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ASSESSING THE RISK OF ACQUIRED INFORMATION TECHNOLOGY KNOWLEDGE LOSS

Research-in-Progress

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Abstract

Mergers and Acquisitions in Information Technology (IT) industry have reached record levels in the last decade. Especially in the fast-growing market of IT, more and more companies merge or acquire for the purpose of gaining access to knowledge, skills, and innovation. However, even in a sector that recognizes the importance of knowledge, where smart people are the competitive edge of a company little attention is being paid to the turnover of acquired employees. We develop two hypotheses related to increase of employee turnover following an acquisition consideration and potential loss of future innovation capacity. Given the limited availability of empirical data approximations like Quarterly Workforce Indicator and U.S. Patents are considered to test the increase in turnover of acquired employees and loss of innovators for the acquiring firm. Preliminary data analysis shows mixed results steering the consideration towards additional factors like acquirer’s reputation and form of acquisition to mediate turnover decisions.

Keywords: Mergers and Acquisitions, IT workforce, Acquisitions, Human resources IS, Information systems professionals, Information worker, Knowledge contributors, Knowledge integration, Turnover/turnover intention
Introduction

Mergers and Acquisitions (M&A), long commonplace in automotive, telecommunications, banking and other mature industries, are rampant in Information Technology (IT). Even despite the “credit crunch” M&A in the global IT sector remains remarkably high over the last years. Moving forward Financial Times (Bayer 2010) forecasts an upturn in 2010 technology M&A’s and The Wall Street Journal (Worthen 2010) states “Tech firms bulk up with depth … as they build war chests for deals”. Software and Information Technology Services remained with 69 percent of the volume the dominant sector for technology M&A globally in 2008 (Morgan et al. 2009).

Among the most frequently cited reasons for M&A are the financial or value maximizing motives. In example private equity firms which are serial acquires drive change in the financial, governance, and operational areas of their acquired firms to maximize their financial results (Kaplan et al. 2009). But especially in the fast-changing markets of IT companies, more and more firms acquire for the purpose of gaining access to knowledge, skills, capabilities and innovation capacity (Norman 2004). Especially in those knowledge-intensive acquisitions, human resources are considered a key element (Ranft et al. 2002). This paper focuses on knowledge-intensive technology acquisitions, where acquired employees represent critical resources for the acquiring firm.

Despite new record volume in M&A deals, a big portion still fails to achieve their targeted objectives (Bruner 2005). While prior research has examined the issues of M&A ineffectiveness from financial and strategic perspectives, organizational and management research has only just begun to investigate the behavioral aspect of M&A implementations. This aspect relates to the impact of the acquisition on individuals as well as behavioral reactions of acquired employees (Houghton et al. 2003). Research focusing on human resource side of M&As has typically emphasized problems related to post-acquisition integration such as low motivation, lack of commitment and performance, as well as employee turnover (e.g., Birkinshaw et al. 2000; Buono et al. 2003). Former studies considering employee turnover related to M&A activities, have often restricted their attention to the members of the top management team (e.g., Bergh 2001; Krug 2003). Furthermore, prior research has generally viewed the post-acquisition process as well as mostly considered the acquirer’s perspective and not considered the target view (Graebner et al. 2010) as acquired employees being the key resources. This lack of consideration is rather surprising given the large amount of anecdotal evidence that acquisitions might cause problems in the retention of acquired employees. This research will focus on the acquired firm’s employees. The aim of the paper is to study the turnover decision of acquired employees prior to post-acquisition integration phase and the firm subsequent loss of individual knowledge as well as the potential consequences for the future innovative capacity of the acquiring firm. The main research question is divided into the following two sub-questions: Is the turnover rate of acquired employees increasing prior to post-acquisition integration phase? Is the innovative capacity of the acquired firm retained following the acquisition?

This paper is an empirical study of U.S. based knowledge-intensive acquisitions in the IT industry. Data is collected from secondary, archival sources like Qualitative Workforce Indicator, Securities and Exchange Commission filing, and U.S. Patent Data. This research attempts to obtain a deeper understanding of the role of acquisitions on acquired employee turnover and related loss of individual knowledge for the firm as well as its implications on acquiring firm’s innovative capacity.

