An Exploratory Approach To e-Commerce Strategy In The 21st Century

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Abstract

This exploratory study analyzes the critical success antecedents that contribute to effective e-Commerce consumer sites. Focused on key firms in selected industry sectors, the study examines factors that have enabled either failure or success in the strategies of the firms to market, sell and service products on the Web. Important to firms eventually successful in e-Commerce is their integration of leading edge technologies to enhance business factors of site strategies. The study imputes business model, content and design, brand image, promotion, community, customer service, traffic management, scalability, performance management and partnership as the continued critical success antecedents that enable effective commerce sites. This study, in its closer examination of the industry sectors of the firms, will be helpful to business managers considering expanded investment in consumer sites in the increasingly improved economy.

1. Background

E-Commerce (electronic commerce), in its dependence on the Internet, continues to flourish in the 21st century. The Internet is an important means of business and consumer communication, enabling independence of location and time for applications. The number of consumers on the Internet grows continually, as the Web furnishes enormous amounts of information on the products and services of firms in simple and standardized user interfaces (Ranganathan & Lertipttayapoom, 2002). New markets are facilitated in increased efficiency through the Internet. E-Commerce is a fully functioning facility for firms to conduct their business on the Internet.

The functionality of e-Commerce is defined in this study as the following:

Technology-mediated exchanges between parties (individuals or [firms]) as well as the electronically based intra- or inter-organizational [firm] activities that facilitate such exchanges (Rayport & Jaworski, 2002).

The impact of e-Commerce is discernable in frequently cited practitioner studies in the literature. Studies, such as Nielsen / Net Ratings, estimate that there are currently 109 million consumers connected on the Web in the United States (Ryan, 2003). Forrester indicates that there are 42 million more households on the Web in 2003, than there were in 1998 (McQuivey, 2003). Surveys from the United States Department of Commerce indicate that consumer revenue on the Web is $13 billion out of $859 billion gross retail revenue, through the second quarter 2003, while Forester further indicates that this revenue on the Web will exceed $230 billion in 2008 (Scheleur & King, 2003 & Johnson, 2003). These studies imply the inherent effectiveness and success of the e-Commerce market on the Internet.

2. E-Commerce Market

Though e-Commerce is flourishing as a marketplace, the criteria for the effectiveness of the sites of business firms on the Web are important in this new century. The highlighting of effectiveness factors is due to the failure of opportunistic e-Commerce firms in 2001 and 2000, in the bankruptcies and liquidations of billions of dollars of on-line firms. Funding of on-line sites through external capital declined notably from 1999 to 2000, initiating downward investment in the sites (Siddiqi, Akhghar & Davies, 2002). The failure of the sites on the Web indicates the importance of considering seriously both technological and business factors in the investment decision of firms. Success in e-Commerce is derived from critical factors that affect this marketplace.

The e-Commerce of sites on the Web is illustrated in failure and success. This study contends that effective sites are evident in firms that consider diligently the factors of success. Surveys indicate that, irrespective of failed firms in e-Commerce, sites on the Web have continued to generate revenue growth in 2001 to 2003. This increase is leading to profit. Growth in profitability is important in firms that are implementing on-line e-Commerce sites or integrating on-line sites with off-line stores.

Successful e-Commerce is no longer about mere marketing, but critically is now about the paradigmatic proposition of sales to consumers that contribute to the profitability of the firms. Studies in the practitioner literature indicate this shift to be the new order to e-Commerce sites (Akhgar, Siddiqi & Al-Khayatt, 2002). In fact, a consensus is developed in the literature of the critical factors of effective and successful sites, and the field of e-Commerce will be helped in focusing on firms that are examples of success in 2003, in contrast to those that were examples of failure on the Web.

3. Focus of Study

The focus of the study is to examine the importance of broad perceptual factors that enable effectiveness in e-Commerce business-to-consumer (B2C) sites. Though generic and normative prescriptions in the success of sites abound in the practitioner literature, this study is closer in business strategy, in its analysis of firms in discrete industry sectors, and confirms but also extends the findings of an earlier academic study by (Vijayaraman & Bhatia, 2002). Managers of large-sized business firms considering further e-Commerce have been frequently hesitant in investing in their sites in the currently improved economic conditions. Fresh insight into factors of e-Commerce effectiveness helps management in its decision-making. This study in its updated findings explores and substantiates a timely framework for forecasting the likelihood of success on B2C sites.

4. Methodology

The research methodology of the study comprised a sample of ten firms, in five pairs of contrasting successful and unsuccessful B2C firms, in five selected industry sectors. The firms were analyzed in a nine-month period of winter – fall 2003, in three stages of study. *Stage 1* consisted of a survey of current practitioner and selected academic literature on the effectiveness factors of the Web sites of the firms, *Stage 2* consisted of an analysis and interpretation of the effectiveness factors, independently by each of the four authors and by each of twelve adult graduate students in an e-Commerce course at Pace University, by application of a three point importance scale, and *Stage 3* included a case study to test the analysis. Effectiveness factors of the sites included business model, content and design, brand image, promotion, community, customer service, traffic management, scalability, performance management and partnership, which were introduced in the B2C framework of the aforementioned Vijayaraman and Bhatia study, and the importance scale was defined in an interpretation instrument as *high*, *intermediate* and *low* in the effectiveness factors. The case study included an analysis of the effectiveness factors of a leading and successful e-Commerce firm in the current 2003 economy.

