

The Intellectual Impact of Cloud Accounting in Enhancing the Quality of Auditing for Jordanian Audit Offices

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Abstract

The study aimed to demonstrate the intellectual impact of cloud accounting on the quality of the work of Jordanian audit offices. The study sample consists of workers in auditing offices in Jordan who have a long track record in the field of accounting and auditing, where the study population reached (120) auditing offices. A special questionnaire was prepared for the purposes of this study, and 100 questionnaires were distributed to those offices, all of which were retrieved, but 18 questionnaires were neglected due to the lack of objectivity and seriousness of the respondents in answering them, the Skewness & Kurtosis test was used, as well as the use of the VIF test to ensure that there is no problem of Multiple linear relationships (multiple correlation) between study variables, The study reached various results, the most important of which was the existence of the intellectual impact of cloud accounting (providing information technology infrastructure, providing software for users, providing communications and easy-to-use applications, flexibility in performing various tasks, saving costs and reducing them) to enhance the quality of auditing for Jordanian audit offices. As for the most important recommendations, they crystallize by improving the conditions for cloud accounting users by audit offices, through solving problems related to information security and their audit mechanism, and encouraging the Jordanian audit office sector to benefit from its services and support more research and development in the introduction of cloud accounting in the core of audit offices.

Key words: Cloud Accounting, Auditing Quality, Jordanian Audit offices.

Introduction

It has become clear that modern technology has revolutionized the world of accounting and auditing and the way accountants and auditors operate. The main driver of this change may be cloud accounting that allows companies to use infrastructure and IT applications effectively and economically. Cloud accounting is the set of computer systems, applications and services provided by a private provider outside the work site that are in demand to provide a number of services. In response to requests for cloud accounting, major companies in Jordan have started to receive and adopt cloud accounting, including many banks and telecommunications companies, where users can obtain many solutions and services via the Internet. Which has become widespread, which allows companies to choose a range of cloud applications with lower costs and more effectiveness?

Thus, this study came to reveal the intellectual impact of cloud accounting in enhancing the quality of auditing for Jordanian audit offices from the point of view of workers in those offices .

Objectives of the study:

This study aims to demonstrate the intellectual impact of cloud accounting in enhancing the quality of auditing for Jordanian audit offices and try to find out the true intellectual compatibility of cloud accounting variables on the quality and efficiency of Jordanian audit offices .

The importance of the study is clear in the following:

First: Scientific importance:

As this study is an extension of the previous studies thus the researchers will study the intellectual impact of cloud accounting in enhancing the quality of auditing for Jordanian audit offices .

Second: The practical importance:

Which lies by linking all the philosophical aspects of the intellectual impact of cloud accounting in enhancing the quality of auditing for Jordanian audit offices?

Problem of the study :

Although cloud accounting has brought many benefits to companies in many areas, its human, legislative and material benefits are still unknown to external audit offices. And since the quality of auditing is the primary concern of the specialists in the field of auditing, this requires investigating the intellectual impact of cloud accounting in enhancing the quality of auditing of these offices, so the study problem revolves around the following questions:

The main problem: Is there an intellectual impact of cloud accounting in enhancing the quality of auditing for Jordanian audit offices?

The following sub-questions are branched from it:

The first sub-problem: There is no effect of providing the IT infrastructure on enhancing the quality of auditing for Jordanian audit offices

The second sub-problem: There is no effect of providing the software to users to enhance the quality of auditing for Jordanian auditing offices

The third sub-problem: There is no effect of providing communications on enhancing the quality of auditing for Jordanian audit offices

The fourth sub-problem: There is no effect of providing easy-to-use applications on enhancing the quality of auditing for Jordanian audit offices

Fifth sub-problem: There is no effect of flexibility in performing the various tasks on enhancing the quality of auditing for Jordanian audit offices

The sixth sub-problem: There is no effect of saving and reducing costs on enhancing the quality of auditing for Jordanian audit offices

