

December 2001

Enterprise Resource Planning Systems and Firm Value: An Event Study Analysis

C. Ranganathan

University of Illinois at Chicago

Imad Samarah

Southern Illinois University, Carbondale

Follow this and additional works at: <http://aisel.aisnet.org/icis2001>

Recommended Citation

Ranganathan, C. and Samarah, Imad, "Enterprise Resource Planning Systems and Firm Value: An Event Study Analysis" (2001). *ICIS 2001 Proceedings*. 19.

<http://aisel.aisnet.org/icis2001/19>

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 2001 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

ENTERPRISE RESOURCE PLANNING SYSTEMS AND FIRM VALUE: AN EVENT STUDY ANALYSIS

C Ranganathan

University of Illinois at Chicago
ranga@uic.edu

Imad Samarah

Southern Illinois University, Carbondale
imad@cba.siu.edu

Extended Abstract¹

There is considerable debate on the contributions of IT investments to firm value. Over a decade of research on the business value of information technology has produced mixed findings. This study focuses on the business value generated by a specific kind of IT systems, namely enterprise resource planning (ERP) systems. Studying the value created by ERP systems is appropriate and important for four reasons. First, ERP systems are being widely used by corporate community. Given the widespread adoption of ERP applications, it becomes essential to assess the contributions of these systems. Second, ERP systems typically encompass a wide spectrum of organizational functions. Given the wide functional coverage of ERP systems, they are likely to have a larger impact on firm performance than those information systems focusing on a specific function. Third, ERP systems require considerable investments in hardware, software, networking, and complementary organizational changes. Since ERP investments represent a critical IT expense for firms, it becomes important to assess the returns from ERP spending. Fourth, the reported failures of ERP systems by companies such as FoxMeyer Drugs, Applied Materials, Hershey, Mobil Europe, and Dow Chemicals have questioned the very viability of ERP systems. This is another compelling reason to ascertain the true contributions of ERP systems.

We use event study approach to assess the business value of ERP systems. Event study approach examines the response of stock markets in response to a key corporate event, or release of information about the event. Use of market-measures like stock prices precludes the need to use accounting-based measures that have been criticized for their inadequacies in capturing the real benefits of IT investments.

The key research questions addressed by this study are:

1. *Is there an impact of ERP related announcements on the market value of the firm?*
2. *Does the nature of announcement (adoption or completion of ERP system implementation) affect the stock market response to the event?*
3. *Is there a difference in the stock market response to ERP related announcements made by manufacturing and service firms?*

We gathered ERP related announcements from two sources—*PR Wire* and *Business Wire*—using the LEXIS-NEXIS database. This list was evaluated and refined based on the following criteria: (1) Only those announcements by firms for which the stock price data was available in the CRSP (Center for Research in Security Prices) database were included. (2) Announcements that might be confounded by other key firm announcements such as other mergers, acquisitions, profits, dividends, etc., around the announcement period were removed. (3) Multiple announcements in different sources were checked for consistency of the announcement dates. Only those announcements with consistent dates were included. This yielded a total sample of 136 announcements for which we had usable returns from the CRSP database.

Our analysis shows positive and significant excess returns to firms making ERP related announcements. The announcements pertaining to ERP adoption produced positive excess returns for firms. Our analysis also provides evidence for industry impacts

¹**Keywords:** ERP systems, firm value, event study, IT investments.

on the firm value created by ERP announcements. We found manufacturing firms to accrue more positive excess returns than the service firms.

This study makes three important contributions to IS research. First, it focuses on a particular kind of technology, namely ERP systems, and examines their impacts on firm value. Second, it adopts the event study approach, a method that has not been as widely used in IS studies. By adopting the event study method, our study also addresses the time lag effect concerns raised by earlier researchers. Third, the study clearly demonstrates the potential benefits of ERP systems. Our findings are timely and highly relevant for practitioners who have made heavy investments in ERP systems and are dismayed by the lack of immediately measurable benefits and reported failures of ERP systems. Our results clearly show that investors view ERP systems as being productive and resulting in firm value.