The paper is structured as follows; after analyzing the main concepts related to knowledge and the individual as well as employee turnover and mobility, the theoretical implications are discussed, followed by the methodological chapter and preliminary results and conclusions. The main contribution of this paper is the empirical analysis of acquired employee turnover in relation to knowledge-intensive technology acquisitions and its implications on future innovative capacity of the acquiring firm.

Theoretical Framework

Knowledge-Based View of the Firm

Studies of technology acquisitions have primarily been centered on what motivates these corporate decisions and what drives their success. As stated goals of technology acquisitions commonly relate to gaining access to strategically valuable resources like knowledge of individuals or innovative capacity (Graebner 2004; Vermeulen et
al. 2001). Success of the acquisition is contingent upon the ability of the acquiring firm to both exploit knowledge of the acquired firm and explore its capacity to secure future innovations (Puranam et al. 2006). Thus retaining, transferring, and integrating knowledge of the acquired firm is a primary factor to the overall success of the acquisition (Bresman et al. 2010).

The knowledge-based view of the firm emphasizes knowledge as a firm’s resource which allows it to achieve and sustain competitive advantage (Barney 1991). Grant (1996) considers firms as integration platform for specialist knowledge of their employees. In contrast to earlier literature, the author views knowledge as residing within the individual and the primary role of the organization is knowledge application rather than knowledge creation. However firms can as well be seen as a social community of voluntaristic actions in which knowledge is learned, produced and commercially applied (Kogut et al. 1992). Firms exist because they outperform markets in organizing the combination of knowledge. Both views are part of knowledge-based theories of the firm. The joint element across this literature stream is the focus on knowledge as a key resource. For the purpose of this study we agree with Kogut and Zander’s (1992) definition of “knowledge is held by individuals, but is also expressed in regularities by which members cooperate in a social community” (p. 383).

Knowledge-based resources are described in two general forms; prior literature implies a deviation of knowledge in explicit and implicit/tacit. The explicit knowledge has codifiable components that can be disembodied and transmitted (Brown et al. 1998). It is reflected in things that can be written down like patents, documents or workflows (Ranft et al. 2002), and can be revealed through its communication (Grant 1996). On the other hand the implicit or tacit knowledge has more of a personal quality to it that makes it hard to communicate (Brown et al. 1998). It is considered a skill set or the memory of an individual (Nonaka 1994; Polanyi 1966). This type of knowledge can only be revealed through its application (Grant 1996) and resides within an individual.

A number of empirical studies questioned whether the move of an individual employee between firms implies as well that knowledge leaves one company and is gained by another. Song et al. (2003) investigated the possibility to acquire knowledge by hiring experts. They specifically reviewed patent data with the emphasis on individual inventors and firms they were affiliated with. The analysis supported their hypothesis that individual’s mobility facilitates inter-firm knowledge transfer and learning. Similar Rao and Drazin (2002) identified that firms which recruit talented employees from competitors are able to reduce their own innovation constraints and introduce new products based on the gained knowledge from the new hires. Overall scholars have demonstrated that individuals carry knowledge and specifically an employer-to-employer move of individual employees can facilitate knowledge transfer between the two firms (e.g., Almeida et al. 1999; Boeker 1997; Groysberg et al. 2008; Moen 2005; Rosenkopf et al. 2003). As knowledge is considered a key resource of firms which can create competitive advantages, firms need to retain their most knowledgeable employees to avoid knowledge drainage. However beside company planned layoffs employees do move between firms and employers for a variety of reasons. It is important for firms to be aware of factors that lead to voluntary turnover and consequently to a loss of individual knowledge for the firm.