Study hypotheses:

According to the study problem, the hypotheses are centered on the following:

The main hypothesis: There is no intellectual impact of cloud accounting in enhancing the quality of auditing for Jordanian audit offices

The following sub-hypotheses are subdivided:

The first sub-hypothesis: There is no effect of providing the IT infrastructure on enhancing the quality of auditing for Jordanian audit offices

The second sub-hypothesis: There is no effect of providing the software to users to enhance the quality of auditing for Jordanian auditing offices

The third sub-hypothesis: There is no effect of providing communications on enhancing the quality of auditing for Jordanian audit offices

The fourth sub-hypothesis: There is no effect of providing easy-to-use applications on enhancing the quality of auditing for Jordanian audit offices

Fifth sub-hypothesis: There is no effect of flexibility in performing the various tasks on enhancing the quality of auditing for Jordanian audit offices

The sixth sub-hypothesis: There is no effect of saving and reducing costs on enhancing the quality of auditing for Jordanian audit offices

The intellectual impact of cloud accounting on the business of accounting and auditing companies:

Cloud accounting software is growing in popularity with the passage of time, which has led to the creation of major accounting firms in addition to accounting organizations including the American Institute of Certified Accountants (AICPA) who emphasized the need to work to increase the level of interest in cloud technology by providing a wide range of services and existing guidance On cloud technology (Kinkela, K. 2013) to benefit the accounting profession by taking a systematic approach to risk assessment including setting effective policies for the use of cloud applications and a risk response plan, which enables companies to test the effectiveness of this new technology and increasing Operating efficiency in its accounting business (Dimitriua, O. &Mateia, M. 2015) .

Therefore (Jones, e t al, 2017) believes that cloud accounting simply works to store, process and use the data available on the company's multi-site computers through access to it via the internet. This means that users of this data can take advantage of the high capacity of the computer system, which does not require large capital investments in order to meet its needs, and that they can access their data from anywhere as long as they are connected to the Internet.

The concept of audit quality and the effect of cloud accounting on it:

(Ningrum, &Wedari, 2017: 22) defined the quality of the audit as: "It is the probability that an auditor will report a violation in a customer's accounting system. This probability depends on the auditor's skills and technology, the sampling process and other factors."

(Ismail, &Witarno, 2016) also defined it as: "a common possibility that the auditor will find and submit reports on the violations in the customer's financial reporting system."

Also (Kilgore & Bennie, 2014) defined it as "the degree of confidence that the auditor provides to the users of the financial statements, and the possibility of the financial statements being free of errors and fundamental irregularities" and searching for the truth of the intellectual impact finds an impact of effective accounting techniques in the field of cloud accounting on the quality of the audit and it is embodied in the following: (Wyslocka&Jelonek2015):

- Database (for data analysis).
- Expert systems with high intellectual (help in deviations and risk analysis).
- Neural network (prediction tools).
- Data storage (to provide specific information to users).
- Important decision support programs for the company (assistance in data analysis and decision support).
- High connectivity (to improve access to information).
- Confirmations and digital signatures (continuous checking).

Artificial Intelligence (possibility to change reports according to circumstances).

- The possibility of synchronization in both the research process and data analysis (data analysis and decision support). Therefore, the researchers believe that cloud accounting will increase the quality of the audit by reducing the time and effort involved in managing the work and reducing operational costs related to auditing operations and improving the efficiency and effectiveness of the performance of the tasks. The audit offices also help to provide guidelines for the policies and procedures adopted by the audit office to provide reasonable conviction in the quality of the audit in general and the commitment to follow and apply professional standards.

Study population and sample:

The study sample consists of workers in auditing offices in Jordan who have a long track record in the field of accounting and auditing, where the study population reached (120) auditing offices. A special questionnaire was prepared for the purposes of this study, and 100 questionnaires were distributed to those offices, all of which were retrieved, but 18 questionnaires were neglected due to the lack of objectivity and seriousness of the respondents in answering them .As some of the retrieved questionnaires carried biased answers towards strong approval (strongly agree), and some questionnaires carried contradictory answers in the same way, thus the number of valid questionnaires for analysis reached (82).

