of the businesses responding to our participation request, four businesses were selected for intensive

phone interviews. The profiles and online experiences of these four businesses can be found in the following table. (The business names have been changed per the requests of participating owners.)

Table 1. Profiles Of Case-Study Participants

<i>Business Name</i>	<i>Midwest Gifts & Collectibles</i>	<i>Woody's Gift Shoppe</i>	<i>Southern Collectibles & Comforts</i>	<i>The Good Stuff Store</i>
<i>Location</i>	A small, rural town in the Midwest	A very small, wilderness resort community near the US-Canadian border	A large shopping area within a major Southern metropolitan area	A mid-sized university city located in the Midwest
<i>Location Population</i>	5,500	250	4 million	100,000
<i>Age</i>	25 years	6 years	17 years	19 years
<i># of Employees</i>	8	2	7-8	35-50
<i>Profile of Brick-&-Mortar Customers</i>	Town and area residents	1/3 rd local residents, 1/3 rd resort (2 nd -home) residents, 1/3 rd travelers	Locals residents or visitors of locals	Local residents or town/campus visitors
<i>Online Sales Approaches</i>	Online auction listings	Online auction listings, Informational website with e-mail ordering	Informational website with e-mail ordering, E-mail advertising campaigns, Online auction listings (past)	Transactional website, Online auction listings
<i>% of Annual Sales Generated Online</i>	3-4%	10% (100% of Winter sales)	33%	20%

Results and Analysis

Identification of Alternative Online Sales-Generating Approaches

Businesses use the Internet to connect with buyers interested in their product offerings. The four businesses that were interviewed had each generated sales from various types of web presences, beyond the traditional transactional website strategy. Results from the interviews suggested that there were three alternative strategies being adopted by small retailing businesses. The alternative approaches include the following: informational websites, e-mail advertising campaigns, and online auction listings. This section will identify the characteristics of each strategy, as well as the information technology (IT) capability factors that can contribute to a business's strategy selection.

Transactional Websites. Palmer and Griffith (1998) define a website as "a direct contact between the organization and the public that provide an opportunity for innovation in both the delivery and selling of products." Transactional websites consist of those websites that represent the product offerings of the business and are capable of generating sales directly through the website, typically done through the use of an electronic "shopping cart." In other words, the website is capable of facilitating the entire sales transaction (Riggins and Rhee 1998).

Informational Websites. Like a transactional website, an informational website serves as a direct contact between the organization and the public. However, the informational website is not capable of facilitating the entire sales transaction. Rather, the purpose of the website is to provide site visitors with store and product information. As a sales generating tool, informational websites serve as an electronic catalog of the store's products. Customers wanting to purchase specific products from the store must then contact the store to place an order. Primarily, orders are then placed via e-mail correspondence or via a telephone call.

E-mail Advertising Campaigns. Another alternative strategy that is being used by small businesses to generate online sales is advertising campaigns conducted electronically via e-mail. Like the informational websites, these e-mail advertising campaigns serve the purpose of informing consumers of new product offerings. These advertising campaigns are opt-in mailing lists developed and maintained by the small business. They are not unsolicited e-mail campaigns (i.e., spamming), which indicates that only prior customers and inquirers of the store are recipients of these messages. Like the informational websites, customers wanting to place an order would contact the store via e-mail or telephone.

Online Auction Listings. Online auctions “bring buyers and sellers together and provide a price discovery mechanism for the assets being traded (Fan et al.1999).” Bakos (1998) states that online auction marketplaces (i.e., eBay, Yahoo!Auctions) have three major functions: (1) to match buyers and sellers, (2) to facilitate the exchange of information, goods, services and payments associated with a market transaction, and (3) to provide an institutional infrastructure that enables the efficient functioning of the market. Product listings created on online auction marketplaces is another strategy that small businesses are using to generate online sales. The bidder that has placed the highest bid at the end of the auction carries on with the transaction, assuming that the seller’s reserve price has been met.

IT Capability Requirements and the Online Sales-Generating Approaches

In Bharadwaj (2000), the influences on a firm’s IT capability were identified by three components: tangible IT resources, human IT resources, and intangible IT-enabled resources. Results from the interviews suggest that the capabilities required for the online sales-generating strategies varied, and that the small business would select an approach that would be within its own IT capabilities. Table 2 identifies the resource requirements needed for the various e-commerce strategies.

