Chapter XVIII

IS Project Characteristics and Performance: A Kuwaiti Illustration

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Empirical research on project-level success of systems development in developing regions is lacking. Managers cannot rely on prescriptions suggested by IS projects research in developed countries to understand IS projects in developing countries without empirical evidence supporting the applicability of these guidelines. We collect data from 61 IS project leaders to test eight research hypotheses tapping the relationship between IS project characteristics and performance in a developing country. Our analyses reveal that adequacy of development tools, formal planning, management support, and participation are positively related to IS project performance. However, the data find no support for a significant relationship between members’ abilities, project uncertainty, and conflict and performance. Contrary to previously reported findings, our data highlight the possible damaging effect of increased horizontal coordination in IS projects. We discuss these results and suggest directions for future research.

INTRODUCTION

The effective management of information systems (IS) projects continues to be an important issue facing organizational managers all over the world (Badri, 1992; Deans et al., 1991; Marchewka & Keil, 1995; Watson et al., 1997). This interest stems in part from the fact that the outcome of such projects can lead, in many cases, to profound organizational consequences ranging from reducing costs to creating a competitive advantage over rivals.

In compliance with this interest, some scholars have examined the salient project characteristics that determine the performance of IS projects (e.g., Saarinen, 1990; Robey, Smith, & Vijayasarathy, 1993; Kraut & Streeter, 1995; Nidumolu, 1995; Deephouse et al., 1996). These empirical investigations, although significant, have come from developed regions like...
the United States and Western European countries, thereby limiting the external validity of these studies.

Culture plays an important role in many situations and certainly in IS implementation (Odedra, 1993). Previous research found differences between developed and developing countries along certain cultural dimensions—power distance, individualism, masculinity, and uncertainty avoidance (Hofstede, 1980). Therefore, one cannot rely on prescriptions suggested by IS projects research in developed countries to understand IS projects in developing countries without empirical evidence supporting the applicability of these guidelines.

Empirical research on project-level success in developing regions is lacking. Previous research in developing countries (e.g., Abdul-Gader, 1990; Khalil & Elkordy, 1997; Odedra, 1993; Siderisdis, 1988) focused on system-level success as opposed to project-level success. Although system-level success is an important construct, it is important to recognize that it is a different construct from IS project performance (Robey et al., 1993). Hence, there is a pressing need to study IS project performance in developing countries.

The purpose of the present study is to examine the relationship between IS project characteristics and IS project performance in Kuwait. We hope that the findings of this investigation will accomplish at least two goals. First, this study will help pinpoint some of the facilitators and inhibitors of IS project performance in Kuwait. Second, the paper will become a reference for IS practitioners and researchers to evaluate the extent to which the guidelines, proposed by similar research that has been conducted in developed countries, can be applied in a developing country like Kuwait. The second goal is extremely important given the critical need for IS managers to understand global information resources management issues (Khosrowpour & Greenawalt, 1997).

**BACKGROUND & PROPOSED RELATIONSHIPS**

Several IS researchers have examined the relationship between IS project characteristics and IS project performance (e.g., Saarinen, 1990; Robey et al., 1993; Kraut & Streeter, 1995; Nidumolu, 1995; Deephouse et al., 1996). Two main conclusions come out of this research. First is that this research comes from developed countries like the United States and Western European countries. Second is that IS project characteristics that influence IS project performance are many.

Based on past research on IS project performance in developed countries, we identify an initial set of project characteristics that may influence IS project performance in Kuwait (Figure 1). The selected variables are horizontal coordination (Nidumolu, 1995), participation (Robey et al., 1993), formal planning (Deephouse et al., 1996), members’ abilities (Saarinen, 1990), adequacy of development tools (Saarinen, 1990), project uncertainty (Kraut & Streeter, 1995), and conflict (Robey et al., 1993). Because of its importance for IS initiatives in developed countries (Lucas, Ginzberg, & Schultz, 1990) and certainly in developing countries (Abdul-Gader, 1990; Khalil & Elkordy, 1997), management support is also added to our list of predictor variables.

**IS Project Performance**

IS scholars used many surrogates to measure the dependent variable in IS implementation research. Usage, user satisfaction, system quality, information quality, and economic impact are examples of surrogates of systems development success used in many past implementation studies (see DeLone & McLean, 1992 for a review). As can be noticed from
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