Event Studies in Information Systems Research: A Review

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Event Studies in Information Systems Research: A Review

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ABSTRACT

Event studies, which look at stock market reactions to assess corporate business events, represent a relatively new research approach in the information systems field. In this paper we present a systematic review of thirty event studies related to information technology. After a brief discussion of each of the papers included in our review, we call attention to several limitations of the published studies and propose possible future research avenues.

Keywords

Event studies, literature review, investments in IT, productivity of IT, IT outsourcing, IT security.

INTRODUCTION

The efficient market theory provides the foundation for event studies. According to the efficient market theory (Fama 1970, 1991), all available information to investors is reflected in the stock prices. When unanticipated news reach the financial markets, investors assess their relevance and possible effects on particular firms, industries, and economic regions; if the events described in the news are believed to substantially affect the financial performance of particular companies, their stocks are likely to move.

Stock prices of a company will move up when the news are perceived to be favorable, i.e. if the reported events are likely to benefit the company and therefore create additional demand for stocks by investors. In contrast, news indicating the possibility of diminishing future cash flows for a company, will result in decreasing stock prices. In the event studies approach, the reaction of stock markets to reported events is used to explore the perceived relevance and implications of these events (McWilliams and Siegel 1997).

Since the late 1960s (Beaver 1968; Fama, Fisher, Jensen and Roll 1969), the methodology has been widely used to explain the potential effects of corporate events such as shifts in corporate strategies (Markides 1992) or changes in top management (Lubatkin, Chung, Rogers and Owers 1989), and event studies are now widely-used in many business research areas in accounting, finance, and strategic management. Only since around 2000 or so, have event studies become reasonably popular in information systems (IS) research, where this approach has been used primarily to identify specific factors which impact the outcomes of information technology (IT) investments.

Although in recent years the focus of event studies in IS research has extended beyond IT investments to other issues, such as security breaches, outsourcing decisions, and standardization choices, event studies methodology is still less known in the IS field than other, more traditional research approaches. Thus, in this paper we present a systematic literature review of event studies in IS, which is backed by experiences from conducting our own event studies. The main motivation for this review is to familiarize IS researchers with the potential of this methodology and to point out further needs and opportunities for event studies research within the IS discipline.

The remainder of this paper is structured as follows: After describing our approach in collecting and selecting papers for our review, and a brief description of the characteristics of our sample, we present our review of all the papers included in our sample. Finally, we discuss our findings and point to several limitations which at the same time present opportunities for future research.

PROCEDURE

For the purpose of a systematic review of published event studies investigating issues related to IT, we have used literature databases, such as ABI/Inform (Proquest), Business Source Premier (EBSCO), JASTOR, and Science Direct. The search queries included keywords such as “event study”, “stock market reaction”, “information technology” and “information systems.” The initial literature search was conducted in spring 2007 with two up-dates: in fall 2007 and spring 2008.
To be included in our review, an article needed to, first, be published in an academic peer-reviewed journal or in refereed proceedings of a major IT conference (ECIS, HICSS, and ICIS), and second, the article needed to use an event studies approach as the primary research method. Once an appropriate article was identified and checked for its relevance to this study, its reference section was examined for additional potential candidates. Basically we followed the “go backward” search strategy (Webster and Watson 2002). We also employed a “go forward” strategy and used databases to look for articles which cited the articles we already had. Overall, we ended up with a total of thirty papers.

EVENT STUDIES IN THE FIELD OF INFORMATION TECHNOLOGY

Sample Description

Twenty-nine of the papers included in our review were published in the time period from 2000-2007; one paper was published in 1993.

In regard to publication outlets, most of the papers appeared in Information Systems Research and Journal of Information Systems, followed by Journal of Management Information Systems, International Journal of Electronic Commerce, and MIS Quarterly. The distribution of the publications outlets is depicted in Table 1.

