On-Line Retailing: What Drives Success? Evidence from Ireland

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ABSTRACT

This research is a descriptive study to identify some of the factors that contribute to the successful use of e-business. The research was focused on the retail industry in Ireland and more specifically on existing on-line retailers of Irish-made gifts. The study was conducted using a postal survey. The research found that specific organizational factors—early adoption of web technology, internal IS/IT expertise, having an e-business strategy and a person who champions the e-business project—result in more successful e-business web sites. Further, the research found no evidence to support the belief that certain product types are more likely to be successful on the Web.

Keywords: on-line retailing, exports, organisational success factors, industry-specific success factors.

INTRODUCTION

Electronic commerce is said to overcome barriers to trading internationally hence making companies truly global without the need for a physical presence in another country. This ability to export while remaining in the same physical location presents opportunities for retailers—as it enables them to increase sales without opening more physical stores. The extension of retail sales through the Internet is a real opportunity for Irish retailers—as over 90 million people worldwide claim Irish descent. This Irish Diaspora represents a lucrative export market for Irish companies that can be reached cost effectively by leveraging the capabilities of electronic commerce.

The Crafts Council of Ireland (*www.ccoi.ie*) estimates that 66% of the crafts industry is located in rural areas. Therefore the Internet presents a great opportunity for these companies to overcome location disadvantages. The main areas of manufacturing in the Irish craft industry are pottery, glass, textiles (particularly knitwear), furniture and quality giftware. Irish craft businesses are typically small in scale and are geographically widespread, but taken nationally the industry is a significant employer. While the retail market in Ireland is said to be worth in excess of 25 billion Euro a year, the Crafts Council estimates that the gross turnover of the crafts industry is 116 million Euro per annum.

This paper presents a descriptive study conducted with the aim of determining some of the factors that contribute to the success of retailers using electronic commerce to perform effectively in export markets. The focus of this research is on Irish export retailers in the gift sector—which includes arts and crafts.

LITERATURE REVIEW

The purpose of this paper is to investigate factors that may have contributed to the success of retail websites. What is proposed is a classification scheme that identifies the factors under two broad headings—organizational factors and industry-specific factors. This classification was adopted as it enabled the research to investigate both the generic factors common to all organizations and also the factors that are specific to the retail industry. The organizational factors investigated are early adoption of a website, IS/IT expertise, possessing an e-business strategy, having a web champion, use of planning and the amount spent on the development of the website. The retail-specific factors investigated are the characteristics of products sold, number of products sold and the integration of the physical store with the online presence.

Organizational Factors Influencing Website Success

Some commentators believe that many of the successful companies on the Web owe their success merely to the fact that they were first to exploit the capabilities of the Internet as a channel for business (Enders & Jelassi, 2000; Mellahi & Johnson, 2000). While De Figueiredo (2000) points out that first movers will have some advantage and early movers have the highest website stickiness, and Golder and Tellis's (1993) study of first mover firms found that first movers did not enjoy exceptional and sustained benefits. Kerin et al. (1992) also support the view that being first to market does not automatically ensure dominant market share or long-term rewards.

Bhatnagar, Misra, and Rao (2000) state that the companies that are successful on the Internet have previous technological experience. Companies that have staff with IT skills and an IT department in their business will be more successful when operating online (Bhatnagar, Misra & Rao, 2000). Mellahi and Johnson (2000), after conducting a case study on Amazon.com, conclude that the critical resources in the electronic commerce industry resulting in competitive advantage are largely intangible assets and capabilities, such as innovation, technical expertise and knowledge. Thus, the technological experience and knowledge that companies have are critical factors in determining success in electronic commerce (Savin & Silberg, 2000).

