Adoption of cloud computing by external auditors in raq.Exploratory Study

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Abstract

The emergence of cloud computing has been one of the biggest developments in the history of computing in recent years. However, for cloud computing to reach its full potential, many studies are needed to address the challenges of cloud computing. In this study, we examine the benefits, problems, opportunities, and challenges of cloud computing in Iraq. We also investigate whether external auditors use cloud computing services in Iraq or not. The results of this study show that the majority of the respondents agree with the adoption of cloud computing by external auditors. So, this shows that cloud computing plays an essential role in the audit process in Iraq.

Keywords: adoption , cloud computing , external auditors .

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Introduction

Many companies are interested in using modern processes and software to perform their tasks, including auditing firms that are trying to use cloud computing in the field of auditing. **This study, therefore, addresses** the question of the extent to which cloud computing is used by external auditors. **The relevance of the study** stems from the various benefits of cloud computing in the field of auditing. Therefore, **the researcher hypothesized** that the use of cloud computing can improve the accuracy and timely completion of audit engagements. Therefore, in the next section, we will review several previous research papers on this topic and show how they differ from the current study. This study answers the following question: the study hypothesizes that external auditors in Iraq use cloud computing and that they have a great deal of knowledge about the benefits and threats of cloud computing.

Literature Review

The study analyzes the external auditors' opinions about the reasons why companies use or do not use cloud computing in Australian companies. It was found that external auditors use both private and public cloud services for many of their clients, but the confidentiality of data and the involvement of other agencies remain a concern for cloud users (Yigitbasioglu, 2015).

Alshamaila et al. (2013) An Empirical Study on Small and Medium-Sized Enterprises Adopting CC Considering the Framework for Technology, Organization, and Environment (TOE). Similar to the study of (Alshamaila et al. (2013)), Conway et al. (2014) Issues raised in CC adoption by SMEs.According to the unified theory, risk perception, trust, performance expectations, and effort expectations also influence the adoption of consumers of M-Government and M-Internet. Baabdullah et al. (2014). Borgman et al. (2013) found that TOE publishing decisions influence technology and organization. McGeogh and Donnellan (2013) and identify ways to overcome these barriers at CC accreditation for business services. the diffusion innovation model (DOI) and The TOE framework were identified as one of the drivers of the adoption of CC by organizations Espadanal and Oliveira (2012). Dutta et al. (2013) analyzed the possible risks of implementing CC. while Gupta et al. (2013) concentrate on the benefits of implementing CCA in businesses. Khanagha et al. (2013) discussed how businesses may overcome the challenges posed by the reliance on managerial innovation in cloud computing. Lee et al. (2013) concluded that customer variables and financial factors are the most important factors for SaaS adoption in the Korean market. Morgan and Conboy (2013) uncover the technical and psychological aspects of CC adoption by exploring the complex nature of CC.

Oliveira et al. (2014) examined the influences on the adoption of CC in the Portuguese industry by building a model using the DOI and TOE frameworks. Petrescu (2012) studied the impact of CC on the business environment. According to this study, cloud computing enables companies to communicate more effectively with their partners and collaborate with them more efficiently. Ratnam and Dominic (2014) examined CC adoption through the use of SEM in the healthcare sector. The majority of the literature on cloud computing adoption shows that SMEs are inherently well suited for cloud computing. It also shows the economic and social importance of cloud computing for these companies.

A study by Depietro et al. (2003) and Rogers (2003) on technology organization environments (TOEs) and diffusion of innovations (DOIs) models are commonly used

in cloud computing adoption research. It serves as a theoretical framework for Tornatzky and Fleischer (1990), but transaction cost theory (Yigitbasioglu, 2014) and logical action theory (Benlian & Hess, 2011) have also been used. (Ma, D. & et al. 2021)

Cloud computing

Accounting in the cloud represents a major change in accounting systems and their use in companies. A wide range of software with varying degrees of complexity is available on the market, ranging from simple cash accounting systems to fully integrated systems with cross-enterprise functionality and customer support. (Ma, D. &ETAL.2021). The advent of CC represents a major shift in information technology (IT), its development, deployment, scaling, modernization, maintenance, and payment. The current situation in computing is paradoxical, with computing becoming increasingly important while the cost per unit of computing is rapidly decreasing, so that computing power is seen as a commodity. On the other hand, computing is becoming more expensive than ever for organizations, as the proliferation of computers in the workplace has increased the complexity of maintaining a comprehensive infrastructure for the many information structures, scattered data, and software. Marston, S., & et al.., 2011).

