

E-commerce and Its Impact on the Accounting Profession

A Literature Review

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Abstract

Issues concerning e-commerce are increasing as more companies are developing a web presence and conducting business on the Internet. Convenience and money are prompting consumers to shop online. The accounting profession is affected in many dimensions by e-commerce. Management accountants must be aware of the company's strategy and how the Internet fits into the company's business. They must also be able to integrate accounting software that can track sales orders and customer data. Internal auditors must understand the laws relating to sales and ensure the company website is secure and trustworthy. Web assurance services are available that assure customers about the security and features of a website. These services create new opportunities for CPAs and licensed accounting firms. Tax issues are also emerging that governments and tax professionals must resolve.

The increased technology and change in which global business is conducted will expand accountants' duties and offer new challenges. Accountants must be informed about various e-commerce strategies in order to advise management on the best and most profitable way to enter into the world of e-commerce. The Internet and e-commerce will only continue to grow as security is enhanced and consumers become more trusting of its services and benefits.

Introduction

E-commerce began during the 1970's. The availability of credit cards, overnight delivery and mail order catalogs began the shop at home concept. The Internet has furthered this by changing from an information tool to a shopping alternative. Consumers who shop on the Internet do so because they desire convenience, choice, information, and value. An organization that chooses to participate in the electronic market must look at its information technology (IT) capabilities and knowledge of the electronic market and the company's efficiency. There are two types of businesses that use electronic marketing: the expert and the passive. The experts are the firms who have reengineered their business to function effectively in the electronic market. The passives are the firms who have a presence but do not conduct business in the electronic market. As the use of the internet to shop rises, retail markets must continue to monitor their business online and take advantage of ways that can increase security of transactions and build consumer trust (Martin 2002).

As evidence that the use of e-commerce is increasing and becoming more popular, *CMA Management* conducted a reader survey on various topics of interest. The magazine found that "almost 80 percent of the respondents' companies have a Web site" (Demers 2002). They also found that 35 percent of the companies are involved in e-commerce (Demers 2002).

The following articles summarize various issues companies are facing with e-commerce and the Internet. The increased responsibilities of various accounting positions, including internal auditors, management accountants, and tax accountants, are discussed, as well as, how a web presence can help a company expand its business and customer base while still maintaining security and customer privacy. Two case studies provide some advantages and disadvantages of e-commerce and conducting business over the Internet.

International Coverage

Two news articles discuss recent events in e-commerce. In 2001, the United States, along with 12 other countries, launched a website designed to combat online fraud and improve the public's confidence in engaging in cross-border business over the Internet. This website, econsumer.gov, is a multilingual Web site that allows consumers to obtain information concerning relevant laws and agencies for avoiding fraud. The website also allows consumers to submit complaints online ("News Digest" 2001). The WebTrust program for OnLine Privacy was started in 2000 when the American Institute of Certified Public Accountants (AICPA) joined with over 200 accounting firms. This new program inspects businesses to ensure their compliance with international privacy laws, regulations, and standards. The WebTrust Program acts in accordance with the guidelines and regulations of the OECD, the European Union, and the Global Business Dialogue for E-commerce ("E-commerce news" 2000).

Even with the growth and development of the Internet and e-commerce, not every country has the web presence like the U.S. The infrastructure of e-commerce varies widely across countries and all are behind the United States. U.S. websites dominate the international market in visits and sales. The main reasons for these differences are the environments of the other countries. Different legal, political, and cultural environments cause different purchasing behaviors and attitudes regarding e-commerce. Some countries' traditions and culture do not support the amount of web presence that is found in the U.S. Countries also have a preference bias when it comes to buying items. This is called the "country-of-origin" effect and means the perception that one country has of another country will affect their perception of that country's products and thus, their buying behavior (Ulgado 2002).

Developing a Web Presence

A multitude of companies are taking advantage of the internet and e-commerce to sell their products and services. Before companies begin selling over the Internet, they should develop a web presence. Starting out with an e-business can use too many resources and only turn a small profit. Gaining an understanding of your business and customers and using this to attract customers online is an important step in becoming a successful company online. First, the company must select and purchase a domain name and then design the site. There is a lot of help and assistance available from internet service providers and accounting software suppliers (Meall 2002). A company should look for a quality company that can offer assistance to make its web presence a success.

