The Functionality of Websites as Export Marketing Channels for Small and Medium Enterprises

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INTRODUCTION

The Internet and the World Wide Web (WWW) have dramatically altered the way businesses interact with customers. By converting information and documents into web pages within a business website, management can raise service levels through increased customer communications and generate sales through expanded customer interactions (Turban et al. 2002). These benefits have prompted a growing number of businesses around the world to participate in the digital economy. Data Corporation predicts that the total worldwide value of goods and services purchased by businesses online will increase from $282 billion in 2000 to $4.3 trillion by 2005 (CyberAtlas 2001). The growth of the digital economy led pundits like John Nasbitt (1994) and Intel's chairman Andy Grove (The Economist 1999) as well as several government agencies (US Census Bureau 2002; US Small Business Administration 2002) to predict that all businesses must adopt the Internet and WWW to improve their performance.

While the literature addresses website usage among Fortune 500 businesses (e.g., General Electric, Amazon, Staples) less is known about how websites are used by small and medium enterprises (SMEs). It is important to understand website usage of SMEs because they represent 99.7% of all employers and represent 95.7% of all identified exporters in the US (Export.gov 2004). Given the important role that SMEs play in the US economy, our study investigates how SMEs use their websites to enhance their export marketing activities. Specifically, we studied how websites are used and the constraints that hamper the development of websites as export marketing channels.

To investigate these issues, we focused on the export marketing activities of US SMEs in Western Europe. Western Europe was chosen for the following three reasons. First, it is the second largest digital market with a compound annual growth rate of 91% (Pastore 1999). Second, business-to-business (B2B) e-commerce in Europe is expected to grow from $314 billion in 2003 to $1 trillion in 2006 (eMarketer 2003). Third, Western Europe is the largest export market for US SMEs (Export.gov 2004).

As a result, this paper will discuss the challenges pertaining to website

Abstract

The e-commerce literature has suggested that the Internet 'levels the playing field' for small businesses trying to market their goods and services worldwide. However, there is limited research that describes how websites are used and the constraints that hamper the development of websites as export marketing channels. Our study found that while small businesses use websites as their primary export marketing channel, limited resources inhibit their ability to conduct more sophisticated marketing transactions. As a result, one could conclude that the Internet only 'partially levels the playing field' when exporting to foreign markets.

Keywords: e-commerce, exports, small businesses

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adoption, the results of our website usage study, as well as the implications for SMEs planning to use websites as export marketing channels.

CHALLENGES PERTAINING TO INTERNET ADOPTION

While many e-commerce books discuss the challenges pertaining to Internet adoption among large corporations, (e.g., Amor 2000; Awad 2002; Deitel et al. 2001; Eisenmann 2002; Farboomand and Lovelock 2001; Kleindl 2003; Komenar 1997; Kosiur 1997; Krishnamurthy 2003; Mohammed et al. 2004; Oz 2002; Rayport and Jaworski 2004; Reding 2001; Turban et al. 2002; Wind and Mahajan 2001), only a few address the issues pertaining to SMEs (DaCosta 2001; Langer 2000). Because small business executives are inclined to use these publications to learn about new business technologies, this void leaves them guessing as to:

1. What value does the Internet provide SMEs?
2. What function(s) does the Internet provide SMEs?
3. What are the constraints for SMEs using the Internet?

These issues are compounded by the fact that SMEs who are exporters must also manage the proper integration of their offline marketing channels (i.e. sales reps, sales agents, distributors and retailers) with their online marketing channels to achieve their export goals. Pelton et al. (2002) define marketing channel as any exchange relationship that creates customer value in the acquisition, consumption and disposition of products and services. We use the term export marketing channel to represent the employment of international exchange relationships or marketing channels to accelerate and/or ease entry into foreign markets. Kim (1998) highlights the issues pertaining to marketing channel selection by suggesting that a failed channel decision may not only lead to poor sales results, but also spell financial peril for SMEs who may miss international sales opportunities. This observation suggests that management needs to understand the value of all marketing channels, including business websites.