Venkatraman (2000) comments that a business strategy that fails to recognise the Internet is destined to fail. A recent KPMG survey shows that mangers are aware of the need to execute a Web strategy to complement existing business models (Venkatraman, 2000). They point out that it is critical for traditional retailers to begin to clearly define their Web strategy. Griffith and Krampf (1998) indicate areas where managers can build an e-business strategy: on-line sales which are consistent with the definition of retailing, communication which involves advertising, promotion and building corporate brand image, and customer service where the Internet provides a rare opportunity for retailers to provide exceptional customer service by being both accessible and responsive. Venkatraman (2000) points out that every company will need to develop a strategy for the dot-com world and ultimately, business strategy will be dot-com strategy. Vision, governance, resources and alignment are the stepping stones to a successful Web strategy (Griffith & Palmer, 1999; Venkatraman, 2000; Hackbarth & Kettinger, 2000).

An individual with responsibility for the Web project is an important factor in successful e-businesses (Chen & Leteney, 2000; De Figueiredo, 2000). Many organisations lack a central decision maker for e-business and need someone to oversee all aspects of e-commerce including e-commerce strategy development and implementation (Schuette, 2000). Barry (2000) and Bergstein (2000) found that companies who have a Web champion to run, maintain and update their website have a higher number of hits and repeat visits than websites that do not have an appointed Web champion.

Planning is required to facilitate the maintenance of a fully interactive website. Competitors who spend time and effort designing well-thought-out Web presences will most likely gain from the mistakes made by businesses that proceed without planning (Van Doren et al., 2000). Indeed, the difference between success and failure on the Web often hinges on how carefully people sift through details and fine-tune plans (Brown et al., 1999). A case study conducted by Chan and Swatman (2000) revealed Internet-based e-commerce requires the same amount of planning and foresight as any previous form of e-commerce, even though it may appear simpler. In another study, Spiller and Lohse (1997) investigated the effects of effective customer interfaces on traffic and sales in online stores. They posit that the promise of electronic commerce, and online shopping in particular, will depend to a large extent upon the interface and how people interact with the computer.

Retail-Specific Factors Influencing Website Success

Kiang et al. (2000) contend that product characteristics play a major role in the successful marketing of a product on the Internet. Phau and Poon (2000) state that one weakness of the Internet is that it can realistically reproduce only two of our five senses—sight and sound. The Economist Shopping Survey (26th February, 2000) shows the simplest distinction is between 'high touch' and 'low touch' goods. High touch items are goods that consumers would prefer to see and touch before they purchase whereas low touch items are more standard items such as books, CDs and computers. Therefore this limitation will restrict the types of products that are saleable on the Internet. Peterson et al. (1997) classified products and services for sale on the Internet versus a retail store along three dimensions: cost and frequency of purchase, value proposition and degree of differentiation. In general, when purchase fulfillment requires physical delivery, the more frequent the purchase and the smaller the cost, it is less likely that there is a good 'fit' between a product and e-tailing. Along the second dimension—value proposition—e-tailing is particularly well suited to certain types of intangible or service-related goods (i.e., those based on digital assets) (Enders & Jelassi, 2000). The third dimension reflects the degree to which a product or service is differentiable. When products are capable of significant differentiation, the Internet can serve as an effective segmentation mechanism for guiding buyers to their ideal product (Peterson et al., 1997).

The merchandise a retailer holds defines the store for the customer (Reardon & Hasty, 1997). However, a Web store can offer a selection that no bricks and mortar store can match (Christensen & Tedlow, 2000). Customers are migrating to these Web stores which offer a larger database of products for sale (Ng, Pan & Wilson, 1998; Walsh & Godfrey, 2000), yet many retailers do not take advantage of this by adding rich product descriptions—many just transfer paper catalogues directly onto the Web (Spiller & Lohse, 1997).

In order to be successful, retail organizations need to possess an integrated clicks and bricks strategy (Gulati & Garino, 2000). Internet retailers are being forced to recognise the importance of having a physical presence (Chen & Leteney, 2000), while traditional bricks retailers need to establish effective electronic commerce ventures to protect their core business (De Figueiredo, 2000). Selling through existing physical stores and through Internet channels allows retailers to leverage the strengths of each channel with stores and websites working well together thus increasing sales at both (Chen & Leteney, 2000; Quinn, 1999; Gulati & Garino, 2000; Enders & Jelassi, 2000). Despite all these advantages, as retailers move online, they face challenges such as organisational restructuring and the adaptation of the existing distribution infrastructure to the new requirements of the online market (Enders & Jelassi, 2000). Conversely, many Internet e-tailers who have so far focused solely on the Internet aim to expand their access to new customers by moving into the physical front end of the value chain by adding physical retail stores (Enders & Jelassi, 2000).

