

E-commerce and Consumers Participation in a Global Economy

Reza Eftekharzadeh, Ph. D.

Computer Information Systems / Decision Sciences Department
St. John's University, 8000 Utopia Parkway, Jamaica, NY 11439

Tel. (718) 990-2134, Fax. (718) 990-1868

E-mail eftekhas@stjohns.edu

Abstract

E-business models continue to evolve around new and innovative approaches to selling goods and services over the Internet. The growth of the Internet is expected to create a new period in the marketing thinking. Therefore, marketing activities have to be reconstructed in forms more appropriate for the new medium. Moreover, the ease and speed of information acquisition and processing on the Internet, allows sellers to tailor their products to individual customer demand, while the ability to cater to variations in customers' preferences leads to the possibility of bundling products. Across industries, firms have adopted e-business initiatives to better manage their internal business processes as well as their interfaces with the environment. Despite this interest, there is a growing acknowledgment that a theoretically rigorous focus is required in the study of e-business. Relatively little consideration has gone into a systematic overview of the economic development of e-commerce, thinking carefully through the incentives and interactions of buyers and sellers across the whole electronic marketplace. The Internet brings together geographically dispersed buyers and sellers, significantly increasing the size of potential markets. Automated interactions are becoming increasingly important, partly because of “technology push”—the growth of automated negotiation technology—and partly because of “application pull”—such as web purchasing of goods, information and communication bandwidth, and the continuing industrial trend toward outsourcing. If anything can be termed “revolutionary” in e-commerce, then it must include these automated interactions between individuals and organizations. In this paper, we explore the nature of the online consumer decision process and analyze the risks perception, which would affect consumer's decision. There has been a vibrant intellectual exchange involving industry experts, academicians, and vendors, both through conferences and the inevitable flow of individuals among different companies. As a result, many industry best practices have arisen as the result of intense scrutiny. Throughout this paper, we seek to elucidate broadly applicable e-commerce lessons learned over many years. Special attention is given to the more significant research contributions that have helped shape revenue management, and we highlight areas where additional research could provide valuable contributions to the practice of marketing and information technology management: **(Keywords: e-Business; e-Commerce; Information Technology; IT Applications).**

Introduction

As e-commerce evolves, EDI systems have expanded beyond data interchange and offer higher-level services, such as transactions and workflow among organizations. Internet technologies are changing the rules by which business is conducted. These technologies are also changing the fundamental technical architecture on which many organizations are building their internal information

systems. Cooperation and alliances are fundamentally competitive in nature, in that teams of corporations with at least some degree of common interest seek to gain an advantage over, or neutralize the advantage of, a single enterprise or another team of cooperating or allied enterprises. Transaction cost economics explains the cooperative relationship among enterprises. It sees them as attempts to increase the utilization of fixed resources, such as productive capacity, managerial capability, and technological know-how, through closer integration of decisions, and hence improved coordination among economic activities that are not jointly owned [2, 14]: economies of scope and scale enable transaction costs to be reduced. During the last years, developments on the Internet are expanding beyond the use of the Internet as a communication medium to an important view of the Internet as a new market. The electronic sale of products and services by the companies to consumers constitutes nowadays one of the most meditated phenomena. An overwhelming amount of media attention is dedicated to the Web and the potential it holds for selling products and services online. While e-commerce has proliferated with the growth of the Internet, there have been insufficient research efforts concerning its status in Korea [5, 6]. The United States, in contrast, has made significant efforts in making empirical research on the consumer's adoption of e-commerce. Many authors argue that information and communications technology in this new economy is causing a globalized, unified society. Others take the opposite stand, viewing local factors such as national culture as very important to the success of information technology. Research indicates that related factors such as gender may also play important roles in the use and acceptance of IT. Across industries, firms have adopted e-business initiatives to better manage their internal business processes as well as their interfaces with the environment. In this study, a unified framework that captures the antecedents of e-business adoption, adoption intensity, and performance outcomes is proposed and empirically tested using data collected from senior managers in four technology-intensive industries. Applying a framework that captures the intensity of e-business adoption across four business process domains, the authors find that the antecedents and performance outcomes of e-business adoption are best studied in a process-specific context. They find, for example, that while the communication and internal administration aspects of e-business positively affect performance outcomes, the more high-profile activities related to online order taking and e-procurement do not.

