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The Impact of E-commerce with Management Information Systems on Business Process Model

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Abstract: *The purpose of this paper is to provide an analysis on the impact of Electronic commerce (e-commerce) information systems on business process design, managerial roles, and the changing world of work. A system integrates people, processes, and technology. Systems thinking provide a big picture analysis for decision makers to understand the organizational history, culture, stakeholders, key business processes, innovative technologies, and deliver structure in a knowledge-based company. Data are facts about people, objects, or events such as name, age, address, telephone number, account number, credit card number, customer, supplier, or purchase a product. E-commerce allows information to flow between organizations and external customers, suppliers, and competitors. In addition, supply chain management enables organizations to track the delivery of a product by using a barcode or radio frequency identification (RFID) tag directly to the customer. This paper will discuss the following: business process design, managerial roles, and the changing world of work.*

Keywords: *Electronic commerce, information systems, business process design, organizations, customers, competitors, supply chain management and radio frequency identification.*

I. INTRODUCTION

The purpose of this paper is to provide an analysis on the impact of Electronic commerce (e-commerce) information systems on business process design, managerial roles, and the changing world of work. A system integrates people, processes, and technology. Systems thinking provide a big picture analysis for decision makers to understand the organizational history, culture, stakeholders, key business processes, innovative technologies, and deliver structure in a knowledge-based company. Data are facts about people, objects, or events such as name, age, address, telephone number, account number, credit card number, customer, supplier, or purchase a product. E-commerce allows information to flow between organizations and external customers, suppliers, and competitors. In addition, supply chain management enables organizations to track the delivery of a product by using a barcode or radio frequency identification (RFID) tag directly to the customer. This paper will discuss the following: business process design, managerial roles, and the changing world of work.

II. BUSINESS PROCESS DESIGN

Business processes are focused on the customer, market, and improving products/services. Prior to making any changes it is important to understand the key business processes in knowledge-based organizations. As stated by Alavi and Leidner (2001), "Data is facts, raw numbers. Information is processed/interpreted data. Knowledge is personalized information." (p. 111). The CEO and steering committee rely on this information to make decisions about selecting IT projects for the organization. The United States of America and Europe have increased offshore business process outsourcing (BPO) of business and IT functions

(Kim, 2008, p. 813). The following factors influence IT governance business process outsourcing (BPO): company size, competition, cultural environment, technology assets, and previous engagements of outsourcing (Kim, 2008, p. 815). In the new economy senior management should select vendors with hybrid governance expertise.

A qualitative and quantitative case study on electronic business management process (e-BPM) was conducted to gather data for decision makers. The following key factors were used to analyze the effectiveness of e-BPM: buy-in from the executive management team, internal alliance, and having automated business processes (Zandi & Tavana, 2011, pp. 169-170). Halstenbach, 2007(cited by Zandi & Tavana, 2011), "Managing business processes electronically gives organizations many advantages such as cost reduction and enhanced quality in administrative processing, faster case handling and enhanced customer satisfaction, faster process adjustment, enhanced capacity planning, among others" (p. 170). IT leaders of the twenty-first century must stay abreast with technological innovations to create products, scan the market for changes, and have an adaptable business model.

III. BUSINESS MODEL

An e-commerce business model is the macro or micro environment in which a company provides products and services to customers. A resource based view (RBV) model was used to examine the relationships of e-commerce information system resources, supply chain process integration, and business value (Ghobakhloo, Sabouri, Hong, & Amirzadeh, 2011, p. 344). As stated by Ghobakhloo et. al., (2011), "A questionnaire-based survey was conducted to collect data from 214 supply chain, logistics, or procurement/purchasing managers of leading manufacturing firms" (p. 344). Technological innovation is essential for supply chain process integration. Senior managers can use this information to develop marketing analysis to target customers in other markets. Michael Porter model provides insight on five factors that influence industry performance as follows: "rivalry, threat of substitutes, buyer power, supplier power, threat of new entrants, and supplier power" (Porter, n. d., p. 1). The executive management team must adjust corporate, business unit, and departmental strategies to compete in the global market (Porter, n.d., p. 9).

IV. BUSINESS STRATEGY

E-business strategy should be incorporated in business/IT development initiatives to generate revenue through business-to consumer (B2C) and business-to business (B2B) on-line transactions. The four attributes of knowledge management systems software is "to enhance the organizational processes of knowledge creation, storage/retrieval, transfer, and application" (Alavi & Leidner, 2001, p. 114). For example, Windows operating system, Oracle database systems, Mobile devices (laptop, Blackberry, and iPhone) telecommunication software, and McAfee security software. Application software supports functions and processes in the organization such as accounting, human resources, and marketing. For example, ERP packages such as Oracle, PeopleSoft and SAP. The following Microsoft applications are used to enhance productivity in the work environment Excel spreadsheets, Word business documentation, PowerPoint for presentations, Access for database entry, MS Outlook email and calendar, MS Project for IT projects, and MS Visio for business process and systems mapping.