<table>
<thead>
<tr>
<th>Publication Outlet</th>
<th>Number of Papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Systems Research</td>
<td>4</td>
</tr>
<tr>
<td>Journal of Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>International Journal of Electronic Commerce</td>
<td>3</td>
</tr>
<tr>
<td>Journal of Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS Quarterly</td>
<td>2</td>
</tr>
<tr>
<td>Computers &amp; Security</td>
<td>1</td>
</tr>
<tr>
<td>Decision Support Systems</td>
<td>1</td>
</tr>
<tr>
<td>The Electronic Journal of Information Systems Evaluation</td>
<td>1</td>
</tr>
<tr>
<td>Expert Systems with Applications</td>
<td>1</td>
</tr>
<tr>
<td>IEEE Transactions on Software Engineering</td>
<td>1</td>
</tr>
<tr>
<td>International Journal of Accounting Information Systems</td>
<td>1</td>
</tr>
<tr>
<td>Information &amp; Management</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Computer Information Systems</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Electronic Commerce in Organizations</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Electronic Commerce Research</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Information Technology Theory and Application</td>
<td>1</td>
</tr>
<tr>
<td>Risk Management &amp; Insurance Review</td>
<td>1</td>
</tr>
<tr>
<td>Proceedings of the European Conference on Information Systems (ECIS)</td>
<td>1</td>
</tr>
<tr>
<td>Proceedings of the Hawaii International Conference on System Sciences (HICSS)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Table 1. Publication Outlets for Information Systems Event Studies

Review

We classified the papers in our sample according to the topics of investigation. Most of the event studies (eighteen) examined stock reaction to IT investments. Two others popular topics of investigations were IT security (six papers) and IT outsourcing initiatives (three papers). The remaining three papers examined various topics such as Web traffic, website redesigning and XML standardization. In discussing the papers included in a particular category, we follow a chronological order.

Information Technology Investments

One of the earliest event studies in IT (Dos Santos, Peffers and Mauer 1993) investigated two major factors which may influence the success of investments in IT: industry sector and the innovativeness of the technology. The results of this study, which used ninety-seven announcements from the time period 1981-1988, imply that innovative IT investments positively affect stock prices, whereas there is no significant stock price reaction to IT investment announcements in general. Furthermore, industry does not seem to make a substantial difference.
A study by Chatterjee, Richardson and Zmud (2001) looked at stock price reaction after the creation of a chief information officer (CIO) position was announced, using ninety-six announcements for the time period 1987-1998. Creation of a new CIO position could be seen as an important, complimentary investment in human resources. The study found that in general, investors react positively to the creation of a CIO position. The results show no substantial difference in stock price reaction for the period 1987-1994 as compared to the period 1995-1998. Furthermore, there seems to be no difference if the new CIO is an external or internal hire.

Hayes, Hunton, and Reck (2001) investigated investments in enterprise resource planning (ERP) systems by looking at the stock price reaction to ninety-one announcements in the time period 1990-1998. The results suggest that investors value ERP implementations and that stock markets react positively to such announcements. In addition, the results suggest that investors differentiate between financially “healthy” and “unhealthy” as well as between “large” and “small” companies. Furthermore, the investors seem to value the investment more when the ERP was acquired from a large vendor.

Im, Dow and Grover (2001) investigated stock market reaction to IT investments in general. In addition to the abnormal returns, this study also looked at potential changes in trading volume. This study expanded the sample of announcements used by Dos Santos et al. (1993) to 238 announcements, covering the period 1981-1996. The reaction is weaker for larger firms and proportionally heftier for smaller firms.

Subramani & Walden (2001) looked at e-commerce initiatives. This study built on 251 announcements from the time period ranging from October 1, 1998, to December 31, 1998. The results indicate that stock markets react favorably to e-commerce announcements. The study also found that investors react more favorably to business-to-customer than to business-to-business initiatives.

One study compared infrastructure IT investments with application IT investments (Chatterjee, Pacini and Sambamurthy 2002). Using 112 IT investment announcements in the 1992-1995 period, this study assessed the reaction to IT investments by looking at stock prices as well as trading volumes. The results suggest that investments in IT infrastructure are positively received by the stock market, while investments in specific IT application are rather ignored by the investors.

Dehning, Richardson and Zmud et al. (2003), using secondary data from three previous event studies (Chatterjee et al. 2002; Dos Santos et al. 1993; Im et al. 2001), assessed primarily the effects of transformative IT investments. After removal of duplicate and possibly contaminating data, their final sample resulted in 353 announcements from the years 1981-1996. The results of their study suggest that stock markets react positively to transformative investments in IT.

Hunter (2003), compared exploitative with exploratory IT investments based on 150 announcements in the time period 1990-1997. This study reported significantly negative reactions to IT investments, but no differences between exploitative and exploratory IT investments were detected.