Many researchers [1, 3, 4, 9] have concluded that small business Internet commerce (IC) participation is on the rise and will fundamentally change the operations of many companies. The Internet serves the small company in many ways, particularly as a new business tool. As a means of transacting, the Internet serves as a channel to conduct sales between buyers and sellers. Electronic distribution, a largely untapped attribute of online commerce, will become increasingly important as businesses realize the value of physically exchanging information goods. As a communication medium, the World Wide Web (WWW) provides an inexpensive new method for interacting with customers. A company's Web presence also helps enhance credibility, gather feedback, improve customer service, and streamline business processes [11, 14]. In this age of information, researchers postulate that information technology (IT) is providing a new medium to finally unite society, they have identified that the end of the Cold War signals a shift towards a "normative integration of principles and institutions". States that technology provides ever-narrowing approaches to social problems, and these approaches are reducing social options. He notes that an "unnatural" selection process caused by technology results in a loss of diversity in human society. E-commerce is frequently-and incorrectly equated with the use of the Internet to transact business [10, 12]. While the Internet has unquestionably been at the forefront of the rapid expansion of e-commerce-providing a low-cost, ubiquitous tool for facilitating business transactions-the use of electronic media to engage in the purchase and sale of goods and services is far from new [11, 13].

Overview of EC Applications and Research Interests

During the last years, developments on the Internet are expanding beyond the use of the Internet as a communication medium to an important view of the Internet as a new market. The electronic sale of products and services by the companies to consumers constitutes nowadays one of the most meditated phenomena. We continue to witness the phenomenal growth in the business use of the Internet as platform for electronic commerce. An overwhelming amount of media attention is dedicated to the Web and the potential (and risks) it holds for selling products and services online. E-business models continue to evolve around new and innovative approaches to selling goods and services over the Internet [4, 7, 13]. The key factors of the Internet commercial success are its reduced cost and its relative ease of use, which facilitate a very fast dissemination, particularly towards small companies and consumers. The growth of the Internet is expected to create a new period in the marketing thinking. Indeed, evidence already shows that the electronic commerce, with all its new developments, will redefine the meaning of the Marketing due to the absence of a physical environment, reduced product's life cycles, the redefinition of consumer's role etc. Therefore, marketing activities have to be reconstructed in forms more appropriate for the new medium [3, 8, 11]. For instance, in order to fully exploit the potential market of the Internet and maximize consumer satisfaction, one of the online sellers' main tasks is to create a solid and reliable corporate image, to build compelling sites, to provide comfortable and supportive environments. Moreover, the ease and speed of information acquisition and processing on the Internet, allows sellers to tailor their products to individual customer demand, while the ability to cater to variations in customers' preferences leads to the possibility of bundling products. The paper is structured as follows. First we definite what is E-commerce and provide a SWOT analysis of E-commerce. Second, we identify a series of fundamental stages that a consumer goes through in deciding to buy a product and choosing a supplier. We do so by drawing upon theoretical constructs from the consumer behavior discipline. We then examine how retailers can use Internet-based facilities during each of the stages to support the buying decision of their prospective customer. Third, research design and experimental design will provide a step-by-step methodology based on the theory that we have discussed. And last, test hypothesis and draw conclusions.

Marketing

Marketing of corporate image, products, and services is the simplest form of electronic commerce application. Most business have achieved this level of electronic commerce in which the World Wide Web is used merely to "inform" customers about products, services, and policies.

E-Strategy

Having a perfect strategy is very important. Some researches estimate that a company spends at least \$25 to \$50 million to develop and market a major e-commerce site. However, the way those millions are spent varies widely from company to company. Some simply hand over the reigns to their IT department, some tap the intuition of the company's more innovative minds, and some rely on turnkey solutions and advice from out-of-the-box solution providers. Retailers who want to be heard above the din as they begin hawking their wares on the web need to develop a whole new "e-strategy." An e-strategy covers three dimensions. The first is to develop the business model, or define how you will make money. The second is to determine the "customer experience" because you have to learn how to interact with your customers online - which is a new concept because the things traditional retailers know about their customers are based on the traditional "in person" model. The third is assessing your technology options; because you must know which technologies will best bring your Internet strategy to life.

