Conceptualization of the Convergence Phenomenon to Develop an Applicable and Integrated Framework for the Emergence of Software-as-a-Service

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ABSTRACT

Financial service companies, such as banks and accounting firms, and product software companies, such as enterprise resource planning (ERP) software companies, previously discrete industries, are beginning to adopt Software-as-a-Service principles, potentially leading them into a new environment. The motivation for this research is to understand what is occurring between these software and service industries, as a result of the convergence phenomenon. A similar phenomenon has happened among the mobile and landline communications, computer, and TV broadcasting industries. By reviewing and analyzing literature on the convergence phenomenon in the industries in which it has already developed, the main aspects are identified and integrated into one comprehensive framework to analyze the phenomenon as a whole. The inter-relations and dynamics are explored via mobilization of institutional theory. The framework’s applicability is then explored against the historical case of the telecommunications, broadcast and computer industries. Future research suggestions are offered to further test and corroborate the framework to increase its generalizability and applicability for analyzing the convergence phenomenon in industries and nations experiencing it at different paces.

Keywords: Convergence, Enterprise Resource Planning (ERP) Software Companies, Institutional Theory, Mobilization, Software-as-a-Service

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1. INTRODUCTION AND MOTIVATION

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 called **Software-as-a-Service** (SaaS). With a SaaS model, ERP software companies manage the software 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). 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 SaaS, 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, alliances and partnerships between companies from discrete industries are becoming increasingly popular (Gulati et al., 2009; Kohli & Grover, 2008). The partnership between the Dutch ERP software company Exact and Rabobank is an example, where Exact’s ERP software solution will now also include Rabobank 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. A well-known example of this resides in the telecommunications, broadcast and computer industries, when all types of traffic (data, voice, etc) were able to converge over due to the adoption of IP, where services and content could then be combined (Seo & Sherif, 2009). 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 West 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 telecommunications companies managed to lock in consumers. They experienced high growth through their mobile TV initiatives, where approximately half...
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