In computing, cloud computing is "a model for provisioning and acquiring computing resources that allows applications to be accessed from any location that has an Internet connection." (Ma, D & et al. 2021). The term "cloud" is figurative and refers to operating resources of computers that are accessible via the Internet. Terms such as grid, utility, network, and service computing have been used to describe aspects of cloud computing. (Lin & Chen 2012). We have studied how the demand and supply of cloud assets in marketplaces affect standard system-centric resource management strategiesBuyya et al. (2008). The concept and reality of cloud computing are fundamental to market-oriented cloud computing. Various types of cloud computing descriptions are accessible in the literature. Our definition is usually based on the definition of NIST, which includes a wide range of computing resources, cloud computing capabilities, and related deployment strategies.

(Raut, R.D., et al., 2018). Scalability, flexibility, and delivery as a service are all characteristics of cloud computing, according to Gartner. According to IDC, cloud computing is a new breed of IT. According to Forrester, cloud computing is a technology that provides billing, scalability, hosting, and abstraction. C C, as defined by IBM, is a platform for deploying and reconfiguring servers. Cloud computing, according to research, is the next phase of computing and provides a low-cost, highly secure software environment. The Burton Group describes cloud computing as a technological model that offers services as needed. As defined by Madhavaiah et al. (2012), cloud computing combines two key components of information technology: (a) improving computing efficiency and (b) using IT as a business tool to run real-time applications. Choudhary and Vithayathil (2013) define CC as a method to provide IT services in-house.

(Raut, R.D., et al., 2018). Excellent examples of cloud computing services include Dropbox and Amazon.com. Cloud computing, according to Buyya et al. (2008), is a network of computers that offers services to users. According to Kim (2009), cloud computing entails using a third-party provider's web browser to access the Internet for a charge. Cloud computing, as defined by Marks and Lozano (2010), is the Internet-

based sharing of hardware and software resources with a focus on accessibility. The three CCA service models identified by NIST are platform as a service, infrastructure as a service, and software as a service. There are alternatives for a private, cooperative, public, and hybrid deployment. (Raut, R.D., et al., 2018).

According to the computer paradigm known as "cloud computing," huge data centers' machines may be dynamically assigned, replaced, and altered to offer scalable services (Wyld, 2009). CSPs offer a variety of services to consumers, companies, and governmental organizations, allowing for the development of highly scalable computer applications.

Cloud computing makes use of data distribution and storage, remote access, database administration, data mining, and online application delivery. Cloud computing is seen as revolutionary in terms of its influence on technical advancement and business success. The cloud service model, according to the National Institute of Standards and Technology (NIST), improves availability and has five primary features: on-demand self-service, resource pooling, wide network access, quantified service, and quick adaptability. The acronym for the NIST is the National Institute of Standards and Technology (2009a). One of three service models is commonly used to provide cloud-based solutions: 1) IaaS (Infrastructure as a Service), 2) PaaS (Platform as a Service), and 3) SaaS (Software as a Service). (Ma, D. et al. 2021)

The advantages of cloud computing

According to Fichman, Kohli, and Krishnan [2], it is clear that modern information and communication technologies (ICTs) can provide tremendous opportunities for various sectors, including healthcare. CC reduces the risk of prescribing errors while providing a significant return on investment, as well as assisting healthcare professionals in making decisions regarding access to patient information, cost reduction, and improvement. (Sharma, M & Sehrawat R.2020)

Customers can access information stored on servers available as (IaaS),(PaaS), or (SaaS) through any Internet-connected device via CC. CC is attractive to organizations not only because it lowers overall capital expenditures on it but also because it offers several benefits, including reduced power consumption, green computing, on-demand storage, and a focus on the core value of the organization such as goods and services. (Sharma, M. and Sehrawat, R., 2020.)

Since cloud computing allows companies to save money while increasing their efficiency and productivity, cloud computing has a direct impact on the GDP and thus on the country's economy. Therefore, these companies have a positive economic impact. By switching to cloud computing, companies can save time, money, and energy that can be better spent in other areas to improve their business. According to this view, cloud computing can improve a country's economy by increasing business productivity and solving IT-related problems quickly and with fewer resources. In addition, cloud computing eliminates the need for companies to operate their centers. Cloud service providers manage large data centers more efficiently than small facilities. Cloud computing achieves environmental sustainability because the cloud computing model is based on virtualization, which consumes less energy. (Raut, R.D., et al., 2018).