RESEARCH METHODOLOGY

The previous section presented the independent variables in the study. The dependent variable is website success. Various studies have investigated website success from different perspectives. Liu and Arnett (2000) investigate website success on the basis of outcome variables such as attractiveness, dependability, reliability, trustworthiness, meeting demand and pleasing customers. O'Keefe et al. (1998) investigated success on the basis of number of hits, visits and orders. This study investigates a specific success factor: the degree to which the website supports the marketing and sales of an organization. As such, it operationalizes on-line success in terms of the extent to which it is successful in supporting marketing and sales. Three measures along the customer-purchasing model were chosen—browsing, request for information and purchase. These measures are similar to those of O'Keefe et al. (1998). The reason that three measures were chosen was due to the fact than many customers initiate their contact with a company through a website but conclude the purchase via traditional sales channels—in-store, telephone, mail order. As such, a single measure such as website sales does not adequately capture the impact of a web site. These measures were assessed as follows: (1) the number of hits per week to the website (browsing), (2) sales leads generated as a result of the website (request for information) and (3) revenue generated directly from the website (purchase).

These success measures were used to test two proposed hypotheses:

H1: Organizational factors influence the success of the website.

H1a: Early adopters are more successful.

H1b: Organisations with higher levels of IS/IT expertise are more successful.

H1c: Organisations with an e-business strategy are more successful.

H1d: Organisations who have a Web champion are more successful.

H1e: Organisations who engage in planning are more successful.

H1f: Organisations who spend more on the development of their website are more successful.

H2: Retail-specific factors influence the success of the website.

H2a: The characteristics of the products being sold influence the degree of success achieved.

H2b: Organisations with larger online product catalogues are more successful.

H2c: Organisations with an integrated "clicks and bricks" strategy are more successful.

The primary research was conducted by a postal survey. The selection of companies was done using purposive judgment sampling—companies registered to any of 15 Irish Web directories under the categories 'gifts' or 'arts & crafts.' Gifts are defined as items given as presents or articles suitable for presents. Arts and crafts are defined as products created using a particular skill and sold as gifts or products for personal use. This sampling technique identified 322 websites. In order to be eligible for inclusion in the study, the website had to have an online ordering capability. Each website was visited to ensure that the company sells on-line and this resulted in 280 suitable companies being identified (42 of the original 322 identified did not have on-line ordering capabilities).

The questionnaire was mailed to the 280 companies along with a personally addressed cover letter to the relevant person in the company responsible for the website. Of the 280 questionnaires mailed, 122 were returned yielding a response rate of 43.5%. Of these 122, 44 were returned after a second mailing of the questionnaire was sent to companies who had not responded after two weeks.

Non-response bias was assessed by treating responses received after the deadline given (two weeks after the first mailing of the questionnaire) as being representative of non-respondents. Chi-Square significance tests were used to test for significant differences between the first respondents and the late respondents in the study. The early and late respondents did not differ significantly (at $p < .05$) on the measures of success (hits, revenues and sales leads) and the other variables tested including e-business strategy, web champion, IS/IT expertise and product characteristics.

The results of the questionnaires were analysed using SPSS version 10.1. The responses were first analysed using statistical measures such as means, standard deviations and frequencies. For more advanced statistics, the Chi-square test for independent samples was used. The chosen level of confidence for the research was $a = .05$.

PROFILE OF ORGANIZATIONS

The majority of the companies use multiple sales channels to sell their products, with only 11.5% selling exclusively on the Internet. Other outlets used include retail outlets (70%), mail order (50%) and third party sellers (27%). The companies are export focused—37% have exports that account for in excess of 40% of their annual revenue.