**Employee Turnover**

Most of the current theory and research on employee turnover is grounded in March and Simon’s (1958) idea of the perceived ease and desirability of movement for the individual. A vast amount of literature exists with regards to antecedents of employee turnover. It is not the aim of this paper to fully discuss the existing research of employee turnover but rather to create awareness that acquisitions are a special context which can lead to an increase in turnover considerations of the individual. Some of the most commonly named causes for individuals to seek out new employment is job dissatisfaction (e.g., Igbaria et al. 1992; Trett et al. 1993), stress (Houghthon et al. 2003) or lack of organizational commitment (e.g., Fedor et al. 2006; Mahatanankoon 2007; Trett et al. 1993). However, a precipitating event, or shock is identified most commonly as the immediate cause of turnover consideration (Holtom et al. 2005). Lee and Mitchell (1994) as well as Lee et al. (1999) established an integrated framework for employee turnover that incorporates most of the prior literature. The authors developed an unfolding model which identifies five psychological and behavioral paths that people appear to follow when they quit. The major components of the unfolding model are shock, script, image violations, job satisfaction, and job search. A shock is a particular event that initiates the psychological analyses involved in quitting. “A shock … is theorized to be a distinguishable event that jars an employee toward deliberate judgment about his/her job and may lead the employee to voluntary quit” (Holtom et al. 2005, p. 341). Examples of shocks include unsolicited job offers, change in marital status, or mergers.
and acquisitions (Lee et al. 1999). Firms that acquire should anticipate that any merger or acquisition can create a shock for the acquired employees which can consequently lead to individual intentions of turnover.

Prior research identifies that the occupation or industry in question may affect the type of turnover decision process (Hom et al. 1992). Niederman et al. (2007) identified particularly Information Technology (IT) professionals to comprise a population in which turnover can be particularly damaging to organizational performance, as those individuals often serve as corporate repositories of explicit and tacit knowledge for the organization, its processes and systems. Anticipating that IT professionals are at the core of technology companies in the Software and IT sector, the retention of those knowledge employees will be of the outmost interest to firms and in specific to acquiring firms in knowledge-intensive technology acquisitions. Bodley et al. (2008) identified that human resource departments in the technology sector struggle against high employee turnover rates, given the problems of long recruitment cycles and extensive development efforts for the employees. Overall prior academic research and practitioner publications agree that IT professionals are particularly difficult to retain, high voluntary turnover is to be expected (Mahatanankoon 2007; Niederman et al. 2007) and especially technically-oriented IT professionals appear to be associated with even higher turnover then IT managerial positions (Ang et al. 2004).

Factors leading to the IT professional turnover rate are awareness of alternative jobs and perceived job opportunities (Thatcher et al. 2002) as well as organizational commitment (Igbaria et al. 1992) and job satisfaction (Igbaria et al. 1991; Igbaria et al. 1994). Ahuja et al. (2007) identified that especially the organizational context matters to IT professionals. Further studies confirmed those findings with regard to workplace characteristics like trust in senior management, sharing of information with employees, and job security (McKnight et al. 2009). In an attempt to gain in depth insights in causes of voluntary turnover of IT professionals, Hunter and Tan (2006) analyzed 18 IT professionals and their turnover decisions in the context of the unfolding model. They concluded voluntary turnover of IT professionals was associated with a particular path of the unfolding model which entails some type of shock in the beginning, creating dissatisfaction which leads to an eventual turnover decision by the individual. Shocks include mergers and acquisitions which leads to considerations that IT professionals as key knowledge resources in knowledge-intensive technology acquisitions are likely to reach out to new employment opportunities outside the acquiring firm.

**Mobility and Geographical Areas**

When employees come to a positive turnover decision to move on to new job opportunities and assignments in other firms, it may or may not lead to a relocation of the employee and potentially its family. In general the classic economic hypothesis states that individuals move to escape unemployment, this view is extended by the findings that employees who are dissatisfied with their jobs are more likely to move than those who are not searching for different jobs (DaVanzo 1978). However, the question if a geographical move occurs when employees decide to leave their current employment requires the consideration of a variety of aspects. In specific factors outside the job sphere influence the individuals decision to move to another geographical area. These factors include but are not limited to individual attributes, family and community attributes (Landau et al. 1992).