Cloud computing reduces the number of employees who need high salaries and also benefits students in their research and labs. It provides access to massive data centers that were previously out of reach for small and medium enterprises due to financial

constraints (Raut, R.D., et al., 2018). according to Larry Ellison, in reality, many of the concepts arising from cloud computing have been included in strategic plans since 1965 (Raut, R.D., et al., 2018).

Although some of the above concepts have existed for some time, we think that their convergence in the modern world—where information can be accessed regardless of platform or location—represents a profound shift in how computing functions. The following important benefits of cloud computing are in particular: (Marston, S., et al., 2011.)

1. small businesses can now access computationally intensive business analytics that was previously only available to larger organizations. Cloud computing enables the processing of massive volumes of data in a short amount of time. In many third-world countries that otherwise lack the resources to deliver IT services, cloud computing provides a platform for delivering IT services.
   In many organizations, this can lead to faster time to market and lower upfront costs because the customer has access to hardware resources without making upfront financial commitments.
   Cloud computing is transforming into a flexible infrastructure that can be used by end users in a variety of ways.
2. Users are separated from one another, and the infrastructure's adaptability enables computing requirements to be balanced when additional users join the system. Even when economies of scale grow, the demand load on a system balances off as the user base grows in a stochastic way.
3. apps such as Facebook and YouTube show us how cloud computing can drive innovation in IT.
   4. Companies can scale their services more easily with cloud computing. It can be deployed quickly as new needs arise because it is managed by software. (Oliveira, & et al., 2014).
5. New applications and services that were previously unimaginable are now possible thanks to the cloud. Examples include (a) context-aware mobile applications that react immediately to data from both human users and non-human sensors, and (b) parallel batch processing, which gives users the ability to quickly examine terabytes of data using powerful computation. Also, there are many advantages of cloud accounting. (Ma, D. et al. 2021).
   Elimination of the functions associated with maintenance, updating, and installation. The hardware and software can be operated with typical accounting software. Reduced reliance on IT expertise.
   Work habits are more adaptable as time management and productivity are improved. Data entry errors can be reduced as authorized individuals have access to accounting records. Cloud users can gain remote access with an internet connection and a browser. Cost savings by eliminating the need to purchase software/hardware.Better predictability of spend in terms of prices. Users can quickly access new accounting features and modules. It is possible to avoid some of the costs associated with business continuity planning and disaster recovery. Accounting records can be made more secure.
   There are both free and premium services, such as Google Docs and cloud accounting systems. A few examples are Google Docs, which is a free service, and cloud accounting systems, which are premium.

in addition, there are many potential benefits associated with cloud computing, including, (Ma, D. &etal. 2021) (1) avoiding significant IT expenditures; (2) realizing cost savings from economies of scale; and (3) cutting maintenance and development expenses; (4) lower barriers to innovation in IT; (5) the capacity to develop new sorts of services and; (6) the flexibility to scale IT resources; (7) continuously updated applications; and (8) consolidation of IT services and management. Trigueros-Preciado et al. (2013).

Potential risks may outweigh these benefits. These include (1) security and privacy of data; (2) continual accessibility of services and the Internet; (3) lock-in with vendors; and (4) There are legal and tax consequences for cloud service providers who base all or a portion of their activities in countries other than those of their clients. (Ma, D. et al. 2021)

Risks of cloud computing

Due to scalability, device and location independence, lower costs, and agility, CCA is advantageous compared to traditional computing. However, some companies are concerned about the security and privacy of their data and therefore have not yet embraced CCA. (Sharma et al., 2017). Therefore, the critical variables affecting the adoption of CCA need to be identified and prioritized. Cost-benefit analysis and implementation methods have been the focus of several studies. CCA methods, barriers related to the selection of CC services, and the interdependence of critical variables affecting the adoption of CC have received little attention (Sharma et al., 2017).

A variety of sectors are interested in learning more about cloud computing service models and using them if they can provide more security. Many studies have been conducted on privacy threats and security breaches. Therefore, three types of risks have been identified: security and technological management, and cloud properties. (Ali, O., et al. 2020).

These risks to CC demonstrate the importance of tightening security measures. Despite regular security breaches and efficient cloud infrastructure technology. Nevertheless, security breaches occur regularly in extremely large enterprises. For example, in 2009, Amazon experienced two separate security breaches when its networks were temporarily stopped while using a simplified storage system. (Ali, O., et al. 2020).

