

Mobile and cloud approach in accounting information systems

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Abstract. Today, the cloud calculations and the application programs of mobile phones are no longer a weird and unfamiliar term. They are considered as important resources in the business strategies of corporations. We observe that many SMEs have followed this issue and have been using the technologies of cloud calculations and mobile phone. Big corporations and data centers have developed their private hybrid cloud to support their process in the mutual service architect.

Since the accounting information systems have processed and stored a series of vital and confidential data (in general, wage and salary data base and financial data base), choosing the cloud and mobile phone technologies requires a precise analysis of information and software security. In this article according to the quantitative researches of the present resources and specialized act, we intend to combine the potential of the cloud and mobile phone technologies in AIS. We have also presented a SWOT analysis of these technologies in AIS area.

Key words: accounting information systems, computer costs less, software upgrade fast and permanent, unlimited storage capacity, findings and discussions

1. Accounting information systems.

Community to meet the information needs of their increasingly depend on accounting information systems, and accounting information systems are widely spread and complexity. In parallel with the increasing complexity and interdependence of the system of accounting information systems, companies also face risks increasingly on information systems. Information Systems is a company often faces four threats: In the early morning, he replaced all his fake tabs tabs on the bank kiosks. During S·hrvz, customers used to deposit the counterfeit cards and all the debris was a dishonest individual accounts. After three days, the dishonest money in your account to withdraw, and disappeared. He used a pseudonym. In the early morning, he replaced all his fake tabs tabs on the bank kiosks. During S·hrvz, customers used to deposit the counterfeit cards and all the debris was a dishonest individual accounts. After three days, the dishonest money in your account to withdraw, and disappeared. He used a pseudonym.

Research problem. The central problem of this study is “What is the impact and global perspectives of cloud and

mobile technologies usage in the Accounting Information Systems”.

Research design. The research is exploratory and it is based on documentary study. We discussed the main issues

regarding the use of cloud and mobile technologies in the Accounting Information Systems. Our findings were

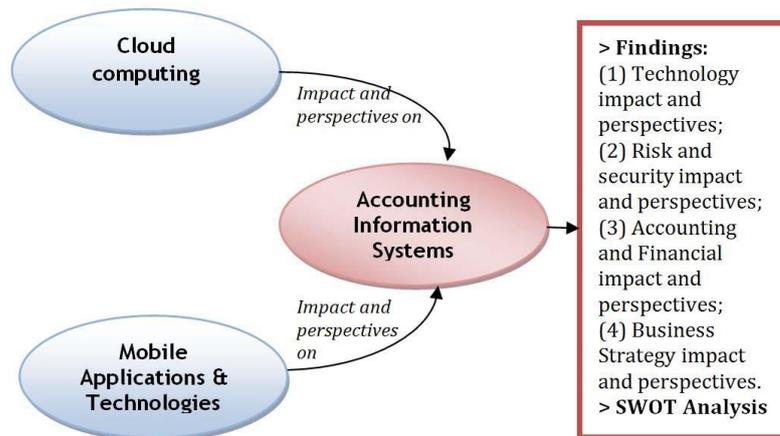
structured on: (1) Technology impact and perspectives; (2) Risk and security impact and perspectives; (3) Accounting and financial impact and perspectives; (4) Business strategy impact and perspectives.

We made a SWOT analysis on the impact of cloud computing and mobile technologies on Accounting Information Systems.

Sample, population or subjects. The sample consists of a most relevant papers and studies about cloud and mobile technologies usage in business.

Research model. The conceptual model of our research is presented in Fig. 1.

Fig. 1. The research model.



2. Computer costs less.

You run web-based applications, you do not need to use a powerful and expensive computer. Since the applications run on the cloud, not on a desktop PC, the desktop PCs you need a lot of processing power or disk space that it requires no desktop software. When you run a Web application, your PC can be cheaper, with a smaller hard drive, with less memory and CPU efficient. In fact, in this scenario, your PC does not even need a CD or DVD drive because it does not load any software program and any document need not be stored on the computer.

3. Software upgrade fast and permanent.

Another benefit of the software is that you no longer need in Cloud Computing Software Update or forced to use old software, due to the high cost of not improving. When applications are web-based, upgrades occur automatically the next time you go to the cloud, Login applied to software. When you access a web-based application, without the need to pay to download or upgrade software, you benefit from the latest version.

4. Unlimited storage capacity.

Cloud Computing unlimited storage capacity puts at your disposal. 200 GB hard disk of your computer's current desktop compared to hundreds of petabytes (one million gigabytes) that are available through the clouds do not count anything. You need to save anything that you can save it.

5. Findings and Discussions.

The results of this research are grouped into two parts. In the first part we will discuss the impact and perspectives of using cloud and mobile technologies in the AIS. In the second part we present a SWOT analysis of the impact of cloud and mobile technologies on AIS.

5.1. The impact and perspectives of using cloud computing and mobile technologies in AIS.

In our research we have identified the following categories of perspectives and areas of impact: (1) Technology impact and perspectives, (2) Risk and security impact and perspectives, (3) Accounting and Financial impact and perspectives, (4) Business Strategy and impact perspectives.

(1) Technology impact and perspectives [3]; [4]; [9]; [10]; [11]. From this point of view we have the following:

Using SaaS solutions for implementation and delivery of ERP (Enterprise Resource Planning) solutions within the AIS represents the most significant impact. In the context of a SaaS model, companies rent an ERP solution, so most transactions and reports from AIS are hosted in the cloud infrastructure. The big companies use

the SaaS model for providing ERP services within the shared services architecture of the company. The impact on AIS involves both the hardware and the software. Here are some examples: SAP, Netsuite, Oracle ERP Cloud Services, Microsoft Dynamics ERP cloud-based, etc.