Characteristics of the study sample:

Table No. (1) shows the distribution of the sample members according to the personal variables of the study sample:

Table No. (1)**Distribution of the sample members according to personal variables**

Variable	level	Repetition	Percentage
EducationalQualification	BSc	51	62.2
	MSc	26	31.7
	PhD	5	6.1
	Total	82	100
Academic specialization	Accounting	54	65.9
	Finance and Banking	21	25.6
	IT	1	1.2
	Economy	2	2.4
	Management	4	4.9
	Total	82	100
	CPA	5	6.1
	CMA	15	18.3
	JCPA	32	39.0
	other	30	36.6
	Total	82	100
Years of work experience	Less than 5 years	5	6.1
	5- 10 years	24	29.3
	10-15 years	22	26.8
	15-20 years	13	15.9
	More than 20 years	18	22.0
	Total	82	100

Table (1) shows the following:

1. The highest percentage of the sample's distribution according to the variable of the educational qualification was (62.2%) of the educational qualification (Bachelor's) was high, while the lowest percentage was (6.1%) of the scientific qualification (PhD) was a rather small percentage, and this indicates The focus of the audit offices is on employing first university degree holders as they have a good cultural level, which makes the study sample eligible to answer the questionnaire and rely on it.
2. The highest percentage of the sample's distribution according to the academic specialization variable reached (65.65%) for the (Accounting) major which is a high percentage, while the lowest percentage was (1.2%) for the (IT) major which is a small percentage, and the highest percentage for the accounting major indicates that Focusing on accounting specialization is that it is able professionally and academically to be worked in this field, and thus the study sample has the concepts, foundations and methods of accounting during their university stage that increases their awareness of the importance of the subject of this study, and therefore can be relied upon in their answers.
3. The highest percentage of the sample's distribution according to the variable who did not have a professional certificate (JCPA) was (39.0%), which is a high percentage compared to those who hold another professional certificate. Perhaps this percentage for carrying the professional certificate indicates the great interest of the sample by encouraging its employees to qualify them For professional certificates and their appointment, as it was clear that the audit offices are heading towards various professional certificates.
4. The highest percentage of the sample's distribution according to the variable of years of work experience in the audit offices reached (29.3%) for the period of experience (5-10 years), while the lowest percentage (6.1%) for the period of experience is less than 5 years, and these percentages indicate The study sample has sufficient experiences, especially if it is covered with the scientific specialization, scientific qualifications and professional certificates, which enhances and strengthens the results of this study.

The validity and reliability test of the study tool:

The content of the tool used in the study has been verified by presenting it to a group of faculty members with experience and competence and Jordanian audit offices to express an opinion in each of the fields of study and drafting paragraphs and the extent of the relevance of each paragraph to its field, as some questions were modified and others were deleted, And adding new questions to comply with the proposals and observations of the arbitrators.

While the study tool consistently means the stability, reliability and predictability of the results, i.e. the extent of compatibility in the results of the questionnaire, if it was applied more than once in similar circumstances. To calculate the stability of the study tool, the study tool was divided into six domains to measure stability for each field and for the tool as a whole, and the internal consistency test (Cronbach's Alpha) was used for the answers of the study sample that was obtained, and alpha can also be interpreted as the internal stability parameter between the answers And its value indicates a high degree of stability, the statistically acceptable value for this measure is (60%) or more (Sekaran& Roger, 2013), in other studies the statistically acceptable value is (70%) or more, and it is clear from the results of data analysis in Table No. (1) The result of the stability of study paragraphs is high.