V. SUPPLY CHAIN MANAGEMENT

In the article Lorchrachoonkul and Mo (2010) discuss a virtual radio frequency identification (RFID) framework for a supply chain organization. The android and iPhone wireless communication devices have application interfaces, internet access, Wi-Fi, Bluetooth, camera, GPS, and data storage (Lorchrachoonkul & Mo, 2010, p. 921). Quick response (QR) code is embedded in RFID tags for organizational marketing material and professional business cards. RFID is a twenty-first century advanced technology used by multinational retailers such as HP and Wal-Mart (Mehrjerdi, 2010, pp. 107-108). Arnold and Bures, 2003(cited by Mehrjerdi, 2010), "Have pointed out the RFID can bring numerous benefits for retailers that include: an improved sales floor, planning for desired styles, sizes and colors, and better customer services by sales staff on the floor

spending more time with customers and less time with the stock” (p. 110). A primary benefit of RFID technology is it can reduce cost and improve business operations in the supply chain.

VI. MANAGEMENT ROLES

The business and IT balanced scoreboard enables executive management teams to oversee the corporations’ internal controls (Grembergen, 2003, p. 2). This article discusses seven essential skills needed as a twenty first century leader in technology. The author use data from Cutter Consortium to obtain an understanding of business models and key processes prior to implementing technology. Senior management focuses on strategic and operational technology to align business and IT initiatives such as “ERP, CRM, B2B Commerce, Wireless Communication, and Security Services” (Andriole, 2007, p. 69). The executive management team can use a dashboard or scorecard to assess the risk of its IT environment.

VII. THE CHANGING WORD OF WORK

Systems theory can be applied by management in various industries to integrate personnel, core business process, and technology. Jennex (2005) conducted a qualitative case study to examine end-user computing systems at an engineering company. The purpose of the study was to identify redundant workflow processes in IT, document assets, and reduce technology cost. RFID technology enable executive management and managers to have access to data in real-time based on the following properties: “embedded code, tags are reprogrammable, capable of working in various environments, improves antitheft protection, inventory management, tracks work in progress, and reduce human errors’ (Mehrjerdi, 201, p. 108). It is the responsibility of senior management to implement a logical security policy, software development lifecycle methodology, as well as change management policy/procedures for ERP systems, application interfaces, databases, and networks. End-users should be encouraged to share ideas or feedback on the functional design of technology initiatives, test business applications, and receive training.

VIII. CONCLUSION

The purpose of this paper is to provide an analysis on the impact of Electronic commerce (e-commerce) information systems on business process design, managerial roles, and the changing world of work. Business processes are focused on the customer, market, and improving products/services. The CEO and steering committee rely on this information to make decisions about selecting IT projects for the organization. The United States of America and Europe have increased offshore business process outsourcing (BPO) of business and IT functions (Kim, 2008, p. 813). In the new economy senior management should select vendors with hybrid governance expertise. IT leaders of the twenty-first century must stay abreast with technological innovations to create products, scan the market for changes, and have an adaptable business model.

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References

1. G. Eason, B. Noble, and I. N. Sneddon, “On certain integrals of Lipschitz-Hankel type involving products of Bessel functions,” *Phil. Trans. Roy. Soc. London*, vol. A247, pp. 529–551, April 1955. (references)
2. Alavi, M., & Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, 25(1), 107-136. Retrieved from the ABI/INFORM Complete database.
3. Andriole, S. J. (2007). The 7 habits of highly effective technology leaders. *Communications of the ACM*, 50(3), 67-72. Retrieved from the Business Source Complete database.
4. Ghobakhloo, M., Sabouri, M. S., Hong, T. S., & Amirzadeh, K. (2011). Electronic commerce-enabled supply chain process integration and business value. *Journal of Systems and Information Technology*, 13(4), 344-368. DOI: 10.1108/13287261111183960.

5. Grembergen, W.V. (2003). The balanced scorecard and IT governance. *Information Systems Control Journal*. Retrieved from <http://www.isaca.org/Certification/CGEIT-Certified-in-the-Governance-of-Enterprise-IT/Prepare-for-the-Exam/Study-Materials/Documents/The-Balanced-Scorecard-and-IT-Governance.pdf>.
6. Jennex, M. E. (2005). End-user system development: Lessons from a case study of IT usage in an engineering organization. *Journal of Cases on Information Technology*, 7(2), 67-81. Retrieved from the ABI/INFORM Complete database.
7. Kim, G. (2008). E-business strategy in Western Europe: offshore BPO Model perspective. *Business Process Management Journal*, 14(6), 813-828. DOI:10.1108/14637150810915991.
8. Lorchirachoonkul, W., & Mo, J. (2010). RFID implementation with virtual infrastructures. *Business Process Management Journal*, 16(6), 917-931. Retrieved from ABI/INFORM Global.
9. Mehrjerdi, Y. (2010). Coupling RFID with supply chain to enhance productivity. *Business Strategy Series*, 11(2), 107-123. DOI: 10.1108/17515631011026434.
10. Porter, M. (n .d.). Porter's five forces: A model for Industry analysis. In *Quick MBA*. Retrieved from <http://www.quickmba.com/strategy/porter.shtml>.
11. Zandi, F., & Tavana, M. (2011). A fuzzy multi-objective balanced scorecard approach for selecting an optimal electronic business process management best practice (e-BPM). *Business Process Management Journal*, 17(1), 147-178. DOI: 10.1108/14637151111105625.