

ACCOUNTING IN THE NEW AGE OF DIGITIZATION. CLOUD ACCOUNTING

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Abstract

We note that, in the recent years, there has been substantial progress in the field of Cloud Computing.

The changes brought about by digital technologies are felt in all areas, including in accounting.

Currently, in business, the transfer of accounting systems in the Cloud is a new solution used by more and more companies that believe that, in this way, they will improve the economic efficiency of their business activity, performance and competitiveness of the company.

The purpose of our article is to analyze the implementation of Cloud technology in the organization's accounting, how it influences the flow of accounting processing, and accounting results.

We want to investigate whether Cloud technology is a solution for the future of accounting, or whether there are important impediments that make us susceptible and cautious as users.

The research methods used consist in the analysis of the specialized literature by applying different techniques of analysis of works based on qualitative, quantitative research but also comparative analysis.

Keywords: *cloud accounting; cloud computing; reduces the volume of manually processed documents; the prevent errors; the increase data accuracy; the security information and confidentiality information.*

JEL Classification: *H70, H83, M40, M48*

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Introduction

In the business world, the transfer of accounting systems in the Cloud is a new and innovative solution that more and more companies are currently using, motivated by the advantages in terms of costs, diversity and speed of operations provided by the new technology.

The purpose of our article is to analyse the implementation of Cloud technology in the organization's accounting, how it influences the flow of accounting processing, and accounting results.

We want to investigate whether Cloud technology is a solution for the future of accounting, or whether there are important impediments that make us susceptible and cautious as users.

The implementation of Cloud technologies in the accounting information system of modern companies is a current topic that is of interest, but also controversial, both in the business environment and in the accounting profession.

The research methodology of this paper is of qualitative-quantitative deductive type. The research methods used consist in the analysis of the specialized literature by applying different techniques of analysis of works based on qualitative, quantitative research but also comparative analysis.

Cloud computing is a model of data processing that consists in making available to the user, through web resources and provider services, the computing power, the disk space, the databases, the analysis services and the artificial intelligence.

Given that information technology has evolved extremely rapidly in the last decade, there is a need for a new approach to accounting computerization, which can have a positive impact on the business.

A study from December 2015, conducted by KPMG on global cloud trends, shows that more and more managers are prepared and choose to migrate the financial and accounting process to the Cloud.

For these companies, elements such as: access to information, speed of transmission, speed of decision-making, flexibility in managing accounting activities are becoming more and more important.

Literature Review

The research topic responds to current needs in the field of digital accounting. I studied the representative and current works on the chosen topic, by Romanian and foreign authors. It is a topical issue and of great interest.

1. Cloud Accounting in the business environment. Characteristics

Information technology changes the way companies conduct their business activity related to structure, objectives, strategies, human resources.

A study conducted by Aberdeen Group – a research and market research company, in 2013, shows that Cloud applications implemented in the flow of accounting processing led to a 50% reduction in invoice processing costs, a significant improvement in customer satisfaction and an increase by over 20% of labour productivity.

Thus, Cloud applications implemented in the accounting process can increase the productivity of accounting staff by optimizing the time spent with data processing and its allocation for the development of accounting analysis in decision-making.

By default, this can generate a reduction in the costs of collecting and processing accounting data, but also an improvement in the client-accountant relationship by accessing in a shorter time the information desired by the client.

For many companies, accountancy is a cumbersome and time-consuming process. Collecting and recording data, organizing information, reconciling accounts, generating reports can be difficult, costly, time consuming and error prone activities.

Therefore, an online accounting software in the Cloud can offer managers and employees the possibility of global and integrated access to data, rapid updating of information when desired, rapid generation of reports, of financial statements with a significant reduction in time and costs [Gupta & Gaur, 2018].

Cloud Accounting can provide applications, levers, to meet business needs [Prichici & Ionescu, 2015].

Thus, at the *operational level* – Cloud Computing has functions that support accountants for efficient processing and storage of data on accounts receivable, debt, taxes, and bank accounts.

At the *tactical level* – Cloud Computing has functions that support accountants for a quick generation and access to financial statements, accounting records, reports, cash flow analysis, risks analysis, etc.