5. Analysis of e-Commerce Sites

5.1 Introduction

The study surveyed the literature on the food, manufacturing, publishing, retailing and technology industry sectors. From the literature, the firms analyzed by the authors of this study included Safeway, KB Toys, Amazon, Macy’s and Dell as examples of successful e-Commerce sites, and Webvan, e-Toys, Bookface, Boo and Egghead as examples of the unsuccessful sites. A summary of the firms in the study is furnished in Table I.

Table I: Analysis of B2C e-Commerce Sites

Industry	**Successful Firm**	**Unsuccessful Firm**
Food	Safeway	Webvan
Manufacturing	KB Toys	e-Toys
Publishing	Amazon	Bookface
Retailing	Macy's	Boo
Technology	Dell	Egghead

The sites were analyzed based on the Vijayaraman and Bhatia factors of e-Commerce effectiveness (successful firms) and ineffectiveness (unsuccessful firms) (Vijayaraman & Bhatia, 2002), as explained below:

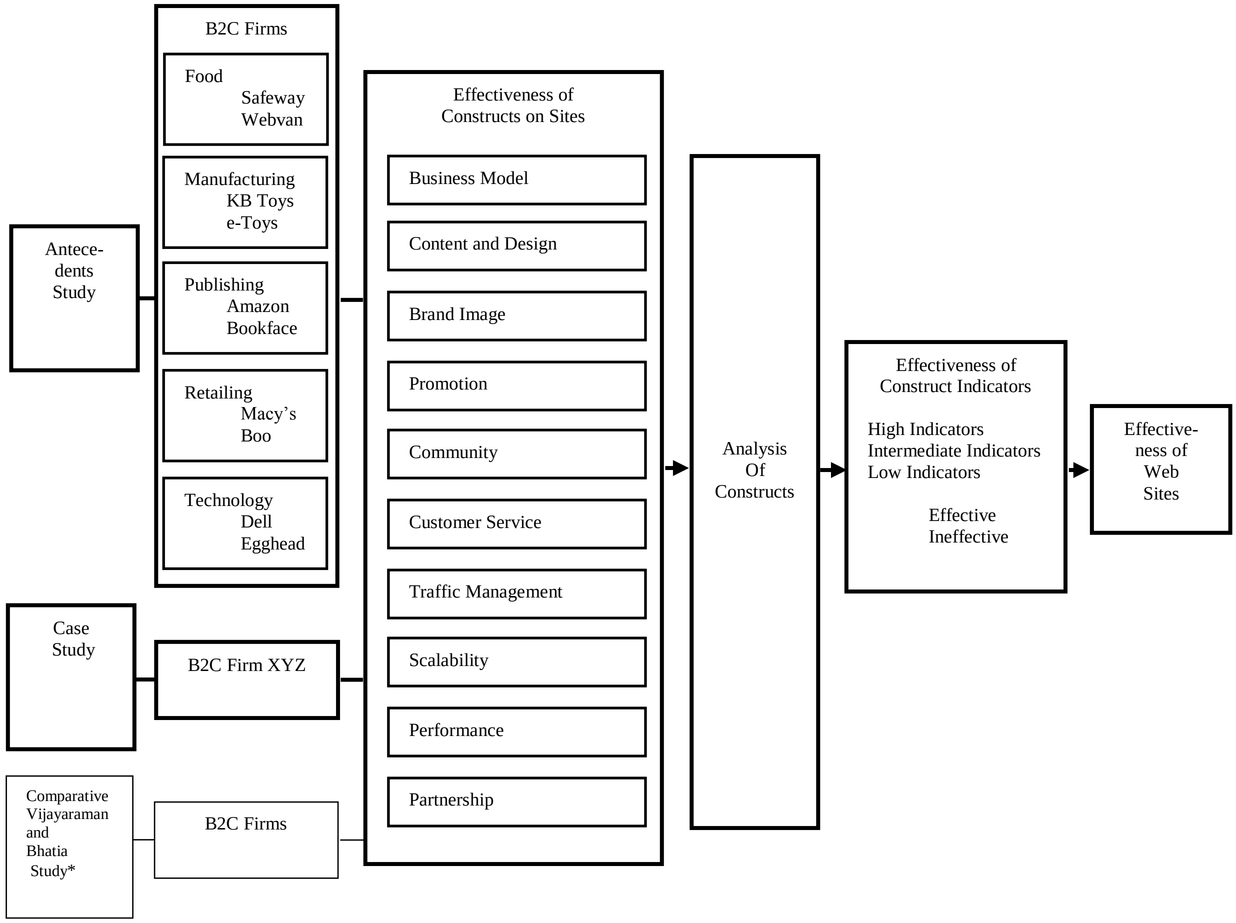
- business model, e-Commerce site aligned to a defined business, financial and customer focused plan that enables potential profitability ;
- content and design, site designed to effect ease and fastness in customer help and navigational features that lead to product sales;
- brand image, site identified to be a favored source of product integrity that facilitates customer trust;
- promotion, site marketed to the customer in a click channel and a brick and mortar channel that complements the click channel and leads to product sales;
- community, site maintained and enhanced to enable continued customer interaction that leads to loyalty and further sales;
- customer service, site maintained and enhanced to enable customized or personalized customer interactivity that leads to further sales;
- traffic management, site maintained technologically to continue current demand levels that enable uninterrupted service to the customer;
- scalability, site maintained technologically to expand to future demand levels that will enable uninterrupted service to the customer;
- performance management, site enhanced and maintained to a technological state that ensures efficient security and support to the customer; and
- partnership, site enhanced in creditability in collaborative relationships that increase products and services marketed to the customer and leads to further revenues and sales.

