Role of Electronic Commence in Business Environment

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Abstract

The use of e-commerce by business in developed countries has grown considerably in the past few years and at the same time the trend is coming in developing countries. While the private sector appears to be benefiting from this low-cost means of reaching consumers worldwide, the question remains: can e-commerce be used effectively by other sectors to generate revenue? This study explains how different e-commerce models and applications can be employed in the any type of sector. If the projections for the upcoming years concerning the growth of e-commerce are true, then it is important for different sectors to realize the opportunities available (keeping in mind SWOT) for generating revenue online and the opportunities emerging from this new internet plat form for development.

Keywords: E-commerce, e-commerce models, SWOT

Introduction

In the emerging global economy, e-commerce (electronic commerce) and e-business (electronic business) have increasingly becomea necessary component of business strategy and a strong catalyst for economicdevelopment. The integration of information and communications technology in business has revolutionized relationships within organizations and those betweenand among organizations and individuals. Specifically, the use of information and communications technology in businesshas enhanced productivity, encouraged greater customer participation, and enabledmass customization, besides reducing costs.

With developments in the internet and web-based technologies, distinctions betweentraditional markets and the global electronic marketplace-such as businesscapital size, among others-are gradually being narrowed down. The name of thegame is strategic positioning, the ability of a company to determine emerging opportunitiesand utilize the necessary human capital skills (such as intellectual resources) to make the most of these opportunities through an e-business strategy that is simple, workable and practicable within the context of a global informationmilieu and new economic environment. With its effect of leveling the playing field, e-commerce coupled with the appropriate strategy and policy approach enablessmall and medium scale enterprises to compete with large and capital-rich businesses.

Commence: Notwithstanding the technologies that are involved, undertaking commerce can be associated with one of the four types of exchange: bargaining, bidding, auctioning, and clearing [1]. The first two types of exchange are bilateral and the last two types of exchange are trilateral (that is, a third party intervenes).

- Bargaining involves one user that negotiates with a provider until an agreement between both is reached. First, the user looks for a provider, browses their products, and then negotiates with the provider for an agreement. If the negotiation fails, the user continues searching for other providers until an agreement with one of them is reached

- Bidding involves one user and several providers. First, the user calls for bids. Next, the user compares the offers that providers have submitted after receiving the call for bids. Finally, the user selects the provider that has made the lowest offer (that is, the offer that minimizes the user's expense).
- Auctioning (English scenario) involves one provider, several potential users, and one broker. First, the provider fixes the lowest price of the product. Through the broker, the provider advertises their products and calls for auctions. Next, the different users respond to the call for auctions by making offers to the broker. Acting on the provider's behalf, the broker selects the user who has made the highest offer regarding the first offer of the provider (that is, the user's offer maximizes the provider's income). Besides the English scenario of auctioning, Dutch and Vickrey also exist as additional scenarios of auctioning.
- Clearing involves several users, several providers, and one broker. Users and providers submit their respective requests to the broker in terms of needs to satisfy for the users and services to offer for the providers. The role of the broker is to match needs to services. If there is a successful match, the broker notifies both users and providers about the match. As soon as they are informed, users and providers start interacting together, bypassing the broker.

Electronic Commerce: Electronic commerce has become one of the most popular tools to gain competitive advantages over other organizations. It is being used to develop new markets, interact with customers, communicate with trading partners, and primarily to increase sales [2, 3].

In recent times, to enhance the efficiency and effectiveness of their business environment, some organizations use electronic business to rebuild their business strategy and transform a traditional business practice into a new application, which facilitates transfer of information among the organization's stakeholders [4]. At present, electronic commerce has already been implemented by several organizations. Electronic business has been used to carry out business strategies. However, the nature of their applications is different in terms of characteristics and implementation. To develop a complete organizational application, which includes business-to-consumer electronic commerce, business-to-business electronic commerce, and electronic business, organizations should pay attention to some common and specific factors before implementing the system [5].

E-commerce is a concept which means that the sales purchase or exchange of goods and services or information isby using a computer network, including the internet. With respect to communication, it is to provide information, services, payment and product using computer networks, telephone networks and other electronic means. In electronic commerce organization use electronic tools such as file transfer, fax, video conferencing, electronic data exchange (EDI) and file transfer etc. In the past, trade is carry on with the physical presence of buyer and sellers but now a day with the technological advancement, it is not necessary for both to appear physically at the market place. The invention of telecommunication network means i.e. internet, web technologies and other electronic devices makes easy the business as well as facilitate the both (business and customers). Buyer of product and services can online order the product by using internet without physically appearing to that shop or office and seller deliver that product according to the order. Through this buyer save its time as well as transportation, cost and seller build a strong relationship with the customer and got the list of customers as well as manage the inventory.

