Acquire or Perish – Unique Factors Motivating M&A in the Software Industry

Research-in-Progress

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ABSTRACT

Business models used in the software industry constantly evolve. Organizations reconfigure their business models through various means and mergers and acquisitions (M&As) is one of the way. Recent past has witnessed a high frequency of M&As in the software industry. There are some unique factors that potentially influence M&As in the software industry. Using theoretical arguments, this study develops a model that explains the M&As and articulates propositions specific to the software industry. This study also intends to examine the proposition with the M&As that took place in the enterprise content management software area. Findings of this study provide unique insights into the phenomenon of M&As in the software industry and provide an understanding on the evolving business models in this industry sector.

Keywords

Mergers and acquisitions, software industry, software business models, network-effects

INTRODUCTION

Rapid pace of innovations, both in the process and technologies drive the software industry. Organizations in the development of software applications have to drive or keep up with these advancements. In order to better compete in the marketplace, organizations rely on their own capabilities and also on external sources resulting in newer business models (Rossi et al. 2013). Moreover, the software industry has moved from product oriented to service oriented also resulting in newer business models (Laamanen et al. 2013). One way organizations compete with newer business models in the innovative software industry is through mergers and acquisitions (Kakola 2003).

Mergers and acquisitions (M&A) have become quite common in the software industry and are often highlighted in reports that appear in popular press. For instance, a report by Ernst & Young highlights the growth of mergers and acquisitions in the technology sector during the recent years. It also highlights that nearly 42% of all the deals worth $119 billion in the technology sector involved software vendor as the seller (Ernst & Young 2011). If the past is any indicator, the future also points to this trend (The Bedford Report 2010). Given the prominence of mergers and acquisitions in the software industry, it would be germane to explore the factors influencing the extent of M&As in the software industry. Examining the phenomenon of M&As will also help us to gain better understanding of the business models employed by the organizations in the software industry.

M&A is a prominent research stream in many of the business research areas (e.g., management, finance, and economics). Some of the issues that have been examined in the past include the relatedness of products (Barney 1988), wealth creation (Datta et al. 1992) and post-merger performance (King et al. 2004). Hence, there are also specific studies that have explored M&As in banking (Zollo and Singh 2004), manufacturing industries (Siegel and Simons 2010), research and development intensive industries (King et al. 2008). Behaviors associated with mergers and acquisitions could differ depending on the industry sector. Hence, it is important to examine the factors that motivate the extent of M&As in software industry.

Research on M&As in the software industry is sparse. Many of the published studies have shown that the mergers and acquisitions does not create wealth for the acquiring firms (Brouthers et al. 1998). This view is also substantiated in a meta-analytical study by King et al. (2004). In spite of these general findings in the literature, as mentioned earlier the technology
sector in general and software industry in specific creates large number of mergers and acquisitions. According to Rossi et al. (2013), in the high-tech industry such as software industry, M&As have produced mixed results for their participants and this has resulted in extensive economics debate without systematic understanding of the phenomenon. The objective of this study is to examine M&As in the software industry through multiple perspectives and to lay out the motivations behind these M&A activities. As a next step, we are planning to use the M&As that took place in the enterprise content management area to illustrate and highlight the prevalence of the outlined motivations in this study.

The next section discusses the nature of software industry followed by a review of pertinent literature in the field of M&A. Following section develops a model and presents various propositions. The subsequent section outlines the study design that is proposed to validate the presented model of M&A in software industry. The final section concludes the paper and provides pointers for future research directions.

LITERATURE REVIEW

The software industry has some unique characteristics that may not be that much prevalent in other industries. As compared to other industries, software industry has witnessed a plethora of innovative products. New products and services are continuously being developed that create new markets rather than merely competing in the existing markets. For example, social networking sites, 3D virtual worlds, etc. have opened up new avenues. Intellectual property is also the cornerstone of the IT industry. Firms value the creation and use of intellectual property rights.

The software industry also offers diverse range of products and services to their customers both individual and organizational ones. Moreover, software products/services are ubiquitous in nature and used in all sorts of organizations and products ranging from cars to microwaves. It is the only product/service that caters all other fields. It touches every aspect of our everyday life from banking to entertainment to education. Typically these software products may be related or unrelated niche products pertaining to diverse areas of use. Critical mass of user base for the products is also important in this industry. Moreover, in the recent times newer business models are being evolved in the delivery of products/services in the software industry (Kakola 2003; Rossi et al. 2013).

Research on M&As in the Information Systems area is sparse. It would be pertinent to discuss these characteristics to provide the context for the proposed model for the extent of M&As in this study. The ever expanding scope of products/services in the software industry has created potential targets to be acquired. We have witnessed mergers ranging from highly related products to unrelated products within the IT industry.

