

Contingent Effects of System Development Life Cycle Critical Success Factors on Accounting Information System Effectiveness: Using Balance Scorecard Perspectives—Empirical Study Applied on the Jordanian Industrial Companies

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ABSTRACT

The aim of this study was to explore the critical success factors that affect accounting information systems development fitness in Jordanian industrial companies. In addition, the paper aims to test the effectiveness level of the AIS and causality relation between the system development process and its effectiveness level. A survey using self-administered questionnaire has been carried out to achieve the study objectives. The study results reveal that Jordanian industrial companies do not have effective accounting information systems; there is not enough evidence that support the sole relationship between the system development process and its effectiveness level.

Keywords: Accounting Information Systems, Critical Success Factors, Industrial Companies, Jordan, System Development Life Cycle

INTRODUCTION

Traditionally, the role of accounting information systems (AIS) within an organization

has been to design, construct, and implement systems to improve organization performance and thus its profitability (Anthony et al., 1994). Unfortunately, this has not always been the case when the organization acquires an information system (Martin, 1998). This is particularly true

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for developing countries. Software projects can often spiral out of control to become “runaway systems” that far exceed original budget and schedule projection (Keil et al., 2000) and that failure could represent a significant loss in a market with billions of investments (ARC Advisory Group, 2003).

Providing and assuring the quality of financial data is a major objective of accounting. With the advent of AIS, the traditional focus on the input and recording of data needs to be offset with the recognition that the systems themselves may affect the quality of data (Fedorowicz & Lee, 1998). Consequently, many efforts appeared in the literature and the profession to measure and evaluate system effectiveness in order to develop the best methodologies and practices that ensure delivering effective information systems and avoid any possible pitfalls.

The majority of the literature measured information system (IS) effectiveness using indicators, such as system usage, cost/benefits analysis, user satisfaction, information economics and system quality (Delone & McLean, 1992; Peslak et al., 2008), all of these indicators seems reasonable; due to the fact that the (IS) function includes a significant qualitative service component (Jiang et al., 2002); but they are partial and inconclusive. Other studies, like (Choe, 1996; Palanisamy, 2001; Sharma & Yetton, 2003), tried to identify the critical success factors that could influence the Enterprise Resource Planning (ERP) effectiveness level in general, these attempts were successful at ERP level but with a little attention to AIS in particular.

This study extends previous literature by examining the relationship between the AIS implementation success factors and AIS effectiveness, where the failure in implementing the System Development Life Cycle (SDLC) may cause discrepancies in system output (Rajagopal & Frank, 2002) and this is very true to all SDLC phases activities (Gupta, 2000 ; Umble & Umble, 2002).

In this study, a critical success factor (CSF) list was developed, based on Oracle Applications Implementation Methodology (OAIM),

literature review and a preliminary investigation of several ERP successful delivery stories in Jordan. The developed CSF list aims to identify the extent to which the SDLC phases are implemented properly in the Jordanian environment. This may enables us to formulate a better understanding for what could be a good fit in this emerging environment, thus; contributes to the literature with the Jordanian experience and support the growing literature in the area of ‘cultural fit’ (Plant & Willcocks, 2007).

To measure the AIS effectiveness level we used the Balance Score Card (BSC) perspectives to develop a comprehensive effectiveness measurement tool that covers all AIS aspects, general enough to be valid for all research sample companies and specialized enough for the industrial sector. AIS that is subject to this study is part of (ERP) and meet its definition.

This research attempts to answer the following questions: First, what is the actual practice in the Jordanian industrial companies regarding SDLC critical success factors? Second, what is the effectiveness level of AIS in the Jordanian industrial companies? And finally, is the effectiveness level of AIS affected by the current SDLC practices in Jordan?

This study to the best of the researchers’ knowledge is the first that attempts to create an overall effectiveness measurement for evaluating AIS effectiveness using BSC perspectives and measuring SDLC implementation using critical success factors developed for the Jordanian environment on the same time.

SDLC USING OAIM

This section discusses the overall content and structure of Oracle’s (OAIM) which is a proven approach for implementing Oracle Applications.

- Planning
- Requirements definition
- Business process alignment and modeling
- Customization
- Interfaces and integration between systems

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