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Influence of Cloud Computing Adaption on Organization Performance: A Case Study of Selected Commercial Banks in Ilala Municipality

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Abstract— *This study focuses on the influence of cloud computing adaption on organization performance with particular reference to selected Commercial Banks in Ilala Municipality. Specifically, the study aimed to assess how cloud computing increases efficiency of bank operations, to examine the effectiveness of cloud computing on enhancing customer satisfaction and to identify the challenges and opportunities encountering Commercial Banks in adopting and using cloud computing services. A sample of 70 respondents was drawn from the study population using simple random and purposive sampling techniques. Research questionnaire was applied in data collection and the collected data were analyzed using quantitative research techniques. Frequencies and percentages were computed to establish descriptive information of the collected data. Multiple regression statistical analysis with the help of Statistical Package for Social Science (SPSS) was employed to analyse the collected data. Results revealed that cloud computing is easy to use in banking operations, it shows that cloud computing in banks is accurate in data processing whereby to improve efficiency cloud technology can bring together multiple data and operational systems and increase efficiency in bank operations. Basing on the findings the study recommends that cloud computing service providers solve the issues that hamper the adoption of cloud computing. The government should create policies on cloud computing to be taught from schools so that people become aware of cloud computing. Seminars and events should be organized so that different kinds of individuals can be educated and informed about different ideas concerning cloud computing adaptation. The study recommends for further studies that cloud computing is a rapidly emerging technology in many companies. It would be interesting to concentrate on other industries that may have a greater demand for information management and so need the usage of cloud computing.*

Keywords— ***Cloud Computing Adaption, Organization Performance, Commercial Banks.***

I. INTRODUCTION

Cloud computing, the most recent innovation in the area of IT infrastructure, is a dynamic of its powers, the most widely used method of distributing and managing IT resources in industrialized countries throughout the world, with fast-expanding infrastructure and cloud-based services. Because of its systemic character, the growing importance of cloud-based services seems to be undermining the advantages of this technology (Wee Xin, 2016). As a consequence of the recent big data revolution, businesses all over the globe are improving their capacity to access and extract data from several sources (Niazmand, 2015). The current Information Technologies (IT) architecture is just being stretched, and more innovative digital solutions are being sought within the banking industry, where cloud computing is one of the most transformative technological solutions (Sivarajah & Kamal, 2016).

Many ICT specialists have seen cloud computing as a technical advancement, and it has had a huge effect on all aspects of the economy (Weistroffe, Soja & Roztocki,

2019). As a technology, cloud computing is evolving rapidly due to the advent of new technologies, such as the capacity for mass storage and the production of superfast computers that can rapidly process information. Cloud computing requires resource sharing, which has dramatically decreased the capital investment in essential infrastructure. Envision substantial growth in cloud computing technology, with the development of new organizations to meet the broad public and private sector demand for cloud computing services (Munya, 2017). Cloud computing shares many of the benefits and drawbacks of distributed computing. Users may request utilities, software, and storage on this website, this means that small and medium-sized firms don't need to invest in costly technology to compete with large corporations; instead, they may concentrate on the services and products they provide (Xue, 2016). Cloud computing services are often charged; however, others are supplied for free. Gmail, Google Talk, and Google Docs are examples of Google Apps, which offer regularly used applications that can be accessed through a Web browser; software and data are kept on Google's servers rather than on the user's device. For personal use, the regular edition is completely free (Bidgoli, 2016).

Cloud technology is a network access model that enables easy, on-demand internet access to shared configurable computing resources (such as network systems, data centers, storage, software, and services) that can be quickly provisioned and released with minimal management effort and service-provider interaction. It is a new computing paradigm that relies on the internet rather than local servers or personal computers to access information and other IT resources. Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS), and Infrastructure-as-a-Service (IaaS) are the three most popular services (Bidgoli, 2016).