These factors that are analyzed in the sites of the firms in the following sections of the study, and that are illustrated in Figure 1, are similar to those antecedents in other studies of e-Commerce.

5.2 Food Industry: Safeway and Webvan

Safeway is a brick and mortar firm that expanded its existing grocery business on the Web in a focused model of industrial capacity, while Webvan was an inexperienced click firm that had insufficient infrastructure to sustain its model, though further focused in its growth in market strategy than click firms (Howell, 2001; Partch, 2001; Rock, 2001; Turcsik, 2003; White-Sax, 2001 & Wilson, 2001).

The business model of Safeway is consistently focused and financially sensitive, in a marketing segmentation strategy that enhances the customer experience of buying grocery products and complementary non-grocery services, and is considered by the authors to be *high* in importance to the effectiveness of its Web site. To extend the customer experience, the Safeway site includes an in-depth information network, such as a nutrition center and a bank, and the leading edge of this design is *high* in importance. The brick and mortar brand of Safeway contributes high creditability and trust in the Safeway site and is *high* in importance to the site. The image of Safeway is further improved in in-house manufactured products. Effective promotion of Safeway products, in flexible pricing and shopper programs and specials that enable increasingly loyal customers, is *high* in importance. Online community is limited on the Safeway site, but is *low* in importance, inasmuch as the site leverages its information network online.



* Excluding B2B Firms Firms of Current

Figure 1: Antecedents of B2C e-Commerce Effectiveness

Safeway is similar to brick and mortar firms in its service of customers in supporting facilities of stores and warehouses, but is additionally similar to the better click firms in its memorable personalized service, effecting *high* importance to the Safeway site. The merchandising and Web technologies enabling traffic management, scalability and performance management, and facilitating fast checkout service, are contracted to external technology firms significantly further than other brick and mortar firms of the study, but are similar in methodology to successful e-Commerce businesses, and are only *intermediate* in importance. Partnerships of Safeway, which include Casa Ley, Dominick's, Grocery Works, Starbucks and United Airlines, enable an innovation edge in site strategy and are *high* in importance.

The business model of Webvan, in contrast to Safeway, was focused not on customer experience or needs, but on a mass distribution and marketing strategy. The strategy highlighted technological innovation, depended on external capital and was insensitive to financial return, and is considered by the authors of this study to be *high* in importance in the ineffectiveness of the Web site. Webvan in its design features frequently malfunctioned as a service site, so that the design factor is also *high* in importance. The lack of an established brand inhibited Webvan, but the site was further impacted in an ineffective re-branding, limiting creditability with consumers, and is *high* in importance in the ineffectiveness of the site. Promotion of grocery products was limited mostly to free shipping on the Webvan site, was not imaginative as Safeway, and is considered *high* in importance in ineffectiveness. Online community was not a factor on the site, and is *low* in importance.

Customer service initiated on the site was not fast enough in delivery of time sensitive products, despite enabling by distributed brick and mortar warehouses, and investment in subsequent customization of the service implemented in Safeway was non-existent in Webvan, so that the ineffectiveness of this factor is *high* in importance. Infrastructure technologies of traffic management and scalability were functionally excellent, but were not a factor due to limited customer demand on the Webvan site, and are *low* in importance, while performance management technologies were excellent, but excessive in investment for unmet demand, and are *intermediate* in importance. Partnerships of Webvan, that included Home Grocer, enabled limited benefit, due to frequent incompatible technologies, but is *low* in importance in the ineffectiveness of the Webvan site.

A summary of the analysis of the Safeway and Webvan sites is furnished in Table II.

Table II: Analysis of Safeway and Webvan Sites

Constructs		
	Successful Firm	Unsuccessful Firm
Business Model	H	H
Content and Design	H	H
Brand Image	H	H
Promotion	H	H
Community	L	L
Customer Service	H	H
Traffic Management	I	L
Scalability	I	L
Performance Management	I	I
Partnership	H	L

Note: H-High Importance, I-Intermediate Importance, and L-Low Importance

5.3 Manufacturing Industry: KB Toys and e-Toys

KB Toys is another brick and mortar firm, similar to Safeway, that enhances its established business on the Web in a financially focused and creatively expanding model, while e-Toys, similar to Webvan, was a click firm that effected an immediate business on the Web, but lacked a sustaining model (Green, 2001; Gulati & Garino, 2000; Heun, 2001; Prior, 2001; Wishart & Bochsler, 2003 & ___, 2002).

The current business model of KB Toys is characterized as customized and determined in market strategy, focused on customer needs, and highlighted in financial return, and is considered *high* in the effectiveness of the Web site. Though in-depth in information about its products, the KB Toys site is equivalent in its design to other e-Commerce sites, and is considered by the authors to be *intermediate* in importance. The brick and mortar brand of KB Toys, as in Safeway, contributes high creditability in the business of toys, and is *high* in importance to the Web site. Promotion of toys is enabled in the integration of the site with stores, but is *intermediate* in importance in leads to sales. Online community is limited and *low* in importance.

Customer service on the site, similar to that of Safeway, is facilitated substantially by the support of KB Toys stores, and is *high* in importance. Investment in state-of-the-art traffic management, scalability and performance management technologies enable fast response of services on the KB Toys site, but is equal to other seasonally successful e-Commerce firms, and is *intermediate* in importance. Partnerships of KB Toys, that include BrainPlay.com, CVS, GT Nexus, Sears and QVC, enable an expanding and strategic edge on the site, as in Safeway, and are *high* in importance.