Developing a company website can be a difficult task, especially for small companies who have little e-commerce experience. A business and marketing consulting firm has developed a site to help small and medium sized companies who want to establish an e-commerce presence. G2-group.net has launched www.internetstrategy.ca to offer free, on-demand Webcast seminars to small and medium sized enterprises in Canada. This Webcast offers assistance to companies “in conducting focused strategic planning before launching or expanding an Internet initiative” (Demers 2003). The seminar includes sessions on strategies for a Web presence, integrating online and offline branding, e-commerce business models and implementation, and strategic selling and database marketing. These tools can help companies who have various degrees of knowledge of the Internet. The seminars also discuss subjects like integrating customer relationship management (CRM) and online procurement into a company’s business process (Demers 2003).

The demographics of Internet shoppers are changing and businesses have to market their products to appeal to this new customer. The number of households shopping online has

increased and now over half are female. More middle income families are also using the Internet, mostly as a result of the prices available and convenience offered from shopping online. The fastest growing group are older individuals; however, this group is underrepresented (Fuscaldo 2003). Companies must be aware of the demographics of people who are shopping from them in order to effectively market their products and make advertisements that will appeal to their target market.

Developing a Web Business

The *American Bankers Association* (2002) reports that e-commerce is not a passing fad. Projects are growing and online banking is also growing. E-commerce today is used to streamline a company's operations beyond traditional business practices. Banks are using the internet to offer tools such as cash management, credit evaluation, and links to lines of credit and escrow services. Various web projects are popping up that are sponsored by banks and offer useful services, such as ordering foreign currency and traveler's checks. These new projects are likely to continue to grow as people see the convenience of the internet and are assured regarding safe transactions.

The Application Service Provider (ASP) marketplace continues to grow as companies obtain ASPs for developing their business on the web. An ASP is "a business that delivers and manages applications and computer service from remote data centers to multiple users via the Internet or a private network" (Burstiner 2003). The consumer maintains ownership of the data that is stored on ASP servers. Fees for the service are usually based on the amount of usage. ASPs are typically used in three areas of a business's information technology: enterprise resource management, human resources, and sales-related applications. There are both advantages and disadvantages to consider when looking into Application Service Providers. The

main reasons companies choose ASPs are flexibility and agility. They also have “shorter implementation schedules and more flexible human resource allocations.” They allow the company to increase the productivity of its information technology resources by lowering development costs and shortening implementation time for new software applications. ASPs offer one-stop shopping and support, lower capital investment for software, and lower cost of entry. Some disadvantages that exist include the risks of sending confidential data to offsite locations. Many companies have concerns over the privacy, communications, ownership, and financial stability of an ASP. These are items the company should investigate before hiring an ASP. The offering of standardized applications may also be a concern for some companies who have individual requirements.

When considering whether or not to use an ASP, the company should determine if it meets its short-, mid-, and long-term goals. The culture and employees of the company should also be considered to determine if the service meets the needs of the company. The capabilities of the business’s IT staff, as well as the costs for obtaining the appropriate hardware and software, are also important considerations. Choosing the appropriate ASP includes analyzing its technical, financial, and legal status in order to determine if the ASP is a good match for the company. A comprehensive service level agreement is necessary once an ASP has been chosen. After the ASP has been chosen, the company should also conduct performance reviews twice a year to ensure improvements are being made and company objectives are being met (Burstiner 2003).

With the growth of e-business, the demand for real time accounting information is also rising. An article in *The CPA Journal* Deshmukh (2000) discusses how a business’ accounting software can provide real-time support when creating web-based storefronts and electronic data

interchange. Connecting the web storefront with the accounting software can improve forecasting, scheduling, manufacturing, and procurement functions. Changes to inventory can be made immediately. Customer relations management (CRM) is becoming more popular because it manages potential and existing customer data and coordinates marketing channels. This software may contain data mining tools that can analyze and predict customer behavior and identify marketing strategies. Another feature of CRM is clickstream analysis. This feature captures information about a visitor for future marketing use and evaluation. A way to help customers feel empowered is by allowing customers to establish their own accounts and track their orders. Accounting software must also have billing and collection abilities for efficient sales and collection. “The software should be able to accept common forms of electronic payment and post them into the accounting system” (Deshmukh 2002). Acceptable forms of payment include debit cards, credit cards, and electronic checks. The accounting software can also contain self-service features for vendors. The software can allow them to access their own information and view purchase orders. Another necessity of the accounting software is the ability to accept online submission of expense reports. Once data has been received by the software, it should be capable of providing web-ready reports on the site. Various vendors are available that can help a company choose the correct software for their business and also keep the information secure (Deshmukh 2002).