One of the advantages that business enterprises reap from this practice is a decrease in IT costs. Cloud computing services are charged on a per-use basis and can expand or contract depending on demand, because cloud computing service providers have made their systems so affordable to use and accessible to access, companies should examine this option for distributing data and services that are not proprietary to their organization (Mago, 2018). The accessibility of services like storing, shared files and applications through cloud storage on the internet makes it easier for users to acquire components of their hardware simply by paying for online services and resources. Cloud computing can support businesses that want to provide their customers with reliable services anywhere they need them. Certain people expect cloud computing to be the technological breakthrough of the 21st century and can do a lot to address these issues given that the required technology is applied on solid foundations that inspire trust in domestic and international users (Muhammed, Zaharaddeen, Kabir Rumana, Turaki, 2015).

Cloud computing, has shown to be quite useful in Tanzanian educational institutions such as schools, colleges, and universities. The use of cloud computing in education, according to Mwakisole, Kissaka, and Mtebe (2018) has allowed schools to implement e-learning systems without having to purchase and host in-house ICT infrastructures. Schools may save a significant amount of money on capital expenditures such as hardware and software purchases, as well as administrative and running costs such as hardware maintenance, software licensing, power, cooling system, and ICT staff wages by using cloud computing (Kumar, 2017).

The global competition puts tremendous pressure on companies to reduce costs, improve profitability and increase efficiency to succeed in this rapidly evolving climate (Lyimo, 2021), this has prompted Information Technology (IT) executives to employ cutting-edge solutions that allow them to save expenses, maintain a competitive advantage, and increase profits. Using information technology can increase the productivity of companies and provide organizations with a positive advantage. As IT services have become more expensive and time-consuming, cloud computing has emerged as a key technical innovation to reduce these processing expenses (Heaveanlight, & Mshana, 2021).

Commercial banks and microfinance institutions in Ilala Municipality have not been left behind; they have embraced certain cloud services to promote their service delivery to achieve a competitive edge over their competitors. However, it is uncertain if the adoption of cloud computing has enhanced the performance of commercial banks in Ilala Municipality. Therefore, this study focuses on assessing the influence of cloud computing adaption on organization performance of selected commercial banks in Ilala Municipality.

II. LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 Technology Acceptance Model (TAM)

This theory was created to meet fields of information systems based on the notion of reasoned action. Davis first stated it in 1986 (F. D. Davis 1986), then Davis, Bagozzi, and Warshaw revised it in 1989. (Davis, Bagozzi & Warshaw, 1989). TAM substitutes two technology acceptance measures for the TRA's behavioral attitude and subjective norm factors: perceived ease of use and perceived utility. These two measurements clearly

distinguish the TAM from the TRA, despite the fact that the TAM is still heavily impacted by behavioral factors due to its inception.

When utilizing computers, two parts of the TAM model are considered as useful and perceived as simple to use. Perceived usefulness, according to Davis, is the subjective likelihood of a prospective user improving his job or life performance by using a certain application system. The most important variables in actual system utilization, according to TAM, are convenience and perceived utility.

The external influences impact these two elements. Social elements, cultural aspects and political considerations are the primary external influences generally evident. Language, skills and conditions are part of social variables. Political considerations largely affect the political and political crises via use of technology. The user's attitude is about assessing the desirability of a specific application for the information system. Compartmental intent is the measure of a person's chance of applying.

Technology Acceptance Model (TAM) is one of the best theories that fits this study as it indicates the organization on understanding technological acceptability can help forecast how new information resources will be used. Confidence in the use of technology, according to the study, may lead to enhanced personal control, flexibility, and competent information utilization. As a result, greater knowledge can lead to improved production.

