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Global perspectives on accounting information systems: mobile and cloud approach

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Abstract

Cloud computing and mobile applications today are no longer buzzwords, but important resources in the business strategies of companies. More and more SMEs have adopted and currently are using cloud computing and mobile technologies. Big companies developed their own big data centers, private cloud or hybrid cloud as a support for their processes within the shared services architecture. Since Accounting Information Systems (AIS) process and store a series of sensitive and confidential data (general ledger, payroll database, and financial database), cloud and mobile technology adoption requires a rigorous analysis of data and application security. In this paper, based on a quantitative research of existing literature and specialized practice, we wish to synthesize the potential of cloud and mobile technologies in the AIS. We also provided a SWOT analysis of these technologies in the context of AIS.

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1. Introduction

Current development and usage of IT&C within organizations has a major impact on Accounting Information Systems. More and more small and medium business companies have adopted and currently are using cloud computing and mobile technologies [5]. Large companies developed their own big data centers, private cloud [3] or hybrid cloud [3] as a support for their processes within the shared services architecture. The shared services approach has a significant and direct impact on the company's financial and accounting processes.

Looking from the global perspective, business development is accomplished through the extensive use of internet and mobile and cloud technologies. In terms of technology and cloud services, this new approach has led to a new business model paradigm, namely the cloud business model paradigm. This paradigm significantly impacts the business strategies of companies, the way companies do business and define the hardware, software and communication infrastructures, risk management and cost management.

The best known and most widely used cloud services in the new business models are: Software-as-a-Service (SaaS), Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) and Business Process-as-a-Service (BPaaS) [4]; [9]; [12]; [13]; [15]; [16]; [17]. Also, a series of studies highlight the role of cloud technologies in the financial and accounting processes within companies. There is a constant increase in scientific literature and practice of the following terms: "Tax in the cloud" [11], "Finance & Accounting in the Cloud" [10].

Regarding the impact of mobile technologies and applications on business processes of companies, we can mention their use in Mobile Payments [13], Automatic Documents Entry, Mobile Customer Service, and Mobile Accounting Service [2].

Considering the role and architecture of AIS [2] we can observe that cloud and mobile technologies significantly influence AIS both from within the organization as well as from the outside.

Taking into account the multiple implications of cloud and mobile technologies on today's business process, we want to conduct a research regarding on how these technologies can be used in Accounting Information Systems (AIS) in order to improve the accuracy, completeness, and timelessness of accounting information.

In the same time we want to analyze the determinant factors of implementing cloud and mobile technologies in the AIS.

In this paper, based on a quantitative research of existing literature and specialized practice, we wish to synthesize the potential of cloud and mobile technologies in the AIS. We also provided a SWOT analysis of these technologies in the context of AIS.

2. Literature Review

In their study, Gupta, Seetharaman and Raj [5] focus on the perceived inclination of micro and small businesses toward cloud computing and present five factors that influence the usage of cloud computing by SMEs and SMBs: ease of use, security, cost reduction, reliability and sharing and collaboration.

Cloud computing can facilitate software engineering activities through the use of computational, storage and other resources over the network [14].

Cloud computing services generally refer to either or a combination of the following [3]; [4]; [9]:

- IT Infrastructure as a service (IaaS): Infrastructure vendors provide physical storage space, processing capabilities, virtual CPUs and database services.
- Platform as a service (PaaS): A set of software and product development tools for development, testing, deployment, hosting and application maintenance hosted on the provider's infrastructure. Software developers can create applications on the provider's platform through the Internet.
- Software as a service (SaaS): The end-user (private user or business user) pays the software provider a subscription fee for the service and the software is hosted directly from the software providers' servers and is accessed by the end user through the Internet.

Dinh et al. [4] offer an overview of mobile cloud computing (MCC) through a survey regarding the architecture, the applications and the approaches of MCC. Mobile cloud computing overcomes problems related to performance, environment and security. Dinh et al. [4] also emphasize certain issues (disadvantages) of mobile cloud computing

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