Gao and Iyer (2006) examined the mergers and acquisitions in the software industry through the complementarities perspective. They conceptualized a structure called “software stack” to measure complementarities and found that M&As that took place between organizations closer in the software stack to create more value than the M&As that took place between organizations farther away in the software stack. They also examined alliances instead of M&As in another study and found that the wealth creation was higher when organizations in the same layer of the stack than when they are in different layers of stack (Gao and Iyer 2008).

Some papers in IS examined the effect of M&As on various aspects of the organizations. For instance, Currie (2000) examined the supply side of IT outsourcing and found mergers and acquisitions have enabled providers to offer additional services to their clients. Kauffman and Tsai (2009) attribute M&As in the software industry as one of the reasons for organizations to adopt unified procurement of software stacks. Ge and Huang (2013) have proposed a model for synergies realized as a result of M&As in the software industry using human capital and social capital perspectives. In recent study, Laamanen et al. (2013) found that the benefits of M&As in the software industry to differ based on the type of acquisition. They classify acquired companies into divested assets, private held company, and publicly held company and found the benefits to be higher in the divested assets type acquisition when compared to the other two types of acquisitions.

Study on M&As in the software industry is important due to various reasons. First, the phenomenon of M&As can provide insights into how the products and services evolve overtime in the software industry. Second, it provides us with an understanding on the overarching factors that are salient for the companies operating in the software industry. Third, it can also provide us with indication on how the business models in the software industry are developing over a period of time.

There are many factors that may influence M&As in the software industry. In this section we have elucidated some of the unique aspects of software industry that we speculate foster M&As in the software industry.
Standardization

Experience with older standards may “lock” a firm and make it difficult to move to different and potentially superior products (Zhu et al. 2006). Because the reward at the end is so appealing, organization may compete intensely to have their products become the de-facto standard (Besen and Farrell 1994). Once the product becomes a standard, it can be exploited later as is the case for razor sets where income is generated through later purchases of blades (Gallaugher and Wang 2002). Organizations are willing to take losses in order to become the future standard. This is leading to horizontal mergers as organizations attempt to “buy” the competition.

History is replete with examples of products which became successful by virtue of being the de facto standard even if they may have been less qualified than others. For example, “the early success of MS-DOS is frequently ascribed not to any technical quality, but to the fact that it was supported by IBM” (Besen and Farrell 1994). Standardization leads to preference for a product by way of being habituated towards it with resistance to learn or accept other products even if they may be better. Organizations have attempted to become the de-facto standard or have attempted to acquire products which had the potential to become the de facto standard.

Alternately in case of many software products the competing partners can reach a common standard by making their products compatible with each other. Here the trade-off is between becoming a stand-alone standard and making it more marketable by allowing it to be seamlessly integrated and compatible with other products.

Proposition 1: Higher levels of standardization in a particular software sector will influence of the extent of M&As in that area.

Network effects

Software products are subjected to network effects, wherein the product becomes more valuable as the user base increases (Gallaugher and Wang 2002). Literature talks about direct as well as indirect network effects (Katz and Shapiro 1985). In the software industry the prevalence of network effect can be direct depending on the degree of acceptance and adoption by customers and the indirect network effect is dependent on the availability of supporting software modules (Gao and Iyer 2006). Presence of network effects is a major feature of the software industry. An example of this effect is the use of now widely popular social networking site: facebook.com. With more people using facebook.com will spur the popularity among many potential users as they see direct benefits in using it.

Present of network effects is higher in some of the software segments. For example, software segments such as collaborative tools, instant messaging, etc. have direct network effects. However some other segments of the products such as MS Windows, the network effects will be indirect as the consumer may see the benefit through the wide variety of software applications available. Some of the software products the network effects will be even lesser as in the case of say corporate email platforms wherein user may not see the difference between different platforms for sending or receiving emails. Because of this we propose that the increased presence of network effects will help in M&As in that particular software segment.

Proposition 2: Presence of higher levels of network effects in a particular software sector will influence of the extent of M&As in that area.

Consolidation

Industry consolidation is often attributed to be one of the reason for firms to pursue M&As. Prevalence of M&As in the software industry is attributed to the maturation of the field where the industry players are striving to achieve higher growth rates (Gao and Iyer 2006). Kauffman and Tsai (2009) also highlight the prominence of unified procurement strategies in the software industry. This unified procurement helps organizations to source wide variety of products/services from the same vendor there by streamlining the procurement process.

Akin to the convergence in the telecom industry where industry players provided all three services: internet, cable and phone, many in the IT industry attempted to develop a one stop shop. For example: Microsoft is no more an organization providing Operating Systems, its products and services ranges from databases to search engines. Similarly Oracle has moved from its “Database” only image to provide other services and products like workflow management tools, enterprise resource planning software, Customer Relationship Management software, etc.

On the flip side, firms with standalone product without the advantage of having a bundled group of products may see their market invaded by firms willing to incur losses in one of their products in order to generate sales or lock consumers in another of their products (Gallaugher and Wang 2002). Hence we state the following proposition:
Proposition 3: Application consolidation in a particular software sector will influence the extent of M&As in that area.