Electronic commerce or e-commerce refers to a wide range of online business activities for products and services [6]. It also pertains to "any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact" [7]. E-commerce is usually associated with buying and selling over the internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network [8]. Though popular, this definition is not comprehensive enough to capture recent developments in this new and revolutionary business phenomenon. A more complete definition is: E-commerce is the use of electronic communications and digital information processing technology inbusiness transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals [9]. Table 1 show difference between traditional commerce and e-commerce.

Table 1: Difference between traditional commerce and e-commerce

Traditional Commerce	E-Commerce
Heavy dependency on information exchange from person to person.	Information sharing is made easy via electronic communication channels making little dependency on person to person information exchange.
Communication/transaction are done in synchronous way.	Communication or transaction can be done in asynchronous way.
Manual intervention is required for each communication or transaction.	Electronics system automatically handles when to pass communication to required person or do the transactions.
It is difficult to establish and maintain standard practices in traditional commerce.	A uniform strategy can be easily established and maintain in e-commerce.
Communications of business depends upon individual skills.	In e-commerce or Electronic market, there is no human intervention.
Unavailability of a uniform platform as traditional commerce depends heavily on personal communication.	E-commerce website provides user a platform where all information is available at one place.
No uniform platform for information sharing as it depends heavily on personal communication.	E-commerce provides a universal platform to support commercial/business activities across the globe.

E-business: On the other hand, information and communications technology is used to enhance one's business. It includes any process that a business organization (either a for-profit, governmental or a non-profit entity) conducts over a computer-mediated network. A more comprehensive definition of e-business is: "The transformation of an organization's processes to deliver additional customer value through the application of technologies, philosophies and computing paradigm of the new economy." Three primary processes are enhanced in e-business [10] are as follows.

- *Production processes*, which include procurement, ordering and replenishment of stocks; processing of payments; electronic links with suppliers; and production control processes, among others;
- *Customer-focused processes*, which include promotional and marketing efforts, selling over the Internet, processing of customers' purchase orders and payments, and customer support, among others; and
- *Internal management processes*, which include employee services, training, internal information sharing, video-conferencing, and recruiting. Electronic applications enhance information flow between production and sales forces to improve sales force productivity. Workgroup communications and electronic publishing of internal business information are likewise made more efficient [11].

Objectives of Study

- To study different types of e-commerce
- To understand role of e-commerce in business environment
- To analyse the strengths, weaknesses, opportunities and threats for e-commerce

Different Types of E-Commerce

The major different types of e-commerce are: business-to-business (B2B), business-to-consumer (B2C); business-to-government (B2G), consumer-to-consumer (C2C), and mobile commerce (m-commerce).

(i) B2B e-commerce:

B2B e-commerce is simply defined as e-commerce between companies. This is the type of e-commerce that deals with relationships between and among businesses. About 80% of e-commerce is of this type, and most experts predict that B2B e-commerce will continue to grow faster than the B2C segment.

The B2B market has two primary components: e-frastructure and e-markets. E-frastructure is the architecture of B2B, primarily consisting of the following [12]:

- Logistics - transportation, warehousing and distribution (e.g., Procter and Gamble);
- Application service providers-deployment, hosting and management of packaged software from a central facility (e.g., Oracle and Linkshare);
- Outsourcing of functions in the process of e-commerce, such as Web-hosting, security and customer care solutions (e.g., outsourcing providers such as eShare, NetSales, iXL Enterprises and Universal Access);
- Auction solutions software for the operation and maintenance of real-time auctions in the Internet (e.g., Moai Technologies and OpenSite Technologies);
- Content management software for the facilitation of Web site content management and delivery (e.g., Interwoven and ProcureNet); and
- Web-based commerce enablers (e.g., Commerce One, a browser-based, XMLenabled purchasing automation software).

E-markets are simply defined as Web sites where buyers and sellers interact with each other and conduct transactions [10].The more common B2B examples and best practice models are IBM, Hewlett Packard (HP), Cisco and Dell. Cisco, for instance, receives over 90% of its product orders over the Internet.

