ROLE OF ENTERPRISE RESOURCE PLANNING TO INCREASE THE EFFICIENCY AND BUSINESS GROWTH OF A BANGLADESHI FIRM

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ABSTRACT

In today's frequently changing economy, digitization has become a more generalized issue every day. To enhance the quality of the business process, dependency on technology is increasing by modern businesses. Businesses are continuously looking for a solution that can handle huge amount data more efficiently. The Enterprise Resource Planning (ERP) system is an answer to these needs. ERP is management process that helps in combining all the process of a business by using multiple utility software. It enables managing and integrating all the business process under same streamline. Modern companies have invested significant amount of money & time to introduce a perfect ERP system to achieve better performance. This paper tries to investigate the uses of ERP in modern business to increase efficiency and effectiveness internal control systems of Bangladeshi firm. The findings of this paper demonstrate how ERP investigates the key features of ERP system that may deem crucial in accelerating business growth & sustainable performance.

Key Words: Enterprise Resource Planning System, Employee Efficiency, Business Growth, ERP quality, User's Interpersonal Development, Sarbanes-Oxley ACT, Internal Control System.

1. INTRODUCTION

In the wake of several key accounting and corruption scandals that happened during the 1990s, organizations are now progressively required to demonstrate decent corporate financial governance through compliance with a variety of financial legislation and regulation, such as the Sarbanes-Oxley Act 2002 and International Financial Reporting Standards (Tryfonas & Kearney, 2008; Worster, Weirich & Andera, 2011). The risk of big penalties for non-compliance with these regulations (Rice, Weber & Wu, 2012; Zhang, 2007) proposes that firms have a strong motivation to implement processes that can structure and validate the collection and reporting of information in order to diminish errors and accordingly support compliance labors.

This study discovers how an ERP can be used by managers to start control over accounting and finance processes for compliance and regulatory purposes.

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Although this is been a decade now since the Sarbanes-Oxley Act of 2002 (SOX) was presented, this legislation is used as the focus of the compliance matter for several reasons. First, two essential sections of SOX require high-ranking managers to show to the effectiveness of the company's internal control processes, thus providing an opportunity to discover how firms use IT to protect compliance with accounting legislation (Krishnan & Visvanathan, 2007; Rice et al., 2012). Second, there are hypothetically simple consequences for companies who do not obey, or who are apparent by investors not to comply, with its requirements (Rice et al., 2012; Zhang, 2007)1, specifying the criticality to organizations of applying systems that enable effective control processes. Third, ten years after its application and despite the high penalties, there is evidence that some firms are not fully revealing their control weaknesses (Rice & Weber, 2012), thus emphasizing the importance of internal processes that decrease the potential for misrepresenting, whether due to lack of managerial correctness or competence. Fourth, the tools used by companies to act upon with the requirements of SOX is of interest to both academics and practitioner keen to recognize more about the role of IT in managing compliance with legislation.

The goal of the study is to contribute to extant research in a number of ways. First, it reports recent calls in the literature for research at the edge between IT and accounting in order to recognize more about the vital role of IT in associate regulatory compliance (eg. Arnold, Benford, Canada & Sutton, 2011b; Kumar, Pollanen & Maheshwari, 2008). While IT has been time-honored as a means to computerize and systematize a variety of business processes, slight is known about its use by managers to ensure compliance with legislation (Granlund, 2011; Grant, Miller & Fatima, 2008; Mauldin & Ruchala, 1999; Tseu, 2005). Besides, by engaging a field study this study purposes to investigate managers' use of IT in a way that evades the over-shortened interpretations of repetition that can be an consequence of survey-based research (Granlund, 2011). Second, the study examines how an ERP can improve the effectiveness of internal control processes (Granlund, 2011; Hyvönen, 2003; Mauldin & Ruchala, 1999), thus contributing to a timely discussion about the role, usage, and purpose of ERPs by addressing questions about their ability to gain the requirements of legislative compliance (eg. Granlund, 2011; Worster et al., 2011). A variety of IT solutions is existing to help accounting and finance processes, but the transaction-based nature of ERP makes them mainly appropriate to this task (Dechow & Mouritsen, 2005; Rom & Rohde, 2007). ERP also provide functionality for the audit of accounting processes (Tryfonas & Kearney, 2008) so are preferably suited for examine into the use of IT for managing compliance and governance concerns. However, firms often flop to modify their ERPs to the specific wants of the business, instead implementing them in a consistent form according to

'best practice' or what has been given by vendors (Tryfonas & Kearney, 2008). In this way, managers can flop to exploit the wide capabilities of ERPs, rendering them fewer flexible and user-friendly with concern to reporting and analysis than they may be (Light, Holland & Wills, 2001; Rom & Rohde,

The study reports the findings of an investigation into how one firm uses an ERP to enable compliance with the Act's requirements in relation to the use of internal controls over financial reporting. The findings propose that these IT systems can sufficiently support compliance requirements. Though, while the study presents a largely straightforward picture of the use of an ERP for this purpose, a number of other matters are raised, such as the role of IT managers in relation to accounting staff and the possibility of conflicting uses of the ERP for other business activities. The study therefore adds to existing knowledge into best practices and models of ERP effectiveness in complying with legislation.