Complementary Assets

Research has attributed complementarities as one of the primary reasons for firms to pursue M&As. Synergy potential in M&As can be achieved through both from accumulating similar operations and from combining different, but complementary, operations (Larsson and Finkelstein 1999). The issue complementarity with regard to M&As in the software industry has been studies in the past. Gao and Iyer (2006) use the concept of software stacks to examine the issues with regard to complementarities of products. According to Gao and Iyer (2006), the software stacks consist of hardware, system software, middleware services, application software, and service layers. Hence organizations may pursue M&As among different layers of the software stack. Apart from the organizations pursuing M&As in different layers of the software stack, organizations also pursue M&As within the same layer.

Seldom software products work in isolation. Software companies develop products that interoperate with complementary product components from other companies to deliver business value (Gao and Iyer 2006). In a recent study on enterprise application software industry, Kude et al. (2012) observed the role of product complementariness in organization forming partnerships. There are different software product segments. Some of the software applications are more for the consumption by organizations whereas as others are for the personal consumption. Within the software for organizations, there are multitudes of different software applications that enable and support the value creation in organizations. Hence there may be complementarity in the products that support a particular area of business. For example, in the past we had specialist vendors for supply chain management (SCM) software applications. Since the SCM products are complementary to enterprise resource planning (ERP) software, in the recent years many of these specialist SCM vendors were acquired/merged with other ERP vendors. Hence we propose that higher levels complementary assets will result in higher M&As in the software segment.

Proposition 4: Higher levels of complementary assets in a particular software sector will influence the extent of M&As in that area.

Source for Innovation

Hagedoorn and Duysters (2002) in their study on alliances and M&As as a source of innovation, found that hi-tech organizations purse M&A if the innovative capabilities they are pursuing is related to the core business of the acquiring firms. Otherwise, they also highlight the prominence of strategic alliances in the hi-tech industries. This finding can also be explained through the notion of software stacks. M&As could be prevalent when the organizations are closer in the software stack. Torrisi (1996) in the study on software industry found firms to pursue research and development based linkages gain access to specialized expertise. Moreover, large mature organizations may have the difficult to sustain innovation in the long run (Dougherty and Hardy 1996).

Because of the above reasons, the need for innovation and intellectual property rights may also force software organizations to pursue M&As. For instance, in the recent years, IBM acquired whole slew of organizations engaged in developing business analytics tools such as SPSS and Cognos. Hence we propose that the presence of new technologies/innovations will spur M&As in that software segment.

Proposition 5: Prevalence new technologies/innovations in a particular software sector will influence of the extent of M&As in that area.

Relatedness

Past research suggests that diversification into related areas can add value to the firm (Prahalad and Hamel 2006). However, the construct of relatedness is still in need of refinement (Wan et al. 2011). Evidence suggests that relatedness are positively and significantly correlated with efficiency and that decisions are made to pursue such effects (Lien and Klein, 2006). IT relatedness was found to be significant in firm performance (Tanriverdi 2005).

The software industry is unique in the plethora of related products and services it provides. In the software industry, relatedness could be classified either as software platform related or product-market related (Tanriverdi and Lee 2008). Additionally, the level of knowledge relatedness a factor uniquely higher in the technology industry was found to significantly improve performance (Tanriverdi and Venkatraman 2004). Owing this we propose that higher levels of relatedness among assets in a particular software sector will influence of the extent of M&As in that area.
Proposition 6: Higher levels of relatedness among assets in a particular software sector will influence the extent of M&As in that area.

RESEARCH METHODOLOGY

As mentioned earlier, M&As are quite common in the software industry. In order to test the propositions, we will examine the M&As that took place in the enterprise content management area. Enterprise content management (ECM) area is fairly new in the software applications industry with the first applications introduced in 1998 (Vitari and Ravarini 2009). Within a short span of time, the ECM industry has seen lot of growth with many major players entering the field. Recent market research reports indicate the total market for the enterprise content management to be $15 billion by 2015 (Global Industry Analysts 2009). As with any software application area, ECM has also seen many M&A over the period of time. For this study, we are planning to review the industry/news reports detailing various mergers and acquisitions that took place in ECM area. A preliminary search of various online databases revealed 22 M&As in the ECM area. Cursory analysis of these M&As has given us the confidence in utilizing them in examining the various propositions outlined in this study. We are currently conducting a detailed search and analysis of M&As that took place in this area.

CONCLUSION

This study examined the phenomenon of M&As in the software industry. M&As are one of the ways in which organizations can formulate newer business models. In spite of the prominence of M&As in the software industry, extant IS research on M&As is sparse. We develop various propositions based on past research on M&As in other disciplines and the unique features of software industry. We propose to use the M&As that occurred in the ECM area to examine the articulated propositions.

REFERENCES


