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How Enterprise Resource Planning (ERP) System Supports the Culture of Change: Jordan Phosphate Mines Company (JPMC)

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Abstract

The purpose of this paper is to investigate empirically the relation between the Appling of the Enterprise Resource Planning (ERP) System and culture of change in Jordan Phosphate Mines Company (JPMC). Correlation analysis and regression analysis was conducted. The application of this study was limited to employees in the (JPMC) in 2012, and the results of this study on the implications of validity and reliability of the tools in the study used. The results support the hypothesis that the Appling of the ERP System has a positive impact on (JPMC) culture of change. The results extend the understanding of the role of ERP in creating culture of change and building sustainable advantages for (JPMC) in rising economies, where unlike technological advancements may bring diverse implications for valuation of culture of change.

Key words: Culture of change; ERP; Jordan; JPMC

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INTRODUCTION

The Enterprise Resource Planning (ERP) projects always have some type of employee struggle to change, particularly in union environments or in companies that have employees with very long tenures with the corporation. The excellent information is that if you can distinguish this early in the process, you can plan accordingly. Cultural change should be a part of any effective ERP organizational change management plan. This paper addresses the question of whether fostering and supporting ERP is the same thing as culture of change at an organizational level. In the process of answering this question this paper will provide an explanation of the relationship between the ERP as an entity and the discipline of culture of change.

1. GENERAL BACKGROUND TO THE PROBLEM

Competition in the new globalized environment became the main force to innovation in all sectors in the business, and the knowledge-based market striking the business to trailing against huge waves of the innovation and competition based on the knowledge that developed by the human and for the human. The culture which is the affects the success of enterprises and of national economies as a whole is ever more reliant upon their effectiveness in gathering and utilizing knowledge. Jordan Phosphate Mines Company (JPMC) which is a main player in the Jordanian business environment have a deal with culture of change and as it a will structure enterprise in the Jordanian market have all basics of the ERP which can deal with culture of change. Globalization affect all business sector especially the financial institutions, especially those in the phosphate industry, have experienced a dynamic and competitive environment which must be faced by the investment and development in the information sector which leads the industry to adopts the ERP as a solution to cope with this a problematic situation of the culture of change.

2. ENTERPRISE RESOURCE PLANNING (ERP) AND CULTURE OF CHANGE

2.1 ERP Systems

ERP is an industry term for the broad set of activities that helps a business manage the important parts of its industry. The information completed on hand through an ERP system provides visibility for key performance indicators (KPIs) required for meeting company objectives. ERP applications can be used to run product planning, parts purchasing, and inventories. Davenport (1998) stated that enterprise resource planning (ERP) systems may be the most important development in the corporate use of information technology. Hence, many organisations want to improve their competitive position by implementing ERP systems (Grabski & Leech, 2007).

An active ERP system can be the backbone of business intelligence for an organization because it can give managers an incorporated view of the processes involved within it (Parr & Shanks, 2000; Nash, 2000). ERPS can tie diverse areas of an organization, such as industrialized, order administration, financial systems, human resources, suppliers and customers, into a tight integrated system with common data and visibility (Chen, 2001). For instance, ERPS provide faultless integration of processes across functional areas with improved workflow, consistency of various business practices and access to real-time up-to-date data (Mebert, Soni, & Venkataramanan, 2003; Ehie & Madsen, 2005). Implementing ERPs successfully however is difficult, costly and complex, and often shows high failure rates or even abandonment due to lack of fit with the business culture.

In its basic definition, ERP is an enterprise-wide information system that integrates and controls all the business processes in the entire organization. Nah and Lau (2001) define the ERP as the following: "a packaged business software system that enables a company to run the efficient and effective use of resources (materials, human resources, finance, etc.) by providing a whole, integrated solution for the organization's information processing needs". The ERP facilitates, if well put into practice, the integration of all the functional information flows across the organization into a single package with a common database. Thus, it allows easy and instant access to information concerning inventory, product or customer data, and previous history information (Shehab *et al.*, 2004). ERP initially enclosed all routine transactions within an organization only. Though, it was later expanded to cover external customers and suppliers (Turban *et al.*, 2006). Nah and Lau (2001) confirmed that most ERP systems now have the functionality and the ability to facilitate the flow of information across all business processes internally and externally. In addition, ERP systems have the capability to "reach beyond their own corporate walls to improved connect with suppliers, distributors and customers to engage in e-business". Now, many community and personal organizations worldwide are implementing ERP systems in place of the well-designed legacy systems that are not anymore well-well-matched with current business environment. But, Kroenke state (2008), the process of moving from functional applications to an ERP system is difficult and challenging. Additionally, the control to ERP system is restricted and it requires expansion of new procedures, training and convert data (Zhang *et al.*, 2005).