While some studies have looked at the use of cloud services from an organizational viewpoint in terms of security failures. they are rare. In this section, we examine the cloud security challenges in the Iraqi context, as per the objective of the study. (Ali, O., et al. 2020).

(Ma, D. et al. 2021) shows some of the CC risks:
Service disruption and delay risks. Enterprise vulnerability to application upgrades from cloud service providers hurts them. Accounting records and/or bank filings were accessed without authorization., Cloud service provider applications are difficult to understand. Vulnerability to cloud service provider's financial position - data ownership may be unknown. Adaptability to existing processes and systems. Unintentional breaches of contractual relationships as a result of global data storage. Multiple data entry locations could lead to duplicate transaction entries.

Despite the innovative nature of the industrial revolution associated and associated with cloud computing, it comes with serious security and privacy risks. (Kshetri, N.,

2013). Yet there are those who argue that issues such as data security may even be mitigated by the cloud because cloud service providers are adopting measures that would be impractical for many other businesses. (Ma, D. et al. 2021)

Impact of Cloud Computing on The External Audit

(Hassan,2020) showed in the research, which was based on the questionnaire. The sample consisted of (75) accountants and managers of accountants and managers in external accounting offices in Cairo, Arab Republic of Egypt. Users' confidence in the security and ease of use of cloud computing via the Internet is significantly high. Workers in the accounting firms under study realize the benefit that may accrue to them and the company from using Online accounting applications. The research recommended companies' interest in including cloud computing in external audits, and audit offices' interest in conducting training courses for employees on cloud accounting applications.

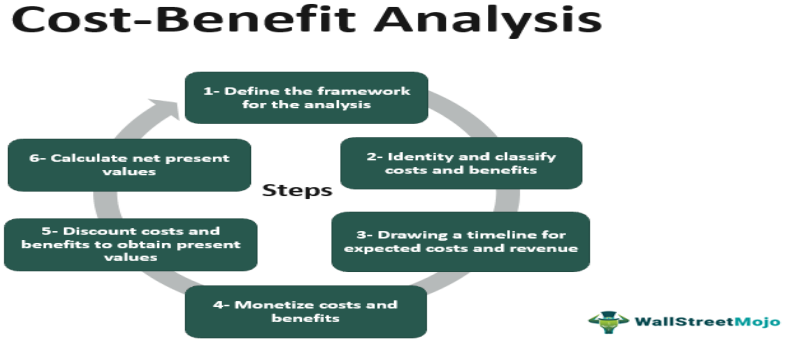
Additionally, (Taha, et al., 2021) employed online questionnaires to assess how three key cloud auditing difficulties were affected by the employment of an external auditor and cloud specialist (i.e. technology security, regulatory standards, and strategy). According to the study, external auditor-cloud specialist involvement had a substantial impact on overcoming the difficulties associated with cloud auditing. The findings indicated that employing IT professionals are more effective in overcoming strategic issues than other types of challenges, such as those related to organizational standards and technology security.

Furthermore, (Nicolaou, & et al., 2012) reviews focus on issues that come up when auditing a business' cloud-based systems. A shared infrastructure is used to provide IT services via the Internet while computing in the cloud. This enables quick and easy network access to shared computing resources and frees up businesses from the requirement to make significant capital investments while also lowering the cost of data processing and archiving.

Several IT auditing standards, including COBIT, COSO, Enterprise Risk Management - Integrated Framework, ISACA's IT Assurance, ISO 27001, and ITLL have been created. ISAE 3402 and SAS 70 are industry standards. Auditors may choose one standard or a combination of the practice of auditing. The majority of these guidelines are relevant to IT audits, which may be used in audit cloud computing as well. (Chou, D.C., 2015)

Cost-benefit analysis

Cost-benefit analysis (CBA) is a method used by organizations to make important decisions after determining the costs and benefits of a particular action using various models (Ramos, D.& et al., 2022). such as net present value, benefit-cost ratio, etc. The following figure (1) illustrates the steps of cost-benefit analysis.



Importance of cloud computing for auditing

Research method and data

Presentation and analysis of the results of the study

This part is about the presentation of the data and testing of the hypotheses, where the researcher has used the questionnaire as the basic instrument for data collection. First, the researcher will check the validity of the questionnaire and its internal consistency.