It is likely that married individuals take the needs of their spouses in consideration when making a decision that would require a geographical move of the household. Given that the majority of spouses in the U.S. are as well active members of the labor force and households are considered dual income and dual career (Clark et al. 2006) strategies for geographical move become more complicated than classic economic theories imply. The decision process to move for a new job, has to consider job opportunities for the spouse, as well as whether the new income outweighs the potential loss of the spouse income. Not surprisingly prior research found that the more the spouse contributes to household revenue, the less likely the employee will move (Challiol et al. 2005).

A further aspect that limits the employee’s motivation to leave its current geographical area is the accumulated social capital (Glaeser et al. 2002), as the level of social capital increases the willingness to move delineates (David et al. 2008). Social capital can consist of local social networks like membership to local sports clubs, family and friends as well as professional relationships to clients or patrons. Similar Noe and Barber (2006) found that community characteristic have an impact on individuals motivation to move to a new geographical area, as people prefer to remain in similar communities.

In addition an employee who weights the alternative to move to a different geographical area for new job is required as well to consider the cost of the move. Most of the classical models of employee mobility did not considered mobility cost so that employees would relocate as soon as they found new employment, however, more recent
research recognizes the need to incorporate this aspect in employee decision making (Zenou 2009). Engelhardt (2003) found that especially the recent variations in U.S. house prices, its effect of equity constraints and nominal loss creates an aversion on moving to other geographical areas. Further studies supported those findings, that move related costs have a strong negative effect on individuals and household willingness to move (Van Ommeren et al. 2005).

Given the prior discussion the move to a different geographical area is not necessarily an immediate action following an employee’s choice to leave its current employment. It rather requires a decision process that incorporates a number of factors from impact on family members to local social networks and cost of the move. Not surprising evidence suggests that employees may become less willing to relocate than in the past (Stroh 1999) as individuals consider the stress of relocation it puts on themselves as well as their family in addition to incremental costs for move and housing as well as the loss of accumulated social capital at current residence. Consequently it should be adequate to assume that following an employee’s turnover decision, turnover rates in a local geographical area should reflect turnover actions, as moves outside the local area might only occur (if at all) after some extensive considerations of a variety of aspects.

Key Resources in Knowledge-Intensive Technology Acquisitions

Acquisitions can bring into a company capabilities the organization finds hard to develop (Haspeslagh et al. 1991), this might be especially important for firms that compete in markets with high innovation rate, like technology industry. These firms continuously innovate to maintain or increase their competitiveness. Previous research has identified that acquisitions will expose firms to new ideas and in the long run will lead to broader knowledge in the acquiring firm (Levinthal et al. 1993; March 1991). Grimpe (2007) states “A major reason for carrying out a merger and acquisition is to gain access to technological knowledge and to increase new product development” (p.614).

Technology acquisitions are in general understood as a transaction where the acquired firm operates in the technology industry (Graebner et al. 2010). Prior research identified that technology acquisitions commonly occur with the purpose to acquire knowledge or innovative capability (Chaudhuri et al. 1999; Desyllas et al. 2008) which the acquiring firm did not posses or mastered (Hagedoorn et al. 1994; Hung et al. 2008). A rich research stream has developed which considers facets of knowledge transfer within post-acquisition phase and related integration strategies (e.g., Puranam et al. 2009; Ranft et al. 2002). It is widely understood that a major set of aspired knowledge remains within individuals from the acquired firm which raises the importance to retain knowledgeable employees to ensure knowledge retention, transfer, and integration to the acquirer (e.g., Ranft et al. 2000). Walter et al. (2007) find evidence in the biotechnology industry that acquisition of scientific and technical knowledge fails because acquirers are unable to transfer and apply the knowledge. In a similar fashion, Kane and Alavi (2007) identify that organizational change which occurs during an acquisition, can lead to loss of organizational knowledge as employees take their knowledge with them when they leave. Maintaining the target firm’s knowledge and successfully transferring this knowledge to the acquirer is a major challenge for merger and acquisition success (Felin et al. 2007; Kozin et al. 1994) and becomes almost impossible when the acquired knowledge walks out the door to pursue other employment opportunities. Given the prior discussion with regards to employee turnover and geographical mobility, the event of an acquisition can trigger a whole thought process within acquired employees, leading to potential decisions of leaving the company. Consequently such acquisitions bear the risk of loosing the human capital and its individual tacit knowledge the acquiring firm just set out to gain with consequences for its future innovative capacity. These insights lead us to our first hypothesis