Most B2B applications are in the areas of supplier management (especially purchase order processing), inventory management (i.e., managing order-ship-bill cycles), distribution management (especially in the transmission of shipping documents), channel management (i.e., information dissemination on changes in operational conditions), and payment management (e.g., electronic payment systems or EPS) [13]. Figure 1 show flow chart for business to business e-commerce model.

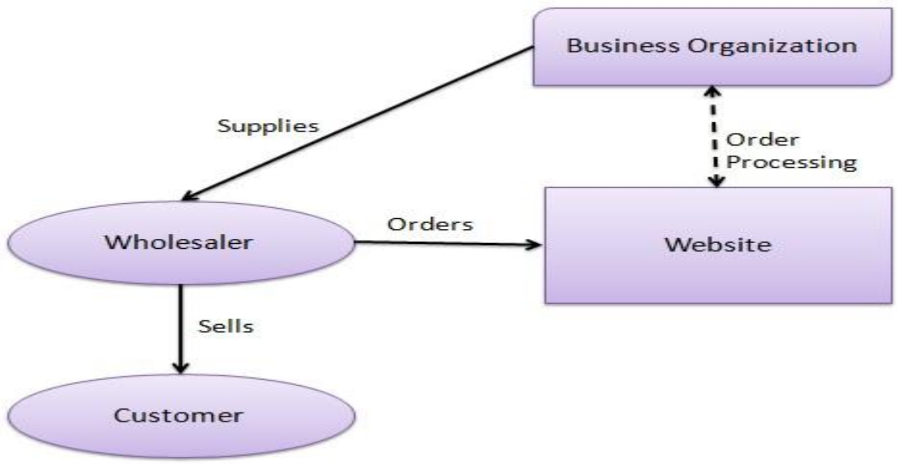

Figure 1. Flow chart for business-to-business e-commerce model

(ii) B2C e-commerce:

Business-to-consumer e-commerce, or commerce between companies and consumers, involves customers gathering information; purchasing physical goods (i.e., tangibles such as books or consumer products) or information goods (or goods of electronic material or digitized content, such as software, or e-books); and, for information goods, receiving products over an electronic network [14].

It is the second largest and the earliest form of e-commerce. Its origins can be traced to online retailing (or E-tailing). Thus, the more common B2C business models are the online retailing companies such as Amazon.com, Drugstore.com, Beyond.com, Barnes and Noble and ToysRus. Other B2C examples involving information goods are E-Trade and Travelocity.

The more common applications of this type of e-commerce are in the areas of purchasing products and information, and personal finance management, which pertains to the management of personal investments and finances with the use of online banking tools (e.g., Quicken) [15]. Figure 2 show flow chart for business to consumer e-commerce model.