Accounting Issues

The growth of e-commerce has not changed the existence of professional guidelines, reporting requirements and the mentality of the business world. A CMA who is involved in e-commerce must know how traditional business knowledge applies to the new economy. One item to consider is the strategic value of your product or service. Whether the company is virtual

or semi-virtual will determine the strategies needed to market the product or service. If the nature of the product or service is electronic, like AOL and Ebay, the organization is virtual. These companies should focus on strategies that are related to product/service offering and customer care, marketing and asset management. Semi-virtual companies are those that use e-commerce to enhance the value offered to its customers by providing the same product or service over the Internet. Strategies for semi-virtual companies would involve the enhancement of customer care, delivery, marketing, and asset management. Another consideration is the issue of appropriate infrastructure. Traditional companies will already have experience in this, which includes customer service and timely delivery. Virtual companies must be able to meet customers' expectations regarding infrastructure. E-commerce technology also allows companies to track customers' choices by following their clicking patterns.

This information and technology can help accountants by providing meaningful details that allow the true cost of products to be found. Advertising expenses can be matched directly with the product sold. Intellectual capital is now the most commonly discussed issue as companies determine how knowledge and expertise can be valued on the financial statements and determine future benefits to be derived. This concern is very important to management accountants because it allows them to understand the impact of intellectual capital, contributes to proactive management, and increases the value of external reports (Kupiec 2000).

The newest battle that has arisen from e-commerce is the issue of taxation. Do current taxation laws apply to Internet sites? Are the buyers subject to the taxes where they live or where the business is located? These are just a couple of the questions that governments around the world are trying to answer. Most governments support tax free zones or simplified taxes that follow a single tax regime. Governments that rely on sales tax, like local and state governments,

are worried that Internet shopping without a sales tax will hurt physical store locations and reduce the sales tax amounts they take in. There still is no definite answer as to what should take place. Governments of many different countries must agree on a similar plan in order to fully solve the problem (Horn 2003).

The widespread use of the Internet has fueled record economic growth and productivity gains because of the readily accessible, free flow of information. With information-sharing technology, companies are able to respond faster in the economy. Communication has improved with the common network. However, there had not been a common language available to share application data. That has changed with the presence of extensible markup language (XML). XML is instantly recognized by the sender and the receiver and is more manageable than electronic data interchange (EDI). “Tags” identify each data element and can also be interpreted by people. XML is flexible, easy to implement, and implementation is free. XML significantly improves the efficiency and accuracy of information exchange because humans are not needed to intercept, translate, and transcribe information. XML is now part of a new business strategy that will allow the free flow of information within and between companies (Livermore 2002). Productivity and growth will continue to increase as more people recognize the benefits of XML.

Legal and Security Issues

The concern for trust is an important consideration customers face before they decide to buy a product or service over the internet. Laws and regulations concerning competition and legal business sales have been popping up since e-businesses have become more prominent. The main trust barrier to using e-marketplaces according to a survey conducted by Abbiati (2003) is the protection of sensitive customer and supplier transactions. Also of concern to the respondents is a lack of clear information on the terms and conditions of a contract and the

uncertainties relating to settling disputes and online payments. Before a potential customer will purchase a product or service, companies must ensure there are adequate safeguards that protect their confidential information. Currently, a “trust gap” exists between what users want and what marketplace operators’ provide. Respondents felt that each business should be responsible for developing its own code of conduct concerning security and contracts. They felt codes of conduct were more effective in improving trust and confidence than additional legislation. The author points out that the best way to lower buyer risks is to conduct a full legal audit that determines if the e-marketplace business safeguards information, complies with laws, and follows its code of conduct (Abbiati 2003).

E-businesses are growing as businesses recognize the benefits of digital supply-chain management. Financial information must be shared digitally between buyers, suppliers, financial institutions, and regulatory agencies. Security of these operations is becoming an increasing concern in order to prevent fraud and theft. One way to increase security is through “collaboration with internal departments over intranets and with trading partners over extranets” (Gundavelli 2001). The three types of financial data security that it is necessary to have are authentication, authorization, and confidentiality. Authentication allows only certain people the access to information. Authorization allows only authorized people to make changes to information. Confidentiality keeps information encrypted so that only the owners can decipher their information. The security needs of a business are constantly changing because of new user needs and hackers. Being proactive is the best defense for keeping the business and its customers’ information secure (Gundavelli 2001).

