

Review Paper on how ICT Influencing the Business Firms in Current Scenario

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Abstract: *It is impossible to overestimate the significance of commercial organisations adopting information and communication technology (ICT) tools like enterprise resource planning (ERP) and electronic commerce (e-commerce). Due to the advantages that can be produced by ICT applications, researchers and practitioners have been particularly interested in these applications. The goal of this study is to determine how ICT applications and technologies have an impact on commercial firms. To determine the trends and patterns of academic research, a thorough literature study has been done. On the basis of the review, suggestions have been made. The literature on the function of ERP with e-commerce is lacking in several areas. To close the gaps, more research is necessary. The conclusion indicates that, rather than using e-commerce in areas like productivity and cost, most research have concentrated on adoption reasons, benefits, and constraints of e-commerce. ERP and productivity were found to be significantly correlated*

Keywords: ICT, ERP, e-commerce, and firm performance

I. INTRODUCTION

ICT applications and utilisation have been around since the 1990s. However, ICT applications like ERP and electronic commerce (e-commerce) have recently emerged as essential to the survival and growth of businesses. Businesses were forced to develop sources of competitive advantages and boost their competitiveness as a result of the increased competition. Only a few research have been done on the relationship between production and e-commerce (e.g. Salwani, Marthandan, Norzaiddi, and Chong, 2009). E-commerce has the capacity to lower operating expenses and increase revenue. It can therefore be utilised and applied in the creation of goods and services. An integrated system, such as ERP, can combine all the applications a business requires into a single platform. This enables businesses to make decisions more quickly and react to market developments more quickly (Madininos, Chatzoudes, and Tsairidis, 2011).

The goal of this study is to look into how ICT applications like e-commerce and ERP affect businesses' production processes. Additionally, it seeks to highlight each application's function and determine the importance of these apps for commercial enterprises.

The first section of this study is an introduction, and the following section is about the research methods. The third segment examines the literature in relation to the study's subject areas. The results of this investigation are presented in the fourth section. The fifth section finishes the essay and makes suggestions for additional investigation.

II. REVIEW OF LITERATURE

Numerous commercial organisations are looking for new, more potent instruments as a result of the intense rivalry. (Sigala, 2003, as referenced in Martinez, Gabriel, and Navarro, 2010) Many businesses have decided to embrace information and communication technologies as excellent techniques to get past the competitive climate and build profitable businesses. According to Barney (1991), Mahoney and Pandian, Chen and Liaw (2001), as referenced in Martinez, Gabriel, and Navarro (2010), these technologies are crucial for a company to develop a durable competitive edge. However, it is evident that businesses are struggling to use these contemporary technology and Internet-based tools in order to run an efficient operation (Cagliano et al., 2003, as quoted in Martinez, Gabriel, and Navarro, 2010).

However, new (ICTs) for businesses that focus on the customer to make decisions have exploded in recent years. However, using these new tools alone is still insufficient for a corporation to be successful (Cagliano et al., 2003, as referenced in Martinez, Gabriel, and Navarro, 2010). Oluwale and Adewale (2014) cite San Jose, Ituralde, and Maseda (2009) as saying that recent technological advancements have created important business driving forces, and that using ICT has improved firm productivity. Brynjolfsson and Hiltt (1996) also say that this. Oluwale and Adewale (2014) also cite them.

Businesses can be conducted more effectively and more digitally connected when ICT technologies are used (Burhalis, 2003, as referenced in Oluwale and Adewale, 2014). In addition, numerous researchers have studied the relationship between ICT investment and firm performance. For instance, Bitler (2001, as cited in Oluwale and Adewale, 2014) studied the connection between ICT usage and firm performance, and his findings revealed that there was a significant performance gap between firms that use ICT tools and those that do not rely on these technologies.

Cho, Ozment, and Sink. (2008). A negative association exists between logistic outsourcing and firm performance in the e-commerce industry, while a positive relationship exists between logistic capabilities and business performance.

Salwani, Marthandan, Norzaidi, and Chong. (2009) Utilisation of e-commerce as determined by company performance IV: i) technological context ii) organisational context. company size when technology investment is made, managerial beliefs, firm scope. Environmental context (iii). Back end integration and front end functions served as mediator variables. E-commerce knowledge was a moderating factor.

Results The following factors are found to have a substantial impact on the use of e-commerce: technical competency, firm size, firm scope, web-technology investment, pressure intensity, and back-end usage. Back-end integration is found to act as a mediator among these factors. It has been discovered that e-commerce experience modifies the relationship between e-commerce usage and business performance. Internet-based applications, groupware applications, and collective systems all have a favourable impact on capital productivity, according to Martinez-Caro and Cegarra-Navarro's (2010) DV Capital productivity, IV.

Dezdar and Ainin.(2011) Success of the DV ERP deployment. IV Enterprise-wide communication, education and training, and top management assistance. As a result, the effectiveness of ERP adoption is positively and significantly correlated with top management support, training and education, and enterprise-wide communication.

Success of the DV ERP deployment, Dezdar&Ainin (2011a).IV Team composition and project management. As a result, there is a strong correlation between successful ERP deployment and project management and team composition. Shatat&Udin.(2012) Workflow management, material management, production planning, regulating, and DV SCM performance. The performance of SCM is positively and significantly correlated with integration, material management, production planning, and controlling. -The performance of SCM is not significantly impacted by workflow management.

Lean practises, e-commerce, and e-procurement have strong relationships with mass customization performance. However, enterprise resource planning has no relationship with this performance. Hong, Dobrzykowski, and Vonderembse (2010) DV Mass customization.IV Lean practises, IT use, and e-procurement and e-commerce.