A study conducted by Dehning, Richardson, Urbaczewski, and Wells (2004) looked once again at e-commerce initiatives. The main objective was to validate an earlier study conducted by Subramani and Walden (2001). Thus, in addition to using the original set of 251 announcements collected by Subramani and Walden (2001) for the time period ranging from October 1, 1998 to December 31, 1998, Dehning et al. (2004) collected 538 new announcements ranging from the period October 1, 2000, to December 31, 2000. They found no significant stock reactions to e-commerce announcements in the fourth quarter of 2000.

Dardan, Stylianou and Dardan (2005) used a sample of 349 announcements from January 1, 1999 to December 31, 2000 to investigate the market response to e-commerce initiatives. Their results show a positive reaction. In addition, this study examined the effect of stock market conditions. The findings indicate that stock markets respond positively during bull markets and negatively during bear markets to e-commerce initiatives. In addition to changes in stock prices, the authors observed increases in trading volumes around the announcement day.

Ferguson, Finn and Hall (2005) investigated stock market reaction to e-commerce projects focusing on Australia. The sample included 232 announcements from January 1, 1988 to June 30, 2001. Similar to the results obtained by Subramani and Walden (2001) for US companies, investors in Australia also seem to appreciate investments in e-commerce. However in contrast to the US, in Australia the non-innovative investments seem to be perceived as more valuable than the innovative ones.

Dardan, Stylianou and Kumar (2006) examined stock market reaction to customer-related IT investments, using fifty-seven announcements of investments on customer relationship management (CRM) and related technology in seventeen companies from 1996 to 2001. A positive stock price reaction to such investments was noted.
Oh, Kim and Richardson (2006b) examined potential interactions between firm type and IT type, using secondary data from three previous studies (Chatterjee et al. 2002; Dos Santos et al. 1993; Im et al. 2001), supplemented by additional announcements for a total of 340 announcements over the period 1981-1999. The basic assumption was that some specific IT investments may benefit different companies to a different degree. Regarding the firm type, the study differentiated between fast growing firms and more stagnant firms.

Ranganathan and Brown (2006) revisited the effect of ERP, using 116 announcements on investments in ERP for the years 1997-2001. The study found that financial markets react positively to investments in ERP and that the reaction is more positive when the investments include more modules or full suites of ERP systems. In contrast to an earlier study (Hayes et al. 2001), no differences in stock price reaction were detected with respect to large or small vendors.

Roztocki and Weistroffer (2006) investigated the effect of activity-based costing (ABC) systems, using eighty-one announcements of IT investments in three companies using ABC. Simplified, ABC is a cost management system that provides more accurate and reliable cost estimates than traditional costing systems. Contrary to common expectation, the automate IT investments in companies using ABC were positively received by the stock market, whereas, “transform” IT investments, which are conducted with the hope to transform business processes, were less favorably received.

Meng and Lee (2007) compared stock market reaction to IT investments in China with the stock market reaction in the USA. This study used sixty-five announcements from China and sixty-three announcements from the USA over the period 1999-2002. The results imply that company location may be an important factor influencing the stock market reaction, as the stock market responded positively to IT investment in China, while the reaction to similar investments in the US was insignificant.

Roztocki and Weistroffer (2007a) investigated the stock market response to enterprise application integration (EAI) investments, using eighty-one announcements from 1998-2005, and compared early investments in EAI with similar investments conducted later, when the technology was more established. The study also looked at stock price reaction to investments by companies perceived as high risk, versus companies perceived as low risk and compared the stock price reactions in bull and bear markets. Both, perceived risk measured by beta value, and stock market conditions, were found to be important influential factors.

Another study by the same authors (Roztocki and Weistroffer 2007b) compared stock market reactions to IT investments in companies using ABC with the reaction to similar investments in companies not using ABC, using 179 announcements from 1989 to 2005. The results suggest that IT investments in companies not using ABC are particularly negatively received in a bear market. Moreover, the reaction in stocks of companies which are perceived unhealthy or a financial risk is related to their usage of ABC.

