A Maturity Based Qualitative Information Systems Effectiveness Evaluation of a Public Organization in Turkey

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EXECUTIVE SUMMARY

Among the top issues of information systems (IS) management is measuring and improving IS effectiveness. In that, the concept of IS effectiveness is widely accepted throughout IS research as the principle criterion for evaluating information systems. IS effectiveness is defined as the extent to which a given information system actually contributes to achieving organizational goals.. As the society moves from the industrial era to the information age,,ıs role in any organization shifts from efficiency to effectiveness. This case study presents an IS effectiveness evaluation methodology applied on a public organization. The paper supports in general the claim that the use of a systematic IS effectiveness evaluation approach can improve organizational performance.

Keywords: effectiveness assessment; information system; maturity based assessment; organizational characteristics; qualitative research

ORGANIZATION BACKGROUND

With the increasing expenditures on computers and computer based information systems and the emphasis shift from "doing things right" to "doing the right things", today, assessment of the value added to organizations by IS assets namely the effectiveness of information systems has become a crucial topic for both practitioners and researchers (Ozkan, Bilgen, Hackney, 2007; Srinivasan, 1985; Scott, 1995; Yuthas and Eining, 1995; Seddon 1999; Kumar, 1990; Khalil and Elkordy, 1996; Ferrat and Agarwal, 1996, Malik and Goyal, 2001). Rau (2004) goes further and states that: "*never has demonstrating the value of IT to an organization been as imperative as today*". Despite the need for evaluations, there is no consensus on a structured and wholly accepted success framework for all. Besides the motives for the IS effectiveness assessment, it should be noticed that it is more urgent for developing countries because financial resources are

being allocated for the expensive information technology instead of providing food and education for the people even vaccine for the babies.

Most of the practical findings on information systems effectiveness and the correlated aspects are generally derived from developed countries. The findings of such research cannot necessarily be generalized to other environments where the social, economical, and cultural characteristics are fundamentally different. Such evidence needs to be validated through cross-cultural research (Khalil and Elkordy, 1996). Little et al (2000) claim that cultural issues are becoming more important as the world moves toward increased communication and globalization. With the growing globalization of business in today's environment, increased multiculturalism has encouraged scholars to examine factors that enhance or inhibit the adaptation of organization and management practices across cultural boundaries (Teng et.al, 1997). Several authors argue that information systems solutions from the developed world, conveyed by professional, standardization "imperatives" or the emulation of patterns seen elsewhere successful cannot be replicated in the developing world with the expectation that similar results would also accrue, local adaptations are necessary (Sahay and Avgerou, 2002).

While IT products open new opportunities for developing countries, they also pose a set of new challenges. It is often the case that in developing countries computer systems may be copiers of their manual predecessors and may not exploit the full potential of computers. Computer based information systems and manual systems may be running simultaneously for longer than needed periods (Yahya, 1993).   Like Yahya, Sahay and Avgerou (2002) claim that developing countries have problems in IT use because developing country environments tend to be politically volatile and unstable, decisions around IT projects are often driven by reasons of expediency rather than rationality. Although it is not sensible to claim that Turkey is experiencing the same problems in the same degree as presented above, it may be argued that Turkey still has some problems in exploiting the full potential of computer-based systems. It may enhance the objectivity of assessment to notice if some organizational transformation practices like business process reengineering or total quality management is not performed to exploit IS effectively. In other words, despite the widely usage of IS development methods and project management tools and techniques, target information system to evaluate may have development phase problems like insufficient requirement analysis, problematic business process modeling or implementation problems.

In almost every IS effectiveness research, organizational characteristics are pointed as one of the most important aspects of IS effectiveness assessment in order to determine the dependent and independent success variables. Due to the difficulty of formulating measures of effectiveness for complex socio-technical systems, the methodology on how to do it is not clearly and explicitly explained. Such an incorporation of tangible and intangible elements in the context of a developing country is not easily achieved. In this case study, this integration is explicitly expressed and implemented.

SETTING THE STAGE

DeLone and McLean Model with its dimensions was justified as the basis of the research. DeLone and McLean's model of IS success is accepted as an important step in consolidating prior research (Kappelman, 1997; Seddon, 1999). Their model is based on the work of Shannon and Weaver (1949) and on a study of 180 published empirical and theoretical papers which address the issue of IS success. In their construction of the model, DeLone and McLean(1992;2003) argue :"*…investigations determine the IS effectiveness frameworks for specific contexts…",* and also they state that: " *The structure of systems success is composed of a set of factors common to all systems plus a set of factors unique to each*

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