Chapter 12
Cost and Service Capability Considerations on the Intention to Adopt Application Service Provision Services

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ABSTRACT

The Application Service Provision (ASP) model offers a new form of IS/IT resource management option for which the vendor remotely provides the usage of applications over a network. Currently, the ASP industry appears to be more vendor-driven. But without a good understanding of how the ASP offerings might appeal to prospective customers, the industry might not survive. This study investigates empirically the intention to adopt an ASP service from the customers' perspective, using survey data collected from a national sample of IS/IT executives. Based on the Transaction Cost Theory (Williamson, 1979, 1985) and service capability, a causal model is developed to examine the effects of perceived cost savings and service capability, as well as their antecedent factors, on the intention to adopt an ASP service. The results show a dominant effect of cost savings consideration on ASP adoption intention.

INTRODUCTION

Dramatically reduced network costs due to the rapid growth of the commercial networks, and the increasing bandwidths together with advances in the security of internet based transactions have led to the emergence of application services providers (ASPs) (Susaria et al., 2003). An ASP may be defined broadly as a company that provides software applications to multiple customers over a wide area network in return for payments (e.g., Ma et al., 2005; Smith & Kumar, 2004; Choudhary, 2007). This new concept combines the provision of software and services into a "whole product"

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(Feller, Finnegan & Hayes, 2008). The hosting services could include complex packaged enterprise systems (e.g., ERP and CRM) as well as general applications, such as accounting, payroll processing, technical support, and industry specific functions, such as lending systems, course management systems for education and training purpose (Seltsikas & Currie, 2002).

Proponents of the ASP business model for providing software application services on a rental or usage basis have argued that it can offer a number of advantages over the traditional ways of purchasing or leasing software. Its one-to-many hosting model lends itself to certain economies of scale by providing standard applications to multiple clients (Choudhary, 2007). The quick, off-the-shelf IT services require shorter period of time to install and implement new software applications (Mears, 2001). It reduces the need for in-house IT staff for both installation and maintenance, which is especially important for businesses with inadequate internal organizational resources, or organizations with high IT turnover rates (Vizard, 2000; Gewald & Dibbern, 2009). Finally, the ASP model allows for easy growth and scalability. It affords a more flexible approach to meet IT service needs without the uncertainties of committing to a large upfront investment (Jayatilaka et al., 2003).

This ASP online hosting model offers a new IT resource option in which service vendors remotely provide the usage of applications over a network. If successful, it can shift in fundamental ways the strategic allocation of IT resource management for user organizations. Since the emergence of the business concept, the industry seemed to be poised for explosive growth, with an estimated large number of IT firms offering ASP-type services including such industry leaders as IBM, Oracle and SAP (Seltisikas & Currie, 2002). Yet, at the same time, a number of researchers have found that the industry overall has a lack luster record in signing up customers (e.g., Caufield, 2000; Susarla et al., 2003; Ma et al., 2005). In a study of managers/owners from small and medium enterprises (SMEs), Seltisikas and Currie (2002) found that only 6% indicated that they use the services of an ASP. The factors contributed to this low utilization may include narrow domains of service, lack of successful experiences and risk-avoidance propensity among IT managers.

As pointed out by Ma et al. (2005), the ASP industry appears to be vendor-driven, but without a good understanding of how the ASP offerings might appeal to the customers, the industry might not survive. Researchers have also found a general lack of studies on the user's reception of ASP services adoption (Dibbern et al., 2004). Most available studies have mainly concentrated on exploring the ASP business model using descriptive case studies (e.g. Seltisikas & Currie, 2002; Levina & Ross, 2003). The limited number of empirical studies have examined users' past experience, satisfaction of ASP services (e.g. Ma et al., 2005; Susarla et al., 2003), benefits and localization of service vendors (e.g. Arora & Forman, 2007), and trust relationship with vendors (e.g. Vatanasombut et al., 2008). Only one study seems to be available that has explored the ASP adoption decision among a small focused group of managers (Jayatilaka et al., 2003).

Although the use of the term ASP may be declining in the popular press, emerging forms of online application and service hosting, enabled by new computing and telecommunication technologies and concepts such as cloud computing, enterprise computing in the cloud, cloudy infrastructure, Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS), are clearly expanding and evolving (Carr, 2008; Erickson & Siau, 2008). Some advocates even argue that this trend will lead to the next technological revolution (e.g., Hayes, 2008; Choudhary, 2007). Li, Huang, Yen and Chang (2007) also argued that many companies also have struggled to make the transition from the current legacy systems to the web services architecture in order to gain the benefits of network enabled