Table 2 summarizes the factors examined in these studies, and also gives the event windows (two days and longer) used in each study.
Table 2. Event Studies Looking at IT Investments

<table>
<thead>
<tr>
<th>Authors</th>
<th>Main Factors Studied</th>
<th>Event Window(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dos Santos et al. (1993)</td>
<td>Industry and type of IT</td>
<td>(-1,0)</td>
</tr>
<tr>
<td>Chatterjee et al. (2001)</td>
<td>CIO position (timing, industry, external vs. internal hire)</td>
<td>(-1,0), (-1,1)</td>
</tr>
<tr>
<td>Hayes et al. (2001)</td>
<td>ERP implementation (company size, financial health, vendor characteristic)</td>
<td>(0,1)</td>
</tr>
<tr>
<td>Im et al. (2001)</td>
<td>Industry, company size, timing</td>
<td>(-1,0)</td>
</tr>
<tr>
<td>Chatterjee et al. (2002)</td>
<td>Type of IT</td>
<td>(-1,0), (0,1), (-1,1), (-2,2)</td>
</tr>
<tr>
<td>Dehning et al. (2003)</td>
<td>Type of IT, industry, leaders vs. laggards</td>
<td>(-1,1)</td>
</tr>
<tr>
<td>Hunter (2003)</td>
<td>Type of IT</td>
<td>(-1,1), (-2,2), (-5,5), (-10,10)</td>
</tr>
<tr>
<td>Dehning et al. (2004)</td>
<td>E-commerce (timing)</td>
<td>(-1,1), (-5,5), (-10,10)</td>
</tr>
<tr>
<td>Dardan et al. (2005)</td>
<td>E-commerce (bull vs. bear market)</td>
<td>(-1,1)</td>
</tr>
<tr>
<td>Ferguson et al. (2005)</td>
<td>E-commerce (innovative vs. non-innovative)</td>
<td>(-1,1), (-5,5), (-10,10)</td>
</tr>
<tr>
<td>Dardan et al. (2006)</td>
<td>Customer-related IT</td>
<td>(-1,1)</td>
</tr>
<tr>
<td>Oh et al. (2006b)</td>
<td>Company type, type of IT</td>
<td>(-2,-1), (0,1), (2,3)</td>
</tr>
<tr>
<td>Ranganathan &amp; Brown (2006)</td>
<td>ERP implementation (number of modules, number of locations, vendor characteristics)</td>
<td>(-2,2), (-1,1), (-1,0), (0,1), (0,2)</td>
</tr>
<tr>
<td>Roztocki &amp; Weistroffer (2006)</td>
<td>Company type, type of IT</td>
<td>(-1,0)</td>
</tr>
<tr>
<td>Meng &amp; Lee (2007)</td>
<td>Company location</td>
<td>(0,2)</td>
</tr>
<tr>
<td>Roztocki &amp; Weistroffer (2007a)</td>
<td>EAI (timing, company characteristics, market conditions)</td>
<td>(-1,0), (-1,1)</td>
</tr>
<tr>
<td>Roztocki &amp; Weistroffer (2007b)</td>
<td>ABC, risk factor, market condition</td>
<td>(-1,0), (-1,1)</td>
</tr>
</tbody>
</table>

Hacker Attacks and Security Breaches

Ettredge and Richardson (2003) compared stock movements of four companies (Amazon, eBay, E*Trade, and Yahoo!) whose websites were subject to hacker attacks, with 275 other companies which were not attacked. The abnormal returns were calculated for three days: February 7, February 8, and February 9 of 2000. Stocks of companies providing security products appear to benefit from reports of hacker attacks.

Hovav & D’Arcy (2003) examined stock market reaction to Denial-of-Service (DOS) hacker attacks on corporate websites. This study examined twenty-three public announcements about DOS incidents released from January 1, 1998 to June 30, 2002. According to the results, the stock market seems to not react negatively to such announcements.

Cavusoglu, Mishra and Raghunathan (2004) looked at sixty-six announcements about Internet security breaches from 1996-2001. The results suggest that financial markets react negatively to such announcements. Furthermore, financial markets seem to respond more negatively when security breaches are released by smaller firms. Also stocks of Internet firms seem to be more affected than stocks of traditional firms.

Hovav and D’Arcy (2005) examined stock market reaction to announcements about defective IT products. This study looked at ninety-two announcements collected from 1988 to 2002. In general, the financial markets appear not to penalize companies which announce that they sold defective IT products in the past. However, the results suggest that the stock market reacts negatively to announcements of IT products containing computer viruses.