The validity of the questionnaire:

The validity of the questionnaire was checked as one of the scientific research instruments to obtain the primary data that will help to achieve the objectives of the study. In this questionnaire, the Pearson correlation coefficient was calculated to determine the degree of correlation between the scores of each paragraph and the scores of each axis. Table 1 shows the results:

Table (1): Correlation coefficients between the degree of each paragraph and the total degree of the axis to which it belongs.

Q.N	Q	correlation
1	Does your company use cloud computing?	.253
2	If you don't use cloud computing, do you intend to use it?	.443
3	Are there any considerations that influence your decision to use cloud computing?	.534*
4	Are there any considerations that influence your decision to avoid using cloud computing?	.877**
5	From your point of view, are there factors that encourage the adoption of cloud computing?	.428
6	Are there external factors that restrict you from using or not using cloud computing?	.668**
7	Are there benefits of cloud computing?	.336
8	Apply kind of applications changed to cloud computing?	.597*
9	Will the attitude about the use of cloud computing change in the future?	0.203
10	Are there new possibilities that cloud computing can provide to a company or a customer?	.273
11	Are there any kind of risks associated with cloud computing?	.270
12	Is it possible to reduce the risks of cloud computing?	.356
13	Are there technological applications that can reduce the risks of cloud computing?	.246
14	Are there any problems with using cloud computing?	.662**
15	Can you explain in detail the benefits you have gained so far from using cloud computing?	.519*
16	Do the benefits of cloud computing meet your expectations?	.505
Total		

"*.There is a significant correlation at the 0.05 level (2-tailed)

"**. There is a significant correlation at the 0.01 level (2-tailed)".

Source: Prepared by the researchers

From the above table, it can be seen that all the expressions in the questionnaire are correlated with the overall degree of the axis to which they belong and that this correlation is statistically significant at the significance level (0.01). Furthermore, the results showed that the values of the correlation coefficients ranged between (0.203 - .877**). Therefore, we conclude that all the expressions achieve the desired measurement objectives as they have a high degree of validity.

Reliability (internal consistency

The overall stability of the study instrument (the questionnaire) and its axes waecked by calculating Cronbach's coefficient. The following table (2) shows the results:

coefficient	questionnaire expressions	Cronbach's Alpha
Reliability	**16**	**0.723**

Source: Prepared by the researchers

Table () shows Cronbach's alpha coefficients for the overall consistency of the questionnaire.

From the above table (), it can be seen that the study instrument (the questionnaire) has achieved a very high level of stability as the value of the Cronbach's alpha coefficient for overall stability reached (0.723), with this value exceeding the permissible limit of stability estimated at (0.70). In addition, the researchers checked the stability of the questionnaire by dividing half of the questions by calculating the degree of correlation between the even and odd questions. The Spearman-Brown correlation coefficient was calculated between the even and odd items and then corrected with the Getman hash factor. The Cronbach alpha coefficient was also calculated for each half:

Table(3): shows the stability coefficients of the study instrument by halving.

Reliability Statistics			
Cronbach's Alpha	**Part 1**	**Value**	**.700**
		N of Items	**8**
	Part 2	**Value**	**.433**
		N of Items	**8**
	Total N of Items		**18**
Correlation Between Forms			**.502**
Spearman-Brown Coefficient	Equal Length		.669
	Unequal Length		.669
Guttman Split-Half Coefficient			.660

Source: Prepared by the researchers

From the results in the table above (), it can be seen that the questionnaire instrument achieved a high level of stability in the split-half coefficient. The value of the Spearman-Brown correlation coefficient was (0.669), while the value of the Gottman half coefficient, i.e. the correction factor, was (0.660).

The sample of the study consists of academics and professionals specialized in the field of accounting. The total sum of the sample studied is equal to (28) points as shown in table ().

Table (4) shows the sample of the study

	sample	**number**	**percentage**
1	**auditors**	**20**	**71%**
2	**accountants**	**6**	**21%**
3	**others**	**2**	**8%**
	total	**28**	**100%**

The researcher has relied on this three-point scale in testing the hypothesis because the hypothesis is acceptable if it is greater than (2) according to the arithmetic mean scale.

Otherwise, it is considered unacceptable.

Results of the hypothesis tests of the study

In this part of the study, the researchers analyzed and interpreted the responses of the

sample members about the extent of the possibility of cloud computing adoption in the Iraqi environment. In this part, the researchers attempt to test the hypothesis of the study by determining the extent to which cloud computing in the Iraqi environment is adopted or not by external auditors. To test the hypothesis of the study, arithmetic means, standard deviations, and t-tests were used. The results were presented as follows ():

Our study hypothesizes whether the external auditors in the Iraqi environment adopt cloud computing or not, and it is based on the knowledge, benefits, and risks of cloud computing.