2. LITERATURE REVIEW

ERP provides a technology platform where organizations can integrate and coordinate their major internal business processes. They address the problem of organizational inefficiencies created by isolated islands of information, business processes, and technology. A large organization typically has many different kinds of information system that support different functions, organizational levels, and business processes. Most of these systems are built around different functions; business units and business processes that do not "talk" to each other. Managers might have a hard time assembling the data they need for a comprehensive, overall picture of the organization's operations.

For instance, Sales personnel might not be able to tell at the time they place an order whether the items that were ordered were in inventory; customers could not track their orders; and manufacturing could not communicate easily with finance to plan for new production. This fragmentation of data in hundreds of separate systems could thus have a negative impact on organizational efficiency and business performance. Gargeya, V.B and Brady, C. (2005).

ERP systems solve this problem by providing a single information system for organization-wide coordination of key business processes. Enterprise software models and automates many business processes, such as filling an order or scheduling a shipment, with the goal of integrating information across the company and eliminating complex. Expensive links between computer systems in different areas of the business. Information that was previously fragmented in different systems can seamlessly flow throughout the firm so that it can be shared by business process

in manufacturing, accounting, human resources, and other areas of the firm. Discrete business processes from sales, production, finance, and logistics can be integrated into company-wide business processes that flow across organizational levels and functions. An enterprise-wide technical platform serves all processes and levels.

The strict requirements for record keeping and the capacity to drill down to transaction-level detail required under SOX suggest that ERP systems can be beneficial in facilitating compliance. ERPs help firms to comply with SOX by automating business processes, most critically those associated with financial reporting (Maurizio et al., 2007). ERPs are not only useful but can be critical in establishing processes that facilitate the collection, analysis, and reporting of information required by SOX (Brown & Nasuti, 2005; Kumar et al., 2008). For example, they can be designed to minimize or eliminate human access to data where such access can potentially corrupt data or otherwise lead to errors that will hinder compliance. They can also ensure data integrity through processes, such as validation steps, that produce consistent and reconcilable data (Maurizio et al., 2007).

ERP vanquishes the old standalone computer systems in finance, HR, manufacturing and the warehouse, and replaces them with a single unified software program divided into software modules that roughly approximate the old standalone systems. Finance, manufacturing and the warehouse all still get their own software, except now the software is linked together so that someone in finance can look into the warehouse software to see if an order has been shipped. Most vendors' ERP software is flexible enough that you can install some modules without buying the whole package. Many companies, for example, will just install an ERP finance or HR module and leave the rest of the functions for another day.

3. OBJECTIVE

Implementation of ERP systems requires a substantial investment in time, money and internal resources and is fraught with technical and business risk. There are a number of challenges that arc associated with the implementation of ERP systems. First ERP systems are expensive and consequently require complex decision-making processes to purchase them. Second, ERP systems usually affect the whole organization. As such, requires a combination of technical and human expertise to select, develop and implement successfully (Escallc ct al, 1999). Third, there have been many reported failures of ERP implementations. Examples include companies such as FoxMeyer Drugs, Applied Materials, Hershey, Mobil Europe, and Dow Chemicals (Bingi ct al. 1999). This research is an attempt to extend the ERP implementation research by defining the conceptual domains constructs and opera

tional measures specific to ERP implementation CSFs to advance ERP research to find out the factors that play vital role behind the successful implementation of ERP system in Bangladesh.

4. RESEARCH METHODS

According to Cantzler (1992) there are two different research methods; quantitative and qualitative methods. Depending on what the researcher is looking for, how much time and resources the researcher has available; the two research methods can be done one by one or combined. Holme and Solvang (1991) claims that qualitative research is characterized by the proximity the researcher has to the respondent. In qualitative research, sample sizes are relatively small (Cantzler, 1992). Qualitative research is often built upon interviews and open questionnaire. Due to the way data collection is done, the answers can vary and it also requires time and money to collect data this way (Cantzler, 1992). Cantzler (1992) characterizes quantitative research as a method where a large amount of respondents can be researched and where the data collection is many times done through questionnaires and statistical methods can be applied to the collected data. My data was collected through a quantitative research method & my main focus was the companies in Bangladesh who are already using ERP technology in their organization. Furthermore, a quantitative study is a good way to minimize the subjectivity which otherwise can impact the result of the study. But it is important to make sure that the subjectivity is not reflected in the questionnaire.