Andoh-Baidoo and Osei-Bryson (2007) examined stock market reaction to Internet security breaches and used forty-one announcements for the years 1997-2003. Decision tree induction was used for assessing the magnitude of the stock market reaction. This study confirmed that stock markets react negatively to Internet security breaches. The characteristics of the attack and firm size are among influential factors.

Telang and Wattal (2007) looked at the effect of software vulnerability disclosures on the stock market. The study examined 147 announcements about software vulnerability lapses from January 1999 to May 2004. In contrast to an earlier study conducted by Hovav and D’Arcy (2005), which did not find a significant stock price reaction, Telang and Wattal (2007) found the stock market reaction to such announcements to be overall negative.

Table 3 summarizes the factors examined in the six studies.
Table 3. Event Studies Looking at Security Breaches

<table>
<thead>
<tr>
<th>Authors</th>
<th>Main Factors Studied</th>
<th>Event Window(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ettredge &amp; Richardson (2003)</td>
<td>Hacker attacks</td>
<td>(1,3)</td>
</tr>
<tr>
<td>Hovav &amp; D’Arcy (2003)</td>
<td>Denial of service, hacker attacks</td>
<td>(-1,0), (-1,1), (-1,5), (-1,10), (-1,25)</td>
</tr>
<tr>
<td>Cavusoglu et al. (2004)</td>
<td>Internet security breaches</td>
<td>(0,1)</td>
</tr>
<tr>
<td>Hovav &amp; D’Arcy (2005)</td>
<td>Defective IT products</td>
<td>(0,1), (0,5), (0,10), (0,25)</td>
</tr>
<tr>
<td>Andoh-Baidoo &amp; Osei-Bryson (2007)</td>
<td>Internet security breaches</td>
<td>(-1,1)</td>
</tr>
<tr>
<td>Telang &amp; Wattal (2007)</td>
<td>Defective IT Products</td>
<td>(0,1), (0,2), (0,5), (0,10)</td>
</tr>
</tbody>
</table>

Table 4. Event Studies Looking at Outsourcing Initiatives

A study by Hayes, Hunton, and Reck (2000), investigated the effect of IT outsourcing announcements, using a sample of seventy-six announcements from 1990 to 1997. The stock prices seem to react positively to such announcements. Moreover, firm size and industry appear to be influential.

Agrawal, Kishore, and Rao (2006) investigated stock market reaction to announcements of e-business outsourcing, using ninety-six announcements from 1999-2002. The results suggest that e-business outsourcing initiatives receive positive stock market reaction, when the outsourced project is relatively complex and is conducted in a prompt manner.

Oh, Gallivan and Kim (2006a) looked at stock market reaction to IT outsourcing announcements. This study used 192 announcements from 1995 to 2003. The results suggest that contract size is negatively related to stock market reaction. Accordingly, large outsourcing projects tend to receive a negative stock market reaction.

Table 4 summarizes the factors investigated in the three studies.

Table 4. Event Studies Looking at Outsourcing Initiatives

<table>
<thead>
<tr>
<th>Authors</th>
<th>Main Factors Studied</th>
<th>Event Window(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hayes et al. (2000)</td>
<td>Firm size, industry</td>
<td>(0,1)</td>
</tr>
<tr>
<td>Agrawal et al. (2006)</td>
<td>E-commerce</td>
<td>(-1,1)</td>
</tr>
<tr>
<td>Oh et al. (2006a)</td>
<td>Contract size, vendor characteristics</td>
<td>(-5,-1), (-1,0), (-1,1), (0,1), (0,2), (-2,2), (2,5), (-5,5)</td>
</tr>
</tbody>
</table>

Table 5. Other Event Studies

Benbunan-Fich and Fich (2004) examined possible stock market reaction to Web traffic achievements. This study used a sample of 283 announcements published from 1996 to 2001. The results indicate that stock market reaction was positive for the time 1996-1999. In contrast, the stock market reaction was insignificant for the post dot-com bubble sample (2000-2001).

A different event study by the same authors investigated stock market reaction to website redesigning initiatives (Benbunan-Fich and Fich 2005), based on seventy-seven announcements from 1995 to 1999. The results indicate that the redesigning initiatives do not result in significant stock market reactions.