The value of websites

Peter Drucker (1974) wrote that the primary purpose of business is to create customers, which is accomplished through marketing and innovation. Marketing is the process of facilitating exchanges with current customers, and innovation is the process of preparing the organization to meet the needs of future customers. While the ‘old economy’ required managers to optimize the components of its traditional value chain, the ‘new economy’ demands a more complex set of requirements. For example, managers must:

- have a vision that combines their own aspirations with the type of firm that will succeed in this changing environment;
- establish objectives that address all key performance measures such as maximizing the lifetime value of targeted customers;
- upgrade their supporting organization architecture to enhance the organization’s value chain; and
- develop a business model that leverages contemporary business technologies and practices (Wind and Mahajan 2001).

Because the Internet and WWW have been promoted as cost-effective means to raise service levels and generate sales, many SMEs have developed websites to interact with customers (Kotler 2003; Quelch and Klein 1996). For instance, Amni-Partners found that small businesses use websites for a variety of online marketing purposes (Butler 2002), the US Census Bureau (2001) found that the manufacturing sector was the most aggressive to adopt websites to sell worldwide, and the US Small Business Administration (2002) found that 65% of small businesses attempt to make a profit with their websites. Because of the reach of the Internet and the functionality of the WWW, one may assume that SMEs would be inclined to use their websites as a primary means to facilitate exchanges with customers in foreign markets (Pelton et al. 2002). As a result, we advance the following hypothesis:

H1: SMEs who market abroad will use their websites as a primary export marketing channel.

The functionality of websites

If SMEs use their websites as an export marketing channel, they must also determine how best to integrate it within their legacy business model and with their conventional offline marketing strategies. Kosiur (1997) argues that websites can provide businesses with four levels of functionality: publishing; interactivity; transactions; and process improvement. Functionality is represented as a continuum of marketing and sales capabilities where each successive level builds upon the functionality of the prior level (see Figure 1). For example, a company must provide product information before it can facilitate customer interactivity. In turn, customer interactivity is necessary to facilitate customer transactions which may lead to overall process improvement.

As noted in Figure 1, publishing is the lowest level of functionality while process improvement is the highest level of functionality. The first level of functionality,
publishing, is when a business uses its website to distribute information on the company or its products. For example, Sumerset Custom Houseboats (www.sumperset.com) uses their website to inform customers of the work that is being done on their houseboats at various stages of development. Management has found that their website is a more cost-efficient way to communicate with customers worldwide than traditional brochures (Pratt 2002).

The second level of functionality, interactivity, raises the effectiveness of marketing or sales by improving the interface with customers. For example, Stacia New York (www.stacianewyork.com) uses its website to market fashions products in areas outside of New York City. They have found their website to be an effective way for prospective customers in nearby states to make inquiries regarding current fashions offerings as well as future designs (Pratt 2002).

The third level of functionality, transactions, occurs when a website facilitates exchanges with customers. Businesses can employ their website as a stand-alone online marketing channel or they can integrate it with other offline marketing channels. For example, Katz Floral Design (www.kcflorist.com) sells flowers, gifts, plants and balloons through a variety of offline (i.e., FTD yellow page advertising, direct mail) and online marketing channels. Their website generates $20,000 per day in sales beyond those generated by their traditional offline marketing channels (Pratt 2002).

The fourth level of functionality, process improvement, occurs when the company’s website is used to improve the efficiency of the organization through order fulfillment, settlement and/or workflow. For example, MexGrocer.com – a Mexican food products wholesaler – uses its website to make order processing more convenient with current retailers by replacing paper transactions with digital transactions. By implementing these changes, processing costs have been lowered because many manual functions have been eliminated (Miller 2003).