The business model of e-Toys, similar to Webvan, was characterized as a mass marketing strategy, not focused on customer needs and investment return, and this strategy is considered *high* in importance to the ineffectiveness of this Web site. The e-Toys site was excellent in design and *low* in importance in ineffectiveness. The lack of a brick and mortar brand or fully established image, as in the example of Webvan, and litigation with eToy.com, contributed limited creditability to e-Toys and is *high* in importance. Pricing promotion of toys only on its site further limited marketing and sales of e-Toys and is *high* in importance. Online community was not a competitive or effective factor, and is *low* in importance.

Customer service was seriously deficient in late delivery of toys, due to lack of efficiently functioning stores and systems, and is *high* in importance. Investment in traffic management, scalability and performance management technologies was additionally deficient due to limited finance, impacting delivery of seasonal services on the e-Toys site, and is *high* in ineffectiveness importance. Partnerships of e-Toys, such as AOL and Yahoo, enabled a limited and tactical edge, due to the mass marketing strategy, but are *low* in importance in the ineffectiveness of the Web site.

A summary of the analysis of the KB Toys and e-Toys sites is furnished in Table III.

Table III: Analysis of KB Toys and e-Toys Sites

Constructs		
	Successful Firm	**Unsuccessful Firm**
Business Model	H	H
Content and Design	I	L
Brand Image	H	H
Promotion	I	H
Community	L	L
Customer Service	H	H
Traffic Management	I	H
Scalability	I	H
Performance Management	I	H
Partnership	H	L

5.4 Publishing Industry: Amazon and Bookface

Amazon is a click firm that continues to diversify its internationally known book business in an expanding and financially favorable merchandise model, while Bookface was a click firm that effected limited product business on the Web, lacking the competitive fundamentals to sustain its site (Berman & Elgin, 2001; Letts, 2001; Reid, 2000; Vogelstein, 2003 & Werbach, 2002).

The business model of Amazon is characterized as exceptionally customized as to customer book and commodity needs, focused increasingly on financial return, and is considered by the authors of this study to be *high* in importance in site effectiveness. Content and design of the Amazon site, similar to successful sites in this industry, is friendly and informative, but *intermediate* in importance. The click brand of Amazon contributes high creditability in the online market, and is also *high* in importance. Promotion of products is enabled in competitive pricing and experimental marketing of a first mover, and is *high* in importance. Online community in customer reviews is facilitated on the Amazon site, but is *intermediate* in importance.

Though lacking in the offline facilities of a retail store from its site, Amazon is noted for its online product personalization and service technology, and this technology is *high* in importance. Investment in traffic management, scalability and performance management technologies is similar to successful industry sites, and is determined to be *intermediate* in importance. Partnerships of Amazon, that include Borders, Circuit City, Target and Toys "R" Us, enable an expanding marketplace and a further financial generator on the site, and is *high* in importance.

The business model of Bookface, in contrast to Amazon, was an intermediary strategy that was focused on marketing to a limited niche of the industry, was hindered in investment return, and is evaluated as *high* in importance to the eventual ineffectiveness of the site. The design of the Bookface site throughout its duration was not fully functional, and is *high* in ineffectiveness. The site was similar to Webvan and e-Toys in brand deficiency, and this impediment is also *high* in ineffectiveness. Promotion of the site was limited, due to the restricted marketing budget of its investment strategy, and is determined by the authors to be *high* in the ineffectiveness of the site. Online community, however, was enabled in chat and discussion forums for enthusiasts on the Bookface site, but is *low* in importance.

Customer service is *low* in importance, because of the intermediary strategy of the site. Traffic management and scalability technologies are *low* in importance, due to the limited number of consumers that were on the Bookface site, while, moreover, not fully functional performance technologies are *low* in importance, due to the limited utilization of the site. Opportunistic partnerships, that included iPublish.com of Time Warner, enabled an innovative edge in the site, but failed in investment return, and is *intermediate* in importance to the ineffectiveness of the Bookface site.

A summary of the analysis of the Amazon and Bookface sites is furnished in Table IV.

Table IV: Analysis of Amazon and Bookface Sites

Constructs		
	Successful Firm	**Unsuccessful Firm**
Business Model	H	H
Content and Design	I	H
Brand Image	H	H
Promotion	H	H
Community	I	L
Customer Service	H	L
Traffic Management	I	L
Scalability	I	L
Performance Management	I	L
Partnership	H	I

5.5 Retailing Industry: Macy's and Boo

Macy's is an established and financially focused brick and mortar firm, that markets its product selections on its site as a lead to sales in its stores, while Boo was an unfocused click firm that marketed limited products and services on a slow responding and unsustainable site (Davis, 2000; Davis & Green, 2000; Kemp, 2001; Lazaro, 2000; Miller, 2003 &Woodward, 2002).

The current business model of Macy's on the Web is considered by the authors as a catalog complement to its brick and mortar stores, and the model is customized and designed as to customer product needs. Because of its focus on sales in its stores, the model is evaluated to be *intermediate* to the effectiveness of a sales site. Content and design of the Macy's site is similar to Safeway in its friendly and informative facilities, including gift finding, searching and zooming tools, but indistinguishable in industry functionality, and is *intermediate* in importance. The historical image of Macy's contributes creditability to its site, but is not determined to be of high impact in an industry of marketable image, and is *intermediate* in importance. Promotions, that include electronic coupons, are essentially focused on products sold in the Macy's stores, and are *low* in importance to the site. Online community is not fully functional on the site, and is *low* in importance.