2.1.2 Diffusion of Innovation (DOI)

Rogers proposed Diffusion of Innovation (DOI) theory in 1983, represents the five phases of knowledge, justification, judgment, execution, and confirmation in the framework of a social system, encompassing time and communication channel context. According to Rogers, there are relative benefits of DOI that include compatibility, difficulty, trialability, and observability, which are the major aspects of explaining the rate of adoption. Trialability and observability variables are not employed in cloud computing research since it is a technology that is dependent on device acceptance rather than method adoption in DOI theory. The external environment is not taken into account in this theory, which is a flaw (Ercan & Sayginer, 2020)

The social systems in which diffusion takes place are closely aligned with the communication channels. Higher education, education, education and organizational structures are part of higher education hierarchy including senior management, academic and student affairs divisions, ICT services, and others (McGuire, 2017).

As the theory emphasize variety of features of innovation, including relative utility, compatibility, complexity, trialability, and observability, allowing the theory to aid and facilitate decision-making throughout the invention and dissemination process.

2.2 Empirical Literature Review

Li (2017) discussed cloud computing as a computing model in which a network provides a scalable infrastructure built on virtualized services that can be scaled dynamically. In a cloud world, services are heterogeneous and dispersed globally. The customer isn't expected to learn how to handle the cloud computing infrastructure's support personnel. Infrastructure, applications, and networks are tools from the cloud computing perspective. On-demand elastic scaling is available for all services. And if these infrastructure services are geographically distributed, it will deliver a full service to the customer. The customer is only paid with the facilities that they currently use (pay-per-use). Meanwhile, since all transactions must obey the rules of the industry, the transaction environment can determine how to handle resource use and expense. How to efficiently handle and plan services, as well as how to set up a new system to provide a secure, stable, and executable service, are essential issues in cloud computing. This approach to cloud computing is innovative. It recommends “Cloud Bank" architecture to support all of the relevant problems, as well as a hybrid cloud computing paradigm based on banking philosophy to handle transactions for all participants in the hybrid cloud computing setting.

A study done by Scholten (2016) identifies the factors that promote and obstruct cloud computing adoption. After Edward Snowden's revelations about digital spying, this becomes even more intriguing. The study began with a thorough review of the literature to see what has already been tried. This data is supplemented by the findings of interviews conducted with experts in the field. The structures and their metrics are incorporated into a TOE system, which is validated through a survey of Dutch IT managers. The technology is similar to that used on-premises, but it is more adaptable.

The study done by Mago (2018) on the influence of cloud computing on the performance of commercial banks in Zimbabwean Health Company (ZHC) revealed that the ZHC's use of cloud computing enhances the business (either or but not both) performance outcomes, and they give some suggestions for maximizing the beneficial effect. These findings have managerial and policy implications for the company, its sister units, and other similar organizations planning to migrate to the cloud: a positive correlation between cloud computing adoption and business outcomes is achievable; adequate

preparation for the migration through information dissemination, partner selection, the establishment of a vibrant disaster recovery center.

Chen (2016) studied how consumers perceive the advantages of cloud computing and the effect of moderating variables on the relationship between cloud computing type and perceived benefit. Two moderating factors are firm size and value-chain activity. A 5-point Likert scale measurement instrument was utilized on companies of different sizes in Taiwan. As advantages of cloud computing, the study looked at cost reductions, expanded capabilities, and greater scalability. According to the results, the perceived value of cloud computing varies depending on the kind of cloud computing, the value chain activity in which cloud computing is utilized, and the company's size.

The study of Ziporrah (2017) focused on the contribution of cloud computing to the performance of SMEs in Nairobi, Kenya. The study's objectives were to identify the amount of Cloud Computing acceptance in Nairobi, Kenya's SMEs, as well as the drivers of CloudComputing adoption, the difficulties of Cloud Computing adoption, and the link between Cloud Computing and Organization performance.

Ahmed's (2016) researched, mobile banking (m-banking) has the potential to increase the quality and breadth of microfinance services in developed nations. Mobile banking might provide a greater range of services to poorer and more rural communities, as well as enhanced operational efficiency and cheaper loan costs. To examine the characteristics that impact the adoption of mobile banking by microfinance service providers (MFPs) in Sudan, an updated model based on the technology-organization-environment (TOE) system was developed. The study used a mixed approach technique that combines quantitative and qualitative methodologies. Data from 30 MFPs is used to test the related ideas. The analytical data was gathered using the partial least squares (PLS) methodology. The findings reveal that the most significant elements impacting MFP a cloud computing adoption of m-banking are ICT technology, top management, competition and commodities, MFP size, the impact of legislation on the business model, and partner collaboration.