Aggarwal, Dai and Walden (2006) examined stock market reaction to XML standardization initiatives. In total, 148 announcements from January 1999 and December 2003 were examined. Overall, proprietary XML schema standardization seems to receive a positive stock market reaction, whereas the stock market reaction to open XML schema appears to be statistically insignificant.

The main factors studied in the three studies are depicted in Table 5.
DISCUSSION

Results

There is no general agreement with respect to the suitable size of a sample and the lengths of estimation and event periods. Accordingly, the sample size in the examined studies ranged from twenty-three to 538 announcements, and the authors used a wide range of estimation periods, ranging from thirty to 255 days. Many studies lack explanation for these choices. While the 200 day estimation period is the most widely used one, a 255 day estimation period may be more appropriate as it better accounts for seasonality. The event periods also vary substantially across the studies from one to twenty-seven days. However, two and three day event periods are the most common. While these short event windows have obvious advantages when controlling for confounding events, such as earning and dividends announcements, they may be too short to properly capture the investors’ reactions. In addition, not many authors reported using more advanced techniques, such as testing the sample for clustering, which are standard in accounting and finance event studies research.

The results from the literature review also suggest complex interactions between the factors that may determine abnormal stock price returns. For example, the study by Hayes et al. (2001) implies that there is an interaction between the financial health and the size of a company that impacts stock price reactions to ERP implementations. The most positive reactions to ERP investments were observed for small, financially healthy companies. As a company’s size increases while the financial health remains strong, the magnitude of the stock market reaction diminishes. When the financial health of a company worsens, the stock price reaction seems to become more positive for large firms and more negative for smaller firms. Comparison across different studies provides further evidence of such complex interaction between the factors. For example, while most studies were unable to find positive stock price reactions to non-innovative, automate IT investments (Dos Santos et al. 1993), one study reported positive reaction to automate investments when a company is using ABC (Roztocki and Weistroffer 2006). While some authors observed interactions among two factors within company characteristics (e.g. firm size and firm health (Hayes et al. 2001) or between company characteristics and IT investment type (e.g. firm uncertainty and strategic role of IT investment (Oh et al. 2006b), a cross comparison between different studies provides a far more complex picture of the interactions among multiple factors.

The focus of the investigations in most of the studies was stocks of US based companies. Only two studies used stock data from outside US: a study about e-commerce initiatives in Australia and a comparative study about IT investments in US and Chinese companies.

Limitations

Although event studies in the field of IS have become more common, the total number of such studies is still small, and thus, only limited conclusions can be drawn as to the efficacy of this research approach in gaining better understanding of corporate business issues related to IS and IT. Our conclusions are limited to the analysis of only thirty papers.

CONTRIBUTION, CONCLUSIONS, AND FUTURE RESEARCH

We believe that our literature review presented in this paper makes an important contribution to the body of knowledge in IS research, as it exposes a relatively new research approach in this discipline and points out the limitations of the published research to date. Although Dehning, Richardson and Stratopoulos (2003) reviewed twelve event studies in IT/IS, to our knowledge, this current paper is the first systematic literature review of event studies in this field. Our review of thirty papers and our conclusions should benefit other scholars in their own work, as it reveals some of the needs and opportunities for further research in this area. We feel that event studies promise to be a most useful methodology for gaining better understanding of IT related events in the corporate world, and a better understanding of these issues may lead to economic benefits at the corporate, national and international levels.

The results presented in this paper, though perhaps not comprehensive, provide a wider picture and new ideas for possible research avenues. Overall, it seems that previous event studies in the field of IT have covered only a very small spectrum and call for substantial revalidation as well as expansion. So far not many event studies in IS looked at potential changes in trading volume, which may provide additional insights about investors’ reactions. Certainly, the field will benefit from “internationalization” of event studies in IS. As reported earlier, we were able to identify only two studies using non-US stock data. Thus, some future studies may simply use event studies methodology in the context of other economies.

Another area where much more research is needed, is looking at the interaction of multiple factors, rather than examining factors in isolation. A few studies have investigated combinations of two or perhaps three factors, such as maturity of technology, technology type, and market conditions simultaneously, but the interaction among the various factors is still not
well understood at all. Of course, the possible combinations of multiple factors is extremely complex, and investigating all possible combinations is probably not feasible. However, by looking at the results of already published studies, and results from other types of research, some logical arguments may be made for further examining some specific combinations of factors.

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REFERENCES


