Factors for Adopting ERP as SaaS amongst SMEs: The Customers vs. Vendor Point of View

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ABSTRACT

This paper identifies the factors for adopting Enterprise Resource Planning (ERP) delivered as Software-as-a-Service (SaaS) among small and medium enterprises (SMEs). The authors conducted a two phases’ qualitative-methodology: interviews with 20 experts from SaaS vendor (Microsoft) and a case-study with executives in three organizations which implemented vendor’s ERP as SaaS (customers). The vendor identified 10 factors for adoption - Costs, Security, Availability, Usability, Implementation, Ubiquity, Flexibility, Compatibility, Analytics and Best-practices, where costs, security and availability were considered the most important factors. The three customers identified 3 additional factors: the trust in the Solution partner, Data integrity, and level of Integration of cloud platforms. Considering all 13 factors, Cost, trust in the Solution partner and Availability were identified as the most important for customers, which gave much less importance to the others factors. These results will help professionals and researchers to improve understanding and accelerate ERP adoption as SaaS among SMEs.

KEYWORDS

Adoption, Enterprise Resource Planning, ERP, SaaS, Small and Medium Enterprises, SMEs, Software as a Service

INTRODUCTION

Cloud computing and more specifically Software as a Service (SaaS) have been associated with benefits by several industry players such as software vendors and market analysts (Iyer & Henderson, 2012), but there is a need for more empirical research on this subject as pointed out in 2010 Davos World Economic Forum meeting (Forum, 2010). Enterprise Resource Planning (ERP) is an area which is not seen as the one with greatest adoption rate in SaaS, despite the fact that it seems to be an excellent way for Small and Medium Enterprises (SMEs) to provide themselves with an ERP. From one hand, established and “traditional” ERP vendors, like Microsoft, have developed new versions that can be deployed in the cloud (Gartner, 2010, 2013). On the other hand, there is a perception that enterprises have also been less receptive to the adoption of ERP as SaaS, due to fear of losing control over the data, security and privacy and “systems ownership” (Cusumano, 2010; Forum, 2010; Mcafee, 2011). Moreover, according to the European Commission (2011), 99% of all European firms are SMEs with less than 250 employees. However, the literature suggests despair factors about what influence the adoption of an ERP as SaaS model, in particularly if it is from the customer or from vendor’s point of view, and from large enterprises or SMEs (Brynjolfsson, Hofmann, & Jordan, 2012; Buonanno

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et al., 2005; Campbell-Kelly, 2009; Laukkanen, Sarpola, & Hallikainen, 2007; Rodrigues, Ruivo, & Oliveira, 2014).

The major question we want to clarify in this exploratory research is: which are the factors that influence willingness for adopting ERP as SaaS among SMEs? This work started in 2013 investigating the vendor point of view, gathering the opinion of 20 experts of Microsoft (Björn Johansson & Ruivo, 2013). In that research 10 factors for adoption of ERP as SaaS were identified from interviewing vendor experts. The findings were based on what these experts thought were the motivations of the customers and thereby limited and in a certain extent biased to the vendor claimed advantages of this choice. The missing piece to answer the suggested research question with greater reliability is the customer’s point of view. So, in 2014 the initial work was followed up with customers through the collection of data from three case-studies. Thus the purpose of this paper is to compare Microsoft’s perspective on what factors affect adopting ERP as SaaS with three customers that already adopted ERP through SaaS and to the authors knowledge, this study is the first research work that analyses both points of view regarding adoption factors of an ERP as SaaS.

The rest of the article is organized as follows. In next section we present the Theoretical background. Followed by the Research methodology. Then we present the Case studies and findings. After we offer discuss the Implications, contributions, limitations and future work, we then close with Concluding remarks.

THEORETICAL BACKGROUND

ERP systems have been greatly adopted by SMEs in the past decade, they are integrated software packages, commonly known as business applications, designed to integrate and optimise the business processes and transactions in a firm, comprising different functional modules; accounting, procurement, sales, production, warehouse, etc., in order to improve firm performance (Esteves, 2009; Federici, 2009; B. Johansson & Sudzina, 2008; Ramdani, Kawalek, & Lorenzo, 2009; Raymond & Uwizeyemungu, 2007; Ruivo, Oliveira, Johansson, & Neto, 2013; Ruivo, Oliveira, & Neto, 2012, 2014; Shiau, Hsu, & Wang, 2009).

Software as a Service (SaaS) is a way of delivering business applications (Armbrust et al., 2010; Cusumano, 2010; Haselmann & Vossen, 2011; Marston, Li, Bandyopadhayay, Zhang, & Ghalsasi, 2011; Oliveira, Thomas, & Espadanal, 2014; Yogesh & Navonil, 2010), being a distribution model where the applications are hosted by a vendor or a third party provider (e.g. telco/hoster) that make software applications available to customers over a network (Benlian & Hess, 2011; Castellina, 2012; Dubey & Wagle, 2007; Sharif, 2010).

ERP as SaaS is accessed through Internet, where the application and data are under control of the service provider, with payment for the software services provided usually through subscriptions paid by user on a monthly basis (Addo-Tenkorang & Helo, 2014; Awad, 2014; Dubey & Wagle, 2007; Mezghani, 2014; Mital, Pani, & Ramesh, 2014; Seethamraju, 2014). Some software vendors deliver ERP only in this distribution model, namely Acumatica, Netsuite and Plex Online. And the largest players in the ERP market, such as SAP, Oracle, Sage and Microsoft, companies which have most of its customer base in the “traditional” “on premise”, now also offer their ERP as SaaS (Gartner, 2011; IDC, 2009). However, for these vendors there seems to be a conflict of interest between the direct provisioning to their customers through this distribution model and the traditional indirect sales channel they have been establishing during some decades, which might see this as a cannibalization of sales and this is also a subject of interest for study. Especially when one of this vendors is Microsoft that built up an ecosystem of implementation partners for their Dynamics suite, where traditionally ERP systems had been implemented “on premise” as products bought by customers.

According to studies from Aberdeen Group (Castellina, 2012) and McKinsey (Montgomery, 2012), more standardized processes in SMEs than in Large Enterprises and less complex implementations might be the reason why these vendors are providing ERP as SaaS mainly in the SME market, these studies show that the percentage of deployments of ERP as SaaS is larger in SMEs (26% versus 12%
Computing Curricula: A Comparison of Models
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Business-IT Alignment Literature Review: A Bibliometric Analysis
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