The feasibility of integrating eLearning programs in cloud-based infrastructure for secondary schools in Tanzania was investigated by Mwakisole, Kissaka, and Mtebe (2018). Cloud computing is a kind of computing that uses the internet According to the survey, computer laboratories were found in 11% of government high schools, with 20.1 percent of those connected to the Internet. Furthermore, more than half of the kids asked (56.6percent) used mobile phones at home, with (53.5percent) utilizing them to access the Internet through cloud computing. Several pupils, however, remained to be unable to afford the Internet, which is referred to as cloud computing in the study. The research shows that cloud-based eLearning enhances the performance of kinds in secondary schools.

Another study was conducted by Oredo, (2017) in Nairobi, Kenya to explore the drivers of cloud computing adoption from an institutional perspective. Hypotheses were established to evaluate the link between institutional authorities and cloud computing adoption. SEM was used to analyze both the estimate and structural models. At the corporate level, a cross-sectional analysis of 60 financial institutions was conducted. Mimetic and normative forces have a positive association with cloud computing adoption, but coercive pressures have a negative effect. The study's key conclusion is that normative effects exercised by technical and standards organizations do have an impact on the technical acceptability of cloud computing.

Toader, Firtescu, Roman, and Anton (2018) studied the impact of ICT infrastructure on economic development in European Union (EU) countries from 2000 to 2017. The main goal of their research is to define and assess the impact of ICT infrastructure on economic development in EU countries from 2000 to 2017. They analyze empirically how different indices of ICT infrastructure influence economic development, as measured by GDP per capita in our research, using panel-data estimation techniques. Any macroeconomic control variables have been used in the estimations. Their findings show that using ICT infrastructure has a favorable and significant influence on economic development in EU member states, though the extent of the effect varies depending on the technology studied. In terms of macroeconomic conditions, their forecasts showed that inflation, unemployment, trade transparency, government spending, and foreign direct investments all have a large effect on GDP per capita at the EU level. The results are largely consistent with theoretical predictions, as well as the observations of a few important observational studies. Their results suggested that, along with other macroeconomic conditions, ICT infrastructure is a primary engine of economic development in EU countries.

Sudhakar (2016) suggested that Banks should adapt to a more authentic method of data privacy safely in the cloud. Several financial institutions have divided information records into various categories based on compassion from the lowest level published widely without the limitations

of security, especially that can only be obtained by high-level decision-makers. Banking services organizations are beginning to select these technologies in some fields.

Bahja, (2013) attempted to investigate openness and blockade between cloud computing and bank division and come up with some recommendations, how to receive in this section depends on troubles. Concerning this work associated with cloud computing planning, the concerns of partners also factor regarding the choice of cloud computing in the financial institution are considered final, in this part, some recommendations for the future of cloud computing will be made.

III. METHODOLOGY OF THE STUDY

The study used stratified sampling by visiting all 5 commercial banks which have adopted cloud computing. These banks are Bank of Africa (BOA), National Microfinance Bank (NMB), CRDB Bank Plc, Exim Bank Tanzania Limited, and ECO Bank by using the purposive sampling technique to obtain variable banks' information have adopted cloud computing.

Data processing was carried out via editing, which assured the completeness and consistency of research data, as well as the removal of undesirable and unnecessary data, verification, and consistency checks. After that, data coding was finished, which entails collecting responses of a similar kind of meaning into one set and assigning them a unique number known as a code. The coding helped ensure that the research got the right number of replies for each question, as well as making data tabulation easier using the figures and numbers collected. Descriptive statistics enabled the researcher to compute the modes, mean and median. The data was coded and analyzed by using the Statistical Package for Social Sciences (SPSS).