**Hypothesis 1:** A technology acquisition in the Software or IT Industry in a specific geographical area is positively associated with employee turnover rate in the Software or IT Industry of that specific geographical area within a limited amount of time surrounding the acquisition announcement.

During our discussion of the knowledge-based theory of the firm we identified individuals as carriers of knowledge. If hypothesis 1 is correct, then we have to assume that an increase in employee turnover from the acquired firm will lead to a loss of knowledge for the acquiring firm and subsequent future innovative capacity. As such we consider the following hypothesis

**Hypothesis 2:** Greater level of employee turnover of the acquired firm is negatively associated with future innovation capacity of the acquiring firm.
In the following we propose a research agenda to empirically test the hypotheses that technology acquisitions lead to acquired employee turnover and that the acquiring technology firms sees drainage of knowledge through the loss of acquired employees.

**Methods**

This research is an empirical study to explore knowledge-intensive technology acquisitions within software and information technology industry in the U.S. with regards to acquired employee turnover, subsequent loss of individual level knowledge and related loss of innovative capacity. Thus two panel data sets are being developed to apply quantitative methods to test both hypotheses and provide empirical evidence in their support. With regards to testing the increase of employee turnover related to the technology acquisition, a secondary panel data set is being developed which consists of technology acquisitions in the software and information technology industry within the U.S., drawn from the Securities Data Company (SDC) Platinum database, acquired firm level employee headcount numbers as reported in Securities and Exchange Commission (SEC) 8-K and 10-K filing, and archival data from the Quarterly Workforce Indicator (QWI), which allows for a small, specified geographical area to observe turnover rates on four digit North American Industry Classification System (NAICS) codes on a quarterly basis. To test the loss of innovative capacity as acquired employees leave, an additional secondary data set is required, containing the prior identified technology acquisitions in the U.S. as well as patent data of the acquired firms, its specific inventors related to those patents, as well as those inventors’ future patent submissions following the acquisition. Archival data from the U.S. Patent Office Database is used, as it allows tracking of specific inventors for each patent from the acquired firm and searching for their future innovations in form of patent submissions following the acquisition. The data offers insights whether the acquired inventor continued to submit patents from within the acquiring firm or if they chose to move on to new employment and submit from those firms.

**Risk of loosing acquired employees due to increased turnover (Hypothesis 1)**

**Sample and Data**

The panel data set, as briefly described above, considers only information technology acquisitions, specific in the Software and IT sector (NAICS code 5415, Computer Systems Design and Related Services). Acquired firms in this sector which are considered in the data set have more then 500 employees to distinguish large acquired firms that have an impact on the local, geographical turnover rate in the QWI. These technology acquisitions have been identified through SDC Platinum’s M&A database for the timeframe between 2003 and 2007 in the U.S. The time window is driven by the availability of good public information on the acquisition and data availability in the QWI databases by the U.S. Census Bureau. As of 2003 and building on the infrastructure of the Longitudinal Employer-Household Dynamics (LEHD), the Census Bureau has published the QWI, a new collection of data series that offers unprecedented detail on the local dynamics of labor markets. The Bureau uses different data sources like administrative records, demographics surveys, and Unemployment Insurance wage records to integrate information about individuals with information about the employer. These data, including total employment, net job flows, job creation, new hires, separations, and turnover are reported for specific counties or metropolitan areas by NAICS code on a quarterly basis since 2003. In addition archival data is pulled from acquired firm’s SEC 8-K and 10-K filing which contains firm level headcount numbers within the quarterly reports.