Table 1: SWOT Analysis for E-Commerce:

Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ Unencumbered by bricks & mortar ✓ Lower cost distribution channel ✓ Global channels easily established ✓ Start up costs may be relatively low ✓ Direct communication with customers can enhance image and customer retention ✓ Personalized marketing ✓ Improved customer service levels ✓ Cross promotional opportunities 	<ul style="list-style-type: none"> ✗ Challenges to closing sales online ✗ Easy to be on the internet but difficult to make yourself known (drawing customers) ✗ Implementation may be time-consuming and costly ✗ Responding to internet requests on a timely basis ✗ Lack of e-commerce vision and leadership ✗ Current lack of technology standards and compatibility ✗ Employee resistance ✗ Inability to meet customer expectations for quick response ✗ Integration of back office functions ✗ Channel conflict ✗ Limited bandwidth ✗ Maintenance of Site
Opportunities	Threats
<ul style="list-style-type: none"> ✓ Low cost sales channel for strong brand names ✓ Ubiquity of the Web ✓ Large literate percent of population is computer ✓ Standard Internet Protocol and Web Technology ✓ Easy, cheap access to the Internet ✓ High disposable income ✓ Low information cost ✓ Entrepreneurship ✓ New customers ✓ Reduced Agency Costs ✓ Ease of Expansion 	<ul style="list-style-type: none"> ✗ Internet may have security problems ✗ Increasing competition from new entrants including foreign companies ✗ With no geographical boundaries brand name becomes the differentiating factor ✗ Privacy Issues ✗ Possible governmental regulations and taxation ✗ The evolving e-commerce technology ✗ Network capacity ✗ Immature Technology ✗ Consumer Distrust ✗ Staff Turnover

Table 1 presents the basics of an e-commerce SWOT analysis that can be used by businesses exploring the possibility of creating a web-based business. The Table does not purport to be an exhaustive SWOT analysis. However, it does represent a starting point for organizations in identifying the external opportunities and threats and internal strengths and weaknesses for current or proposed ecommerce operations. Especially we can identify the weaknesses and threats as the potential information of the perceived risk

Overview of B2B e-commerce: Culture & People Perspectives

B2B e-commerce involves businesses selling products and services to each other over the Internet. The B2B Industry has seen its share of growth prior to 2001. Many companies whether small or large wanted the ease of being able to buy and sell online. They count on B2B companies to develop and implement a branded B2B e-commerce marketplace where customers could easily buy goods and services. A major trend that is taking place within the B2B industry is the ability for buyers and sellers to place orders with a multitude of suppliers by directly accessing their suppliers' electronic catalog. With much business online, one of the main problems is finding the best B2B Company with which to do business. Although corporate culture is largely an intangible asset, few would deny that it plays an essential role in shaping the character and effectiveness of the enterprise. In the earliest days of e-Commerce, the culture of most Web initiatives was marked by chaos (even when such Initiatives popped up in stable old-line companies). Although most employees had heard the hype surrounding the World Wide Web and the Information Superhighway, few had any real concept of where or how it would affect them personally, let alone the enterprise as a whole. Early net initiatives were led by individual visionaries who broke away (or sneaked away) from the pack and established the first corporate beachheads on the Web.