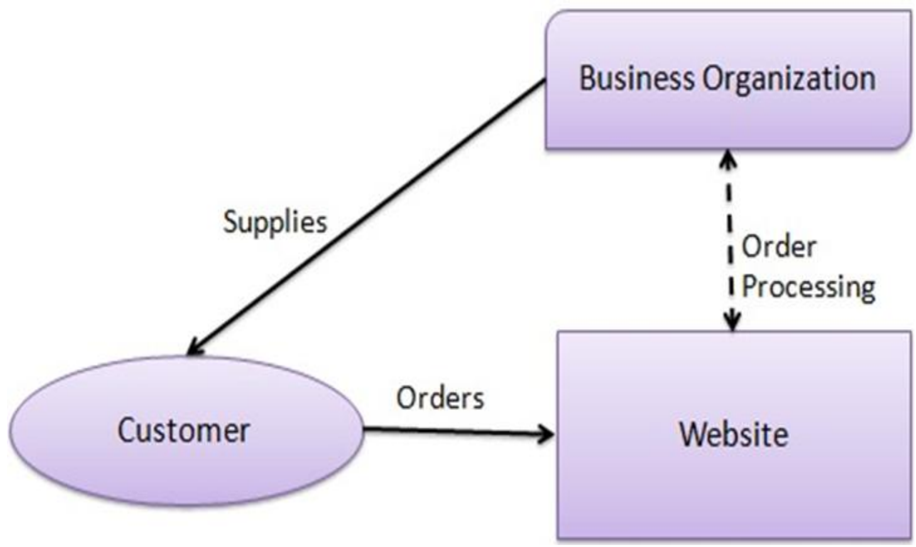

Figure 2. Flow chart for business to consumer e-commerce model

B2C e-commerce reduces transactions costs (particularly search costs) by increasing consumer access to information and allowing consumers to find the most competitive price for a product or service. B2C e-commerce also reduces market entry barriers since the cost of putting up and maintaining a Web site is much cheaper than installing a "brick-and-mortar" structure for a firm. In the case of information goods, B2C e-commerce is even more attractive because it saves firms from factoring in the additional cost of a physical distribution network. Moreover, for countries with a growing and robust Internet population, delivering information goods becomes increasingly feasible.

(iii) B2G e-commerce:

Business-to-government e-commerce or B2G is generally defined as commerce between companies and the public sector. It refers to the use of the Internet for public procurement, licensing procedures, and other government-related operations. This kind of e-commerce has two features: first, the public sector assumes a pilot/leading role in establishing e-commerce; and second, it is assumed that the public sector has the greatest need for making its procurement system more effective [16]. Web-based purchasing policies increase the transparency of the procurement process (and reduces the risk of irregularities). To date, however, the size of the B2G ecommerce market as a component of total e-commerce is insignificant, as government e-procurement systems remain undeveloped. Figure 3 show flow chart for business to government e-commerce model.

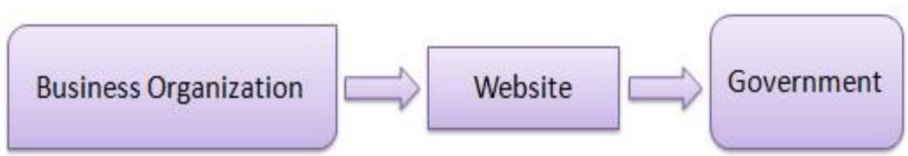

Figure 3. Flow chart for business-to-government e-commerce model

(iv) C2C e-commerce:

Consumer-to-consumer e-commerce or C2C is simply commerce between private individuals or consumers.This type of e-commerce is characterized by the growth of electronic marketplaces and online auctions, particularly in vertical industries where firms/businesses can bid for what they want from among multiple suppliers [17]. It perhaps has the greatest potential for developing new markets. Figure 4 show flow chart for consumer to consumer e-commerce model.

This type of e-commerce comes in at least three forms:

- Auctions facilitated at a portal, such as eBay, which allows online real-time bidding on items being sold in the Web;
- Peer-to-peer systems, such as the Napster model (a protocol for sharing files between users used by chat forums similar to IRC) and other file exchange and later money exchange models; and
- Classified ads at portal sites such as Excite Classifieds and eWanted (an interactive, online marketplace where buyers and sellers can negotiate and which features “Buyer Leads and Want Ads”).

(v) C2B e-commerce:

Consumer-to-business (C2B) transactions involve reverse auctions, which empower the consumer to drive transactions. A concrete example of this when competing airlines gives a traveler best travel and ticket offers in response to the traveler’s post that she wants to fly from New York to San Francisco. There is little information on the relative size of global C2C e-commerce. However, C2C figures of popular C2C sites such as eBay and Napster indicate that this market is quite large. These sites produce millions of dollars in sales every day. Figure 5 show flow chart for consumer to business e-commerce model.