DV Supplier Performance, IV, Hwang & Min (2013) External environment, ERP deployment, and supplier capability. As a result, the internal environment acts as a mediating factor, and the external environment has little impact on the company's decision to adopt and deploy ERP. An external environment still indirectly influences the choice to adopt and execute ERP through the mediating role of an internal environment. ERP could improve the ability of the ERP adopter's suppliers.

Effective deployment of the IV ERP system, IV Top Management support, user support, consultant help, conflict resolution, knowledge transfer, and communication were all factors, according to Maditinios, Chatzoudes, and Tsairidis (2011). Support from result consultants, knowledge transfer, good communication, and conflict resolution are key components of ERP adoption. Support from top management and user support are unrelated in any meaningful way.

III. FINDINGS

The following is a presentation of the study's findings:

E-commerce

E-commerce is now a frequently used technique of conducting business. According to Molla and Licker (2005), the majority of e-commerce research was done in the west only up until 2005. The advent of e-commerce into the market has significantly lowered costs and increased revenues for businesses. Although most businesses utilise e-commerce for online buying and selling, it can also be employed in other contexts, like the outsourcing of logistical operations (Cho, Ozment, and Sink, 2008). Numerous factors that can improve the deployment of e-commerce can affect how well it performs (Salwani et al., 2009).

Business Results from E-Commerce

E-commerce has immensely benefited businesses in the business world. The relationship between logistic capability, logistics outsourcing, and business performance is examined by Cho et al. in 2008. In the e-commerce market, they discover a strong correlation between logistical capacity and company performance. There was no discernible correlation between the performance of the firm and logistics outsourcing.

Salwani et al. (2009) explore the effect of e-commerce usage on business performance in the tourism sector in Malaysia using a quantitative approach. They employ mediate and moderate variables. The findings show that factors such as back-end usage, pressure intensity, firm size, business scope, web technology investment, and technical proficiency have a substantial impact on the use of e-commerce. Back-end integration is discovered to act as a mediator among these factors. It has been discovered that e-commerce experience modifies the relationship between e-commerce usage and business performance.

Planning an enterprise resource

The adoption of ERP systems is one of the latest uses in commercial organisations. Production, sales, human resources, finance, and other conventional functional modules that can be customised to meet the unique demands of each organisation make up an integrated software package known as an ERP system (Laudon and Laudon, 2012). This section focuses on how business enterprises use ERP and the elements that encourage its adoption.

IV. ERP AND PRODUCTIVITY

In his study, Nurmilaakso (2009) examined the connection between labour productivity and ICT applications like supply chain management (SCM), customer relationship management (CRM), enterprise resource planning (ERP), and standardised data exchange with trading partners. The results show that Internet connectivity, standardised data sharing with trading partners, ERP systems, and CRM systems contribute significantly to advances in labour productivity, but that Internet websites or SCM systems do not. Martinez-Caro and Cegarra-Navarro (2010) did yet another investigation to determine the connection between capital productivity and internet-based, groupware, and collective systems. The results show a statistically significant beneficial link between groupware applications and collective systems and capital productivity.

Hong, Dobrzykowski, and Vonderembse (2010) looked into the application of ERP in mass customization. They looked into the connection between IT use, as represented by ERP, e-procurement, and e-commerce, and lean practises. The results suggest that the performance of mass customization is strongly correlated with lean practises, e-commerce, and e-procurement. Enterprise resource planning, however, is unrelated to the effectiveness of mass customization.

ERP Implementation Success

Maditinos et al. (2011) look into the conditions that result in an ERP system being implemented successfully. They discover that key elements in the deployment of ERP include consultant support, knowledge transfer, good communication, and dispute resolution. Support from top management and user support are unrelated in any meaningful way.

Similar to Maditinos et al. (2011), Dezdar and Ainin (2011b) study the elements that result in the effective deployment of ERP and do not agree with them. Their research shows that enterprise-wide communication, top management support, and training and education have a favourable and significant association with the effectiveness of ERP deployment. The same authors, Dezdar and Ainin (2011a), conducted a different investigation, although they used

various variables. The study's conclusions demonstrate the importance of the relationship between successful ERP adoption and project management and team makeup.

Supply Chain and ERP

An ERP system's integration, material management, production planning, controlling, and workflow management are studied by Shatat and Udin (2012) in connection to SCM performance. The results demonstrate a significant and positive association between SCM performance and integration, material management, production planning, and controlling. Workflow management and SCM efficiency are not significantly related.

In a similar line, a 2013 study by Hwang and Min examined the connections between supplier capacity, ERP deployment, and external environment performance. A mediator is employed by using the internal environment. The results demonstrate that the decision to adopt and execute ERP is not greatly influenced by the external environment. However, an external environment still indirectly affects the decision to adopt and implement ERP through the mediating function of an internal environment. Additionally, it was discovered that ERP could improve the supplier competence of ERP adopters.

V. CONCLUSION

This study was a review of the literature. According to the analysis, commercial enterprises can use e-commerce to efficiently obtain raw materials and employ them for logistical objectives. The performance of e-commerce can be greatly improved by a variety of elements, including business size, technology proficiency, and others. To learn more about e-commerce, extra research can be done. Following a review of the literature, it was discovered that the majority of studies on e-commerce focused on the factors, advantages, and challenges of adoption. Additional research is required in other areas, such as productivity and cost.

One of the ICT applications that has seen recent growth is ERP. Regarding both capital and labour productivity, a correlation between ERP and productivity was shown to be positive. ERP and mass customization were found to be negatively correlated, nevertheless. This outcome is contradictory. Because mass customization requires both labour and capital, it might be thought of as a form of labour and capital productivity. The association between the terms can therefore be investigated by more research in this area.

ERP success criteria had inconsistent results. While some people believe that top management support is crucial, others think top management is irrelevant. To shed further light on this matter, study in this field can be done.

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