**QWI Data Example**

To test the applicability of the QWI data, the author reviewed two information technology acquisitions from 2005 and 2006. One acquisition made by Oracle Corporation and one acquisition made by Cisco Systems. Oracle Corporation specializes in developing and marketing enterprise software products — particularly database management systems. Through a number of high-profile acquisitions, Oracle extended its business in new areas like the enterprise software market. The first major acquisition that supported this new business strategy was the acquisition of PeopleSoft in January 2005 (12,000 employees, located in Pleasanton, Alameda County, California, Software Industry). The second transaction that is considered in this preliminary analysis is Cisco Systems acquisition of Scientific Atlanta in February 2006 (7,500 employees, located in Lawrenceville, Gwinnett County, Georgia), a manufacturer of cable television, telecommunications, and broadband equipment.
In the case of PeopleSoft acquisition, Oracle started out with a hostile takeover bid in June 2003. PeopleSoft management was fighting the acquisition for almost 18 months through different legal and financial market mechanisms (see acquisition history details in Nolan (2005)). From the QWI data of Alameda County (NAICS Code 5415) it can be identified that the turnover rate reached its highest mark in 2nd Quarter of 2004 with 12.4% (see Figure 1). For PeopleSoft employees who would consider leaving the company before it gets acquired by Oracle, the 2nd quarter of 2004 would be the first logical timing. First the hostile takeover activities from Oracle were going on for over nine months at that point in time and Oracle made it increasingly known that it would pursue this acquisition with all its might. Second the PeopleSoft employees had received, as common in the Software Industry, their annual bonus payments for 2003 by end of the 1st Quarter 2004. As such the 2nd Quarter 2004 might be a good timing for employees to take the leap to new employment opportunities avoiding the M&A activities altogether.

In addition to QWI data the SEC 8-K filing of PeopleSoft displays an ongoing headcount reduction from 3rd Quarter 2003 (total employee count 12,740) till 3rd Quarter 2004 (total employee count 11,225). The author checked as well Factiva and LexisNexis databases for any other activities or events at PeopleSoft as well as in Alameda County during that timeframe which might account for decrease in headcount of the respective firm and the temporary increase in employee turnover in the Computer Systems Design and Related Services, but could not identify any related press release or news.

In the case of Scientific-Atlanta acquisition by Cisco Systems in February 2006, there were no lengthy negotiations prior to the acquisition. Further, the acquisition was not an unfriendly takeover, rather done in agreement with the top management of Scientific Atlanta, its CEO Jim McDonald is still head of the company today, even being a subsidiary of Cisco Systems. The QWI data analysis for Gwinnett County (NAICS Code 33 Manufacturing) shows an almost annual cycle during the years 2003, 2004 and 2005. The highest employee turnover rate of 9.8% in 2nd Quarter of 2005 is for the most part related to the re-location of corporate offices of Lund International, a manufacturer of appearances for automobile, from Lawrenceville to Duluth, Georgia (see Figure 2). This information is based on Factiva Press Announcements. Six month prior to the acquisition announcement and the months following the acquisition announcement of Scientific Atlanta through Cisco, data does not reflect any major shift or change in the local employee turnover rate.
The examples from the panel data set show inconsistent results, as for the Oracle acquisition of PeopleSoft an increase of employee turnover is identifiable, however, in case of Cisco’s acquisition of Scientific Atlanta this is not the case. In depth analysis of the overall panel data will be required to conclusively test hypothesis 1. Given this preliminary data example the author considers as well to include the type of technology acquisition (e.g. hostile take-over) in the panel data set, as this might also have an impact on the acquired employee turnover.

**Consideration of loosing innovative capacity (Hypothesis 2)**

**Sample and Data**

Consistent with the earlier discussion only information technology acquisitions, specific in the Software and IT sector are considered in the panel data. Respective technology acquisitions in the U.S. were identified through SDC Platinum’s M&A database for the timeframe between 2003 and 2007 (in analogy with discussion above). To gain an indicator for the loss of innovative capacity due to the fact that an acquired employee left, we consider the U.S. patent database published from the U.S. Patent and Trademark Office. In specific the author follows the concept of Jaffe et al. (1993) that knowledge flows do sometimes leave a paper trail, in form of patents.