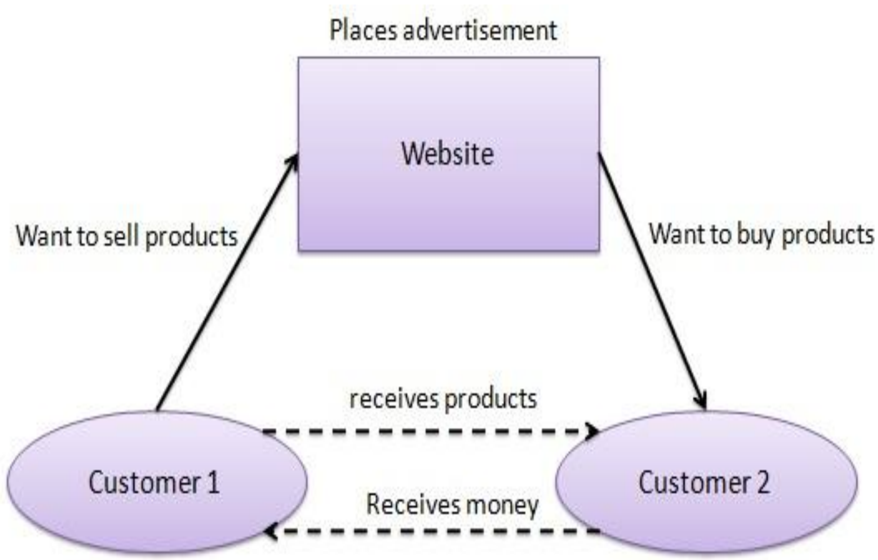

Figure 4. Flow chart for consumer-to-consumer e-commerce model

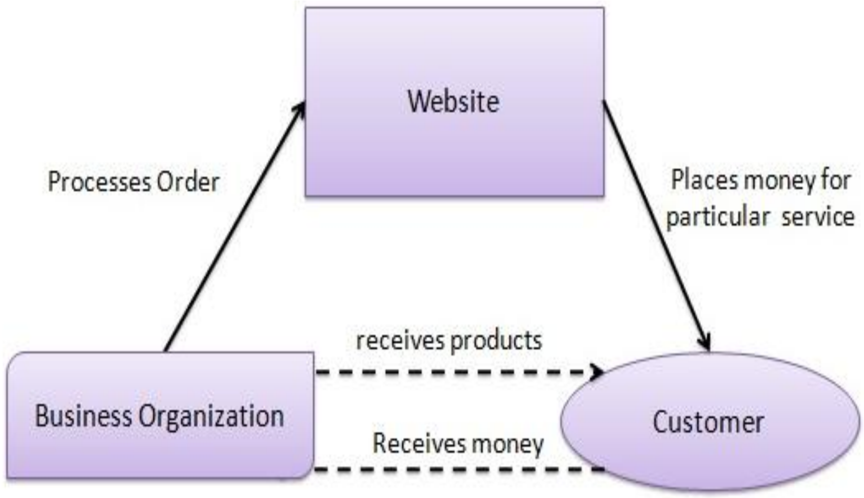

Figure 5. Flow chart for consumer to business e-commerce model

(vi) M-commerce:

M-commerce (mobile commerce) is the buying and selling of goods and services through wireless technology-i.e., handheld devices such as cellular telephones and personal digital assistants (PDAs). Japan is seen as a global leader in m-commerce. As content delivery over wireless devices becomes faster, more secure, and scalable, some believe that m-commerce will surpass wireline e-commerce as the method of choice for digital commerce transactions. This may well be true for the Asia-Pacific where there are more mobile phone users than there are internet users. Industries affected by m-commerce include following.

- Financial services, including mobile banking (when customers use their handheld devices to access their accounts and pay their bills), as well as brokerage services (in which stock quotes can be displayed and trading conducted from the same handheld device);
- Telecommunications, in which service changes, bill payment and account reviews can all be conducted from the same handheld device;
- Service/retail, as consumers are given the ability to place and pay for orders on-the-fly; and
- Information services, which include the delivery of entertainment, financial news, sports figures and traffic updates to a single mobile device [18]

SWOT Analysis

Evaluating Business Unit Opportunities

Now that we have learned how to identify industry value chains and break each value chain down into strategic business units, we can learn one popular technique for analyzing and evaluating business opportunities. Most electronic commerce initiatives add value by the reducing transaction cost, creating some type of network effect, or a combination of both. In SWOT analysis (the acronym is short for Strengths, Weaknesses, Opportunities and Threats), the analyst first looks into the business unit to identify its strengths and weaknesses. The analyst then reviews the environment in which the business unit operates and identifies opportunities presented by that environment and the threats posed by that environment. As shown in the Table 2 and Figure 6, which shows the questions that, an analyst would ask in conducting a SWOT analysis.

Table 2: SWOT Analysis Questions

Strengths	Weaknesses
▪ What does the company do well? ▪ Is the company strong in its market? ▪ Does the company have a strong sense of purpose and the culture to support that purpose?	▪ What does the company do poorly? ▪ What problems could be avoided? ▪ Does the company have serious financial liabilities?
Opportunities	**Threats**
▪ Are industry trends moving upward? ▪ Do new markets exist for the company's products/services? ▪ Are there new technologies that the company can exploit?	▪ What are competitors doing well? ▪ What obstacles does the company face? ▪ Are there troubling changes in the company’s business environment (technologies, laws, and regulations)?

