

The Role of Business Information Systems in Online Banking and E-Commerce Environment

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Received: December 23, 2019; **Published:** December 30, 2019

Abstract

This paper looks at business information systems and the hot topics in it. More specifically, online banking and e-commerce are looked at as hot topics in business information systems. The paper discusses how online banking and e-commerce works, their importance in the business world, impact, trends, opportunities and challenges. The different types of business information systems are also discussed as well as their use in business such as helping in decision-making, strategic planning and inventory management. The five components of business information systems are highlighted and the requirements for efficient systems outlined. The importance of business information systems is discussed and their practical use looked at.

Key words: *Online banking; E-commerce; Internet banking; Information systems; Internet.*

Abbreviations: AI – Artificial Intelligence. B2B – Business to Business. B2C – Business to Customer. C2B – Customer to Business. C2C – Customer to Customer. DSS – Decision Support Systems. ESS – Executive Support Systems. ICT – Information and Communication Technology. KMS – Knowledge Management Systems. MIS – Management Information Systems. TPS – Transaction Processing Systems.

Introduction

Business information systems are interconnected structures or procedures within a business entity that uses information and communication technology (ICT) to support decision making by generating, processing and providing useful information for the entity. Business information systems have five key components. These are the people using the system, the hardware, software, database and network. Good business information systems are flexible such that they can be able to anticipate and adapt to changes in the information needs of the business. They are also must efficient, meet the demands of the business, and are designed according to

the financial and human resource capacity of the business entity. Furthermore, good businesses are cost effective.

A business entity incorporates the use of diverse types of information systems in its operations. These include executive support systems (ESS) for strategic decision making, management information systems (MIS) for with internal sources of information, decision support systems (DSS), knowledge management systems (KMS) for creating and sharing information and transaction processing systems (TPS). The information derived from these businesses is used for business planning, as well as monitoring and controlling

business activities. Information systems improve productivity and efficiency, reduce costs and improve service delivery for customers. For business information systems to be effective, they ought to be networked, secure, fast, and accessible and have a storage capacity that can hold the information needed by the business. The information that is generated by the systems must also be relevant, accurate, reliable, timely and complete for it to be useful.

This paper will look at online banking and e-commerce as hot topics in business information systems. It will discuss what they entail, the current trends in the two areas and how the onsets of e-commerce and online banking have revolutionized businesses. The objective of this paper is to show the importance of business information systems and their practical use. It is also to highlight the opportunities for growth that exist in business information systems.

Online banking is also known as internet banking. Online banking incorporates the use of an electronic payment system to enable customers carry out financial transactions online. These financial transactions include checking account balances, obtaining bank statements, loan applications and repayments, money transfers and making payments. It is a convenient way of banking that has fastened the process of banking faster for customers and increased efficiency in the banking system.

E-Commerce can be described as a way of conducting business through online platform (Laith et al., 2019). It allows buying and selling of goods and services over the internet. E-commerce is constituted of any commercial transaction that is done online. Based on this definition, online banking is a form of e-commerce. Both e-commerce and online banking heavily involve the use of business information systems and this is what makes the two hot topics in business information systems.

Materials and Methods or Experimental Procedures

For the purposes of this paper, the method used was a qualitative research. In particular, the desk research methodology was used. The materials used were online content obtained through web searches and browsing industrial, marketing and business sites to obtain the relevant information. Emphasis was laid on sources that have been peer reviewed and those that are up to date with regard to the developments and advances in current and future technology.

Results and Discussion

E-commerce is becoming more prominent by the day. Every business today has either incorporated it into its operations or is exploring the possibility of using e-commerce as an avenue of serving their customers. According to Laith et al. (2019), e-commerce can be business transactions between two business entities, business-to-business (B2B), between two customers who are referred to as customer-to-customer (C2C) and between a business entity and its customers, this can be business to customer (B2C) or customer to business (C2B). E-commerce integrates various IT systems that help to reduce administrative costs and streamline processes. Business information systems are used in e-commerce for stock control as well as supply chain management. Customer experience is also a key component of e-commerce. Businesses use customer management systems to improve on their customer service. Customer management systems record, organize and plan the contacts the business has made with customers. They also obtain data from the customers which is stored and can be accessed by the business for analysis purposes, targeted marketing or any purposes for which the business needs it (Zhou, 2011, p. 646).

E-commerce is important in today's business world. One of the reasons why it has become important is that it offers a wide variety of goods and services. Customers can shop from different websites in a very short time as compared to moving from one store to the other or even one market place to the other in search of variety in the products that they are shopping. Furthermore, this variety is provided more conveniently to the customer since he or she can access the products from anywhere at any time (Laith, 2018). Secondly, e-commerce is important in today's business world because it helps to lower costs as compared to the traditional way of buying and selling (Laith, 2013, 2017). Traditional selling involves high overhead costs and recurring expenses such as rent. This adds to the costs of goods and services since the business has to cover its costs and as such, customers end up buying products at a much higher price. Reducing costs for the business also helps to drive profits for businesses and spur their growth (Kim et al., 2009; Laith, 2013).

Another importance of e-commerce is seen in how it is less time consuming and allows for the freedom of the consumers to be flexible. Additionally, e-commerce helps the customers to take advantage of purchase offers and shopping deals as soon as they are out. E-commerce has also connected people around the world and leveled the playing field for retailers and small businesses can now compete fairly with big businesses if they have the right strategy

in place. Retailers are able to know faster what is in high demand in the market. Additionally, e-commerce has been vital in promoting transparency and accountability in business. This has enabled businesses keep track of their performance and has also helped tax authorities in ensuring compliance of businesses (Flavian et al., 2009).