Business and Organizational Models

Most early e-Commerce successes were startup companies with little if any presence in conventional markets. These pure Net plays built their reputations by aggregating content and wowing the market with numbers. Amazon.com rose to fame by becoming the world's biggest bookstore. eBay boasts millions of auctions every day. Content sites such as Time Warner's Pathfinder can post every story from every issue from every one of their magazines. e-Commerce was also the heyday of venture capital funding. Entrepreneurs with little experience could get access to working capital like never before as investors clamored to get in on the next big thing before its inevitable IPO. In the e-Business era, the startup crave has slowed and Fortune 1000 enterprises are leading the charge through business process aggregation. Still a bit unsure of where Net initiatives fit into their overall strategy, corporations will sometimes start new online commerce divisions only to spin them off. Alternately, many Fortune 1000 companies are signing long-term agreements with pure Net plays to leverage their own brand recognition with the startups' perceived technology and niche position. Finally, we are seeing dramatic consolidation among Net companies as traditional software companies spend exorbitant sums to round out their product lines with new Net offerings and position themselves as Web players. e-Enterprises, by contrast, will recognize that knowledge workers form the core for success on the Net. The role of the organizational model, or org model, in the e-Commerce phase depended on whether the enterprise considered itself primarily a player in conventional markets or a pure Net play. Traditional corporations had learned the lessons of horizontal integration and were primarily focused on internal functions for individual product lines and departments. Because developing an early Web-presence was typically inexpensive and wasn't considered much of a strategic move, corporations often delegated Web site design and maintenance to small internal IT teams. Startups often struggled to maintain an efficient org model through periods of dramatic growth and change. Many upstarts were entirely driven by the core founders, and maintained the loose models typical of young companies, even as they hired thousands of new employees and diversified into new and varied markets.

IT and Management processes

Because it was propelled by reactive rather than proactive forces, e-Commerce management was largely situation-driven. Managers were usually middle level employees with very little strategic responsibility. They focused on day-to-day projects that were designed, implemented, and rolled out one at a time. This led to a disjointed management view of e-Commerce initiatives. e-Business, on the other hand, is business process-driven. Executive managers-typically from a distinct e-Business division-focus on uniting single-point applications into large e-Business platforms that share information and data in real-time. Simultaneously, they maintain a long-term view of the business that envisions not only the next revision of an application, but also the overall goal and direction of Net initiatives. e-Enterprises won't be able to afford qualitative, hunch-based decision making for their strategy and application development. Instead, corporations will employ a methodology designed by industry experts. This process will be driven by methods, the creation and support of new business models, and continuously forecasting and measuring ROI on Net investments. The goal will be complete solutions on an enterprise-wide scale. These platforms will be completely integrated with existing processes and systems. The ubiquitous Web browser smashed barriers to entry on the Net and new toms sprung up left and right. Simultaneously, an ever-widening audience moved online and became prospective customers.

E-Enterprise Methodology: e-Visioning, e-Processes, and e-Application Modelings

Once the full engagement of the leadership team is ensured, the next thing required for a successful transition from e-Commerce to e-Business to e-Enterprise is an objective methodology for creating your e-Enterprise model. This, of course, begs the question: what exactly is an e-Enterprise model? According to industry magazine *Information Week*, a model is a representation of business concepts that can be validated that can be checked for rigor and robustness, that capture and communicate ideas, that can be changed, and that can provide 'what if' scenarios. e-Enterprise models should contain several primary components: business models, process models, application models, and application architecture. Each of these is driven by a combination of e-Vision and e-Strategy, which we describe later as the fundamental force behind e-Enterprise business and technology architectures. The concept of modeling within the enterprise isn't new. e-Visioning and e-Strategy is primarily about gathering and analyzing information to determine the overall focus and strategy of the enterprise. This creates the business model for the overall enterprise. Among other things, the business model outlines the required focus and priorities for strategic initiatives. An essential component of this stage is analyzing market trends to determine how your corporation's business model fits in and will compete in the marketplace. The foundation of any market analysis is a databank of customer information and behavior as well as information about competitors' positions in the marketplace and the directions they plan to take. Ultimately, you should define the target market for your goods and services through data collected from corporate and partner knowledgebase's, market research from analysts and experts, customer focus groups, surveys, and acknowledged industry trends. Another essential component of e-Visioning and e-Strategy is determining the e-Enterprise economic structure. Typically, this is a financial model that is based on a combination of predictable cost analysis-for example, staffing costs, distribution, and manufacturing-and also intangible costs. Intangible cost analysis incorporates qualitative assumptions and predictions about industry trends, customer acceptance of new products, and marketing program success. Process modeling begins once you're confident that the current iteration of e-Visioning and e-Strategy has produced an accurate and profitable business model for the

enterprise. During this stage, you examine and determine what type of processes can support the required enterprise business model. Once you've determined what type of e-Initiative you want to take, it's time to think about exactly what process model can support each initiative. Because process models are composed of business entities, use-cases, and process definitions, you first should define these in some detail. e-Application modeling involves the business design of application models that support the overall enterprise business models and processes. Examples of application models include cataloging, requisitioning engines, and shopping carts.