The study used a sample size of 70 respondents was drawn from the study population using simple random and purposive sampling techniques. Research questionnaire was applied in data collection and the collected data were analyzed using quantitative research techniques. The study used descriptive statistics including (frequency), age average(mean), and cross-tabulation. The data were analyzed by statistical package for social science where data were coded and being tested and re-tested to make sure data obtained were valid.

IV. FINDINGS OF THE STUDY

The results of influence of cloud computing adaptation on organization performance.

Table 1: It is easy to use cloud computing in banking operations

It is easy to use cloud computing	**Frequency**	**%**
Disagree	13	11.7
Neutral	19	17.1
Agree	27	24.3
Strongly Agree	11	9.9
Total	70	100

Table 1 presents results of respondents' views on ease of use of cloud computing in bank operations. Results show that 13 out of the 70 respondents, which is equal to 11.7 percent disagreed that it is easy to use cloud computing in bank operations. 19 respondents out 70 which is equal to 17.1 percent were neutral, 27 respondents out of 70 which is equal to 24.3 percent agreed, 11 respondents out of 70 which is equal to 9.9 percent strongly agreed. Therefore, majority of the respondents (34.2%) agreed. This implies that cloud computing is easy to use in banking operations.

Table 2: Accurate data processing on the operations of banks to customer satisfaction.

Accurate data processing	**Frequency**	**%**
Little Extent	9	17.3
Moderate Extent	2	11
Large Extent	40	45.2
Very Large Extent	19	26.3
Total	70	100

It can be observed from Table 2 that 9 respondents out of 70 which is equal to 17.3 percent said that cloud computing is a little extent in accurate data processing, 2 respondents out of 70 which is equal to 11 percent said it is moderate extent while 40 respondents equal to 45.2 percent said that cloud computing is accurate in data processing to a large extent and 19 respondents out of 70 which is equal to 26.3 percent said that cloud computing is accurate in data processing to a very large extent . This shows that cloud computing in commercial banks is accurate in data processing whereby to improve efficiency cloud technology can bring together multiple data and operational systems that reside in silos and increase efficiency.

Table 3: The benefit of adopting cloud computing outweighs its cost on the structure of the bank

The benefit of adopting cloud computing outweighs its cost	**Frequency**	**%**
Strongly disagree	6	12.78
Disagree	4	10.98
Neutral	7	13.68
Agree	19	24.48
Strongly Agree	34	37.98
Total	70	100

Results in Table 3 shows that 10 respondents out 70 which is equal to 23.76 percent disagreed with the notion that benefits of adapting cloud computing outweighs its costs on the structure of the bank. Moreover, 7 respondents out of 70 which is equal to 13.68 were neutral while 53 respondents out of 70 which is equal to 62.46 percent agreed. This implies that cloud computing is essential for commercial bank operations. With cloud computing, commercial banks do not have to invest heavily in dedicated hardware and software with a limited shelf life, nor the manpower to maintain it instead, financial institutions can buy into the infrastructure of a secure, dedicated cloud service provider and focus on driving more money into their business.

Table 4: Cloud computing improves customer relationship in bank operations

Improved customer relationship	**Frequency**	**%**
Little Extent	8	16.4
Moderate Extent	24	30.8
Large Extent	35	40.7
Very Large Extent	3	11.9
Total	70	100

Table 4 indicates that 8 respondents out of 70 which is equal to 16.4 percent said that cloud computing improves customer relationship in bank operations to a little extent while 24 respondents out of 70 equals to 30.8 percent said cloud computing contributes to improving customer relationship in bank operations to a moderate extent. However, 38 respondents out of 70 which are equal to 52.6 percent said that cloud computing contributes to improved customer relationship in bank operations to a large extent. According to the findings, this shows that cloud computing improves customer relationships by **i**ncreasing customer insights the **c**ustomer data contains insights that can only be unlocked with advanced analytics. The results of real-time data analysis can provide the foundation for a level of personalization and proactive engagement across all channels not normally possible with legacy infrastructure.

