

Chapter 14

An Integrated Framework via the Convergence Phenomenon for the Emergence of Software-as-a-Service

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ABSTRACT

Firms from previously distinct industries are increasingly adopting software-as-a-service (SaaS), allowing for the emergence of new markets at the convergence of these industries. The motivation for this research is to explore what is occurring as a result of the convergence phenomenon. The convergence phenomenon is when a technological evolution occurs where previously separate products or services merge into a single offering and cross-industrial collaboration increases as a result. By reviewing literature on the phenomenon in affected industries, such as the telecommunications, television and computer industries, the main aspects are identified and integrated into one framework to analyze the phenomenon as a whole. The inter-relations of the main aspects are explored through the lens of mobilization of institutional theory. The framework's applicability is then explored against a historical case. Future research suggestions are offered to further corroborate the framework to increase its generalizability for analyzing the convergence phenomenon in other relevant industries.

INTRODUCTION

Previously, software was licensed as a product that customers purchased and deployed on their own premise, however more recently this has begun to change. Software companies, particularly enterprise resource planning (ERP) software companies, are beginning to adopt a new business model referred to as a *Software-as-a-Service* (SaaS) model. With a SaaS model, ERP software companies manage the software

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product deployment on their servers and offer the software to customers as an outsourced online service accessible via the internet. In a sense, ERP software companies are becoming service providers. This has many benefits for both ERP software companies and their customers, and the shift to this new SaaS model has become a recent trend (Kaplan, 2005; Forbes, 2014). The majority of ERP software vendors state that their intention is to move towards a SaaS deployment model (Forrester, 2012). In the same vein, banks and accounting firms are beginning to utilize SaaS principles, e.g. online banking portals and online book keeping. As a result, with all parties adopting a SaaS model, it has become possible that banking, accounting and IT services can be tightly integrated together and delivered to customers via a single online software solution. This combined service is henceforth called the *new integrated solution*, or *new solution*.

As a result of such technological developments and new opportunities for increased value, alliances and partnerships between companies from discrete industries are becoming increasingly popular and necessary (Gulati et al., 2009; Kohli & Grover, 2008; Sarker et al., 2012; Iansiti & Richards, 2006). Partnerships between ERP vendors and banks are an example, where an ERP software solution includes banking services as an added functionality for customers. These firm collaborations surrounding a new solution can impact the solution's value (Sarker et al., 2012). For example partners in an ERP venture can be involved in the reselling, extension and delivery of the integrated software to end clients, which can impact the success of the solution. Managing these collaborations will likely become essential in this SaaS environment. This was also the case when this phenomenon occurred in the telecommunications, broadcast and computer industries.

What is occurring between the software, banking and accounting industries is similar to what has occurred in other industries as a result of the convergence phenomenon. The convergence phenomenon is when a technological evolution occurs where previously separate products or services merge into a single offering, resulting in cross-industrial collaborations and the integration of services and markets. One of the most well know and dramatic examples of this phenomenon resides in the telecommunications, broadcast and computer industries, when all types of traffic (data, voice, etc.) were able to converge due to the adoption of IP, where services and content could then be combined (Seo & Sherif, 2009; Hacklin et al., 2013). The combined services and content could then be accessed from one device or terminal, an example being the varying applications on a smart phone. This combination of services and content is where jointly created value can stem from, as is for the case of SaaS. There is a possibility of accessing multiple types of data, content and services from one new integrated solution. These new integrated services that stem from this phenomenon through cross-industrial collaborations are henceforth referred to as *fusion services* (Seo & Sherif, 2009).

The importance of managing these fusion services in the midst of the convergence phenomenon can be seen in the stark contrast between the cases of the telecommunications companies in Western Europe and Asia (mainly Korea and Japan). The interesting observation is how companies in different nations have dealt with the same phenomenon differently. As a result, their market positions are at the almost opposite sides. In Asia, Korea and Japan adapted to the convergence phenomenon and managed their fusion services by becoming content managers earlier on (Seo & Sherif, 2009). In doing so, the Korean telecommunication companies managed to lock in consumers. They experienced high growth through their mobile TV initiatives, where approximately half the population of Korea subscribed to this new service by 2009 and this number only continues to rise (Chan-Olmsted et al., 2011). On the other hand, many telecommunications companies in Western Europe are rapidly losing revenues having failed to adapt despite a continually changing environment. KPN, the Dutch telecommunications incumbent, lob-

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