An ERP system has a service-oriented structural design with modular hardware and software units that communicate on a local area network. The modular propose allow a business to insert or reconfigure modules while preserving data integrity in one shared database that may be centralized or distributed. ERP implementations are littered with tales of lost millions and withdrawals after implementation. Numerous of the majority practiced IT organizations have failed. Here are a few things the vendor is not going to tell you about. One of these things is the culture change.

2.2 Culture of Change

Kroeber and Kluckhohn (1952) motioned that there is more than 150 definitions for the organization culture; culture refers to unspoken, often barely visible aspect of organizations, culture includes core values and consensual interpretations about how things are in the organization (Detert, Schroeder, & Mauriel, 2000).

Cameron and Ettington (1988), O'Reilly and Chatman (1996), Schein (1996) have the same opinion with the idea that culture is a socially constructed characteristic of organizations which serves as the social stick compulsory an organization together. Edgar Schein (1992) has expected the following clarification of what we mean by culture:

"Culture somehow implies that ritual, climate, principles, and behaviors bind together into a coherent whole". Schein propose cultural levels, artifacts, values and beliefs, and the basic assumptions. Schein points out, are the mental models and value systems that actually drive organizational behavior (Schein, 1992).

Most cultures are basically conservative in that they tend to refuse to accept change. Some refuse to go along with more than others by enact laws for the preservation and protection of traditional cultural patterns while putting up barriers to alien ideas and things. The interrelationship between culture and environment also can be seen in our depletion of energy resources and forced adoption of new energy sources Intangible assets have become more important to business success than the traditional factors of production - land, labour and financial capital (Edvinson & Malone, 1997; Sveiby, 1997; Stewart, 1998). Many factors form organizational culture and have impact on it, the examination of the various sources of literature propose that factors come into three groups (Schein, 2004; Driskill *et al.*, 2005; Schabracq, 2007):

(1) Factors indirectly influencing organizational culture (macro-environment of an organization).

(2) Factors directly influencing organizational culture (micro-environment of an organization).

(3) Factor of leader's impact (primary and minor mechanism, method of the change of the organizational culture).

Human economies change as necessity forces us to alter our relationship with the location. As our economy change, the rest of culture changes in response. The reasons for this are different attitudes, values and goals of the founders and leaders of the organizations. The major pressure on the configuration of organizational culture is exerted by the organization founder (Robbins, 1993; Driskill *et al.*, 2005). The founders plan the basic reason of the organization and develop the environment in which it functions; Thus they shift their work and efforts in the direction necessary for the organization. There are managers, who generate an organization and expand an organizational culture by using such personal uniqueness as personality (Schein, 2004).

In establishment and early development stage organizational culture is a positive and strong force, which must be further development. In the expansion stage subcultures outline in organization and at these stage managers can choose the acceptable values from subcultures and change organizational culture in the needed direction, in maturity stage the major part of the elements forming the organizational culture must be changed, in order to make the change of the organizational culture successful employees should be concerned, the results already achieved should be constantly highlighted, efforts should be made to permeate the organization and feel every aspect of it. And every change is only forth best, employees should be encouraged to devote themselves to the new ideas and the focus on the desired culture should be constantly maintained (Armstrong, 2001).

2.3 ERP and the Culture of Change in Mining Industry

Ciborra and Lanzara (1990) mentioned that there is social setting of the organization that shapes technology and vice versa. The rise of ERP in organizations reflect a new stage in the information of organizations, integrate disconnect processes like accounting, manufacture planning, marketing and human resource management. The intended incorporation of combine organizations makes ERP a very out of the ordinary case for studying organizational culture and ICT, since these ERP systems are working with the alteration of standardized solutions of septic routine within and between organizations (Holland & Light, 2001). There are relatively few discussions on the relationship between ERP and culture of change, and even fewer studies on such a relationship in the mining industry. The core competitiveness of the mining industry is highly reliant on the ability of management teams to systematically being effective. It also depends on whether they are able to create sophisticated skills catering to the culture of change of their organization to effectively manage risks and generate income. Only some studies were conduct to find out the connection between the ERP and the culture of change in the mining industry, the literature hasn't any study about the Jordanian mining industry.