Table 5: Cloud computing improves efficiency in commercial banks

The benefit of adopting cloud computing outweighs its cost	**Frequency**	**%**
Strongly disagree	3	10.08
Disagree	2	9.18
Neutral	2	9.18
Agree	36	39.78
Strongly Agree	27	31.68
Total	70	100

Results in Table 5 indicate that 5 of respondents which is equal to 19.26 percent disagreed that cloud computing improves efficiency in commercial banks while 2 respondents which is equal to 9.18% were undecided. However, 63 respondents out of 70 which is equal 71.46 percent agreed. This implies that a large number of respondents said cloud computing improves efficiency in bank operations. Bank's data can be collected, analyzed, processed and mined in a limited period of time thanks to cloud computing technology, significantly improving the bank's data processing capability. As competition heats up, banks will need to segment their consumer marketing to offer customized service to various levels of customers, putting greater demands on their data processing capabilities.

Table 6: Cloud computing ensures data security in commercial banks

Cloud computing and data security	**Frequency**	**%**
Strongly disagree	3	10.08
Disagree	14	19.98
Neutral	16	21.78
Agree	29	33.48
Strongly Agree	8	14.58
Total	70	100

Table 6 presents views of the respondents on the usefulness of cloud computing in data security. It can be observed that 3 of the total respondents which is equal to 10.08 percent strongly disagree and 14 respondents which are equal to 19.98 percent disagreed while 16 of respondents which is equal to 21.78 percent are neutral. 29 of respondents which is equal to 33.48 percent agree and 8 of respondents which is equal to 14.58 percent strongly agreed. Commercial banks rely heavily on financial data for their operations. This implies that cloud computing improves security of data in commercial banks. Lack of security on financial data will not only result in financial losses for the bank, but it will also have a significant impact on its future growth prospects. Cloud computing improves data security by establishing disaster management, and detecting compliance violations with robust server security in the banking industry (Rani & Gangal, 2012).

V. DISCUSSIONS

The purpose of the presented study focused on investigating influence of cloud computing adaption on commercial banks in Dar es Salaam region in Tanzania. The study was conducted in the Dar es Salaam region specifically in the Ilala district. The objectives of this study were to assess how cloud computing can increase efficiency in bank operations to examine the effectiveness of cloud computing towards customer satisfaction in bank operations and to identify the challenges and opportunities encountering banks while using cloud computing services.

5.1 Cloud computing and efficiency of commercial bank operations.

According to the results, cloud computing offers considerable cost reductions for public cloud solutions, particularly when compared to conventional IT infrastructure's upfront capital expenditure needs. Furthermore, during moments of high client demand, cloud computing may help commercial banks better manage computer resources. When cloud computing is used for risk reduction and innovation, cost savings are realized as a consequence of increased company efficiency. Traditional technological risks, such as capacity, redundancy, and resilience, may be mitigated by using the cloud. Furthermore, the scalability of cloud computing gives institutions greater control over concerns like security. Yan (2017) agreed that if banks utilize cloud storage, they do not need to purchase additional storage facilities. With cloud computing solutions, banks don't have to acquire servers, storage devices, or network equipment, and a cloud computing service provider handles all software, hardware, and technical difficulties. Banks can have the most up-to-date technology applications without having to recruit specialized IT professionals; they also don't have to spend extra to hire specific maintenance and operations personnel.