To test this hypothesis, the results were presented in the following table:

Table (5) Mean and standard deviations of external auditors' responses on whether they should adopt cloud computing or not.

Q.N	Q	mean	Standard deviation
1	Does your company use cloud computing?	2.1786	0.66964
2	If you don't use cloud computing, do you intend to use it?	2.5000	0.79349
3	Are there any considerations that influence your decision to use cloud computing?	2.6429	0.62148
4	Are there any considerations that influence your decision to avoid using cloud computing?	2.4286	0.69007
5	From your point of view, are there factors that encourage the adoption of cloud computing?	2.6071	0.68526
6	Are there external factors that restrict you from using or not using cloud computing?	2.4286	0.74180
7	Are there benefits of cloud computing?	3.6429	2.65573
8	Is there some kind of application changed to cloud computing?	2.0357	0.79266
9	Will the attitude about the use of cloud computing change in the future?	2.5000	0.74536
10	Are there new possibilities that cloud computing can provide to a company or a customer?	2.7857	0.56811
11	Are there any kind of risks associated with cloud computing?	2.6071	0.62889
12	Is it possible to reduce the risks of cloud computing?	2.6429	0.67847
13	Are there technological applications that can reduce the risks of cloud computing?	2.0357	0.83808
14	Are there any problems with using cloud computing?	2.1071	0.68526
15	Can you explain in detail the benefits you have gained so far from using cloud computing?	3.6786	0.59135
16	Do the benefits of cloud computing meet your expectations?	2.55	0.6006
Total		**2.5857**	**0.81164**

Source: Prepared by the researchers

The results in the above table (5) show the responses of the sample members of the external auditors and other participants in the current study on the impact of the external auditor's use or adoption of cloud computing in the audit process. This shows that the majority of the sample members of the external auditors agree with the adoption of CC by the external auditor. Thus, this shows that cloud computing plays an essential role in the audit process in the Iraqi environment.

From the results of the previous table (5), it was clear to the researchers that the auditors agree with the introduction of cloud computing in the audit process. Moreover, they are aware of the factors that prevent them from using it, such as legislation. This proves the validity of the hypothesis of the current study (the external auditors in the Iraqi environment adopt cloud computing or not and it depends on the knowledge, benefits, and risks of cloud computing).

To test these results, the researchers conducted a t-test, which yielded the following results in table (6):

T-Test

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	420	2.4714	.72240	.03525

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
VAR00001	70.113	447	.000	2.47143	2.4021	2.5407

From the above table, it can be seen that there are significant differences among the variables in the study as the value of Sig. (2-tailed) is less than 0.05. This means that the research sample agrees with the adoption of cloud computing in the audit process.

Conclusions

Technological developments in the world have impacted all areas of life and cloud computing is one of these developments, which is used in the field of accounting and auditing. In this context, the current study revealed that auditors in the Iraqi environment agree with the adoption of cloud computing in the field of auditing. They are also aware of all aspects of cloud computing, its benefits, problems, risks, and external factors associated with cloud computing that may affect the audit process. As a future study, the researcher proposes to investigate the impact of cloud computing usage on the audit process from the external auditors' perspective in the Iraqi environment.

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تبني الحوسبة السحابية من قبل المراجعين الخارجيين في العراق دراسة استطلاعيه

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الملخص

كان ظهور الحوسبة السحابية أحد أكبر التطورات في تاريخ الحوسبة في السنوات الأخيرة. ومع ذلك ، لكي تصل الحوسبة السحابية إلى إمكاناتها الكاملة ، هناك حاجة إلى العديد من الدراسات لمعالجة تحديات الحوسبة السحابية. في هذه الدراسة ، ندرس فوائد ومشاكل وفرص وتحديات الحوسبة السحابية في العراق. نقوم أيضًا بالتحقيق فيما إذا كان المدققون الخارجيون يستخدمون خدمات الحوسبة السحابية في العراق أم لا. تظهر نتائج هذه الدراسة أن غالبية المستجيبين يوافقون على اعتماد الحوسبة السحابية من قبل المدققين الخارجيين. لذلك ، هذا يدل على أن الحوسبة السحابية تلعب دورًا مهمًا وأساسيًا في عملية التدقيق في العراق.

الكلمات المفتاحية: التبني ، الحوسبة السحابية ، المدققون الخارجيون.

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