E-commerce has also been vital in bringing about faster business expansion and creating more employment opportunities. It has also been important in enhancing innovation and the production of digital products such as online courses and e-books. E-commerce is also important in helping businesses with customer retention through the purchase databases created. There is high competition within the e-commerce space and this has been important in compelling sellers to provide the best quality products with personalized customer experiences (Hernández et al., 2009).

Due to its significant importance, e-commerce has had a significant importance on business. MIS has changed how businesses analyze, design and implement business strategy through the integration of various back and front-end systems. Human Resource Management has been impacted through on-line recruiting and remote working. The impact on finance and accounting can be seen through online banking. Production and operations management has been impacted through the reduction in processing durations. Marketing has been revolutionized through online advertising (Olszak and Ziemba, 2012, p. 139).

The benefits that businesses have gotten out of engaging in e-commerce include access to a global market, a reduction in operational costs, and customization of products for consumers, digitization of products and processes, and round the clock operation. Consumers on the other hand enjoy round the clock access to products, more variety, lower prices, faster delivery, better service and better deals. E-commerce has also allowed customers to deal directly with businesses without going through intermediaries. As for the society, e-commerce has enhanced more flexible working arrangements thus improving the quality of life. It has also connected people and facilitated the delivery of public services.

Despite its importance, impact and benefits, there are certain barriers to e-commerce. One of the major barriers has been security. Security concerns emerge from the likelihood of fraud and abuse of consumer information. The other barriers include inadequate international business laws, absence of standard technological systems

and applications for use in e-commerce, poor internet infrastructure in some parts of the world, interoperability of systems and lack of qualified personnel. E-commerce also involves high start-up, setup and maintenance costs. There is also a high risk of failure for businesses that venture into e-commerce without the right plan. Additionally, e-commerce lacks a personal touch and there are lots of fulfillment problems.

Even with these barriers, opportunities still exist in e-commerce. These include the extended use of artificial intelligence (AI), advanced chat bots, virtual reality shopping, instant delivery using drone technology and live streaming. At the same time, there are certain emerging trends in e-commerce-which include micro-payment systems, preference of mobile technologies to desktop technologies, the use of social media, return options, global availability, localization and customization (Chaffey, 2009).

Online banking is another hot topic in business information systems and is a part of e-commerce. Today, banking sector firms are becoming more competing than before to increase their profit of market share (Laith, 2018). It allows users to make online financial transactions, which may be deposits, transfers or payments. These transactions can be made through the internet on a bank's website, through a seller's website or through mobile and desktop applications developed and customized by banks for online transactions. Online banking has revolutionized not just, how banking is done but also how business in general is being done. This has given it importance in today's business world. To begin with, online banking is important in assuring security. Banks have heavily invested in the security of their platforms through encryption technology. It has also brought about security for customers through reducing the risks that were associated with moving hard cash in the past. Banks have also incorporated the use of special secure transaction software and put in place security management protocol for their systems (Chiou and Shen, 2012, p. 869).

The second important role that online banking is playing is increasing the access to banking services for customers. Banking services that are available online can be accessed at any time of the day and from anywhere. This increased accessibility has increased convenience for customers. Online banking, just as the wider e-commerce, is important in enhancing transparency and accountability. The verification measures put in place for all transactions ensure that no transaction can be done without the knowledge or direct

authority of the account holder. Online banking is also done with no hidden fees charged to the account holder. Monitoring one's bank account has thus been made possible and easy. Furthermore, online banking does not just save time in terms of reducing time spent in banking halls but it is also a fast and efficient method that sees the transactions take place in real time. Customers also benefit from online banking since they are charged lower banking fees. This is because banks need fewer branches and thus have less overhead costs. This reduction in costs for the banks also enables them to offer higher interests on their accounts and this is an additional benefit to customers (Chavan, 2013. p. 23).

Online banking has had significant impact on the banking industry and business in general since its adoption. It has limited the transactions being done by tellers in banks. Businesses just as individual customers also enjoy full access to banking services. Online banking has also brought about financial integration that has opened an opportunity for new businesses to emerge. The trends in online banking are also changing. Some of the current trends are messaging technology for live chat services, virtual assistants that incorporate the use of AI, increased use of mobile applications, voice recognition technology, co-browsing support services, personalization through context based automation, self-service banking and social media integration.

However, it is important to take note that online banking has its challenges as well. A key challenge has been an increase in criminal activity. Online banking has attracted hackers interested in compromising the online banking systems. The personal information being shared on the online banking platforms are therefore more vulnerable. The funds available online are equally vulnerable to such cyber-attacks. Another challenge is that customers who are not tech savvy can find it difficult to use online banking platforms to access the services they need. Additionally, most banks limit the amount of money that can be transacted online and as such one still needs to visit a branch for transactions involving large amounts of money. Customers with poor internet connection can also not use online banking platforms effectively (Khare, 2010, p. 181).

Conclusion

In conclusion, business information systems are keys to every business in today's world. No business can succeed in today's highly competitive market without incorporating technology in its operations. E-commerce is at the heart of business and technology and so is online banking. As the world continues to evolve and advance,

technology and business information systems will play an increasingly vital role. The challenges that are currently being faced present an opportunity for innovative businesses to provide solutions and improve the overall experience for the customers and businesses and increase the benefits to everyone involved.

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