By considering all of the issues that it faces in a systematic way, a business unit can formulate strategies that will take advantage of its opportunities by building on its strengths, avoiding any threats, and compensating for its weaknesses. In the mid-1990s, Dell Computer used a SWOT analysis to create a strong business strategy that has helped it become a very strong competitor in its industry value chain. Dell identified its strengths in selling directly to customers and in designing its computers and other products to reduce manufacturing costs. It acknowledged the weakness of having no relationships with local computer dealers. Dell faced threats from competitors such as Compaq and IBM, both of which had much strong brand names and reputations for quality at that time. Dell identified an opportunity by noting that its customers were becoming more knowledgeable about computers and could specify exactly what they wanted without having Dell salespersons answer questions or develop configurations for them. It also saw the Internet as a potential marketing tool. The results of Dell’s SWOT analysis appears in Table 3.

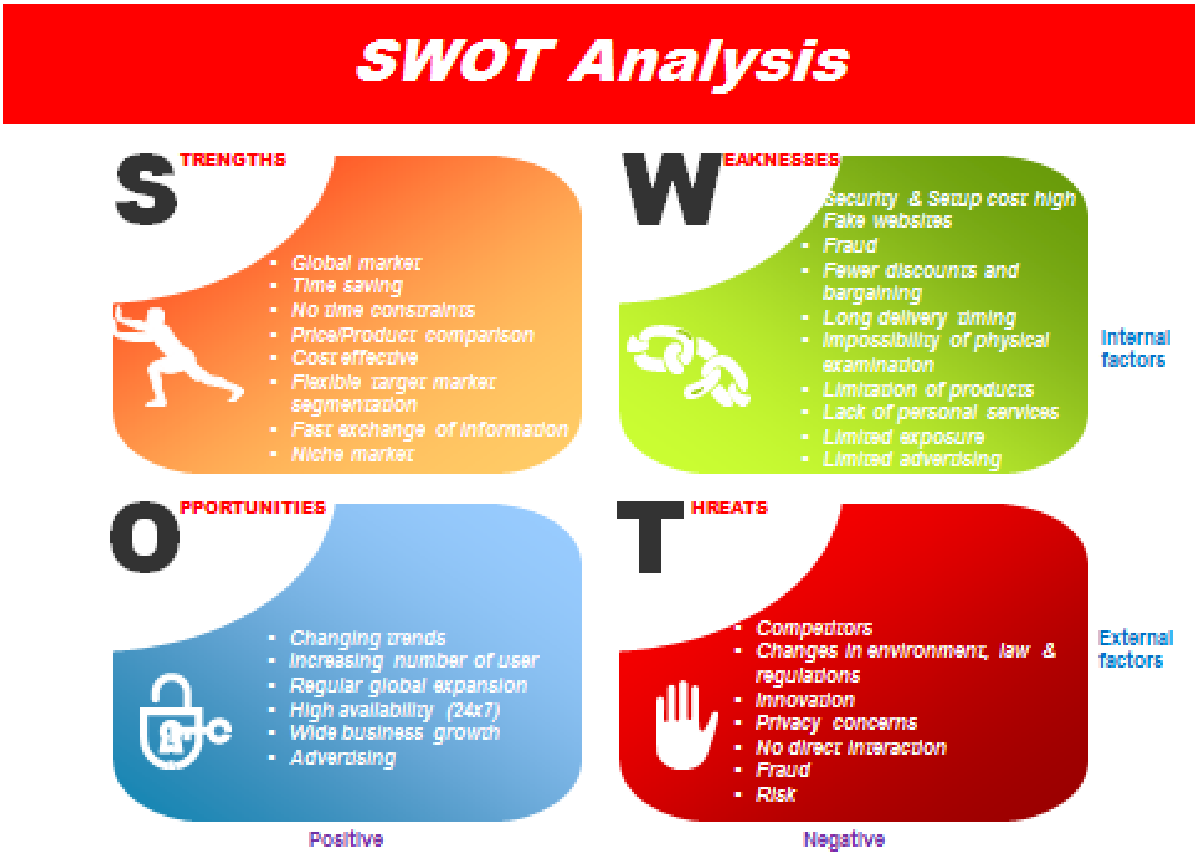

Figure 6: SWOT analysis internal and external factors

Table 3: Results of Dell's SWOT Analysis

Strengths	Weaknesses
➢ Sell directly to consumers ➢ Keep costs below competitors' costs	➢ No strong relationships with computer retailers
Opportunities	**Threats**
➢ Consumer desire for one-stop shopping ➢ Consumers know what they want to buy ➢ Internet could be a powerful marketing tool	➢ Competitors have stronger brand names ➢ Competitors have strong relationships with computer retailers