At the *strategic management level* – Cloud Computing provides fast and integrated access to data on activities at other levels of responsibility, has functions that support budget planning, business modelling, efficient management of internal controls of a company.

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Table 1. Influences of Cloud Accounting business levels.

Influences of Cloud Accounting business levels
Operational level - Cloud Computing has functions that support accountants for efficient processing and storage of data
Tactical level - Cloud Computing has functions that support accountants for a quick generation and access to financial statements, accounting records, reports, cash flow analysis, risks analysis
Strategic management level - Cloud Computing has functions that support budget planning, business modeling, efficient management of internal controls of a company

Source: The author's processing

A Cloud Accounting application is an accounting application that can be accessed from anywhere with an Internet connection, without the need to be installed and managed on one's own servers.

By implementing Cloud-type applications, the financial relationship between the business partners can be significantly improved, in the sense that [Weins, 2016]:

- by means of these applications, it is possible to give up time and resource consuming activities;
- it allows data access in a common workspace;
- it allows secure and online storage of information;
- regardless of location, it allows permanent access from any electronic device that has an Internet connection.

Accounting organizations such as the American Institute of Certified Public Accountants (AICPA) consider Cloud Computing technology as an innovative way of operating in business. Thus, AICPA highlights the diversity of possibilities that are created by using Cloud Computing-based applications in accounting efficiency such as [Weins, 2016]:

- fiscal planning;
- productivity and profitability analysis;
- cash flow forecasts;
- confirmations requested for audit;
- payment of invoices;
- preparation of financial statements, salaries, sales;
- customer relationship management (CRM);
- real-time approach to scanned invoices, etc.

We show in Table no.2 the platforms often used in Cloud:

Table 2. Cloud platforms.

Cloud platforms - opportunities for accounting:
<i>Platforma Software-as-a-Service (SaaS)</i>
<i>Platform-as-a-Service (PaaS)</i>
<i>Infrastructure-as-a-Service (IaaS)</i>

Source: based on information from Tugui, A. & Gheorghe, A.M. (2014)

Through the *Software-as-a-Service (SaaS)* platform – which is the most common form of Cloud – professional accountants have the opportunity to provide accounting services in an innovative way, namely, the use of third-party managed applications without the need of installing additional applications.

Another Cloud platform is *Platform-as-a-Service (PaaS)* – which is the most complex form of Cloud and offers the possibility for a company to develop its own applications.

Another platform often used in the Cloud and with many benefits is *Infrastructure-as-a-Service (IaaS)* – through which one can access infrastructure resources, storage or networking services.

More and more specialists recommend that, before using the Cloud Computing applications in the accounting process, a review of the software possibilities, the infrastructure, the internal processes, its staff be made within the company.

Implementing Cloud applications in the accounting process is not an easy action because it involves a change of mentality, culture, attitude, and even a staff reduction.

Accountants not only adopt Cloud Computing, but must structure a new approach to work, which will reduce administrative processes that are repetitive, but also a staff reduction.

According to a EUROSTAT ranking at the level of September 2020, only 10-15% of the Romanian companies chose to implement Cloud applications in the accounting process. At European level, countries with a better level of IT digitization in the Cloud are: France with 28%, respectively, Germany with 19.4%.

However, at European level, there has recently been a 21% increase in Cloud adoption among corporations.

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2. Advantages of Cloud Computing in accounting

* Implementing Cloud applications in a company's accounting process helps reduce the time for processing invoices and other financial documents by means of electronic records possibility.

Accounting documents, especially invoices, receipts, tax receipts for purchases, sales, transfers, can be uploaded online directly by the customer through scanning, thus eliminating the stage of sending these documents to the accountant and processing them in the document -by- document system.

Cloud applications collect transaction data from invoices, record information in the accounting journals and post data to the account sheets. Thus, it eliminates a series of accounting steps that the accountant would perform document by document using the usual accounting program, gaining, by means of the Cloud applications, time, a fast processing of a large volume of accounting documents, but also their rapid centralization in Accounting Journals, Account Forms [Mohanty & Mishra, 2017].

* Financial management based on SaaS solutions automates the financial process and reduces the volume of manually processed documents.