Table No. (2)

Internal stability coefficients (Cronbach alpha) for each field of the study tool and for the tool as a whole

Field	Paragraph number	Cronbach alpha
Providing information technology infrastructure	6	75.6
Provide software to users	5	76.5
Provide communication	5	84.5
Provides easy-to-use applications	5	95.8
Flexibility to perform various tasks	6	86.6
Save and reduce costs	6	86.2
Professionalism	7	88.3
Apply the rules of conduct and etiquette of the auditing profession	6	89.3
Audit office	6	91.9
the tool as a whole	52	96.1

It appears from Table No. (2) that all values of the Cronbach alpha coefficients were high, and that the stability of the study paragraphs as a whole was high as it reached (96.1), which indicates that the study tool is of high credibility (reliability).

Normal distribution:

Table No. (3) shows the results of the normal data distribution test.(Skewness & Kurtosis) test was used. The results were as follows:

Table No. (3)

Variable	Skewness	Kurtosis
Providing information technology infrastructure	-0.645	-0.1622
Provide software to users	-0.560	-0.5163
Provide communication	-1.058	2.560
Provides easy-to-use applications	-1.862	3.590
Flexibility to perform various tasks	-1.018	1.204
Save and reduce costs	-1.408	4.021
Professionalism	-1.051	1.335
Apply the rules of conduct and etiquette of the auditing profession	-1.031	1.138
Audit office	-0.935	0.691

Table (3) shows that the test value of Skewness is between (± 1.96) and the value of the Kurtosis test is between (± 2.85), so the data distribution is subject to the normal distribution.

Interference test between independent variables

Table (4) shows the value of VIF and Tolerance

The first hypothesis

The VIF test was relied upon to ensure that there is no Multiple linear relationships (multiple correlation) problem, because it is considered a problem as one of the problems facing the statistical estimation of regression coefficients, and Table No. (4) shows the test results for VIF:

Field	VIF	Tolerance
Providing information technology infrastructure	1.271	0.787
Provide software to users	1.707	0.586
Provide communication	1.318	0.759
Provides easy-to-use applications	1.450	0.690
Flexibility to perform various tasks	1.953	0.512
Save and reduce costs	1.939	0.516

The above table shows that there is no multiple correlation problem between the independent variables being less than 5, thus accepting the level of variance in each of the independent variables.

Showing results

Discussion of the study results:

The first main hypothesis:

The intellectual impact of cloud accounting in enhancing the quality of auditing for Jordanian audit offices
To test this hypothesis, multiple regression analysis was used to identify the relationship between cloud accounting (represented by providing information technology infrastructure, providing software to users, providing communications, providing easy-to-use applications, flexibility in performing various tasks, saving costs and reducing them) to enhance the quality of audit for Jordanian audit offices, and Table (5) shows that relationship:

independent variable	Value β	value t	Statistical significance
coefficient	-1.972	-4.199	0.000
providing information technology infrastructure	0.239	3.034	0.003
providing software to users	0.256	2.939	0.004
providing communications	0.230	3.422	0.001
providing easy-to-use applications	0.155	2.850	0.006
flexibility in performing various tasks	0.274	2.855	0.006
saving costs and reducing them	0.280	2.893	0.005
value F	38.224	Statistical significance for F	0.000
$Adj. R^2$	%73.4	R^2	%75.4
Durbin-Watson	1.652	Number of views	82

The table shows a strong and statistically significant relationship between the first main hypothesis:

The intellectual impact of cloud accounting (providing information technology infrastructure, providing software for users, providing communications, providing easy-to-use applications, flexibility in performing various tasks, saving

costs and reducing them) on enhancing the quality of auditing for Jordanian audit offices, where the value of F (34.224) And statistically significant of (0,000) and Adj. R² reached (73.4%), which represents the effect of the independent variable (for cloud accounting) on the dependent variable (audit quality), thereby rejecting the first major null hypothesis, and we accept the alternative hypothesis.