5.2 Cloud Computing and Customer Satisfaction in Commercial Bank Operations

From the findings obtained from respondents in commercial banks is that cloud computing improves customer relationships cloud customer relationship management in the use of (CRM) has emerged as an innovative tool to augment the customer satisfaction and performance of banking systems. Whereby Cloud CRM allows the collection, analysis, and utilize customer-associated information and update of the systems, thereby offering superior customer service. Cloud technologies have invaluable potential to ensure innovative customer experiences, cloud computing useful collaboration, enhanced speed to the marketplace, and IT effectiveness. As such, many leading banks have been attracted towards the adoption of such innovative and customer-driven solutions to revolutionize their existing business models. Cloud computing according to Harlord (2018) explained that the cloud is always on, as long as they have an internet connection, clients can get the applications they need from literally anywhere at any time. From the research findings, the majority of the respondents strongly agreed that a company can cloud computing its information from any place at any time. Cloud service providers enable customers to store documents and apps on remote servers, and cloud computing's all information via the Internet. Public Sector can only achieve cloud computing through the internet. Good Internet connectivity is a must in cloud computing. Without an internet connection, the user cannot a cloud computing's cloud services. Effectiveness of cloud computing towards customer satisfaction in bank operations.

5.3 Challenges encountering commercial banks in using cloud computing services.

According to the research, the difficulty is a lack of security, and keeping data safe is critical for financial institutions. Banking data is exceedingly confidential, making it both valuable and risky. It might be far more than that since financial information is significantly more sensitive and important. Many bank executives would be hesitant to delegate such a vital duty. A study was done by Zhang, (2016) revealed that banking has very high data protection requirements; once the workload is transferred to a shared architecture, the possible risk of unwanted cloud computing and information leakage will undoubtedly increase. At the same time, the emphasized

idea of cloud storage, which states that "users do not need to think about the actual position of the data they instead need to worry about how to use," raises questions and suspicions for many financial executives. The goal of the research was to identify the problems that manufacturing companies experience when they embark on their adoption journey. The findings revealed that financial organizations faced three primary challenges: a shortage of qualified individuals in cloud computing, a lack of understanding of how to implement security in the cloud, and the difficulty of adopting cloud solutions, which is connected to the lack of skilled staff problem. In London, where 90 percent of listed companies have embraced cloud computing, the problem of a shortage of competent workers is not a problem (Specter, 2017). The findings of this research contradict those of Specter's study since a shortage of trained employees is a serious concern in Nairobi. This is due to a disparity in development in Nairobi compared to London, where cloud computing training is readily available. As such, data collected from bank firm's questionnaires is based on challenges and opportunities encountering banks while using cloud computing services.

VI. CONCLUSIONS AND RECOMMENDATIONS

The research suggests that cloud computing services providers solve the issues that hamper the adoption of cloud computing. The government agencies responsible for the regulation of the supply of internet services should address issues related to connection, cloud awareness to the users, and the speed of cloud comp. Internet service providers should also verify the speeds supplied are enough for the required processing. Service Providers should also guarantee systems in the other financial sectors in Tanzania are user-friendly and easy to use. It's also suggested that the research be expanded and the sample size boosted. This will aid in identifying how businesses may increase their productivity by using Cloud Computing. This applies not just to financial institutions, but also other businesses.

The government should create policies on cloud computing to be taught from schools so that people should be aware of cloud computing. Seminars and events should be organized so that different kinds of individuals can be educated and informed about different ideas concerning cloud computing adaptation. Most of the Organizations that have adopted cloud computing should provide full knowledge and education to their employees and toward to customers to be capable of using efficient cloud computing where the system is indeed more efficient than the analog methods.

Cloud computing is a rapidly emerging technology in many companies. It would be interesting to concentrate on other industries that may have a greater demand for information management and so need the usage of cloud computing. This research focused on the banking business, where cloud computing is applied. Research should also be conducted for groups outside of Dar es Salaam city, such as Mwanza, Arusha, Mbeya, Dodoma, and others, to see whether their perspectives vary from those addressed in Dar es Salaam. This will provide a national conclusion on the use of cloud computing and the issues associated with it. It is strongly advised to do more research on this subject of study. Finally, after conducting this study, the researcher has been able to identify areas that need to be examined. Future Researchers and the government should examine challenges faced by organizations that hinder cloud computing adaptation in Tanzania. The sample size should be expanded across Tanzania and, if feasible, farther afield. This will add to the research and give support for Cloud Computing adoption.

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