

Chapter XIII

ERP Systems Effectiveness in Implementing Internal Controls in Global Organizations

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ABSTRACT

This chapter examines the effectiveness of ERP systems in implementing internal controls in global organizations, particularly controls required by the Sarbanes-Oxley Act (U.S. Congress, 2002), or SOX. It aims to understand the extent to which ERP systems are able to meet these requirements and challenges organizations face in enhancing their ERP systems for this purpose. The chapter reports the results of interviews with ERP systems managers and directors in four organizations with significant global operations. It reveals a substantial degree of completion of SOX requirements by these organizations, often facilitated by consultants, and often accomplished as part of broader systems, processes, and strategic management improvement initiatives. It also highlights some significant technical and cultural implementation challenges, such as systems inflexibility and diversity, systems security weaknesses, and resistance to change, as well as some benefits upon completion, such as improved process efficiency and systems security, and potential intangible long-term benefits.

INTRODUCTION

The need for increased reliability and relevance of accounting and control information has long been recognized (Kaplan, 1984). The increasing popularity and adoption of both advanced information technology-based enterprise resource planning (ERP) systems, such as SAP R/3, and modern performance measurement and control systems, such as the balanced scorecard (Kaplan & Norton, 1996), have been considered as an organizational response to this need. During the past few years, this need has gained critical importance due to new internal control requirements imposed by the Sarbanes-Oxley Act (U.S. Congress, 2002), often called SOX. SOX imposed stringent internal control requirements over financial reporting following prominent business scandals, such as those involving Enron and WorldCom, in an effort to improve corporate governance and regain investor confidence. SOX stipulated management's and auditors' responsibilities for internal controls over financial reporting in public organizations. In addition to U.S.-owned public corporations, many multinational non-U.S. corporations that operate in the global business environment are also listed on U.S. stock exchanges and, as such, are also subject to SOX requirements.

ERP systems provide critical technical tools and solutions for collecting, analyzing, and reporting relevant financial and non-financial information for implementing SOX compliance. However, ERP systems, and regulations themselves, are dynamic and continuously evolving (Bititci, Turner, & Begemann, 2000). For example, new technological developments and organizational learning can provide needs and opportunities for redesign and continuous development of ERP systems. New knowledge and organizational learning can provide ways for organizations to respond to uncertainties in the global environment (Harrison & Leitch, 2000). In addition, regulatory requirements can vary in different environments

and evolve in multiple stages as experience grows (Bratton, 2003) and also require further systems modifications. Such dynamic environments can require innovative approaches and continuous monitoring, evaluation, and complex adjustments to controls, processes, and systems. Nonetheless, little guidance or models exist to help systems managers and researchers understand control implementation challenges and enhance ERP systems for control purposes in competitive global organizations.

This chapter addresses such a void by examining the effectiveness of ERP systems in implementing internal controls in global organizations. It aims to understand the extent to which ERP systems are able to meet control requirements imposed by SOX in global organizations and challenges organizations face in enhancing their ERP systems specifically for this purpose. In order to identify and understand these issues, interviews were conducted with ERP systems managers and directors in four organizations with significant global operations. This chapter reports qualitative exploratory findings of these interviews. As such, it provides systems managers some insight into successes and challenges in enhancing ERP systems for SOX compliance, which in turn can ultimately contribute to best practices and long-term organizational effectiveness. It can also serve as a basis for developing a comprehensive model of ERP systems effectiveness in implementing internal controls in future research.

The remainder of this chapter is organized into five main sections. The next section provides a background on internal controls, implementing internal controls using ERP systems, and implementation challenges in global organizations. In the following three sections, the method, results, and future trends are presented and discussed in turn. Finally, an overall summary of the chapter, concluding remarks, and future research directions are presented.

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