Table 2. IT Resource Requirements For Various E-Commerce Strategies

Category	Transactional Website	Informational Website	E-Mail Advertising Campaigns	Online Auction Listings
Tangible Resources	HIGH	MEDIUM	LOW	LOW
	Secure Servers Database Integration	Servers Dedicated Connection	PC with Internet Connectivity	PC with Internet Connectivity
Human Information Technology Resources	HIGH	MEDIUM	LOW	LOW
	Site Development & Maintenance	Site Development & Maintenance	Basic Typing & WWW Navigation	Basic Typing & WWW Navigation
Intangible Resources	The various strategies do not require specific intangible resources			

Tangible IT Considerations. The technical requirements vary across the differing sales-generating strategy. If a small business chooses to expand online through the use of online auction listings, the IT requirements are small, primarily consisting of the need for a personal computer and access to the Internet. The IT requirements for a transactional website are much more demanding (e.g., secure server, dedicated connection).

Human IT Considerations. The human technical skill-sets required for the various sales-generating approaches range from very basic skills (i.e., basic typing abilities) to advance skills (i.e., java programming). To create an online auction listing or an e-mail advertising message requires only basic typing and word processing skills and some familiarity with navigating on the web. A higher skill-set is required for a business to develop and maintain a transactional website. Additionally, with the frequent advancements in technology, employees’ skills will need to be constantly updated.

IT-Enabled Intangibles. IT-enabled intangibles consist of key organizational considerations (i.e., customer orientation, knowledge assets, synergies) that can influence a firm’s IT capability (Bharadwaj 2000). These intangible considerations are so strongly embedded into a firm and vary widely from organization to organization. Unlike tangible resources and human information technology resources, the various online sales-generating strategies do not require specific intangible considerations.

Other Considerations

In addition to the firm's IT capability, findings from the interviews suggest that there are other considerations that weighed into the decision among online sales strategies. Other considerations include financial differences (i.e., financial investments, transaction-related costs), employee time involvement, and the longevity of the strategy.

Table 3. Other Considerations For Various E-Commerce Strategies

<i>Category</i>	<i>Transactional Website</i>	<i>Informational Website</i>	<i>E-Mail Advertising Campaigns</i>	<i>Online Auction Listings</i>
<i>Financial Considerations</i>	<ul style="list-style-type: none"> • High initial costs • Low transactional costs 	<ul style="list-style-type: none"> • Average initial costs • Low transactional costs 	<ul style="list-style-type: none"> • Low initial costs • Low transactional costs 	<ul style="list-style-type: none"> • Low initial costs • High transactional costs
<i>Pricing</i>	<ul style="list-style-type: none"> • Fixed price • Products listed until inventory is sold 	<ul style="list-style-type: none"> • Fixed price • Products listed until website is manually updated 	<ul style="list-style-type: none"> • Fixed price • Product advertised through single e-mail 	<ul style="list-style-type: none"> • Flexible • Item up for sell for a set period of time
<i>Employee Time Involvement</i>	<ul style="list-style-type: none"> • Average involvement • Packing & shipping 	<ul style="list-style-type: none"> • High Involvement • Corresponding with customers/ taking orders • Checking inventory • Packing & shipping 	<ul style="list-style-type: none"> • High involvement • Corresponding with customers/taking orders • Packing & shipping 	<ul style="list-style-type: none"> • High involvement • Corresponding with customers/taking orders • Packing & shipping
<i>Business Commitment</i>	<ul style="list-style-type: none"> • Long-term 	<ul style="list-style-type: none"> • Medium- to short-term 	<ul style="list-style-type: none"> • Short-term 	<ul style="list-style-type: none"> • Very short-term

Financial Considerations. Financial considerations of each strategy range from the initial financial investment required to the costs associated with each individual transaction. The initial financial investments are the monetary costs that a business must absorb even before a transaction occurs. Transactional websites require a large amount of resources, thus having high initial costs. On the other hand, online auction listings require virtually no initial financial investment. However, products sold via an online auction listing are subject to a much higher transaction-related cost. Transaction-related costs are the monetary costs that the business absorbs for each transaction that is initiated and/or completed online. For online auction listings, this typically amounts to about 10% of the final bid price of the item.

Pricing of the products sold also came into consideration when the businesses were selecting their approach. Online auctions operate differently than the other approaches in that the demands of consumers determine the price at which the item is sold. Consumers place bids based on their willingness to pay for an item. In an industry, such as the Gifts & Collectibles industry, where rare and limited products can be harder for consumers to find, businesses can use online auction listings to generate a higher purchase price.