While websites provide four levels of functionality, several studies suggest that SMEs use their websites for lower levels of functionality. For example, Korchak and Rodman (2001) found that while over 60% of SMEs have websites that provide information, only 20% allow customers to place orders via their website. The National Federation of Independent Businesses (2001) found that the majority of SMEs use their websites to communicate with their customers (83.2%). In addition, this latter study found that only 23% of SMEs were able to increase sales outside the US as a result of using their websites. Given these findings, we advance the following hypothesis:

H2: SMEs are inclined to use their website for lower level functions.

Constraints on enhancing website functionality

If SMEs are inclined to use their websites for lower level functions, this would suggest that constraints exist that hamper higher level functionality. One possible constraint is cost. As suggested in Figure 1, resource requirements and therefore the costs of employing websites increase as functionality increases. Thus, the assertions that websites are a cost-effective tool for SMEs may only apply at the lower levels of functionality. Indeed, previous research suggests that financial and human resources have limited the functionality of websites among SMEs (Butler 2001; Cassano 2002; Harrison-Walker 2002; Karkoviata 2001; National Federation of Independent Buiness 2001; Van Beveren and Thomson 2002).

While cost may be one type of constraint, other studies suggest that knowledge constraints such as familiarity with Internet integration, security, privacy and laws and regulations, also limit an enterprise’s ability to utilize the Internet at higher levels of functionality (Cassano 2002; Chaston et al. 2001; Gould 2001; Harrison-Walker 2002; National Federation of Independent Business 2001; Swatman 2000). Given that both resource and knowledge constraints have been found to hinder the development of websites, we advance the following hypothesis:

H3: SME website usage is equally hampered by both resource and knowledge constraints.

RESEARCH METHODOLOGY

To test these hypotheses, a survey of small and mid-sized businesses across the state of Pennsylvania was
conducted. Using the Harris Directory, 3,250 Pennsylvania SMEs (employers with 500 employees or less) who export were identified. A cover letter, questionnaire and postage-paid return envelope were mailed to presidents and/or chief operating officers producing 121 returns, of which 105 of the surveys were usable. Missing data was the primary reason 16 surveys were not included. Given the many challenges of running a smaller business, we were not surprised to find that only 3.23% of the targeted executives responded to our survey.

The majority (77.9%) of the respondents were industrial products manufacturers followed by consumer products manufacturers (6.7%), industrial service providers (4.9%), consumer service providers (0.9%), and non-defined businesses (9.6%). This distribution of business types is consistent with an earlier study conducted by the US Small Business Administration (2002), which found that manufacturers accounted for the largest share of digital export sales, followed by merchant trade, retail trade and service businesses.

RESULTS AND ANALYSIS

Hypothesis 1 states that SMEs who market abroad will use their websites as a primary export-marketing channel. In order to test this hypothesis, a Repeated Measures ANOVA was performed on participants’ responses to a survey question that asked: ‘What marketing channels are used by your company in Western Europe?’ Participants were to rate the usage of the five marketing channels (see Table 1) from 1 (most used) to 5 (not used). The results indicate that the type of marketing channel had a significant effect on the usage ratings (see Panel A of Table 1). Therefore, SMEs do not use all five marketing channels equally.

In order to determine whether SMEs use their website as one of their primary export marketing channels, we compared the usage ratings of company website with each of the other four marketing channels. Panel B of Table 1 lists the five marketing channels and their mean usage ratings. Company website has the lowest mean (2.09) indicating that it is the most used marketing channel. Panel C of Table 1 reports the results of the Tukey method of multiple comparisons. With the exception of direct sales, the results indicate that SMEs rate the usage of their company website significantly higher than each of the other marketing channels (all other p-values <0.05). Therefore, Hypothesis 1 is supported.

Hypothesis 2 states that SMEs are inclined to use their website for lower level functions. In order to test this hypothesis, a Repeated Measures ANOVA was performed on participants’ responses to a survey question that asked: ‘What do you want to achieve using your company’s website?’ Participants were to rate the importance of seven functions (see Table 2) from 1 (most important) to 5 (not important). The results indicate that the type of function had a significant effect on the importance ratings (see Panel A of Table 2). Therefore, SMEs do not view all seven functions as equally important.

