



Exploration of Factors affecting implementation of Cloud Computing in ITes

Varun Garg¹

varun.garg_phd19@gla.ac.in

¹Research Scholar, Institute of Business Management, GLA University, Mathura

Dr. Prateek Kumar Bansal²

prateek.bansal@gla.ac.in

²Asst. Professor, Institute of Business Management, GLA University, Mathura

Abstract

This study aims to identify the various factors influencing adoption of cloud computing in accounting or cloud accounting for small and medium enterprises (SMEs). Now a day it is very important to cut reduce cost and to maximize the profit. Cloud computing is one of the way through which cost can be reduced and efficiency can be improving. The study is empirical in nature and data has been collected through structured questionnaire from the sample size of 300. The examination has identified various factors which influences implementation of cloud computing in accounting. The study further recommends that the manager should take appropriate action in implementation of cloud accounting from the perspective of technology, environment and organization.

Keywords: Accounting, Cloud Computing, Cloud Accounting, Technology, ITes

DOI Number: 10.48047/NQ.2022.20.12.NQ77720

NeuroQuantology2022;20(12): 3965-3970

3965

Introduction

Business competitiveness can be improved and profitability can also be increased with the help of information and technology for all kind of organizations (Phuthong, 2022). Cloud computing is an innovation of information and technology (Arnbrustet al., 2010; Tuncay, 2010). Cloud computing provided new way to use information technology in business to improve the efficiency and capabilities. Cloud computing has been considered a most important boom in IT which will lead all kind of business in future competitive era. It also creates suitable environment to compete in adverse economic conditions. It refers to a kind of system which consist of group of computers interconnected to each other, provides vendor based services (Buyya et al., 2008). Cloud computing has revolutionized various industries, and accounting is no exception (Lu et al., 2013). The adoption of

eISSN1303-5150

cloud computing in accounting has provided numerous benefits to businesses of all sizes. Cloud-based accounting software allows users to access their financial data anytime, anywhere, as long as they have an internet connection. This flexibility is particularly beneficial for businesses with multiple locations or remote employees, as it enables real-time collaboration and access to up-to-date financial information. Cloud computing eliminates the need for businesses to invest in expensive on-premises infrastructure and hardware (Khajeh-Hosseini et al., 2012). Instead, they can subscribe to cloud-based accounting services, paying only for the features and storage they need. This reduces upfront costs and provides scalability, as businesses can easily adjust their subscription as their needs change. Cloud accounting platforms typically offer robust security measures to protect sensitive financial data.

www.neuroquantology.com



They employ encryption, firewalls, and regular backups to ensure data integrity and minimize the risk of data loss (Kucharska, 2021). Cloud providers also have dedicated IT teams that monitor and address security threats, offering better protection than many small businesses can afford to implement on their own (Zissis and Lekkas, 2011). Cloud accounting software often integrates with other business applications, such as customer relationship management (CRM), payroll, and inventory management systems (Alhomdy et al., 2021). This integration streamlines data flow between various departments, reducing manual entry and increasing efficiency. Furthermore, cloud accounting platforms often include automation features for tasks like invoicing, expense tracking, and financial reporting. Cloud-based accounting software facilitates collaboration among team members, accountants, and clients. Multiple users can access and update financial data simultaneously, allowing for real-time collaboration and reducing communication delays (Hovav et al., 2004; Wang et al., 2005). This enables better collaboration with external accountants or auditors, who can access the necessary financial information securely and remotely. Cloud accounting solutions provide scalability to accommodate business growth or seasonal fluctuations. As businesses expand or add new users, they can easily scale up their cloud resources and adjust their subscription plans accordingly. Additionally, cloud-based software is regularly updated by the provider, ensuring that businesses have access to the latest features and enhancements without the need for manual upgrades. cloud computing has transformed accounting by improving accessibility, reducing costs, enhancing data security, enabling collaboration, and streamlining processes. It allows businesses to focus on their core competencies while leveraging the benefits of advanced accounting technology.

Remainder of the study includes brief review of literature followed by hypothesis and objective of the study, third part of the study provide research methodology used for the

examination, fourth part of the study exhibits analysis of data and last part concludes the study.

Review of literature

Cloud computing is an important innovation of information technology and provided support to every kind of industry in competing, improving efficiency and generating adequate profit for the stakeholders. A brief review of literature is as follow:

The study of Leimeister et al. (2010) found that cloud computing is an model deployed by information technology which serve as a software for on-demand and online delivery of IT services to the consumers. In the words of Armbrust et al., (2010) “the term “cloud” refers to data centers that offer virtualized computer resources and services”. There is various research which shown importance of cloud computing. Arpacı (2017) has given argument that cloud computing is very beneficial in education for knowledge management. He further said that cloud computing provides credible learning atmosphere for knowledge management practices which may provide education and training to the participants of organization. Cloud computing in finance and business areas in education industry is used more in comparison to the other industries (Tuncay, 2010). studies are also conducted to check the potential of cloud computing in developing countries such as the study of Arinze and Anandarajan (2010). Low et al. (2011) have taken various factors such as firm size, technology readiness, support of management, level of competition and its pressure on the firm and partners of trade to check the limitation in adoption of new technology. Gupta et al. (2013) stated that ease of use, security and privacy in usage in adoption of cloud in various kind of enterprises are the important factors. The study of Strauß et al., (2014) found that cloud computing helps in ensuring optimum utilization of scarce resources in business firm including accounting and finance. It is also important to keep in mind that there are



various issues related with security, reliability and privacy in usage of cloud computing rather than advantages of its use (Howlett, 2011; Quinn et al., 2014). Various cloud service providers have claimed that use of their services based on cloud are more secure and safe as they are experts in their field (Du and Cong, 2010).

Hypothesis

Following hypothesis can be formed with the help of above review of literature-

H1: There is positive impact of cloud computing on overall performance of organization.

H2: there is some negative impact on traditional accounting system of the organization.

Research Methodology

Cloud computing has changed accounting world drastically. Due to introduction of cloud computing access of information became easy from anywhere, anytime in safe and secure manner. Now a day it has been used by many of the organization. People are confused to define cloud accounting and cloud computing; cloud accounting refers to the process of storing data with help of internet rather than hard drive. This research aims to find the

innovation and challenges in implementation of cloud in accounting.

Data collection

This study is based on primary data which is collected through questionnaire. The sample size is 400. Convenience sample method is used to collect the data. Likert scale of five point has been adopted, 1 “strongly disagree” 5 is “strongly agree” to set the statements. Target population is of the professionals who are involved in accounting process such as accountant, teachers, students of graduation in various public and private universities. Time duration of data collection is from December 2021 to June 2022.

Variables

This study tries to find the factors affecting implementation of cloud in accounting. Cloud computing in accounting is taken as independent variable whereas overall organizational performance and traditional accounting system has been taken as dependent variable for the study. Analysis of data has been done with the help of SPSS. Statistical tools such as reliability statistics and ANOVA has been applied to validate the hypothesis.

Results and Discussion

Table 1 Statistics of Reliability

Cronbach’s Alpha	N
.824	20

(Source: Author’s Compilation)

Internal consistency in data set that how all the items in a set is inter related as a group can be checked through Cronbach Alpha value which is .824 with all items. The value must be more than .80 to show the high internal consistency in the data set. It can be concluded that reliability is good enough for further examination.

Demographics

Our data set indicated that more than half of the respondents are male (56%) and 44% are female. Out of 400 respondents around 80% (318) were young respondents, most of the professional were having post-graduation degree from the various universities. As the professional are working in accounting world they are resident of urban cities.

KMO and Bartlett’s Test

Table 2. KMO and Bartlett’s Test

KMO	.719
-----	------



Bartlett's test	Chi-Sq.	1296.23
	df	.72
	Sig.	.001

(Source: Author's Compilation)

Suitability of data for factor analysis can be checked by KMO test. The value of KMO test is (.719) which is more than .70 indicating suitability for the research. Results of

Bartlett's Test indicated significance value .001 which is less than .05 (5%) which mean data results are valid.

Regression Analysis

Table 3. Test Results of H1

Model Summary						
Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
1		0.624	0.641	0.642	0.5213	
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.263	13	5.423	17.25	0.001
	Residual	84.092	245	0.0123		
	Total	147.355	258			

3968

		t	Sig.
Model 1	(Constant)	-1.254	0.00
	Cost reduction	3.254	0.01
	Adoption of new technology	1.692	0.03
	Availability of information	0.633	0.527
	Time saving in operations	0.961	0.337
	Data consistency	0.159	0.874
	Reliable information	1.217	0.210
	Decision quality	1.351	0.177
	High storage capacity	0.39	0.634
	Knowledge improvement	2.235	0.012
	Services improvement	0.221	0.738
	Greater security	2.935	0.001

(Source: Author's Compilation)

Table 3 indicated the results of regression analysis. Goodness of fit of the model is based on the R value which is .624. it shows the moderate positive level of correlation. R-Square value is .641 which shows 64% effect of IDV on DV and standard error value is .5212. our null hypothesis "cloud accounting

does not have any impact on overall performance of the organization" has been rejected at the 5% significance level while alternative hypothesis "cloud computing has impact on overall performance of the organization accepted.



Table 4. Test Results of H2

Model Summary						
Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
1		0.693	0.546	0.552	0.7213	
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.36	5	2.365	16.23	0.004
	Residual	84.092	245	0.0123		
	Total	147.355	258			

		t	Sig.
Model 1	(Constant)	-1.322	0.03
	Total expenditure	3.221	0.065
	Expertise	1.621	0.032
	complexity	0.712	0.421
	Probability of losing data	0.651	0.292
	Challenging	0.136	0.254

(Source: Author’s Compilation)

Table 4 indicated the results of regression analysis. Goodness of fit of the model is based on the R value which is .693. it shows the moderate positive level of correlation. R-Square value is .543 which shows 54% effect of IDV on DV and standard error value is .7213. our null hypothesis “cloud accounting does not affect traditional accounting system of the organization” has been rejected at the 5% significance level while alternative hypothesis “cloud accounting has impact on traditional accounting system of the organization accepted.