Employee Time Involvement. All strategies require an adjustment to the day-to-day tasks of employees. These adjustments can come in many forms, such as answering a larger amount of e-mails and telephone calls, relisting products to sell on the online auction, and packaging and shipping products sold to these online customers. However, the time involvement that is required varies based on the selected approach. For example, sales generated via a transactional website eliminate much of the correspondence as required with other strategies. Additionally, with some strategies, the firms have greater flexibility in controlling their level of time involvement. For example, online auction listings can generate sales during times when the brick-and-mortar store faces lower sales attributed to cyclical or seasonal sales (e.g., winter months).

Business Commitment. Business commitment is the length of time that a business would need to dedicate itself to providing online sales through its selected strategy. Businesses selecting a transactional website would need a long-term commitment to help justify the higher initial costs. A long-term commitment can be a risky investment, especially if the business owner is uncertain to the benefits that would be gained. With the average length of online auction listings lasting just seven days, this strategy requires a much shorter commitment from the business. A business can stop creating new auction listings at anytime.

Discussion and Implications

So, why are small retailers adopting e-commerce strategies other than the creation of a transactional website to generate online sales? After analyzing the characteristics of these sales-generating strategies and getting insight into the thought processes that occurred during the business's selection of an approach, this study provides the following three explanations as to why smaller businesses are selecting these alternative strategies.

Small businesses are restrained from resources and lack the technical skills needed to develop and maintain a transactional website. A transactional website requires a firm to be highly IT-capable. A requisite is that the business has the capacity to handle the tangible and human IT resource demands. The inability to meet the IT demands can be a barrier for some businesses.

Other factors also are causing small businesses to consider other strategies. While a transactional website requires a large initial financial investment and a long-term business commitment, alternative strategies do not. It can be more difficult for some smaller businesses to justify the upfront costs and risks associated with a transactional website, as they tend to need a more immediate return on their investments (Charlton et al. 1997). If the transactional website generates a large number of transactions, these upfront costs could be justified. However, the risks are too high considering that the initial financial investment with the alternative strategies is much more feasible.

Businesses in this study suggest that positive experiences with one approach increases the firm's IT capabilities. For example, businesses with positive experience in selling with online auctions have expanded beyond their initial approach to encompass the higher IT resource requirements needed for an informational website or a transactional website.

Small business owners/managers don't know what to expect from e-commerce, and thus select very deliberate strategies. Small business owners had very little or no initial expectations with their online sales efforts. They were uncertain to the benefits and drawback that their business would experience if they were to sell online. Therefore, these businesses selected very conservative approaches that allowed them to "test the waters" of the online marketplace.

By initially selling products through online auctions, business owners were able to gain some practical e-commerce experience. The businesses were able to slowly adjust their brick-and-mortar operations for online sales. They use these e-commerce experiences to redesign current business strategies and processes to accommodate online sales, even before introducing a transactional website. For example, managers could test various customer policies, such as sales returns and undelivered packages, before launching a transactional website.

Small business owners/managers want to capitalize on the benefits of e-commerce, but do not want online sales to interfere with their existing and proven operations. This explanation suggests that small businesses want to increase their sales and profitability through electronic commerce, but with minimal interference to their existing brick-and-mortar operations. The selling of goods through the online auction listings strategy could be done with only minor adjustments to existing business process. Additionally, this strategy can be used to keep employees active during low traffic times, thus improving productivity and sales.

The price-discovery nature of the online auction marketplace also appeals to small businesses, as they have been able to generate higher selling prices online for some items compared to the items' selling prices within their store. Managers are using this approach to sell over-stocked and sought-after items, usually with a minimum sell price equivalent to their in-store retail price. As the sell price increases due to competitive bidding, the manager realizes a higher profit than if the item was sold within the store.

Limitations and Future Research

Although this study provides new insights into the decision processes behind the various online sales approaches, it is not without some limitations. First, the businesses selected were not randomly selected. Rather, the businesses were selected based on the diversity of their online sales experiences. This method was chosen in order to satisfactorily represent businesses that have used a variety of strategic approaches. Second, the businesses were all members of the same industry. That constraint was applied in this study to help reduce the effect that outside factors (i.e., product characteristics, competitive environment) would have on the business's chosen strategy. Third, the businesses that were interviewed were all willing to participate in this case study. This suggests that these owners/managers had developed a strong interest in electronic commerce. This strong interest could have developed from positive online experience.

Future research activity is needed to confer that these findings do represent the general population of small retailing businesses. Studies using other methods, such as surveys, should be conducted to determine if the same conclusions could be drawn. Research conducted on randomly-selected businesses across industries is needed to see if these findings can be generalized across populations. Finally, attempting contact with non-responding businesses is needed to confer that their unwillingness to participate is not attributed to a negative online experience.

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