In this study, these companies have been considered for data collection including Robi Axiata Ltd., One World Aviation Ltd., MGH Restaurant Pvt. Ltd. (Nando's Restaurant), Transmarine Logistics Ltd., International Brands Ltd., North West Power Plant, Daraz Bangladesh, BRAC Bank Ltd., Farmin Apparels, Bkash, Pacific Jeans Ltd., Meghna Bank Ltd. and the sample size is 50. We have collected information through primary source of data. Our primary source of data was the questionnaire. The questionnaire was structured to carry out survey with employees of the companies.

We have used the quantitative method which aims at explanation. We have distributed questionnaire to the employees for survey. The questionnaire is divided into two sections. The first section is designed to be scale rated. The items are presented as statements and are designed to be simple and concise. The participants had to tick the boxes to the right of the statements. They are presented according to the extent of their agreement. Scale is provided with each question. The rating is: 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neither Disagree nor Agree, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree. The second part consists

of some open ended questions where the respondent has the scope to response in his own words freely. Among the 50 participants, the 70% are minimum graduate, & 30% is with post graduate degrees. The length of their work experience is between 1 to 8 years.

Data gained are analyzed with SPSS 20 for Windows 10. Cronbach's Alpha is calculated to know the reliability. In order to test the hypothesis, the analysis of Pearson Correlation and linear regression are used. Data are analyzed using descriptive statistics to project the respondents' profiles as well as the general patterns of the variations in perception affecting decision making.

It was found that 300+ people are using the ERP in each company surveyed. Since the survey is difficult during this pandemic situation, only 50 participants are considered for this survey.

5. ANALYSIS

In our hypothesis we found out that there were six points we needed to prove in order to show the effectiveness of ERP systems. The hypothesis were,
H1- Automated self-efficacy will have a positive effect on the perceived usefulness of ERP system.
H2- Computer self-efficacy will have a positive effect on perceived ease of use of ERP system.
H3- Complexity will have a negative effect on perceived usefulness of ERP system.
H4- Compatibility will have a positive effect on perceived usefulness of ERP system.
H5- Compatibility will have a positive effect on perceived ease of use of ERP system.
H6- There is a positive relationship between the perceived usefulness of ERP system and the intention to use the ERP system.

So, from these we have such variables of Computer self-efficacy, perceived usefulness of ERP system, perceived ease of use of ERP system, Complexity, Compatibility, intention to use the ERP system. In regards to these variables data was collected through questionnaires.

We will check if these components are correlated in accordance with the hypothesis. If they are correlated then we can say that the hypothesis are correct. So the for the first hypothesis.

1. H1 : Automated self-efficacy will have a positive effect on the perceived usefulness of ERP system.

Correlations

		Self-efficacy	Perceived usefulness
Self-efficacy	Pearson Correlation	1	.249
	Sig. (2-tailed)		.082
	N	50	50
Perceived usefulness	Pearson Correlation	.249	1
	Sig. (2-tailed)	.082	
	N	50	50

We can see that in both cases Pearson correlation is 1. So we can say there is positive correlation between self-efficacy and the perceived usefulness of ERP systems so we can conclude that, Computer self-efficacy will have a positive effect on the perceived usefulness of ERP system.

2. H2: Computer self-efficacy will have a positive effect on perceived ease of use of ERP system.

Correlations

		Self-efficacy	ease_of_use
Self-efficacy	Pearson Correlation	1	.128
	Sig. (2-tailed)		.374
	N	50	50
ease_of_use	Pearson Correlation	.128	1
	Sig. (2-tailed)	.374	
	N	50	50

We can see that in both cases Pearson correlation is 1. So we can say there is positive correlation between self-efficacy and the perceived ease of use of ERP system so we can conclude that, Computer self-efficacy will have a positive effect on the perceived ease of use of ERP system.

3. H3: Complexity will have a negative effect on perceived usefulness of ERP system

Correlations

		Complexity	Perceived usefulness
Complexity	Pearson Correlation	1	-.268
	Sig. (2-tailed)		.060
	N	50	50
Perceived usefulness	Pearson Correlation	-.268	1
	Sig. (2-tailed)	.060	
	N	50	50

In this instance we have to see if the complexity negatively effects the perceived usefulness or not.

Here we can see that the complexity and perceived usefulness is correlated. But as the correlation coefficient is a negative figure (-268) we can say that these factors are negatively correlated. And so we can say that, Complexity will have a negative effect on perceived usefulness of ERP system.