A patent is the grant of a property right to an inventor for an invention. The patents assigned to a firm represent the knowledge that a firm is acknowledged as having created (Jaffe et al. 1993). In this sense, the patents filed by the acquired firm prior to acquisition are a measure of the knowledge stock of the acquired firm. Given the U.S. Patent Database it is possible to identify for a specific firm the number of patents and per patent the names of inventors listed and affiliated firms. Per acquired technology firm, all patents prior to the acquisition will be reviewed and inventor names identified. For each inventor the Patent Database will be searched for submissions of further patents by those specific inventors after the time of acquisition and affiliated to which firm. Consequently the data will allow identifying whether former inventors of the acquired firm remained with the new firm or chose to move on to new employment and submit patents and inventions with the new employer. Similar to Jaffe et al. (1993) there is a need to consider a kind of null hypothesis to control for the probability that individual inventors might not generate multiple U.S. patents as well as they might show a “natural” type of mobility independent of mergers and acquisitions.
U.S. Patent Database Data Example

In a first attempt to identify innovative capacity loss for the acquiring firm through employee turnover, the author examined all patents ever filed and approved for PeopleSoft. The database listed under the Assignee Name PeopleSoft Inc. of Pleasanton, California 12 patents. All 21 Inventors were identified by name listed on those 12 patents. The U.S. patent database was searched by each individual inventor’s name. Of the 21 individuals inventors only one had filed a patent with Oracle as Assignee after the acquisition in 2005. Two Inventors had filed patents with other information technology firms as Assignees after the acquisition of PeopleSoft through Oracle in January 2005. The remaining 19 individuals had not filed for any new patents ever since. In this specific example, Oracle was apparently limited successful to either acquire or motivate the innovative capacity of inventors from PeopleSoft.

Preliminary Conclusions

This research contributes to the growing interest of knowledge-intensive technology acquisition antecedents to success and the consideration of a target firm view (Graebner et al. 2010). To answer the first research question, increased employee turnover temporarily related with acquisition activities in the Software and IT industry could be observed in some cases but not as a general trend. The results could imply that not only the act of an acquisition, but also the related context like type of acquisition (e.g. hostile takeover) as well as acquiring firm’s reputation might affect the level of employee turnover prior to post-acquisition integration. In the specific case Oracle performed a hostile takeover of PeopleSoft as well as carried a reputation of massive lay-offs with regards to acquired employees. On the other hand Cisco made a non-hostile acquisition and is in general known for its no-layoffs pledge to acquired firms (Goldblatt 1999). The consideration of acquisition type and acquirer reputation could be somewhat in line with prior findings that acquired firms reputation is related with overall acquisition success (Saxton et al. 2004), however, more research would be needed to analyze the role of acquisition type as well as acquirer reputation in acquired employee turnover decisions.

In addition the empirical results imply that acquired innovators might no necessarily contribute equally to the innovative capacity of the acquired firm, as U.S. patent data shows that innovators either submit future patents in association with new employers or do not submit any new patents at all. However, it is at the current stage of data analysis unclear whether the drop in submission of new patents from acquired innovators is related to a temporal lag in displaying submitted patents in the U.S. patent database. Overall the preliminary results require confirmation from a completed data analysis.

In conclusion, knowledge-intensive technology acquisition in the Software and IT sector can lead to an increase of acquired employee turnover prior to post-acquisition integration. However, in knowledge-intensive acquisitions the retention of employees and their individual knowledge is important (Ranft et al. 2000; Ranft et al. 2002). In addition there exists a risk that some of the leaving acquired employees are former inventors who take their innovative capacity with them to support new employers. Even inventors of acquired firms that stay might drop their individual innovative capacity. Both cases negatively affect the success rate of knowledge-intensive technology acquisitions. This paper has many limitations, especially related to empirical data sources that approximate employee turnover and innovative capacity. But it may inspires more academic research on the related topic.
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