Chapter 102 Attitudes Towards Cloud Computing Adoption in Emerging Economies

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ABSTRACT

Cloud computing is perceived to be the trend of the future as software and hardware turn into the new utility. This study aims to investigate the attitudes of IT professionals and decision makers in emerging economies towards cloud computing. The study also investigates the opportunities and concerns which IT professionals and decision makers have regarding adopting cloud computing in their organizations. This study was carried out in Jordan and the researchers used semi-structured interviews as a research methodology. The theoretical foundation for this research is found in the Diffusion of Innovation Theory. The findings suggest that IT professionals and decision makers in Jordan have positive attitudes towards cloud computing and the adoption rate is increasing at a rapid pace. Relative advantage in terms of cost reduction is a major adoption driver, while compatibility with organizations policies and culture is a major concern. The findings also suggest that government and small to medium-sized enterprises are the major adopters and large enterprises are lagging behind.

INTRODUCTION

Ever since the invention of the computer it has been an aspiration to deliver computing service as a utility. Cloud computing has the potential of transforming the shape of how computer hardware and software are designed, developed, and sold (Armbrust et al., 2010). Following the US National Institute of Standards and Technology (NIST), we adopt the following definition of cloud computing "Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction." (Mell & Grance, 2011, p. 2). The market for cloud computing is expanding tremendously. A re-

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cent report by Forbes forecasts revenues of cloud computing in 2016 to be \$106 billion, which is a 21% increase from 2015. The same report indicates that 42% of IT decision makers are planning to rely more on cloud computing (Columbus, 2015). For organizations, a potential of cloud computing is reducing upfront investment and capital expenditure (Zhang et al., 2010). However, adopting cloud computing mandates substantial changes to business processes and organizational culture as it redefines organizational boundaries (Paknezhad & Keshtgary, 2013; Chang, 2015). Therefore, organizations are required to align advancements in cloud computing technology with their strategic plans to sustain themselves in the market (Alsomali & Baghabra; 2016).

Little research investigates the applicability of cloud computing and its impact on organizations in emerging economies. At the time in which cloud computing providers such as IBM, Microsoft, and Amazon are leveraging their technology, infrastructure, and service to meet the increasing demand for cloud computing, little is known regarding emerging economies readiness to adopt this technology advancement and meet the increasing market demand.

In this research, we investigate IT professionals and decision makers' attitudes towards adopting cloud computing in emerging economies. We investigate the opportunities and concerns which they perceive to affect cloud computing adoption in their organizations. The study was conducted in 2015 and 2016 to evaluate the adoption rate of cloud computing in Jordan. Data were gathered by means of a surveyby-interview approach to understand the opportunities and concerns from IT professionals' perspective. The theoretical foundation of this study is found in the Diffusion of Innovation Theory which explains how an innovation gains momentum and diffuses over time (Rogers, 1962; Rogers, 2003).

CLOUD COMPUTING

Cloud computing generated a considerable amount of interest in both business and academia. While some research demonstrates concerns that cloud computing could be another technology hyperbole (Buyya et al., 2009), the majority argue that cloud computing is the next generation of information technology which delivers the promise of computing utility (Armbrust et al., 2010; Zhang et al., 2010). The Diffusion of Innovation Theory offers a justification for the anticipated adoption of cloud computing in emerging economies. That is cloud computing is currently gaining momentum and it is in the process of diffusion (Rogers, 2003). In this section, we discuss the benefits of cloud computing with an emphasis on emerging economies, and we present selected cloud computing frameworks introduced in the literature.

Cloud Computing Benefits

Cloud computing providers established data centers to host hardware and applications in several countries, and they expect a tremendous growth in the use and adoption of cloud computing all around the world (Buyya et al., 2009). Cloud computing appears to be very attractive to businesses due to the several promises it delivers and the sought benefits to decision makers. The most important benefit of cloud computing is lowering the up-front investment in information technology, which is a major obstacle for small and medium sized enterprises (SMEs) in emerging economies (Zhang et al., 2010). By adopting cloud computing platform, SMEs can better utilize their limited resources and redirect them towards other venues beside technology. Furthermore, cloud computing lowers a business's risk as no major investment in information technology is needed (Zhang et al., 2010). Adopting cloud computing lowers 14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/attitudes-towards-cloud-computing-adoption-inemerging-economies/275381

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