B-to-C e-Application Models

The first-and simplest-examples of B-to-C platforms were catalog-based retailers that began to display product information and take orders over the Net. For the most part, these pioneers aggregated and presented content in the same manner as in conventional print catalogs: product selection was typically limited to a single supplier, and order processing involved manually entering credit card numbers and customer shipping information into internal computer systems. Gradually, however, the Net became more than just brochureware, and multiple revenue models began to evolve for doing business with consumers online. The primary focus of most B-to-C e-Applications is generating revenue by selling goods and services. Another type of B-to-C initiative focuses on providing services that, although they don't directly generate revenue online, add value to traditional business models by improving interaction between retailers and customers to reduce costs. Shipping company Federal Express is a prime example. FedEx's core logistics business is largely unaffected by the Web. Shipping packages, after all, is done with delivery trucks, cargo planes, and freighters-all decidedly non-virtual forms of transportation. The most successful B-to-C e-Applications don't opt to only sell goods and services, build online content and communities, or reduce customer interaction costs. Instead, they do all three at once. No matter how they embrace these models, however, a few key drivers form a backbone for most B-to-C e-Applications. To succeed, B-to-C e-Applications must focus on com branding, building one-to-one relationships with customers, aggregating online communities of users, advertising both on the Net and in the conventional world, and providing unparalleled customer care.

- ***e-Tailing/consumer portals:*** e-Tailing/consumer portal applications are what most consumers widely associate with e-Commerce and B-to-C e-Applications. They aim to aggregate consumers, market goods and services, and make transactions from simple, static catalogs with mostly fixed prices.
- ***Bidding and auctioning:*** Bidding and auctioning sites sell products and services with non-traditional, flexible pricing models. Often, the host of the auction or bidding application is a third-party cybermediary who operates as a link between the buyer and the seller.
- ***Consumer care/customer management:*** Consumer care/customer management applications aim to provide services to customers that add value to either transactions that already have taken place or long-term customer relationships between the end user and the host of the application.
- ***Electronic bill payment (EBP):*** EBP applications streamline the process of collecting, presenting, and paying repetitive consumer charges such as credit card and other bills.

e-Applications that enable enterprises to sell goods and services to other businesses on the Net are referred to as *virtual marketplaces*. Superficially, virtual marketplaces share several common components with B-to-C e-Tailing environments; such as online catalogs of goods, marketing promotions, payment processing facilities, and post-sale customer care.

The Business Perspective: Intensity of e-Business Adoption

The organizational adoption of an innovation has been defined as the adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization. Researchers have examined innovation adoption antecedents both within and outside the business unit. Consistent with the "often unwritten assumption" that innovations benefit their adopters, businesses frequently adopt innovations to gain competitive advantages or capabilities. The literature on the organizational adoption of innovations has delineated specific business characteristics and conditions that facilitate such adoption. These include, but are not limited to, functional differentiation administrative intensity, external and internal communication, and vertical integration. An organization may adopt an innovation because it fears being left behind by other organizations that do so. During innovation diffusion, early adopters are more likely to seek efficiency and profit gains.. E-business adoption can impart greater scalability (defined as the ability to increase output without corresponding increases in the variable costs of achieving that output) to business processes. Therefore, larger business units could, ceteris paribus, derive greater returns from ebusiness investments. The SBU size variable (measured by the total number of SBU employees) is included to control for this effect. Firms are increasingly using multiattribute, multi-round procurement auctions that evaluate bids on cost and noncost criteria such as quality, lead time, contract terms, supplier reputation, and incumbent switching costs. Typically a scoring rule is announced for comparing bids that essentially reduces the multiple bid attributes to a single composite dimension. The reduced transaction costs and the ease of collecting information from and about individual bidders in an Internet auction make multi-round auctions more cost effective. They also make sophisticated auction designs more practical than is possible for offline auctions. The following criterias were studied