In order to determine which types of website functionality were most important to SMEs, we compared the importance ratings of lower level functions with higher level functions. Panel B of Table 2 lists the seven functions, their level of functionality based on Kosiv’s (1997) four levels of functionality, and their mean importance ratings. Both level 1 (Promote the company and Promote its product) and level 2 (Generate sales leads) have the lowest ratings indicating that they are viewed as more important than levels 3 (Provide post sales support, Collect customer data, Sell online) and 4 (Reduce operating costs). Panel C of Table 2 reports the results of the Tukey method of multiple comparisons. The results indicate that both the level 1 and level 2 functions are perceived to be significantly more important than the level 3 and 4 functions (all p-values <0.001). Therefore, Hypothesis 2 is supported.
Hypothesis 3 states that SME website usage is equally hampered by both resource and knowledge constraints. In order to test this hypothesis, a Repeated Measures ANOVA was performed on participants’ responses to a survey question that asked: ‘What problems have you encountered in developing your company’s website?’ Participants were to rate the importance of six constraints (see Table 3) from 1 (most problematic) to 5 (not problematic).

The results indicate that the type of constraint had a significant effect on these ratings (see Panel A of Table 3). Therefore, SMEs do not perceive the six constraints to be equally problematic.

To determine which of the constraints were most problematic, we compared the ratings of the resource constraints with the ratings of the knowledge constraints on the internet functionality level (see Panel B of Table 3). The means of the differences and q-values for the Tukey tests are shown in Panel C. The Tukey test results indicate that the differences in means were significant for all pairs, with the most significant differences being between constraints 1 and 4 (resource vs. knowledge), 1 and 5 (resource vs. knowledge), and 1 and 7 (resource vs. knowledge).

A regression analysis was also conducted to determine which constraints (resource vs. knowledge) best explained the variation in the importance ratings. The results of this analysis are shown in Panel D. The regression equation is: 

$$\text{Mean rating} = 3.891 + 0.258 \times \text{(Resource)} - 0.258 \times \text{(Knowledge)}$$

The adjusted R-square of the model is 0.033, indicating that the model explains a small portion of the variance in the importance ratings. The coefficient estimates for the resource and knowledge constraints are significantly different from zero, with the coefficient for the resource constraint being positive and the coefficient for the knowledge constraint being negative. This suggests that resource constraints are perceived as more problematic than knowledge constraints.
Constraints. Panel B of Table 3 lists the six constraints, their classification as either a resource or a knowledge constraint, and their mean ratings. Overall, the three resource constraints have lower ratings than each of the three knowledge constraints, indicating that the resource constraints are viewed as more problematic. Panel C of Table 3 reports the results of the Tukey method of multiple comparisons. With the exception of the comparison of Constraint 2 (Lack of technology) and 6 (Concerns about international Internet laws and regulations), resource constraints are perceived to be significantly more problematic than knowledge constraints (all other p-values <0.05). Therefore, Hypothesis 3 is not supported.

Expanding on our analysis of Hypothesis 3, we examined the relationship between the problematic ratings of the resource and knowledge constraints to the participants’ perception of the effectiveness of their company’s website. Participants were asked: ‘How would you rate the effectiveness of your company’s website?’ Responses to this question were marked on a scale from 1 to 5, where 1 implied that the website was ‘highly effective’ and 5 implied that the website was ‘not effective’. To facilitate this analysis, an average rating was calculated for the resource constraints and the knowledge constraints for each participant.

A regression was performed with the website effectiveness ratings as the dependent variable and the average ratings for the resource and knowledge constraints as the two independent variables (see Panel D of Table 3). The regression coefficient or beta for the average resource constraint was significant (B=-.258, p=.053) indicating that as participants perceived resource constraints to be more problematic, they rated their website as less effective. The regression coefficient or beta for the average knowledge constraints was not significant (B=.000, p=1.00) indicating no significant relationship between perceptions of knowledge constraints and website effectiveness ratings.