E-commerce and the Internal Auditor

The article, "Cyberlaw and e-commerce: An internal audit perspective," provides suggestions for internal auditors of companies who are pursuing sales over the Internet. It is very important with increasing web sales, that the company and the customer understand who has the liability if there is a disagreement over a transaction. This article informs the auditor about what she needs to be aware of and provides information about basic legal issues. The four main concerns for an internal auditor are the similarity of electronic records and paper documents, the enforceability of licenses for software, avoidance of customer's denial of an order placed, and use of digital signatures. There are also opportunities arising from the increase in e-commerce for new assurance services relating to website controls and information systems reliability (Baumer 2002).

New laws have been enacted that treat electronic records like paper records unless another law exists that prohibits electronic transactions. The internal auditor should know the states where his company does business and the related laws for each state. If software is sold on the Internet, the licenses are enforceable if the customer knows and accepts the terms (Baumer 2002).

Internal auditors should also be familiar with web assurance services that can increase consumer confidence in a company's website. This familiarity allows the internal auditor to advise management on the operations of information technology, evaluate the website's effectiveness, work with external auditors on assurance engagements, and understand the relationship between web assurance services and complying with company procedures and policies. Internal auditors are often the ones responsible for setting up the attestation engagement with the CPA firm and are responsible for evaluating the efficiency and effectiveness of the company's internet operations. Two sources of value that a web assurance

seal provides a company are reduced levels of legal liability and assurance of a responsibly run website to stakeholders. Before choosing which web assurance service is appropriate for the company, the internal auditor should consider the brand identification, costs, clarity of disclosure and its applicability globally. The company's operations on the web will determine to what extent each source is necessary. The most popular web assurance services and seals are CPA Web Trust, BBBOnline, TRUSTe, and VeriSign.

CPA Web Trust is an evaluation of a company's website by a CPA firm and was developed by the AICPA and the CICA. Assurance is provided regarding a company's business practices and information privacy, transaction integrity, and protection of sensitive information. The CPA performing the service must be licensed to review and issue the report. TRUSTe provides only privacy assurance. It is, however, the most visible symbol on the Internet. BBBOnline is a service provided by the Better Business Bureau. A company that has the BBBOnline seal on its website assures its users that it stands behind its privacy policy, is a member of the BBB, has been in business for at least a year, has agreed to follow BBB standards for truth in advertising, and has committed to work with the BBB to resolve consumer disputes. VeriSign provides narrow assurance as a certificate authority, assurance on transaction security. Whether a company has one or many of these seals, the presence indicates to investors and creditors that the company is conducting business online in an effective way (Lehmann 2002).

Real-World Examples

Two case studies show the benefits and drawbacks of e-commerce and operating a business online. Shell has recently incorporated e-commerce tools that will allow the company to spend more effectively. Its strategy includes a global spend analysis, participation in industry exchange, and online bidding. The company reports that it has received the quickest benefits

from online bidding. Online bidding allows contracts to be bid online to get fast responses and determine which bid provides the most value. “Transformational” building is the new method where suppliers include “extras” in the bid, like land transportation, for the customer to decide which extras they really want (Porter 2003).

The TechMall.com case provides an example of some difficulties that can result in the technology sector. TechMall is an Internet channel of “cyber stores.” The company faces revenue issues because the company wants to report fees invoiced as gross revenue and book a commission expense for the costs. However, under SAB No. 101, companies must book net revenues instead of gross revenue, even though operating income will be unaffected. However, TechMall bases its bonus plan for employees on gross revenue and reporting net revenue will cause the company to miss their performance goal. SOP No. 97-2 also provides that revenue must be deferred and recognized over the amount of time that services are rendered to the customer. An additional problem facing the company is the recognition of setup fees. Currently, the company recognizes the full setup fee in the original invoice month. However, the setup fee could be deferred over the average life of the merchant (Swain et al. 2002).

Conclusion

These issues are some of the problems facing companies who provide services that span beyond an operating cycle or fiscal year. The increase of Internet service companies and other technology companies will bring the uncertainties of revenue and expense recognition to light and regulatory bodies must be prepared to address these issues. As technology expands, new opportunities arise for companies that can increase productivity and sales. With these opportunities, reservations also arise about how to operate in this new high-tech environment and how to make this technology work for a specific company and its customers. Companies that

embrace e-commerce and tailor it to their customers' needs will receive the greatest benefits and achieve greater productivity and success.

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