The Macy's site is limited and *low* in importance in personalization and service technologies, due to the sales proposition of the stores. Investment in proprietary traffic management, scalability and performance management inventory systems and technologies, similar to Safeway, is equivalent to the budgets of successful sites in this industry, and is *intermediate* in importance. Limited partnerships, that include Roxy.com, are of *low* strategic importance in the effectiveness of the Macy's site.

The business model of the Boo firm was an inexperienced foreign investor strategy that effected limited competitive edge in the industry marketplace, and is determined to be *high* in importance to the ineffectiveness of the Web site. The contextual design of the Boo site was excessive in graphical imaging, limited and not helpful in further information on products sold by Boo, and is *high* in importance. Boo was similar to Webvan, and also Bookface, in its limited image in the industry, and is *high* in the ineffectiveness of the site. Promotion of Boo, in an expanded online and offline marketing strategy, was ineffective and lacked a favorable pricing proposition, in an industry of larger sites and stores, such as Macy's, and is *intermediate* in importance. Online community was *low* in importance.

Customer service technologies were significantly slow and unsophisticated on the Boo site, and are *high* in ineffectiveness. Though performance management technologies were not fully implemented in the initial installation of the Boo site, and are *high* in the importance to the ineffectiveness of the site, scalability and traffic management technologies were not impacted, due to limited utilization, and are *low* in importance. Partnerships to expand the potential of the Boo proposition in the retailing industry were non-existent, and are determined to be *high* in importance.

A summary of the analysis of the Macy's and Boo sites is furnished in Table V.

Table V: Analysis of Macy's and Boo Sites

Constructs		
	Successful Firm	**Unsuccessful Firm**
Business Model	I	H
Content and Design	I	H
Brand Image	I	H
Promotion	L	I
Community	L	L
Customer Service	L	H
Traffic Management	I	L
Scalability	I	L
Performance Management	I	H
Partnership	L	H

5.6 Technology Industry: Dell and Egghead

The final analysis is of Dell, a brick and mortar firm that extended its business onto the Web to consumers in an innovative marketing model, and Egghead, an earlier brick and click firm that re-engineered its computer business to be exclusively on the Web, but lacked a financially sustaining model (Baar, 2003; Freedman, Goulding, Howe, Kalogerakis, Mount, Nussenbam & Thomas, 2002; Hicks, 2001; Kirkpatrick, 2002; Krauss, 2003 & Prior, 2002).

The business model of Dell on the Web is characterized as customized in customer marketing, highlighted in circumvention of intermediary firms and improved in financial return from consumers and large to small businesses, and is considered by the authors to be *high* in importance to the effectiveness of the site. The content and design of the Dell site are comprehensive and in-depth, enabled in a business-to-business (B2B) infrastructure, and are considered *high* in importance. The brand image of Dell as a back end business is exceptionally creditable and honored in the technology industry, and is *high* in importance on the Web. Promotion is facilitated in competitive pricing that is frequently low, educational kiosk displaying of products in partnered retail stores that include Sears and T-Mobile, and special offerings that include free security utilities, and is determined to be *high* in importance. Online community is limited on the Dell site, and is *low* in importance.

Customer service on the Web is similar to Amazon in flexible product configurations of diverse peripheral systems, but is further enabled in international and domestic support of brick and mortar state-of-the-art warehouses, and is considered to be *high* in importance to the effectiveness of the Dell site. Traffic management, scalability and performance management technologies supporting the service site facilitate fast turnaround, but are equivalent to other successful industry sites, and are *intermediate* in importance. Partnerships of Dell in the manufacturing and marketing of its products to consumers and businesses on the Web continue the competitive edge of the site, but are not exceptional in the technology industry, and are evaluated to be *intermediate* in importance.

The business model of Egghead was focused on a consumer home office and small business niche, limited in initial financial return, not sustainable in a slowed economy, and is therefore considered to be *high* in importance to the final ineffectiveness of the site. The content and design of the Egghead site were excellent, and is *low* in the ineffectiveness of the site. The image of Egghead in the home office and small business markets online was creditable and established from its brick and mortar stores, and is *low* in ineffectiveness. Promotion was extensive, but less innovative in pricing and product configuring than Dell, and is considered *intermediate* in importance. Online community on the Egghead site, as on most of the unsuccessful and successful sites in the study, was non-existent, and is *low* in importance.

Customer service was facilitated in an implemented brick and mortar warehousing strategy, similar to Dell, but lacked the sophisticated technological support of Dell, and is considered *intermediate* in the ineffectiveness of the Egghead site. Traffic management and scalability technologies were sufficient to support the site prior to the bankruptcy of Egghead, and are *low* in the ineffectiveness of the site, while performance management technologies were supportive, but subject to untimely security intrusions, and are *intermediate* in the importance of the ineffectiveness. Partnerships of Egghead with firms, such as Fair Market, were limited in sustaining the site, but are evaluated *low* in importance, given the Egghead niche strategy.

A summary of the analysis of the Dell and Egghead sites is furnished in Table VI.

5.7 Summary

A summary of the analysis of the effectiveness constructs in the e-Commerce firms of the study indicates the importance of business focused factors. Of the factors studied, business model is considered by the authors to be almost consistently the highest in importance in *high* evaluations in both successful and unsuccessful firms, followed by *high* evaluations in brand image and customer service. Content and design, promotion and partnership are considered mostly *high* to *intermediate* in importance. The traffic management, scalability and performance management technological factors of the Web sites, in contrast to the above business factors, are evaluated mostly *intermediate* to *low* in importance. Community is evaluated the lowest, in *low* importance to the effectiveness of the sites, except in *intermediate* importance to the Amazon site.