The majority of companies have been in business for more than eight years (58.5%), with only 4% of companies being in business for less than one year. The organizations surveyed are early adopters of e-business within their industry—only 17% believe that their competitors adopted e-business before them. In addition, the majority developed a website on their own initiative and not as the result of any outside pressure. Not only have these firms adopted e-business, but the majority (81%) are also generating revenue directly through their website.

The main reasons for getting involved in e-business were to acquire new customers (93%), to gain international exposure (90%), to advertise (79%), to overcome the company's location disadvantage (60%), to provide on-line customer support (59%), to gain cost savings (41%) and to gather customer information (31%). As such, the main motivator for e-business adoption was as a sales mechanism rather than as a means to cut costs or improve business processes.

The expectations of companies with respect to sales and competitiveness have been realised for the majority of the companies: 79% believe it has created new business, 68% believe it gives them a competitive edge, 62% have increased their sales in export markets. With respect to cost savings and business process improvements, only 39% believe that e-business speeds up the delivery of their product and 35% believe that it has resulted in substantial cost saving.

The use of e-business is changing the industry structure within which these firms operate. Firstly, it is increasing competition within the industry (only 17% believe it is not), and secondly it is giving rise to disintermediation—40% have cut out intermediaries in the sales process, and e-business has allowed 84% of companies to sell directly to their final customers.

Metrics of Success

Seventy-five percent of firms are receiving between 1 and 500 hits to their website per week, (with 26% receiving less than 50 hits per week, 26% receiving between 101-500 hits per week and the remaining 23% receiving between 50-100) (Figure 1). Of the 25% who received more than 500 hits per week, 8% receive more than 5,000 hits per week.

Nearly half of the respondents (49%) generated 1-20% of their sales leads as a result of the website, while a further 12% obtained 21-40% of sales leads as a result of the website (Table 1). Another 21% of companies attain anywhere between 41% and 100% of sales leads as a result of their Internet presence. However, 17% of respondents thought that the website generated none of their sales leads.

The third measure of success is revenue generated by the website. A small percentage of firms (8%) are generating between 81-100% of their revenue from the website (Figure 2). A further 9% are generating between 21% and 80% of revenues from their website. However, most companies (64%) are only generating between 1-20% of revenues from the website. Despite these promising figures, a further

Figure 1: Number of Hits Per Week

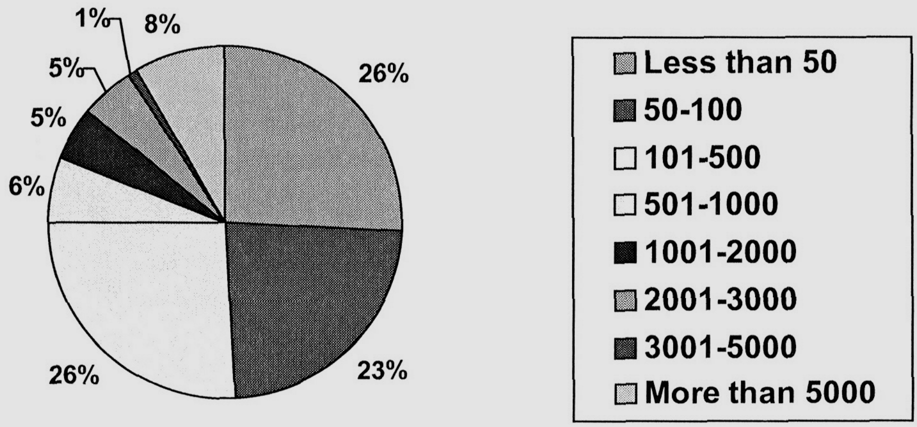


Table 1: % of Sales Leads Generated from Website

% of Sales Leads Generated from Website	% of Companies
0%	17%
1-20%	49%
21-40%	12%
41-60%	6%
61-80%	3%
81-100%	6%
Don't Know	7%

20% of companies are generating no revenue at all from their website.