The strategy that Dell followed after doing the analysis took all four of the SWOT elements into consideration. Dell decided to offer customized computers built to order and sold over the phone, and eventually, over the Internet.

Dell's strategy capitalized on its strengths and avoided relying on a dealer network. The brand and quality threats posed by Compaq and IBM were lessened by Dell's ability to deliver higher perceived quality because each computer was custom made for each buyer

E-Commerce Advantages and Disadvantages [19]

E-Commerce Advantages for Customers

- *Convenience.* Every product is at the tip of your fingers on the internet, literally. Type in the product you are looking for into your favorite search engine and every option will appear in a well-organized list in a matter of seconds.
- *Time saving* With e-commerce there is no driving in circles while looking and digging in hopes of finding what you need. Stores online offer their full line as well as use warehouses instead of store fronts-products are easy to locate and can be delivered to your door in just days.
- *Options, options, options!* Without driving from store to store the consumer can easily compare and contrast products. See who offers the best pricing and have more options to choose from. While a physical store has limited space, the same store on the internet will have full stock.
- *Easy to compare.* Side by side comparisons are readily available and easy to do. When products are placed online, they come with all the specifics, and they *want* you to compare them with others, know they have the best options and come back for more!
- *Easy to find reviews.* Because the competition is high, companies online want you to look at other consumer reviews. Good and bad reviews are on every site, not only can you see if the product is liked, you can also see the reasons behind the thumbs up or down.
- *Coupons and deals.* With every online business wanting you, more and more coupons and deals can't be avoided, which are totally great for customers. With major sites that act as department store, you may find items up to 80% off! Take advantage of the competition and find the best price available.

E-Commerce Advantages for Businesses

- *Increasing customer base.* The customer base is every business's main concern, online or off. When online, a business doesn't have to worry about getting the best property in town, people from around the world have access to their products and can come back at any time.
- *Rise in sales.* By not managing a storefront, any business will have more sales online with a higher profit margin. They can redistribute money to make the consumer shopping experience faster and more efficient. While being available to international markets, more products will sell.
- *24/7, 365 days* If it's snowing and the roads are closed, or it's too hot and humid to even step outside in the summer, or a holiday that every store in town closes, your online business is open for consumers 24/7 every day of the year. The doors never close and profits will keep rising.
- *Expand business reach.* A great tool on the internet is…translation! A business online does not have to make a site for every language. With the right marketing, every consumer around the globe can find the business site, products and information without leaving home.

- *Recurring payments made easy.* With a little research, every business can set up recurring payments. Find the provider that best suits your needs and billing will be done in a consistent manner; payments will be received in the same way.
- *Instant transactions.* With e-commerce there is no more waiting for the check to clear, or a 30-day wait for certain other types of payment. Transactions are cleared immediately or at most two to three days for the money to clear through the banking system.

E-Commerce Disadvantages for Customers

- *Privacy and security.* Before making instant transactions online, be sure to check the sites certificates of security. While it may be easy and convenient to shop, no one wants their personal information to be stolen. While many sites are reputable, always do your research for those with less than sufficient security.
- *Quality.* While e-commerce makes everything easily accessible, a consumer cannot actually touch products until they are delivered to the door. It is important to view the return policy before buying. Always make sure returning goods is an option.
- *Hidden costs.* When making purchases, the consumer is aware of the product cost, shipping, handling and possible taxes. Be advised: there may be hidden fees that won't show up on your purchasing bill but will show up on your form of payment. Extra handling fees may occur, especially with international purchases.
- *Delay in receiving goods.* Although delivery of products is often quicker than expected, be prepared for delays. A snowstorm in one place may throw off the shipping system across the board. There is also a chance that your product may be lost or delivered to the wrong address.
- *Need access to internet.* Internet access is not free, and if you are using free wifi, there is the chance of information theft over an unsecure site. If you are wearing of your public library, or cannot afford the internet or computer at home, it may be best to shop locally.
- *Lack of personal interaction.* While the rules and regulations of each e-commerce business is laid out for you to read, there is a lot to read and it may be confusing when it comes to the legalities. With large or important orders, there is no one you can talk to face to face when you have questions and concerns.