Results for the first sub-hypothesis:

There is no effect of providing information technology infrastructure on enhancing the quality of auditing for Jordanian audit offices

The result of the multiple regression showed that there is a direct relationship between the provision of information technology infrastructure to enhance the quality of the auditing for Jordanian audit offices with statistical significance, as the result indicates that an increase of the independent variable by 1% leads to an increase in the dependent variable by (0.239) units, thereby rejecting the null hypothesis We accept the alternative hypothesis.

Results related to the second sub-hypothesis:

The effect of providing software to users has no effect on enhancing the quality of auditing for Jordanian audit offices
The result of the multiple regression showed that there is a direct relationship between providing the software to the users to enhance the quality of the auditing for the Jordanian audit offices with statistical significance, as the result indicates that the increase of the independent variable by 1% leads to an increase in the dependent variable by (0.256) units, thus rejecting the null hypothesis and accepting The alternative hypothesis.

Results related to the third sub-hypothesis:

There is no effect of providing communications on enhancing the quality of auditing for Jordanian audit offices

The result of the multiple regression showed that there is a direct relationship between the provision of communications to enhance the quality of the auditing for the Jordanian audit offices with statistical significance, as the result indicates that an increase in the independent variable by 1% leads to an increase in the dependent variable by (0.230) units, thus rejecting the null hypothesis and accepting the alternative hypothesis .

Results related to the fourth sub-hypothesis:

There is no impact to provide easy-to-use applications to enhance the quality of auditing for Jordanian audit offices

The result of multiple regression showed that there is a direct relationship between providing easy-to-use applications to enhance the quality of auditing for Jordanian audit offices and statistically significant, as the result indicates that an increase of the independent variable by 1% leads to an increase in the dependent variable by (0.155) units, thus rejecting the null hypothesis and we accept the alternative hypothesis.

Results for the fifth sub-hypothesis:

There is no effect of flexibility in performing the various tasks on enhancing the quality of auditing for Jordanian audit offices

The result of the multiple regression showed that there is a direct relationship between the flexibility in performing the various tasks on enhancing the quality of the audit for the Jordanian audit offices and statistically significant, as the result indicates that the increase of the independent variable by 1% leads to an increase in the dependent variable by (0.274) units, thus rejecting the null hypothesis and accepting the alternative hypothesis.

Results related to the sixth sub-hypothesis:

There is no effect of saving and reducing costs on enhancing the quality of auditing for Jordanian audit offices

The result of the multiple regression showed that there is a direct relationship between saving costs and reducing them in enhancing the quality of the auditing for the Jordanian audit offices, which is statistically significant, as the result indicates that an increase of the independent variable by 1% leads to an increase in the dependent variable by (0.280) units, thereby rejecting the null hypothesis and accepting the alternative hypothesis.

Table No. (6) is Prediction table for the intellectual impact of cloud accounting represented by (providing information technology infrastructure, providing software for users, providing communications, providing easy-to-use applications, flexibility in performing various tasks, saving costs and reducing them) to enhance the professionalism of Jordanian audit offices.

Table No. (6)

Independent variable	value β	value t	Statistical significance
Coefficient	-1.201	-2.025	0.046
providing information technology infrastructure	0.204	2.049	0.044
providing software for users	0.233	2.119	0.037
providing communications	0.189	2.229	0.029
providing easy-to-use applications	0.144	2.099	0.039
flexibility in performing various tasks	0.252	2.080	0.041
saving costs and reducing them	0.251	2.054	0.043
value F	19.230	Statistical significance for F	0.000
$Adj. R^2$	% 57.5	R^2	% 60.6
Durbin-Watson	1.844	Number of views	82

Table No. (7) is a Prediction table for the intellectual impact of cloud accounting represented by (providing information technology infrastructure, providing software for users, providing communications, providing easy-to-use applications, flexibility in performing various tasks, saving costs and reducing them) To enhance the application of the ethics of the auditing profession for Jordanian audit offices

Table No. (7)