FINDINGS

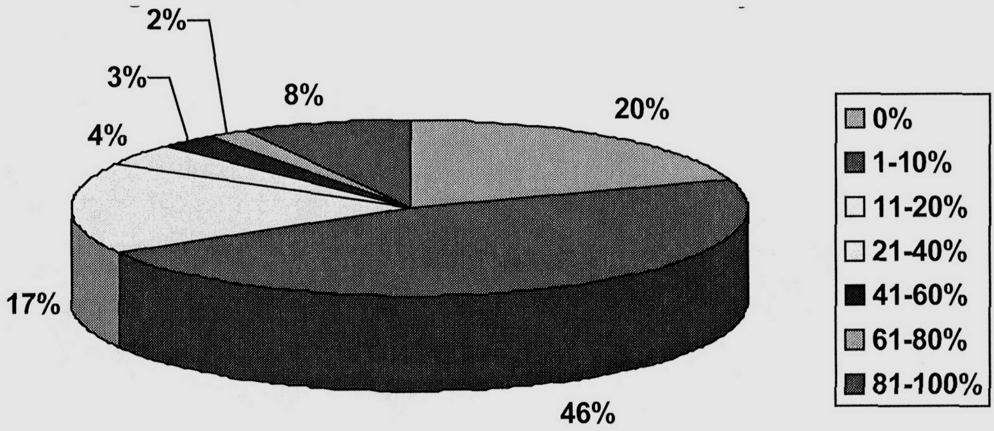
The study found that significant relationships exist between some of the organisational factors hypothesised and the website success measures. The extent and the nature of these relationships are presented in Tables 2 and 4.

Organizational Drivers of Website Success

Two metrics were used to assess the extent to which firms were early adopters of Web technology—years using the Web and the extent to which companies adopted the technology before their competitors. Companies who have been using e-commerce for longer gain significantly more hits and sales leads. However, these hits and sales leads do not turn into significantly more on-line revenue. The majority of the firms (55%) exploited the capabilities of the Internet before their competitors. The early exploiters of the Web gain significantly more hits and sales leads. However, these are not converted into hard cash in terms of on-line sales. Early adopters are reaping rewards in terms of visitors to their site and subsequent sales enquiries, but these are not being converted into on-line sales.

The research examined whether there was a difference in how successful a company was depending on the level of IS/IT expertise in the company. Twelve percent of the companies surveyed have an excellent level of IS/IT expertise in their organisation, 38% have above-average levels of IS/IT expertise, 32% cited an average level of expertise, with the remaining 13% and 5% falling into the below-average and poor categories, respectively. Those with better IS/IT expertise were significantly more successful in terms of hits

Figure 2: Percent of Annual Turnover Generated by Website



and sales leads generated, but not in on-line sales.

The extent to which an e-business strategy had a positive outcome on success was assessed using two measures—the extent to which a formal e-business strategy existed and how well this e-strategy was integrated into the business strategy. Fifty-four percent of firms have an e-business strategy in place while the remaining 46% do not have an e-business strategy. The results show a significant relationship exists between the existence of an e-business strategy and both the number

Table 2: Organisational Drivers of Website Success

Organisational Drivers of Website Success	Number of Hits per Week		Number of Sales Leads Generated		Amount of Revenue Generated	
	Chi Square	Cramer's V	Chi Square	Cramer's V	Chi Square	Cramer's V
1st Mover Advantage (H1a)						
Length of time on WWW	.005	.005	.005	.005		
Exploit before competitors	.011	.011	.006	.006		
IS/IT Experience (H1b)						
Level of IS/IT expertise	.003	.003	.007	.007		
E-Business Strategy (H1c)						
Formal e-business strategy	.000	.000	.025	.025		
Integrated e-business strategy	.000	.000	.025	.026		
Web Champion (H1d)						
Leader of e-business project	.000	.000				
Planning of Website (H1e)						
Security of customer information	.012	.012				
Security of payment						
Ease of navigation			.006	.006		
Ease of use of checkout	.032	.032				
Minimising customer effort in the purchase process			.025	.025		
Full product catalogue					.005	.005
Uses customer profiles to anticipate future needs			.022	.022		
Development Costs (H1f)						
Money spent developing website						

of hits and the amount of sales leads generated. However, no statistical significance to on-line revenue was found.

