The Value Relevance of IT Investments on Firm Value in the Financial Services Sector

Ram S. Sriram, Georgia State University, USA
Gopal V. Krishnan, City University of Hong Kong, China

ABSTRACT

Understanding and assessing the payoff from investments in IT is an important exercise for managers. A number of researchers have examined the elusive notion of firm-level information system effectiveness and the results are mixed. This study contributes to this debate by examining the association between market value of equity and IT-related investments for a sample of firms in the financial services sector. It should be noted that companies in the financial services industry are intensive users of IT and often rely upon IT as a source of competitive advantage. We find a positive association between investments in IT and market value. Overall, our findings support the notion that investors perceive investments in IT as value-relevant.

Keywords: IT investment payoff; information systems effectiveness; financial services sector

INTRODUCTION

We examine whether disclosures relating to investments in information technology (IT) are relevant to investors in assessing the market value of equity. During the last two decades, firms have made large investments in strategic information systems. Managers believe that the investments in IT would enable them to introduce new products and services with greater ease and in the long run, the investments would provide their firms with several tangible and intangible benefits such as cost reduction, improved operational efficiency, decision support in the areas of planning and business strategies, and enhancement of brand image, product quality, and customer loyalty (Keen, 1981; Ives & Learmonth, 1984; McFarlan, 1984; Cash & Konynski, 1985; Porter & Millar, 1985; Cash et al., 1988). Managers consider the IT investments as a strategic necessity and a key to obtaining a competitive position within the industry.

For corporate managers, a greater understanding of the current and future value of IT investments is important. While deciding to invest in IT, managers must evaluate the impact of such spending on the firm’s current operational and strategic performances and also the impact on the
bottom line. Concurrently, they must weigh the consequences of falling behind a competitor or losing competitive position and not making investments on a timely manner. IT investment decisions made on a timely manner improve a firm’s competitive position and when delayed, make the firm more vulnerable to competitive forces (Cash & Konsynski, 1985; Clemons & Row, 1988; Jarvenpaa & Ives, 1990; Parsons, 1984; Porter & Millar, 1985). For example, in the financial services industry, IT investments are a strategic necessity. IT investments help financial service firms in offering innovative products (e.g., Merrill Lynch Cash Management System), building customer service and customer loyalty and brand image, all of which contribute to competitive success (Guilding & Pike, 1990; Hodgson et al., 1993). Assessing the potential benefits also aid managers in assessing the risks of such investments. IT investments require significant investments and as history has shown, many of these systems have failed to produce benefits to the investing firm. The risk assessment will help managers in determining whether the competitive advantages can be sustained (Sabherwal & King, 1995).

Since the early 1980s, the information technology literature has pointed out the importance of investment in IT. When a firm invests in IT, it helps improvement in performance through greater operational efficiency, cost reduction, increased sales and revenue that contribute to cash flows. Managers are generally aware of these benefits and consider them in their IT investment decisions (Dos Santos et al., 1993). However, managers also must consider the future benefits of IT investments and whether the investment would help the firm’s bottom line. This is because the current investments in IT enable the firm to use the technology in future projects and receive sustainable competitive advantage when it uses the IT to leverage differences in strategic resources (Clemons & Row, 1993). If firms are investing in IT to receive competitive benefits, then managers must look at the “totality of the firm” and make IT decisions based from a “totality of the firm” perspective (Clemons & Row, 1993). When managers make investment decisions based on future opportunities available to the firm, the decisions would have an impact on maximizing the future value of the firm (Dos Santos, 1991).

In practice, managers rarely evaluate the future potential or firm value in the long run. This is because future IT benefits and the value enhancement that the benefits produce are difficult to quantify and measure (Barua et al., 1995). As Brynjolfson et al. (1998) identify, estimating the long term economic impact of IT investments is difficult because of measurement problems, lag between IT investments and impacts, and redistribution of outputs within an industry. Earlier studies that provided evidence that IT leads to corporate success or provided long-term value were mostly anecdotal and consisted of ex post investigation of firms that were successful in implementing information technology. These studies lacked rigorous empirical support and did not provide rationality for management’s decision to invest in IT (Cash & Konsynski, 1985; McFarlan, 1984; Wiseman, 1985; Kramer & King, 1986; Laudon & Turner, 1989). Therefore, in this study, we take a different approach to studying the future value of IT. Instead of directly measuring the benefits that accrued to a specific firm, we take a macro approach and investigate whether investors and the stock market react to IT investments that are of strategic importance. We analyze the impact of IT investment announcements on the common
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