Conclusion

This study is conducted to know the effect of cloud accounting on organization in terms of performance and traditional accounting system. This study finds that innovation in information technology consisting of cloud computing has significant impact. Cloud accounting is one of the innovation of cloud computing through which organizational performance can be improved. This study indicated that cloud accounting which is one of the innovation has significant impact on eISSN1303-5150

overall organization performance in terms of reduction in cost, improving knowledge and skills, competency, improving expertise, security and ease of use. On the other side it also helpful in improving accounting system of the organization.

References:

- Alhomdy, S., Thabit, F., Abdulrazzak, F.A.H., Haldorai, A. and Jagtap, S. (2021), “The role of cloud computing technology: a savior to fight the lockdown in COVID 19 crisis, the benefits, characteristics and applications”, *International Journal of Intelligent Networks*, Vol. 2, pp. 166-174
- Armbrust, M., Fox, A., Griffith, R., Joseph, A., Katz, R., Konwinski, A., Lee, G., Patterson, D., Rabkin, A., Stoica, I. and Zaharia, M. (2010), “A view of cloud computing”, *Communications of the ACM*, Vol. 53 No. 4, pp. 50-58
- Armbrust, M., Fox, A., Griffith, R., Joseph, A.D., Katz, R., Konwinski, A., ...



- and Zaharia, M. (2010), "A view of cloud computing", *Communications of the ACM*, Vol. 53 No. 4, pp. 50-58.
- Arpaci, I. (2017), "Antecedents and consequences of cloud computing adoption in education to achieve knowledge management", *Computers in Human Behavior*, Vol. 70, pp. 382-390.
 - Du, H. and Cong, Yu. (2010), "Cloud computing, accounting, auditing, and beyond", *The CPA Journal*, October, pp. 66-70.
 - Gupta, D., Rewari, M. and JAIN, S. (2017), "Impact of cloud accounting on business performance", *International Research Journal of Commerce Arts and Science*, Vol. 8 No. 12, pp. 321-329
 - Hovav, A., Patnayakuni, R. and Schuff, D. (2004), "A model of internet standards adoption: the case of IPv6", *Info Systems Journal*, Vol. 14 No. 4, pp. 265-294
 - Howlett, D. (2011), "The bright future for cloud accounting", *Chartered Institute of Management Accountants, Insight*, June,
 - Khajeh-Hosseini, A., Greenwood, D., Smith, J.W. and Sommerville, I. (2012), "The cloud adoption toolkit: supporting cloud adoption decisions in the enterprise", *Software: Practice and Experience*, Vol. 42 No. 4, pp. 447-465.
 - Kucharska, W. (2021), "Do mistakes acceptance foster innovation? Polish and US cross-country study of tacit knowledge sharing in IT", *Journal of Knowledge Management*, Vol. 25 No. 11.
 - Leimeister, S., Riedl, C., Böhm, M. and Krcmar, H. (2010), "The business perspective of cloud computing: actors, roles, and value networks", *Proceedings of the 18th European Conference on Information Systems, Pretoria, South Africa*
 - Lu, C.W., M. Hsieh, C., Chang, C.H. and Yang, C.T. (2013), "An improvement to data service in cloud computing with content sensitive transaction analysis and adaptation", *Computer Software and Applications Conference Workshops (COMPSACW), IEEE 37th Annual*, pp. 463-468
 - Phuthong, T. (2022), "Factors that influence cloud adoption in the public sector: the case of an emerging economy – Thailand", *Cogent Business and Management*, Vol. 9 No. 1, p. 2020202
 - Quinn, M. (2014), "Stability and change in management accounting over time – a century or so of evidence from Guinness", *Management Accounting Research*, Vol. 25 No. 1, pp. 76-92.
 - Strauß, E., Kristandl, G. and Quinn, M. (2014), "The effects of cloud technology on management accounting and decision making", *CIMA Research Executive Summary Series*, Vol. 10 No. 6, pp. 1-12,
 - Tuncay, E. (2010), "Effective use of cloud computing in educational institutions", *Proscenia Social and Behavioral Sciences*, Vol. 2, pp. 938-942.
 - Tuncay, E. (2010), "Effective use of cloud computing in educational institutions", *Proscenia Social and Behavioral Sciences*, Vol. 2, pp. 938-942
 - Wang, C.C., Hsu, Y. and Fang, W. (2005), "Acceptance of technology with network externalities: an empirical study", *Journal of Information Technology Theory and Application*, Vol. 6 No. 4, pp. 15-28.
 - Zisis, D. and Lekkas, D. (2011), "Securing e-government and e-voting with an open cloud computing architecture", *Government Information Quarterly*, Vol. 28 No. 2, pp. 239-251.

