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Cloud Computing: Business Perspectives, Benefits and Challenges for Small and Medium Enterprises (Case of Latvia)

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Abstract

Cloud computing (CC) is a recent and significant trend in Information and Communication Technology (ICT) usage paradigm. The research attempts to evaluate the current situation of CC deployment in Latvia and investigate how CC services can improve business performance of Latvian Small and Medium Enterprise (SME) in various industries. The aim of the research is to identify the main factors motivating and influencing the adoption of CC services in Latvian SME, understanding the concept, benefits, and challenges of CC, its' impact on business performance and future perspective. This exploratory research paper tries to answer the following research questions: to what extent CC services are familiar to Latvian SMEs and how are they using CC services; what is the impact of CC usage on business performance and what is the potential and future foreseen of cloud computing services at Latvian SMEs in various industries. To attain the goal and objectives of the research the theoretical literature review is made and exploratory, descriptive mixed approach is applied for further research. The research was made during period 2016 April–June. This study provides insights and recommendations to SME, ICT vendors, service providers, government agencies, researchers and students.

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1. Introduction

Nowadays, CC presents a significant technology trend and it is definitely aimed at tremendous shift in information technology processes and the IT marketplace (Manyika *et al.*, 2013). According to the international study managed by Luftman *et al.* (2015) on “Influential IT Management trends”, CC was categorized in top 5 of the most influential technologies over 10 year period. Goel and Sharma (2014), Sharma *et al.* (2016) state the vital necessity for enlarging the Technology Acceptance Model considering CC deployment at business enterprises and identifying the main factors essentially influenced CC adoption. ICT area is defined as one of the principal fundamentals of information society and knowledge economy in Latvia (Balina and Mickevica, 2012; KPMG in Baltic States, 2014). We could assume that key trends for the future of ICT in Latvia include active development of CC technology, according to the data from Central Statistical Bureau of Latvia, for the last years the use of CC services increased from 5.7% in 2014 till 8.3% in 2015 (CSB, 2015).

Moreover, for a target group of the research, SMEs have been chosen as they are playing an essential role in the economic growth of the country by generating a large employment pool and thus alleviating poverty (Savlovski and Robu, 2011). As reported in “Annual Report on European SME” gathered by Muller *et al.* (2015), SMEs have compiled 99.8% of the whole enterprise market for the last years. Ross and Blumenstein (2015) believe that CC is a serious facilitator of SME entrepreneurship “providing greater access to global markets, lowering opportunity costs and supporting collaboration and innovation in an increasingly connected world”.

2. Theoretical framework

Nowadays, attention from all kinds of companies to CC services is increasing rapidly. Forrester Research’s forecast is promising a growth of CC industry from US\$40.7 billion in 2011 to \$159.3 billion in 2020. Likewise to estimations, IBM survey with more than 3,000 global CIO’s stated that 60% of organizations were “ready to embrace CC over the next five years as a means of growing their businesses and achieving competitive advantage.” (Yigitbasioglu *et al.*, 2013).

In general, previous researches stated that CC is a form of convergence of two major trends in information technology – (1) IT efficiency, whereby ventures can utilize modern computers through highly scalable hardware and software resources and (2) business agility, whereby IT is used as a competitive advantage through rapid deployment and real time collaboration with customers (Marston *et al.*, 2011).

A recent research by KPMG reveals the most successful areas of business improvement as a result of cloud computing implementation, wherein the enhancement of business performance and service automation as well as cost reduction has been positioned in the top (KPMG, 2014). Likewise, the study done by Harvard Business Review (2011, p. 2) sponsored by Microsoft revealed the most valued benefits of CC that increase business agility. Highly valued benefits of CC the respondents estimated as the following: increased business agility (44%); flexible capacity (41%); faster adoption of new technology (36%); lower fixed costs (shift from CapEx to OpEx) (33%); lower up-front costs to develop/deploy IT systems (31%); always on newest versions of software without IT updates/patches (26%). The survey by Luftman (2014) stated that the highest interest will be derived from Software as a Service model, followed by Infrastructure as a Service and lastly Platform as a Service.

The development of CC in the EU countries is growing slower in the comparison with progressive USA market. Nevertheless, recent data on Eurostat (2014) predicate that over 30 % of enterprises are using CC in Finland, Iceland, Italy, Sweden, and Denmark. On the other hand, fewer than 10 % did so in Hungary, Bulgaria, Greece, Poland, Latvia, and Romania. According to the article of Pelse and Zeverte-Rivza (2015), in comparison to other EU states, Latvia is using CC services rather rarely. Results of the survey conducted by Budniks and Didenko (2014, p. 76) elucidate that CC services are utilized by employees mostly in private services, even though, the majority is not aware of what CC is.

The aim of this paper is the evaluation of business perspective of CC at Latvian SMEs from both sides – consumer (SME) and the CC providers. Nowadays as marked by Maresova and Halek (2014), CC is one of the essential technologies HP and Microsoft deliver to their clients. As was stated in the article “Cloud Computing: Paradigms and Technologies” by Shawish and Salama (2014) CC has been coined as an umbrella term with many on-demand computing services offered by ICT providers.

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