- The greater the top management emphasis on e-business, the greater the overall intensity of e-business adoption.
- At the business process level, the greater the top management emphasis on e-business, the greater the intensity of e-business adoption in (1) communications, (2) order taking
- The higher the organizational learning ability of a business, the greater the overall intensity of e-business adoption.
- At the business process level, the higher the organizational learning ability, the greater the intensity of e-business adoption in (1) communications, (2) order taking, and (3) procurement.
- The higher the customer orientation of a business, the greater the overall intensity of e-business adoption.
- At the business process level, the higher the customer orientation of a business, the greater the intensity of e-business adoption in the areas of (1) communication, (2) internal administration, and (3) order taking.
- The higher the competitor orientation of a business, the greater the overall intensity of e-business adoption.
- At the business process level, the higher the competitor orientation of a business, the greater the intensity of e-business adoption in the areas of (1) communications, (2) order taking
- The greater the customer power exercised in the context of e-business adoption, the greater the overall intensity of e-business adoption.
- At the business process level, the greater the customer powers in the context of e-business adoption, the greater the intensity of e-business adoption in the area of communications
- The higher the normative pressures from the competitive environment, the greater the overall intensity of e-business adoption.

National Control and Privacy Cost Limitations

Researchers define privacy in terms of protection from intrusion and information gathering, and control in terms of framing policies that provide privacy protection. They postulate that privacy is best defined in terms of restricted access, and is fundamentally about protection from intrusion and information gathering by others. Control, on the other hand, plays a critical role in the management of privacy and should be understood under that framework. They observe that virtually all societies establish normative private situations the details of these vary somewhat from culture to culture. Further, they recommend that e-commerce should be designated as an international zone of privacy. Internet is at a "crossroads" between the ability to collect and relate personal data, and the potential for misuse. Citing research, he also notes a common hesitancy for consumers to provide personal data, the common practice of providing erroneous data and marketing's increasing desire to utilize the potential for data analysis provided by new technology. Privacy is also defined as: "The right to be left alone", "the right to control", "the degree of access others have to us", "freedom from the judgment of others", and "a means for creating social context in relationships with others", consumer confidence must be established and maintained to get any value from the data obtained and manipulated by technology. On the common attitudes towards Privacy Cost, this may be important to ecommerce site developers and certainly refutes the common idea that privacy is dead. Most people waive their rights to privacy in order to be able to use the Internet. Clearly any waiving of rights is not done consciously.

Structural influences on global e-commerce, including financial (electronic payment systems, credit financing), legal and regulatory (consumer protection, taxes), national policies about promoting or regulating the Internet usage and e-commerce, space and logistics (home size, distance to shopping, transportation, warehousing), telecommunications, IT penetration and use, local business practices (purchasing, payment, financing), language, education, firm size, structure, and control systems, and industry concentration.. The structural conditions may vary widely across countries, and are not fully captured in measures of national culture. Businesses must identify national culture as influential on the acceptance of e-commerce, and know that nations may differ on controls and access to this technology. Businesses must also recognize that consumer attitudes about information technology may differ across nations.

Critical Success Factors

The following factors were implemented within the industry, this is especially encouraging to small businesses that seek to take advantage of Internet technology to expand their markets, better serve customers, reduce costs, and increase profitability.

- Allocate resources wisely
- Change business practices
- Study the customer
- Revise and evaluate results
- Servicing the online customer
- Quantifying the benefit of e-commerce
- Responding to the changing policies of business partners
- Increasing business-to-business revenue
- Thinking globally