Using PaaS in the AIS for developing custom modules and applications on financial processes, accounting, marketing, HR, etc. (e.g. SAP HANA Cloud Platform). If SaaS allows just providing standardized ERP solutions in AIS, PaaS enables extending and customizing these solutions through the tools of the development platform.

Using IaaS in the AIS allows the installation of database servers and back-up solutions in a cloud infrastructure. IaaS provides large storage capacity and data processing of financial information.

Using Mobile Applications and Technologies in the AIS allows extending client applications in basic financial and accounting processes of the company. Mobile payment systems and mobile systems for capturing data in documents have the most significant impact on AIS.

In perspective, cloud technologies can create an integrated environment in which Accounting Information Systems of various companies that are in the same cloud and use the same ERP can interact easier and faster in EDI (Electronic Data Interchange). Likewise, the mobile applications and technologies can be used in the AIS as mobile

terminals for primary data collection, data entry, and accounting and financial transactions.

(2) Risk and security impact and perspectives [7]; [8]. In most studies, the problem of risk and security of cloud and mobile technologies is critical. Although some authors consider that migration to cloud represents a security improvement, many risks and security problems still remain. Most cloud service providers often implement powerful security solutions that for many companies turning to cloud services lead to an increase in security [12];

[13]. Regarding concerns over cloud and mobile security services, in our research we have identified the following risks and security issues with a significant impact on the AIS:

Financial and Accounting Data Loss [8]; [10]; [11]. Processed and stored data in AIS are vital for the company (for example general ledger, payroll database and sales database). They are the basis for all reporting and analysis of the company. Storing data and information in an infrastructure outside of the company (SaaS or IaaS) has the effect of increasing the risk of loss of that data. The company owns only the data not the infrastructure offered by the cloud service and cannot control or verify the storage and data processing systems.

Privacy [8]; [10]; [11]. Privacy is the most common concern when it comes to cloud technology implementation in the AIS of a company. The Accounting Information System processes and stores sensitive data and confidential information, like employee data, customer data and financial data of the company.

System availability and business continuity [8]; [10]; [11]. Regarding this issue, most concerns are about communication interruptions or mobile/cloud infrastructure and recovery for business continuity.

Legal and regulatory concerns [12].

Intellectual property theft [12].

The perspectives of enhancing AIS security by introducing cloud technology that we have identified are:

Patch management [7]; [8]. Having a centralized and unitary structure, applications or infrastructure patches management are more effective and in short time.

Disaster recovery and backup procedures [7]; [8]. Cloud Service Providers (CSPs) have mostly advanced backup and data recovery implemented solutions.

Permanent supervision and security administration [7]; [8]. CSP departments and teams deal exclusively of ensuring infrastructure security. In perspective, regarding cloud and mobile security, an important role is attributed to insurance services through

IT auditing. IT audit services of cloud infrastructure will represent a mandatory requirement for adoption of these technologies in the AIS of a company. In this context, the continuous auditing of cloud technologies will be of high importance.

(3) Accounting and financial impact and perspectives [12]; [13]. Using cloud technologies in the AIS has a positive impact by significantly reducing acquisition costs, maintenance and management of hardware and software infrastructure of the company. Likewise, the tax implications of cloud adoption play an important role in the cloud decision-making process [12]; [13]. A financial characteristic of investing in implementing cloud and mobile technologies in the AIS is the high rate of ROI. A positive financial impact of adopting cloud services is the one on the company's cash flows by reducing payments for purchases of hardware and software (ERP and others). Cloud services are pay-per-usage and they are used by paying rent monthly or yearly.

(4) Business strategy impact and perspectives [9]; [6]; [16]. Using cloud and mobile technologies within companies has a significant impact on the company's business strategy as well. These technologies reshape the way in which companies make business. For most of the big companies, using cloud or hybrid cloud-based technologies involves organizing business based on the shared services architecture. Thus, the company becomes more flexible in support processes for doing business. Another impact on the business strategy is the use and

development of outsourcing services in every company’s business strategy. In perspective, we can highlight the increased role of the cloud business model in the business strategy.

5.2. Swot analysis of cloud computing and mobile technologies impact on aiss.

Table 1. SWOT Analysis of cloud computing and mobile technologies impact on AIS.

Technologies	Impact on AIS			
	Strengths	Weaknesses	Opportunities	Threats
Cloud computing and Mobile Applications	Scalability	Service Agreement (Contract)	ERP-SaaS	Accounting and financial data loss
	Costs reduction	Internet connection	Mobile automated	Privacy breaches
	Collaborative environment (with customers, employees)	A lack of standards between cloud providers (inter-operability) [12]	Accounting (documents) data gathering	Systems Availability
	Global approach (without borders)	Integration with existing architecture [12]	Mobility	Dissatisfaction with offerings/ performance/ pricing from vendors
	Data back-up and recovery	Data migration [15]: [16]	Security Improvement	Legal and regulatory

6. Conclusions.

In the context of mobile and cloud technology development, more and more companies adopt such technologies as infrastructure support for their activities. Migration to these technologies has a significant impact on the AIS as well. Through our research, we have tried to identify and present the

main areas of impact in using cloud and mobile

technologies on AIS. Most papers and studies that we have reviewed highlight the positive role of using cloud and mobile technologies in business development. For AIS, these technologies provide scalability, mobility and reduced maintenance costs. Since 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. Therefore, we wish to emphasize the important role of IT audit services on mobile cloud technologies. These solutions will be used more and more both in SME as well as in Big Companies mainly due to the low cost and high scalability considering stable and permanent Internet connections. From a global perspective, AIS development using cloud and mobile technologies will lead to a reorganization of the business architecture with significant impact on business strategy.

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