Independent variable	value β	value t	Statistical significance
coefficient	-1.961	-3.178	0.002
providing information technology infrastructure	0.248	2.394	0.019
providing software for users	0.234	2.044	0.045
providing communications	0.275	3.112	0.003
providing easy-to-use applications	0.147	2.058	0.043
, flexibility in performing various tasks	0.261	2.069	0.042
saving costs and reducing them	0.278	2.185	0.032
value F	21.897	Statistical significance for F	0.000
$Adj. R^2$	% 60.8	R^2	% 63.7
Durbin-Watson	1.554	Number of views	82

Table No. (8) is a Prediction table for the intellectual impact of cloud accounting represented by (providing information technology infrastructure, providing software for users, providing communications, providing easy-to-use applications, flexibility in performing various tasks, saving costs and reducing them) On enhancing the auditing office of Jordanian audit offices.

Table No. (8)

Independent variable	value β	value t	Statistical significance
coefficient	-2.88	-3.920	0.000
providing information technology infrastructure	0.272	2.199	0.031
providing software for users	0.305	2.234	0.028
providing communications	0.233	2.212	0.030
providing easy-to-use applications	0.176	2.062	0.043
flexibility in performing various tasks,	0.312	2.080	0.041
saving costs and reducing them	0.316	2.083	0.041
value F	19.863	Statistical significance for F	0.000
$Adj. R^2$	% 58.3	R^2	% 61.4
Durbin-Watson	1.786	Number of views	82

Conclusions and recommendations:

Results:

1-The existence of the intellectual impact of cloud accounting represented in (providing information technology infrastructure, providing software for users, providing communications, providing easy-to-use applications, flexibility in performing various tasks, saving costs and reducing them) on enhancing the quality of auditing for Jordanian audit offices, where the value of F (34,224) and statistically significant (0,000) where Adj. R2 is (73.4%) which represents the effect of the independent variable (for cloud accounting) on the dependent variable (audit quality)

2- There is a direct relationship between the provision of information technology infrastructure to enhance the quality of the auditing for Jordanian audit offices with statistical significance, as the result indicates that an increase of the independent variable by 1% leads to an increase in the dependent variable by (0.239) units.

3-There is a direct relationship between providing the software to the users to enhance the quality of the auditing for the Jordanian audit offices with statistical significance, as the result indicates that the increase of the independent variable by 1% leads to an increase in the dependent variable by (0.256) units

4-There is a direct relationship between providing easy-to-use applications to enhance the quality of auditing for Jordanian audit offices and statistically significant, as the result indicates that an increase of the independent variable by 1% leads to an increase in the dependent variable by (0.155) units .

5-There is a direct relationship between the flexibility in performing the various tasks on enhancing the quality of the audit for the Jordanian audit offices and statistically significant, as the result indicates that the increase of the independent variable by 1% leads to an increase in the dependent variable by (0.274) units

6-There is a direct relationship between saving costs and reducing them in enhancing the quality of the auditing for the Jordanian audit offices, which is statistically significant, as the result indicates that an increase of the independent variable by 1% leads to an increase in the dependent variable by (0.280) units.

Recommendations:

1- The necessity of utilizing the benefits of cloud accounting to meet the requirements of audit quality of offices in terms of providing laws related to them for effective use by those offices.

2- Improving conditions for Cloud Accounting users by audit offices by solving problems related to information security and its audit mechanism, and encouraging the Jordanian audit office sector to benefit from its services and support more research and development in the introduction of cloud accounting at the heart of the business of audit offices.

3- The necessity of emphasizing the provision of an efficient and high-quality auditing environment that will undergo pioneering business of cloud accounting, which regularly affects the quality and efficiency of Jordanian audit offices.

4- Efforts must be intensified to establish close relations between financial and academic bodies and accounting bodies to hold seminars and conferences that show how the use of cloud accounting affects the quality of external audit, and this is done by establishing open channels between each of the Association of Certified Public Accountants, academics, universities and specialized institutes.

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