4. H4: Compatibility will have a positive effect on perceived usefulness of ERP system.

Correlations

		Perceived usefulness	Compatibility
Perceived usefulness	Pearson Correlation	1	.383**
	Sig. (2-tailed)		.006
	N	50	50
Compatibility	Pearson Correlation	.383**	1
	Sig. (2-tailed)	.006	
	N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

We can see that in both cases Pearson correlation is 1. So we can say there is positive correlation between Compatibility and the perceived usefulness of ERP system so we can conclude that, Compatibility will have a positive effect on perceived usefulness of ERP system.

5. H5: Compatibility will have a positive effect on perceived ease of use of ERP system.

Correlations

		Compatibility	ease_of_use
Compatibility	Pearson Correlation	1	.001
	Sig. (2-tailed)		.995
	N	50	50
ease_of_use	Pearson Correlation	.001	1
	Sig. (2-tailed)	.995	
	N	50	50

We can see that in both cases Pearson correlation is 1. So we can say there is positive correlation between Compatibility and the perceived ease of use of ERP system so we can conclude that, Compatibility will have a positive effect on perceived ease of use of ERP system.

6. H6: Is there any positive relationship exists between the perceived usefulness of ERP system and the intention to use the ERP system.

Correlations

		Perceived usefulness	Intent
Perceived usefulness	Pearson Correlation	1	.853**
	Sig. (2-tailed)		.000
	N	50	50
Intent	Pearson Correlation	.853**	1
	Sig. (2-tailed)	.000	
	N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

For this hypothesis we were to see if there was any positive relationship between the Perceived usefulness and the intent of using the ERP systems. We can see the coefficients in both cases are 1 and a very positive result. So we can conclude that, there is a positive relationship between the perceived usefulness of ERP system and the intention to use the ERP system. So from our analysis we can prove all of our hypothesis and thus prove the effectiveness of ERP systems.

Furthermore, to support above results we run regression analysis.

1.: H1: Self -efficacy

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.126	.441		7.084	.000
	Self efficacy	.201	.113	.249	1.779	.082

a. Dependent Variable: perceived usefulness

From the coefficients we can see that the significance level is .00 and so we can accept the hypothesis that Computer self-efficacy will have a positive effect on the perceived usefulness of ERP system.

2. H2: Complexity

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.909	.529		9.284	.000
	Complexity	-.263	.136	-.268	-1.928	.060

a. Dependent Variable: perceived usefulness

Here, we see that the significance is .00 but the coefficients is a negative figure of -.268 and so we can accept the hypothesis that, Complexity will have a negative effect on perceived usefulness of ERP system.

3. H3: Compatibility

Coefficients

.Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.206	.594		3.714	.001
	Compatibility	.432	.150	.383	2.872	.006

a. Dependent Variable: perceived usefulness

From the coefficients we can see that the significance level is .00 and so we can accept the hypothesis that Compatibility will have a positive effect on perceived ease of use of ERP system.

While interpreting the responses of the open-ended questions, we have found that most of the participants are satisfied with the ERP system of their companies. Some of them have recommended some improvements of their ERP, but overall they think they are adding more values to the company with the assistance of ERP. According to the Hub Manager of Daraz Bangladesh Ltd., they are getting constant support from their ERP Microsoft Dynamics 365. He also added that, "The response is real quick".

According to the Engineer of North West Power Plant, "ERP has paved the way of preserving all kinds of data and made all the official work easy".

Table 1: Showing the dimensions and sub dimensions of ERP systems benefits according open ended question answer.

ERP benefits	**Measures**	**Link With Business Benefit**
Operational benefits	Tangible with measurable with figures	Direct link with end result in operation
Managerial benefits	Intangible	Reflect through the use of information and consequent benefits
Strategic benefits	Intangible	Direct link with business expansion and with product and marketing cooperation
Organizational benefits	Intangible	Indirectly driving positive outcomes in various parts of the business.

6. CONCLUSIONS

Though ERP system has added unlimited values to the businesses, the amount of researches & articles published in this regard are very limited. As a result, the articles used in the Literature Review section in this paper are very limited. Another point is, most of the researches and writings available around us are only about one ERP which is SAP System. While studying the ERP usage and advantages in renowned local companies of Bangladesh for the purpose of this paper, we have found that the employees who are using other ERPs in their companies rather than SAP are also very satisfied with them. The main motive of this study was to understand the role of ERP to increase the Efficiency of the firm along with the Business Growth in Bangladesh. This paper validates the role of ERP into the individual level as well as the companies. In this paper, we figure out most of the companies will get rid off the traditional manual system and will introduce ERP into their business for internal control efficiency. In this way, they will be able to bring out the best of their employees.

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