Fifty six percent have integrated e-business and business strategies, while 17% have not. Having integrated strategies results in significantly more hits and generates more sales leads but not on-line revenue. Thus there is partial support for the idea that an e-business strategy leads to a more successful e-business.

Seventy-eight percent of companies have a person who leads the e-business project in their company. Having such a champion significantly improves the number of hits that a site generates, but does not bring significant benefits in the other two success measures—sales leads generated and on-line revenue.

The research investigated the extent to which firms engaged in planning prior to launching their website. The majority of firms actively pre-planned their Web presence. However, such planning only has a limited impact on the success of the website. Attending to the needs of customers in terms of securing their information and making it easy for them to use the shopping cart facilities improves the number of hits, but not the amount of revenue generated.

Making the site easy to navigate and minimising the effort to complete a purchase increases the number of sales leads, but again not revenues generated. The only planning element that does significantly improve the revenue-generating capabilities of the site is deciding to put the full product catalogue of the company on-line from the beginning.

Some firms also continue the planning process once the website is live. Forty-three percent use the customer profiles generated from the website to anticipate future needs and requirements of customers. Those who engage in this activity are significantly more likely to generate increased sales leads from their e-business activity. As such, proactive management of customer information obtained via the website can yield successful results in terms of providing a more customised and focused product offering.

Fifty-nine percent of companies spent between •1-•6,350 developing their website, a further 22% spent between •6,351-•12,700, while another 14% spent between •12,701-•63,500 and 5% spent more than •63,500 developing their website. The amount of money that a company spends on its website is not significantly related to any of the measures of success.

In general, organizational factors contribute to increasing the number of customers who browse the website, and who contact the company with a sales enquiry, but not in the amount of revenue generated. By investigating three measures of success, this research is able to determine the extent of website success along the spectrum

Table 3: Planning Issues Undertaken During Web Design

When planning the design of the website, the following were considered important	Strongly Disagree	Dis-agree	Neutral	Agree	Strongly Agree
Ease of navigation	1%	2%	6%	30%	62%
Projection of a favourable corporate image	3%	2%	12%	36%	47%
Security of payment	4%	3%	17%	24%	53%
Minimising effort in the purchase process	1%	3%	17%	27%	51%
Full on-line product catalogue	1%	7%	17%	40%	35%
Ease of use of checkout facilities	3%	3%	23%	38%	33%
Detailed company information	6%	3%	27%	44%	20%
Site search facilities	2%	9%	28%	28%	34%
Interactive features	39%	27%	24%	4%	4%

of a customer's purchase decision. The lack of significance with on-line revenue generated might be explained by the fact that customers choose not to order on-line but order instead by more traditional means. Support for this interpretation is provided in that 75% of firms see their web site as a source of sales leads. Given the nature of the sampling frame—Irish gift retailers—this might not be unexpected, as customers may wish to converse with the company prior to placing the order.

Retail-Specific Drivers of Website Success

Part of this research sought to assess the extent to which certain traits unique to retail impacted on the success of a website. In particular the significance of the products' characteristics, the number of products for sale and the extent of integration between bricks and clicks was assessed.

The results show no statistical significance between any of the characteristics of the products being sold on-line and the measures of success. Sixty-five percent of companies have a product that is easy to ship. However, this fact does not result in higher revenues, a higher number of hits or a higher number of sales leads. Also, even though the literature presents one of the main advantages of online selling as the ability to customise products, there is no significance between customisable products and any of the three success measures, despite the fact that 42.4% of companies sell products that are customisable to individual customer needs. The other characteristics—small value item, little need for touch/feel and largely information based—also had no significant impact on the success measures for on-line retailing. The failure to find any significant relationship between product characteristics and success on the Web runs contrary to other research (Kiang et al., 2000). A possible explanation for these contradictory findings might be found in the sampling frame employed—Irish gift retailers. The homogeneity of the products being sold by those surveyed may not have provided enough variation for any significances to emerge. The products that are offered for sale are specialist products—those related to Irish heritage. These products are normally only sold in Ireland and a select number of international retail outlets. As such, the uniqueness of the products sold, and their non-availability internationally, could be more important characteristics than any of the characteristics investigated in the survey.