Culture of change is increasingly acceptable as an important factor for sustainable corporate advantages. The importance of culture of change in enhancing firm profitability and cost efficiency by the adaption with culture of change is no less important than capital investments for companies. Therefore, culture of change should be increasingly recognized as one of the major investment for driving the company's sustainable expansion, jointly with the other factors of production.

3. RESEARCH OBJECTIVES

The objective of this research is to test how ERP support the culture of change in this research it's attempted that the vacuum resulted from the lack of related researches be filled and the significance for the relation of these two variables be verified.

3.1 Research Hypotheses

This research has one main hypothesis: "ERP has positive impact on Culture of Change."

In order to test this hypothesis, three other subordinate hypotheses:

(1) ERP has positive impact on factors indirectly influencing organizational culture (macro-environment of an organization).

(2) ERP has positive impact on factors directly influencing organizational culture (micro-environment of an organization).

(3) ERP has positive impact on factor of leader's impact (primary and minor mechanisms, method of the change of the organizational culture).

3.2 Methodology

To achieve the goal of the study, the researchers developed an instrument to measure the variables of the study, and formed a tool of the study. Reliability is a mechanism employed to check the internal consistency of test questions against every other test item when completed by different participants. In order to estimate reliability, 30 questionnaires were sent to employees. Overall Cronbach's alpha for the sample was 0.79 which indicate an excellent level of statistical internal consistency. Sequentially to increase the content validity of the research instrument, the questionnaire was "pilot-examined" by interviewing 10 managers and experts in the mining industry who agreed to fill in the questionnaire and also to comment on the balance working. Then, their suggestion was composed and some reformations were made to improve validity of questionnaire.

The boundaries of the study and its determinants as follows:

- The application of this study was limited to employees in Jordan Phosphate Mines Company (JPMC) in 2012.
- Determined that the results of this study on the implications of validity and reliability of the tools in the study used.

3.3 Analytical Procedures

To attain the objectives of the study was the use of statistical software packages for the Social Sciences (SPSS 22) to answer the questions of the study.

3.4 Hypotheses Test

In order to test hypotheses research, we used SPSS 22 software. The results of the analysis have been discussed below.

Hypothesis 1.1: ERP has positive impact on factors indirectly influencing organizational culture (macro-environment of an organization):

Table 1
Hypothesis 1.1

Hypothesis 1.1	Dependent variable	Independent variable	R square	Standard β	T test	Result
	ERP	Factors Indirectly Influencing Organizational Culture	0.398	0.390	4.830	**Confirmed**

According to the results, Beta Standard ratio is calculated 0.390 which is significant. Thus, this hypothesis is confirmed and ERP has positive impact on factors indirectly influencing organizational culture (macro-environment of an organization).

Hypothesis 1.2: ERP has positive impact on factors directly influencing organizational culture (micro-environment of an organization):

Table 2
Hypothesis 1.2

Hypothesis 1.2	Dependent variable	Independent variable	R square	Standard β	T test	Result
	ERP	Factors Indirectly Influencing Organizational Culture	0.361	0.193	3.762	**Confirmed**

According to the results, Beta Standard ratio is calculated 0.193 which is significant. Thus, this hypothesis is confirmed and ERP has positive impact on factors directly influencing organizational culture (micro-environment of an organization).

Hypothesis 1.3: ERP has positive impact on factor of leader's impact (primary and minor mechanisms, methods of the change of the organizational culture):

Table 3
Hypothesis 1.3

Hypothesis 1.3	Dependent variable	Independent variable	R square	Standard β	T test	Result
	ERP	Factor Of Leader's Impact	0.386	0.445	2.454	**Confirmed**

According to the results, Beta Standard ratio is calculated 0.445 which is significant. Thus, this hypothesis is confirmed and ERP has positive impact on factor of leader's impact (primary and secondary mechanism, method of the change of the organizational culture).

CONCLUSIONS

The concepts of the ERP and culture of change have been shown to be closely related and mutually supporting. The mining industry must invest to transform to the ERP which in then will increase the culture of change, consequently it will go forward in the competitive globalized environment.

Having established the synergies between the ERP and culture of change, the management challenge now is to further develop the meanings and implications arising from the combined utilization of this discipline. The messages that come out from this paper and opportunities for further research can be summarized as follows:

(1) ERP and the culture of change are inextricably linked to the extent that they should take in mind of the mining industry planers.

(2) Organizations should focus on the total inter-organization change process and the nurturing of the cultural environment that supports it and ensures its continuing development.

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