The successful firms of Safeway, KB Toys, Amazon, Macy's and Dell are almost consistently evaluated *high* in business model, brand image and customer service, except for Macy's, due to the lower sales intent of its site. Effectiveness of the Web sites, however, is enabled in brick and mortar firms accustomed to a focused customer and business management strategy. Safeway and Dell are *high*, while KB Toys and Amazon are *intermediate*, in content and design, and KB Toys is *intermediate* in promotion, indicating the higher or improved informational services on the Safeway and Dell sites, while partnership enabling further competitive edge is evaluated *high* in the Safeway, KB Toys and Amazon sites.

Table VI: Analysis of Dell and Egghead Sites

Constructs		
	Successful Firm	**Unsuccessful Firm**
Business Model	H	H
Content and Design	H	L
Brand Image	H	L
Promotion	H	I
Community	L	L
Customer Service	H	I
Traffic Management	I	L
Scalability	I	L
Performance Management	I	I
Partnership	I	L

Standardized technologies of performance management, scalability and traffic management, that facilitate logistical and site support, are evaluated *intermediate* in importance to the effectiveness of the successful Macy's, Safeway, KB Toys, Amazon and Dell sites. These inherent technological factors are lower than, and in contrast to, the *high* importance of the aforementioned business factors of customer service, brand image and business model.

The unsuccessful firms of Webvan, e-Toys, Bookface, Boo and Egghead are evaluated *high* in business model importance, as in the successful firms. Business factors of brand image and content and design of the unsuccessful firms are similarly *high* in importance in the ineffectiveness of the sites, except for Egghead, due to its earlier edge as an established firm, and e-Toys, due to its excellent informational design. Promotion and customer service factors are *high* in importance in Webvan and e-Toys, but, except for Bookface in promotion and Boo in customer service, which are *high* in importance, are largely *intermediate* in the other unsuccessful firms. Except for the e-Toys site, that is *high* in the importance of the ineffectiveness of traffic management, scalability and performance management technologies, the other sites of the firms are mostly *intermediate* to *low*, due to the limited utilization of the sites, and in contrast to the business focused factors. Partnership is evaluated mostly *low* to *intermediate* in importance to the unsuccessful sites.

From this analysis of the effectiveness of the successful e-Commerce Web sites, the following is hypothesized in this study:

H1a Web sites of successful e-Commerce firms have high to intermediate importance in focused factors of business model, content and design, brand image, promotion, customer service and partnership, and

H1b Web sites of successful e-Commerce firms have only intermediate importance in logistical and technological factors of traffic management, scalability and performance management when in contrast with the business focused factors.

These hypotheses are tested for confirmation in the Case Study of the XYZ e-Commerce Firm, which is in the next section of this study.

A summary of the analysis of the e-Commerce sites in this section of the study is in Table VII, and a summary of the market indices through third quarter 2003 of the successful firms is in the Appendix.

Table VII: Summary Analysis of B2C e-Commerce Sites

Constructs	**Food**		**Manufacturing**		**Publishing**		**Retailing**		**Technology**	
	Safeway	Webvan	KB Toys	e-Toys	Amazon	Bookface	Macy's	Boo	Dell	Egghead
Business Model	H	H	H	H	H	H	I	H	H	H
Content and Design	H	H	I	L	I	H	I	H	H	L
Brand Image	H	H	H	H	H	H	I	H	H	L
Promotion	H	H	I	H	H	H	L	I	H	I
Community	L	L	L	L	I	L	L	L	L	L
Customer Service	H	H	H	H	H	L	L	H	H	I
Traffic Management	I	L	I	H	I	L	I	L	I	L
Scalability	I	L	I	H	I	L	I	L	I	L
Performance Management	I	I	I	H	I	L	I	H	I	I
Partnership	H	L	H	L	H	I	L	H	I	L

6. Case Study – XYZ Firm

The e-Commerce firm in the Case Study is identified as the XYZ Firm, an actual and successful firm in industry. XYZ is a click firm, which is enabled in a brick and mortar infrastructure and is internationally known as a popular product retail model, similar to the successful models of the firms analyzed in this Analysis of e-Commerce Sites section. More than 40 million consumers are registered with the XYZ site, launched in 1996. Revenues were $310 million in 2002. Throughout the fall 2003 period, senior managers of the XYZ Firm were interviewed by the authors, based on an instrument of a questionnaire that included the effective factors of the analysis, or ten variables, defined in the Methodology section, in order to test the hypotheses of the overall study.

The business model of the XYZ Firm is exceptionally focused on customer needs, in a continually enhanced and informed marketing strategy, but is considered by the management of the firm as *intermediate* in the effectiveness of its Web site. Competitive first mover aggressiveness on the site is not a critical feature of the strategy in 2003, as the impact is construed to be disruptive to the business model. Content and design of the XYZ site are enticing and instructive, but are equivalent in customer experience to other sites in the industry, and is considered *intermediate* in importance to the site. The brand image of this established firm is highly creditable to consumers, and is considered *high*, while online portal and offline publication promotion of the site in the industry is evaluated *high* in importance by management. Online community is of limited and *low* importance in the evaluation by the XYZ Firm, and continues to be insignificant in this study.