E-Commerce Disadvantages for Businesses

- *Security issues.* While businesses make great efforts to keep themselves and theconsumer safe, there are people out there that will break every firewall possible to get the information they want. We have all seen recently how the biggest and most renown business can be hacked online.
- *Credit card issues.* Many credit card businesses will take the side of the consumer when there is dispute about billing-they want to keep their clients, too. This can lead to a loss for e-commerce business when goods have already been delivered and the payment is refunded back to the consumer.
- *Extra expense and expertise for e-commerce infrastructure.* To be sure an online business is running correctly, money will have to be invested. As an owner, you need to know transactions are being handled properly and products are represented in the most truthful way. To make sure you get what you need, you will have to hire a professional to tie up any loose ends.

- *Needs for expanded reverse logistics.* The infrastructure of an online business must be on point. This will be another cost to the business because money will need to be invested to ensure proper handling of all aspects of buying and selling, especially with disgruntled consumers that want more than a refund.
- *Sufficient internet service.* Although it seems that everyone is now on the internet all the time, there are still areas in which network bandwidth can cause issues. Before setting up an e-commerce business, be sure your area can handle the telecommunication bandwidth you will need to run effectively.
- *Constant upkeep.* When a business has started as e-commerce, they must be ready to make changes to stay compatible. While technology grows, the systems that support your business must be kept up to date or replaced if needed. There may be additional overhead in order to keep databases and applications running.

Summary

E-commerce is still commerce and still about human beings. Customers are still customers and merchants want people at their end. They send confidential, personal and financial information only by e-mail or can cash on the phone or might just prefer to visit in person. E-commerce is just only a new way of doing business or an additional method of doing business. It is a new generation technology, a new method of doing business with new generation technology. Still, there are many drawbacks which fail to benefit the users of technology to a great extent.

E-commerce is to be viewed as business but not as a technology issue. It must be business driven but not information technology driven and initiatives must be integrated thoroughly into the existing commerce structure and strategy.

Conclusion

- A developing country can be rationalized and mechanized if it introduces E-commerce effectively and efficiently. It will enhance its output and gives competitive advantage.
- Information technology (IT) has boosted ecommerce worldwide. Now it's easier to enter to a new market and one can evaluate his/her product and company's performance. It reduces business overhead and enhances business management. There are definitely several positive and negative opportunities that ecommerce has brought on in the past couple years.
- Globalization is an important aspect of ecommerce, as it is a result of online communications.
- It can be concluded that e-commerce has undeniably become an important part of our society.

Recommendations

- The government must be convinced of using this technology in the business environment in order to achieve its aims (e.g. sustainable development).
- The government also has a critical role in paving the way for the practical implementation and utilization of the technology.
- Electronic payment systems must ensure inter-operability in a global environment. Standards must be developed and implemented on the national level, but must be compatible with the global level.

- There are also numerous legal issue to be determined. Privacy, liability intellectual property protection and security are all major questions to be undertaken, breaking new frontiers in "traditional" legislature.
- Approaches to enforcement of contracts must be changes; governments should establish a predictable and simple legal environment based on a decentralized contractual model of law rather than one based on top-down regulations.
- The appropriate liberalized telecommunications and information infrastructure must exist to ensure suitable market access.
- Private sector investment, promoting and preserving competition, implementing independent flexible regulation and guaranteeing non-discriminatory user-access and open access must be encouraged. Technical standard needs to be determined to guarantee interoperability.
- Governance should be bottom-up. The government should act as a coordinator between the private and public sector, but giving the private sector "the upper hand" so to speak. Finally, consumers, user and business awareness of and confidence in e-commerce must be established
- Moreover, the government must have a non-regulatory, but supervisory, role when needed e.g. government intervention concerning consumer protection, providing a transparent and predictable legal environment, granting a " seal of credibility" when needed in establishing " trust" among e-commerce partners in the cyberspace.
- To ensure e-commerce success, financial and regulatory issues must be tackled. E-commerce defined simply as electronic delivery of a product or service implies that customs and taxation regulations must be altered.

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