* Compared to traditional accounting, the Cloud accounting system can make the transition from basic accounting records to compiling real-time business analysis.

* Cloud Accounting technology improves the customer-accounting relationship through the following two interface components [Prichici & Ionescu, 2015]:

- *Customer-oriented interface:*

Cloud Accounting simplifies the way of approaching the data, all the information required at a certain moment for the analysis of the financial situation are arranged in the form of Dashboards easy to follow by the client;

- *Single user interface:*

Regardless of who accesses certain information and from which location, the same data is available, as different users can track the same information in real time.

* Cloud Accounting offers the ability to eliminate duplicate information, prevent errors and increase data accuracy. SaaS-based accounting systems have implemented controls that automatically identify and prevent duplicate records [Mohanty & Mishra, 2017].

For example, goods, services purchased or rented are automatically attributed to invoices received or payments made, and expenses are correctly recorded in the accounting period to which they correspond.

* Cloud technology requires minimal investment in hardware, and maintenance of cloud applications is provided by the vendor at no additional cost. The costs involved in using Cloud applications are lower than the costs of running applications locally on one's own devices.

* Another advantage is given also by the increase of the activity volume. Thus, for an application running on the company's servers, increasing the volume of activity above a certain level can lead to major additional investments in hardware and software. Instead, cloud technology offers much more flexibility, without additional investment in equipment or infrastructure, this technology allows the management of a larger volume of data by supplementing the demand for cloud services at a minimum additional cost [Gupta & Gaur, 2018].

3. Limitations of Cloud Computing technology in accounting

Although the benefits of Cloud Accounting are recognized at the company level, as we saw from the study conducted by EUROSTAT 2020, the implementation of Cloud applications is quite slow, especially due to the uncertainty of management regarding the control and ownership of information.

The biggest fears of companies refer to the security and confidentiality of their information, in terms of using Cloud-based applications.

These data security concerns are explained by the fact that, by applying Cloud services, the company information is stored on a Server that can be accessed via the Internet, and is not stored on the company's own computer unit.

According to the 2019 Oracle & KPMG Annual Report – there has been a 3.5-fold increase in the number of companies that will hold more than half of the data in the Cloud by the end of 2020.

However, the Report points out that the critical nature of cloud services has turned the security of the Cloud into a key strategic point.

The 2019 Oracle & KPMG Annual Report has identified several segments where companies can face *security threats* by applying Cloud services in accounting, namely [Oracle & KPMG, 2019]:

- The confusion generated by the division of responsibility between departments – can generate cyber and security incidents in the form of malware attacks and data theft;

- CISO central IT security officers frequently see their responsibilities at the edge of cloud security. About 90% of central IT security officers are confused

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about their role in software security (SaaS) compared to what Cloud services provide;

- Visibility remains the most important security challenge. Timely detection of the cybersecurity problem, but also the inability of the existing network security protocols to provide visibility into the workload of the host server can represent cybersecurity issues;

- Other cybersecurity issues are the lack of security controls, but also the use of the Cloud by unauthorized persons – leading to fraud and information leakage.

Conclusions

Our research on the chosen topic demonstrates the positive impact of Cloud applications on accounting systems, which determines the improvement of business performance.

Many transactions can be performed faster, in a simplified and integrated way, and managers will be able to make faster and better decisions to achieve the company's objectives.

Being connected to a global market, the company can maintain better connections with all its business partners, thus becoming more competitive.

Accounting needs to position itself in the future by taking advantage of digital technology opportunities, including Cloud Computing applications, in order to have a business vision, but also to ensure process efficiency, compliance, control, increase productivity, reduce costs and increase overall business.

Cloud Computing technology changes the way in which the functions of the finance department support business, changes the way in which we identify and manage current and future risks and opportunities, as well as the way in which we analyse and process the information.

Cloud Computing technology changes the way in which information is stored and sorted, the speed and manner in which we interact and communicate and helps us increase transparency and accountability. This is no longer an IT function, but an economic-financial function that is gaining more and more ground in the activity of companies.

The cyber risk is and will remain a thorny issue in this context, but it must be integrated into all business decision-making processes, not added later as a secondary idea.

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