Customer service is enabled in the XYZ site in excellent help and information searching systems, but is considered by the firm as *intermediate* in the effectiveness of its intended self-service site, inasmuch as help is frequently furnished in costly and offline customer service representative support. The XYZ Firm is challenged in the 2003 economy, in satisfying higher customer demand fast on its site and on its linked partner sites on the Web, and its traffic management and scalability technologies are therefore evaluated *high* in importance to the firm. Performance management technologies are also evaluated *high* in importance, in increased spending to support the inquiry needs of customers on the site. The intent of the site is to stimulate traffic to higher peaks of transactions, in tandem with its higher supporting technologies. Partnerships with numerous firms, internal and external to the XYZ industry, are evaluated *high* in importance in short-term opportunity by XYZ management.

This analysis of the XYZ e-Commerce Firm, however, does not confirm hypotheses H1a and H1b in their entirety. The *high* to *intermediate* importance of brand image, content and design, promotion, partnership, customer service and business model factors in the XYZ Firm confirms hypothesis H1a, that Web sites of successful e-

Commerce firms have *high* to *intermediate* importance in these business factors. The *high* importance of traffic management, scalability and performance management factors in XYZ does not confirm H1b, that sites of effective e-Commerce firms have only *intermediate* importance in these logistical and technological factors, when in contrast with the business factors. Still, this divergent finding in the XYZ Firm may be attributable partially to the increased investment in technologies on sites in fall 2003, the analysis period of the XYZ Firm, in contrast to the decreased investment in winter – spring 2003, the analysis period of the ten e-Commerce firms of the study. Though further analysis is needed to investigate the dimension of economic and seasonal effect on increased technology investment, the inclusion of increased consumer disposable income, and their impact on the Web effectiveness factors of the study, the analysis of the Case Study of the XYZ Firm confirms the continued importance of business factors in e-Commerce strategy.

A summary of the analysis of the Case Study XYZ Firm is furnished in Table VIII.

Table VIII: Analysis of B2C XYZ Case Study Site

Constructs	**XYZ Firm**
	Successful Firm
Business Model	I
Content and Design	I
Brand Image	H
Promotion	H
Community	L
Customer Service	I
Traffic Management	H
Scalability	H
Performance Management	H
Partnership	H

7. Vijayaraman and Bhatia Study

The analysis of the Vijayaraman and Bhatia study, conducted in 2001, indicates an almost consistently *high* importance in the effectiveness factors of defined B2C click firms and click and mortar firms, in contrast to the diverse *high*, *intermediate* and *low* importance in the factors of the current 2003 study. Except for *intermediate* to *low* importance in image, promotion and community factors of click and mortar firms, the traffic management, scalability and performance management technological factors are indistinguishable from the business factors in *high* importance, in Vijayaraman and Bhatia. The *high* importance of the technologically focused factors in Vijayaraman and Bhatia are confirmed in the XYZ Case Study, but not in the successful firms of the e-Commerce study. Implied in Vijayaraman and Bhatia, nevertheless, is the inherent importance of technology in the context of business. The Vijayaraman and Bhatia study is a foundation from which to analyze e-Commerce firms in the manner of this 2003 study.

A summary of the analysis of the successful e-Commerce firms, the Case Study of this section and the Vijayaraman and Bhatia study is in Table VX.

8. Implications of Study

The Internet as a model of commerce is clearly alive for firms. The findings of the overall study imply the importance of the model in business elements that effect consumer sites. Strategies of successful sites are differentiated in effectiveness factors of business model, content and design, brand image, promotion, community, customer service, traffic management, scalability, performance management and partnership that lead to benefits that include the profitability of firms.

Table VX: Summary Analysis of B2C eCommerce and Case Study Sites

Constructs	**e-Commerce Firms[1]**	**XYZ Firm**	**Vijayaraman and Bhatia[2] Firms**	
	Successful Firms		Click and Mortar	Click
Business Model	H	I	H	H
Content and Design	I-H	I	H	H
Brand Image	H	H	L	H
Promotion	H-I	H	I	H
Community	L	L	I	H
Customer Service	H	I	H	H
Traffic Management	I	H	H	H
Scalability	I	H	H	H
Performance Management	I	H	H	H
Partnership	H-I	H	H	H

1- Composites of Factors of Importance in Amazon, Dell, KB Toys, Macy's and Safeway from Table VII
2- H-Most Important (MI), I-Somewhat Important (SI), and L-Least Important (LI) [Indicators in Vijayaraman and Bhatia Study]

Managers that consider site strategies in the context of these factors have an improved chance of becoming successful e-Commerce firms. Though e-Commerce effects discrete functions of firms, its enabling of profitability continues to be the important function to management (Byrne, 2001).

The timing of this study is helpful to managers considering further investment in e-Commerce technologies in the B2C domain. Through the practitioner studies, surveys indicate that customers in B2C commerce are consuming $95 billion on e-Commerce sites in 2003. Interesting to this study is that more firms are now investing their limited budgets in the Internet. Surveys further indicate that firms are increasing their B2C e-Commerce budgets at a time when they are decreasing their overall technology spending. The driver behind this investment is evident in new forecasts that anticipate half of public firms on the Internet will be actually profitable by 2004 (Mullaney, 2003).

Managers driven by this profit proposition are competing in e-Commerce in their incremental and slow implementation of technology. Smaller scale projects that frequently contribute short-term investment return are favored over the large-scale projects considered elusive in investment return. Larger scale projects are not the norm in the 21st century. Full realization of benefits in productivity, however, requires longer periods of time, not only for technology firms but also for business firms, as they transform the processes of commerce on the Web. Successful firms on the Internet are cognizant of a longer-term strategy.

The success of firms on the Internet will continue in the evolution of new technologies. Important to success will be faster e-Commerce in increased installation of broadband. Subscriptions to broadband have doubled since 2001 to 22% of households in the United States, and indications are that 29 million household users will have broadband by 2004 (Mullaney, 2003). Also important to e-Commerce will be improved customization software that will tailor products to profitable consumers. Technologies that include open source, utility hosting and computing grids will facilitate efficient and economical implementation of commerce on the Internet.

