Chapter 4.4
Size Matters!
Enterprise System Success in Medium and Large Organizations

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ABSTRACT

Organizations invest substantial resources in acquiring Enterprise Systems, presumably expecting positive impacts to the organization and its functions. Despite the optimistic motives, some Enterprise System projects have reported nil or detrimental impacts. This chapter explores the proposition that the size of the organization (e.g. medium, large) may contribute to the differences in benefits received. The alleged differences in organizational performance are empirically measured using a prior validated model, using four dimensions employing data gathered from 310 respondents representing 27 organizations.

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INTRODUCTION

Enterprise System (ES) is an ideology of planning and managing the resources of an entire organization in an efficient, productive, and profitable manner, and is manifested in the form of configurable information system packages (Laukkanen, Sarpola et al. 2007). The Enterprise System vendors promote a fully integrated core business processes through the organization where seamless integration of the information flowing from one functional area to the other. Amongst the myriad of benefits, Enterprise Systems said to deliver key benefits like: cost reduction, productivity improvement, quality improvement, customer service improvement, better resource management, improved decision-making and planning, and organizational empowerment (Shang and Seddon 2002).

Organizations devote substantial resources and time on acquiring an Enterprise System, presumably expecting positive impacts to the organization and its functions. These extensive ES implementations are typically measured in millions of dollars Pan et al (2001), and for many organizations they represent the largest single IT investment. The substantial resource requirements for Enterprise Systems have restricted Enterprise System market to the Medium-Large organizations with many suggesting that ES are best suited for Large Corporations (Hillegersberg and Kumar 2000). Recent changes in market place, wherein the demand for Enterprise Systems from large organizations has plateau, vendors are attempting to shift their emphasis into the Small-Medium Enterprises (SMEs) with scaled-down ES products (Piturro 1999; Everdingen, Hillegersberg et al. 2000).

Measuring the impacts of Enterprise Systems takes on special importance since the costs and risks of these large technology investments rival their potential payoffs. Often carefully rationalized in advance, ES investments are too seldom systematically evaluated post-implementation (Thatcher and Oliver 2001). Welsh and White (1981) differentiated the small and large organizations using such aspects like time, skills, and resources – where the medium organizations lacking all three compared to their counterparts. D'Amboise and Muldowney (1988) argue that the lack of resources has made smaller organizations more vulnerable to the environmental effects and misjudgments forcing them to allocate more time to adjusting to, rather than devoting time on predicting and controlling. The resource lack of constraints has been found to hinder IT adoption (Baker 1987; Cragg and Zinatelli 1995; Iacovou, Benbasat et al. 1995; Proudlock, Phelps et al. 1999), and to negatively affect IS implementation success (Thong 2001) and IT growth (Cragg and King 1993) in SMEs.

With the aforementioned background – where organizations devote huge resources acquiring ES and many not receiving anticipated benefits, where the traditional market leveling with ES vendors moving into the SME market segment – this chapter discusses whether the organization size has an influence over the benefits brought-to-bear by the Enterprise System. This study aims to contribute to the encyclopedia by investigating the relationship of organizational size with the performance of the system (commonly referred to as System Success). Although prior research (Raymond 1985; DeLone 1988; Raymond 1992; Lai 1994) has contributed to our understanding of IS and organization size, few have empirically assessed influence of organizational size for contemporary IS success. More importantly, instead of resorting to the customary approach of considering large and medium-sized organizations as one homogenous group receiving equal benefits, this study aims to bring forth the differences between these two groups using four system related dimensions. This study presented herein investigates the influence of organization size on ES performance. ES impacts are empirically measured using information received from 310 responses representing 27 organizations that had implemented a market leading Enterprise System solutions in the second half of 1990.

The chapter begins with a historical overview of literature on size as an important determinant. The broad contextual overview begins by differentiating characteristics of the medium vs. large organizations and demonstrating the impact of such contextual factors on System success. The research context is introduced next followed by discussions on the research methodology and data collection instrument. The final section demonstrates the observed differences between the two organizational sizes and research implications.

BACKGROUND

Prior research suggests that organizational context is a determinant of Information System (IS) success. Researchers have concluded that medium