Given the limited resources (both monetary and human) that most small businesses have, the ability to allocate these resources effectively becomes crucial. Benefits conveyed by e-commerce, particularly by streamlining order entry and fulfillment processes, reducing business steps, processing returns, cost savings, and automation of redundant tasks are the real contributions of e-commerce. E-commerce is not just a direct transfer from traditional business model to the electronic medium. A stream of research in e-commerce takes a consumer-oriented view to investigate what factors influence consumers' retail channel selection. Research points to the fact that those companies that consistently deliver the best online customer service also have the greatest gains in revenue per employee. Small businesses should not sacrifice customer service for the lack of resources. Outsourcing and other innovative and cost-effective ways to maintain high service quality should be considered, as keeping customers satisfied is the only way to long-term survival and profitability. However, these intangible benefits were hard to quantify. The inability to do that prevents the company from having an accurate evaluation on its return on investment and determining future investments for e-commerce. Engaging in IC requires a business to reevaluate its business model and value chain. E-business represents an integration of many businesses that are virtually connected to achieve a common goal. To amplify the benefits from these relationships, a business must stay on top of the changes in the policies and business practices of its many business partners, the key to e-business success is building a profitable e-business community, which closely links the business and its partners to create a unique business organism that breathes and prospers together. To stay competitive, a business must be able to quickly react to the changes in the policies of its business partners. It needs to work closely with its business partners to form the most profitable alliance for each party and nurture long-term business relationships.

B2B Implications

As B2B is becoming popular, companies are demanding new technologies, creating new opportunities for companies that can successfully predict what e-marketplaces will demand in the long term. Furthermore, the physical infrastructure of the Web (measured in terms of hosts, servers, Web pages, and the devices connecting users to the Web) has expanded substantially. The cost of going online is also decreasing as countries privatize and deregulate their telecommunications sector. Also, the shift toward Net Markets by many brick-and-mortar businesses brings light many significant back-end integration issues. This translates to huge revenue opportunities for technology and services enablers something that is becoming more evident as these marketplaces reach the next level of maturity. The threats facing B2B companies are vast as well. As e-Marketplaces and online trade are becoming an integral part of how industries operate, business on the Internet may experience a massive round of regulation. The success of e-marketplaces will spur greater oligopolizations in many industries. The emergence of e-Marketplace oligopolies will lead to renewed debate about whether the government should intervene in the market or simply regulate it to make sure that monopolies are not abused. Also, as traditional rivalries die hard, some participants may still distrust their competitors and worry about revealing too much information in the exchange. Another issue is that many of the software programs used by exchange participants are not compatible. Also, international B2B marketplaces face problems with conflicting currencies and language barriers. Another factor that may slow the development of B2B e-commerce is that even though the technology is available, corporate decision-makers may take longer than anticipated to embrace its benefits. The aim of this model is to shift power and value in the marketplace to the buyer's side. Such a model includes e-procurement, like Japan Airlines on the Web.

Decision Support Systems for B2B

As B2B is implemented, the next generation of computer systems must be considered "smart decision-support systems". These Decision Support Systems (DSS) are interactive systems that provide the user with easy access to decision models and data in order to support semi-structured and unstructured decision-making tasks. Within B2B, these decisions can be broken into categories: supply chain decisions, requirements determination, inventory decisions, and purchasing decisions. In the supply chain process, one of the many decisions that occur include "Who should we buy from and at what price?" Since such questions have an enormous impact on the outcome delivered by the supply chain, the quality of these decisions has a bigger effect at the bottom than any efficiencies that result from electronic transactions. In the age of B2B, the choice of the supplier and the resulting price is a decision that can be made by the system. The timely and accurate recognition of the need is an important area. Smart DSS can assist companies to plan their procurement and take advantage of savings by buying in volume or utilizing cheaper freight methods. For every stock code, there are a number of inventory related decisions. The combined effect of these decisions determines the required inventory investment by the organization as well as the magnitude of other inventory-related costs. Smart DSS can make these decisions automatically or recommend answers for review that can be implemented by uploading the optimized parameters to the main corporate system. The principle purchasing decision to be made is the choice of the supplier. This is often a complex decision that requires analysis of price, performance, and relationship

B2C and B2B e-commerce Differences

For one thing, the customers are different - B2B customers are other companies, while B2C customers are individuals. Overall, B2B transactions are more complex and have higher security needs. Beyond that, there are two big distinctions. Selling to another business involves haggling over prices, delivery, and product specifications. Not so with most consumer sales. That makes it easier for retailers to put a catalog online, and it's why the first B2B applications were for buying finished goods or commodities that are simple to describe and price. Retailers do not have to integrate with their customers' systems. Some ways companies have benefited from B2B e-commerce include:

- Managing inventory more efficiently
- Adjusting more quickly to customer demand
- Getting products to market faster
- Cutting the cost of paperwork
- Reigning in rogue purchases
- Obtaining lower prices on some supplies

B2C applies to any business or organization that sells its products or services to consumers over the Internet for its own use. However, in addition to online retailers, B2C has grown to include services such as online banking, travel services, online auctions, health information, and real estate sites. In the early days, groups that were separate from the main IT often led e-commerce initiatives. With so many sites out there, how can you build a strong relationship with customers? Here are some tips:

1. Focus on personalization
2. Create an easy-to-use customer service application
3. Focus on making your site easy to use

Conclusion

IC of small businesses is still in its infancy. The contribution of this research to the field lies in its specificity to small businesses seeking to profit from IC. The challenges facing the company can be generalized to apply to other businesses and can be used by business owners and managers to prepare for e-business concerns. The combination of the six critical success factors and six underlying challenges is a model with important implications for business owners, managers, and researchers. Internet commerce, while not being the panacea it was once considered, is here to stay. This paper has attempted to make two basic contributions. First, this paper has proposed a holistic, dynamic and dialectical conceptual framework of e-business. This study found that globalization and common technology have not resulted in common attitudes about e-commerce. It also uniquely revealed several interesting facts about the nature of globalization as perceived by various cultural groups and genders. This study found that culture influenced attitudes about e-commerce yet gender did not. However, and very important, culture played no role in influencing attitudes about Privacy Cost and Consumer Preference. This study found that U.S. e-commerce users were less tolerant of government control of the Web.

References

- [1] Algiers, S., M. Besser. (2001). Modeling Choice of flight and booking class-A study using stated preference and revealed preference data. *Internat. J Services Tech. Management* 2 pp. 28-45.
- [2] Anand, K. S., R. Aron. (2003). Group buying on the Web: A comparison of price-discovery mechanisms. *Management Sci.* 49(11) pp. 1547-1564.
- [3] Brynjolfsson, E., Y. Hu, M. D. Smith. (2003). Consumer surplus in the digital economy: Estimating the value of increased product variety at online booksellers.
- [4] Carayannis, E. & Sagi, J. (2001). Dissecting the professional culture: Insights from inside the IT "black box". *Technovation*, 21, pp. 91-98.
- [5] Datta, A., K. Dutta, H. Thomas, D. VanderMeer. (2003). World Wide Wait: A study of Internet scalability and cache-based approaches to alleviate it. *Management Sci.* 49(10) pp.1425-1444.
- [6] Geoffrion, A., R. Krishnan. (2003). E-Business and management science: Mutual impacts (Part 1 of 2). *Management Sci.* 49(10) pp. 1275-1286.
- [7] Kendall, K.E. (2000). Ecommerce aesthetics: Ecommerce for ecommerce's sake. *Information Resources Management Journal*, 13(3).
- [8] Keskinocak, P., S. Tayur. (2001). Quantitative analysis for Internet-enabled supply chains. *Interfaces* 31(2) pp. 70-89.
- [9] Lee, M. (2001). The adoption and diffusion of electronic commerce. Editorial. *Journal of Global Information Management*, 9(3), 3.
- [10] Rayport, J.F. & Jaworski, B.J. (2001). *E-Commerce*. New York: McGraw-Hill/ Irwin.
- [11] Smith, B. C., D. P. Gunther, B. V. Rao, R. M. Ratliff. (2001). E-Commerce and operations research in airline planning, marketing, and distribution. *Interfaces* 31(2) pp. 37-55.
- [12] Snir, E. M., L. M. Hitt.(2003). Costly bidding in online markets for IT services. *Management Sci.* 49(11).
- [13] Tavani, H. and Moor, J. (2001). Privacy protection, control of information, and privacy-enhancing technologies. *Computers and Society*, March, pp. 6-11.
- [14] Turban E., Lee, J., King, M., & Chung, H. (2000). *Electronic commerce: A managerial perspective*. NJ: Prentice Hall