The successful model of e-Commerce strategy is, in the final analysis, in firms that distinguish their information technologies in the context of the effectiveness of the business factors confirmed in this study. Internet technologies effect further opportunities in the profit proposition to managers that take advantage of the possibilities to improve their strategies in an intensely competitive market (Brown, 2003). Though practitioner surveys indicate that most firms have not taken full advantage of the e-Commerce proposition, the marketplace is fertile for new e-Commerce initiatives (Perkowski, 2003). Key to future success will be a long-term strategy of innovation options, effected by Internet technologies that enable benefits to customers and the firms. The strategy is facilitated by the focus on business factors updated in this study.

9. Conclusion

The study is insightful in its analysis of effectiveness factors in e-Commerce consumer sites. Factors of business model, content and design, brand image, promotion, community, customer service and partnership, as well as traffic management, scalability and performance management, emphasize in their importance the shift from earlier technology strategies of unsuccessful firms to current business strategies of successful firms engaged in e-Commerce. Failure in e-Commerce sites is indicated in essence to be due to ineffective business strategy. Managers evaluating future investment in Internet technologies will be guided by the findings of this study. Firms will benefit from further empirical research, needed to continue to analyze critical success antecedents that contribute to the effectiveness of evolving e-Commerce consumer sites, and this study is initiating an immediate and living framework.

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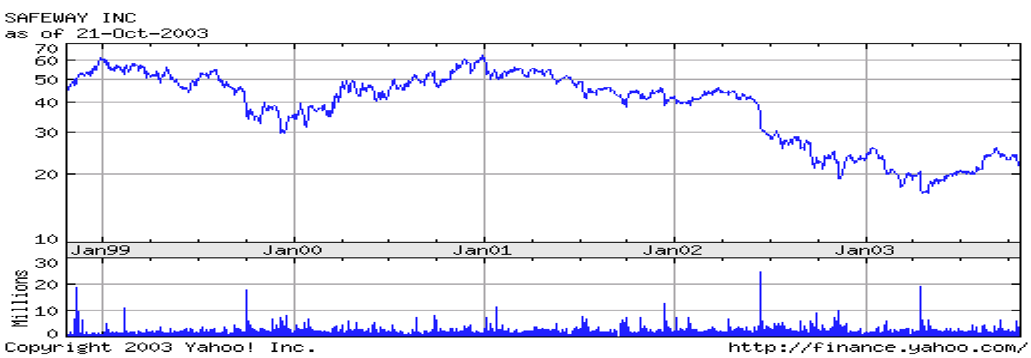
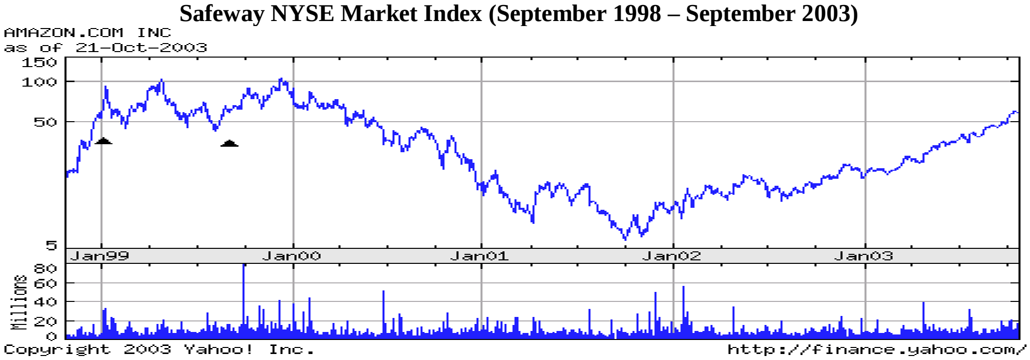
Appendix

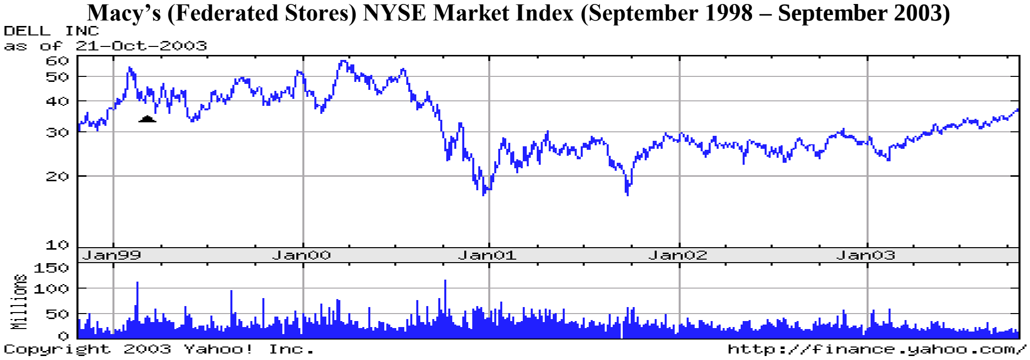


Safeway NYSE Market Index (September 1998 – September 2003)



Amazon NASDAQ Market Index (September 1998 – September 2003)

Macy's (Federated Stores) NYSE Market Index (September 1998 – September 2003)



Dell NASDAQ Market Index (September 1998 – September 2003)

<u>Note</u>: KB Toys is not listed as an NASDAQ or NYSE firm.