**IMPLICATIONS OF THE RESULTS**

The Internet and WWW have changed the way businesses interact with customers. Advocates have argued that because these business technologies redefine the economies of scale and scope, SMEs may be better equipped to compete with larger corporations through the creation of websites (Rayport and Sviokla 1995; Sandler and Boggs 2001). For example, by making global advertising more affordable and extending small firms’ market reach, the cost of developing new customers in international markets is claimed to have been reduced.

The first issue we explored was website usage among SMEs. Because a company’s website is a global medium coupled with the fact that SMEs represent 95.7% of US exporters (Export.gov 2004), we hypothesized that SMEs would use their websites as one of their primary export marketing channels. Of the five export marketing channels listed, SMEs rated websites as the most used, supporting our hypothesis. This finding suggests that SMEs are not only receptive to adopting new business technology, but that their websites play a significant role in helping them to generate sales in Western Europe.

While the mean usage ranking for websites are higher than the other offline marketing channels, we also found that SMEs still employ other traditional offline channels (direct sales, sales agents, distributors and retailers). This implies that SMEs must be capable of mastering the nuances of both online and offline export marketing channels in an effort to build and manage an integrated export strategy. According to Pelton et al. (2002), this is not an easy task for even the most sophisticated exporter. The inherent danger with managing both sets of challenges is that it can place too many burdens on businesses with limited resources and may result in market failure (Phillips et al. 1994).

Our second hypothesis explored the website functionalities that were most important to SMEs. Our results suggest that SMEs used their websites most often to publish company and/or product information and interact with customers in foreign markets. This result is consistent with a number of earlier studies. For example, KPMG Consulting, Inc. found that only 52–81% of SMEs actively use their websites to facilitate business leads or sales (Korchak and Rodman 2001); and Ami-Partners found that only 8% of SMEs were actively engaged in e-commerce (Weinthraub 2001). International studies have produced similar findings. For instance, Van Beveren and Thomson (2002) found that only 4% of Australian SMEs use the websites to sell over the Internet; Canadian Electronics (2001) found that only 32% of Canadian SMEs develop a specific web strategy; and Daniel et al. (2002) found Internet success among SMEs in the UK varied greatly.

Our third hypothesis investigated the constraints that SMEs have encountered in developing their websites. Our results suggest that resource constraints proved to be a more important deterrent than knowledge constraints. Coupled with the results of our second hypothesis, SMEs may have discovered that the cost of higher-level functionality is beyond what they were led to believe when they initially decided to develop their websites (Hayes 2002). A potential implication of this realization is that SMEs may become disillusioned with the value of their websites and as a result may begin to de-emphasize the importance of their websites in favour of the more traditional offline export marketing channels (Buckley and Montes 2002).

In order to counter this disillusionment, the literature should reflect the increasing cost of higher levels of website functionality and that the Internet and WWW may not ‘level the playing field’ for all businesses. In
addition, federal, state and/or local governments may need to provide resources to SMEs to help them to employ their websites at higher levels of functionality. Otherwise, their ability to fully participate in the digital economy may not be realized.

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

While the results of our study suggest that while SMEs use their websites as a primary export marketing channel, limited resources inhibit SMEs ability to develop websites that are capable of performing higher level functions. Although this study increases our understanding of how SMEs employ their websites, the conclusions that may be drawn are somewhat limited by our sample of SMEs. Our sample consisted of 105 SMEs from the state of Pennsylvania. Future research conducted at a national level may produce more conclusive results.

Future research could also assess whether website usage varies by industry type. Prior research suggests that manufacturers are the most aggressive users of websites. It would be interesting to determine if website functionality for SMEs varies by industry. Additionally, website usage could be compared between those firms that export and those that only sell domestically. Our study only examined the functionality of SME websites that export. Geographic location of SMEs’ customers could also have a significant effect on how websites are used as a marketing channel.

Answers to these and other questions will not only help fill the void in the literature, but also help faculty better educate tomorrow’s business leaders on the functionality of websites as export marketing channels.

References