Twenty-one percent of the companies surveyed had more than 100 products available on their website, with a further 21% offering between 50 and 100 products. The breadth of the product offering on a website did not influence its success—no significant relationship was found in respect of any of the measures of success.

Table 4: Retail Specific Factors of Website Success

	Number of Hits per Week		Number of Sales Leads Generated		Amount of Revenue Generated	
	Chi Square	Cramer's V	Chi Square	Cramer's V	Chi Square	Cramer's V
Clicks & Bricks (H2b)						
Web store that complements other channels			.003	.003		
Retail outlets as the key to acquiring customers			.044	.044	.014	.014

This finding indicates that creating extensive e-catalogues is not sufficient to generate success.

The website is seen as a complementary sales channel for the majority of companies (62%). Those who use the Web as a complementary sales channel gain significantly more sales leads from their e-business presence. At a more specific level, 43% of companies believe that retail outlets are the key to acquiring new customers (26% believe they are not). Companies who believe that they are presently dependent on retail outlets for new sales generate significantly more sales leads and on-line revenue from their website. These findings provide some support for the notion of creating an integrated clicks and bricks strategy. Further, the integrated clicks and brick strategies are resulting in increased sales and revenue activities rather than an increased browsing on the website.

CONCLUSIONS AND FURTHER RESEARCH

This research investigated the impact of certain organizational and retail-specific factors on the success of the Web presence. Success was measured from a sales and marketing perspective and used three metrics: number of hits, sales leads generated and on-line sales. An important contribution of this research is the adoption of such a multi-point evaluation. Few of the factors investigated impacted on-line sales, yet they did impact the other two measures—hits and sales leads generated. An explanation for this may be due to the fact that customers are using retail websites to gather information, but still prefer to complete the transaction off-line. Thus, any evaluation of a website success should not just focus on the metric of on-line sales as the website may be more important as a marketing tool, rather than a sales execution means.

Specific organizational factors—early adoption of Web technology, internal IS/IT expertise, having an e-business strategy and a person who champions the e-business project—result in more successful e-business presences. In particular, the extent to which these organizational factors are present greatly improves the degree to which customers seek information from, and enquire about products on a retailer's website. However, these same organizational factors do not significantly impact the amount of sales completed on-line.

Previous research has shown that specific product characteristics—easy to ship, small value items, customisable to individual needs—make certain products more likely to be successful on the Web. This study of Irish gifts found no evidence to indicate that the presence of a particular product characteristic made it more successful relative to other Irish gift products. This study investigated a specific retailing sector—one in which tangible goods which incur shipping costs are supplied—and further research would be required to verify these findings in other sectors and for other products. In addition, the number of products on offer through the website is not a good predictor of the likely success of the website. The extent to which a retail company integrates its Web presence with its physical presence is likely to produce significant success for the website in terms of sales leads generated and online revenues.

This research has a number of limitations. The research method employed was a postal survey and as such the research suffers from the limitations inherent within such a research method. In particular, the research method provides a view of the state of affairs at a particular point in time. The data presented investigated e-tailers selling Irish gifts. As such, the results are not generalisable to other sectors or other businesses.

Further research is required to further investigate the conclusions drawn in this research. In particular, there is a need to replicate the study using a wider or alternative population sample, as this study was confined to Irish retail organisations that sell giftware on-line. Further research is also required to verify the success measures adopted and indeed to verify the need to adopt multiple metrics when investigating website success in terms of marketing and sales. In addition the website success measures presented in this paper could be broadened and developed in future research.

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