Factor Analysis of the Adoption of Cloud Computing In Nigeria

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ABSTRACT
Research has indicated that cloud computing will become the mainstream in computing technology and an effective tool for businesses. Traditionally, companies build corporate data centers, install applications and are responsible for maintaining their IT infrastructures. However, cloud computing removes the need for organizations to own corporate data centers and install enterprise applications. Instead, cloud provides businesses with the advantage of scalability, on-demand service, flexibility and reduced cost of computing, an increase has been identified in the acceptance and adoption of this new computing model. So then this research was carried out to investigate the perception of employees in IT & Telecommunication companies and users of devices that support cloud computing, regarding cloud computing being the next generation of computing technology, the extent of cloud computing adoption and to identify the motivating factors, current issues affecting the adoption of cloud computing in Nigeria. These objectives were achieved through Quantitative and qualitative research methodologies, the basis of the research consists of two separate questionnaires that was designed and administered. The exclusion criteria are Non-IT firms, Telecommunication companies and those who are not aware of cloud computing. While the inclusion criteria are IT & Telecommunication employees, IT managers and people who are aware of cloud computing. Questionnaires were designed and distributed using survey monkey, an online survey application. A number of semi-structured interviews were conducted through Skype with some employees and IT managers to produce a further, in-depth investigation. Analysis of the findings from both interviews and questionnaire served to provide an insight to the objectives of this research. Following the outcome of the research, Proper awareness by the cloud service providers on the risk and benefits of cloud, availability of more cloud service providers and free trial of cloud services to clients for a stipulated period will encourage adoption of cloud computing.

Keywords - Nigeria, cloud, computing, technology, IT, adoption, analysis, telecommunication.

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1. INTRODUCTION

The significance of cloud computing as the new paradigm in computing cannot be over emphasized, as most businesses are looking for opportunities to maximize profit whilst reducing cost. Looking into the trend of adoption of cloud computing in developed and developing countries, an increase has been identified in the acceptance and adoption of this new computing model. The increasing adoption has motivated the study of cloud computing in Nigeria. According to [National Bureau of Statistics (2012)], Nigeria’s economy consists of many different business sectors. The Information and telecommunication industry is a valuable sector within that industry which has become a great value to the economy. This sector has gradually improved over the recent years and Information technology in Nigeria, has brought about many changes in many sectors of the country. These include Telecommunication and IT firms, Education, Health, Agriculture and Banking to name but a few. There has been a remarkable growth in the telecommunications industry due to an increase in the availability and quality of service.

However, telecommunications and technology in Nigeria initially developed as a result of the trunk telephone service which linked two towns in 1923 [[Ofulue, 1980]. Between 1955- 1962 the introduction of very high frequency radio system also allowed for the expansion of trunk cables on a nationwide basis. Nigerian External Telecommunications (NET) Limited was consequently, established to manage the external services and the installation of many more telephone lines. In 1971, Nigeria’s first international telecommunication satellite became operational and in subsequent years more satellite stations, including digitalized Earth stations have been built. In efforts to improve the quality of the telecommunication service, the telecommunication arm of the Post and Telegraph Department of Nigeria, Nigeria External Telecommunications (NET) Limited were merged in 1984. However, the emergence of cellular phones in 1992, led to an unmet demand for more efficient telecommunication services, such as faster bandwidth, which resulted in congestion during peak periods, poor service delivery and a slow growth in infrastructure because more people use mobile phones and used the Internet.
In order to meet with increasing demand for a better quality of service, Nigerian Telecommunications Limited (NITEL), a government owned company, was sold off and became a private company. However, the licensing of the telecommunication service providers has led to an increase in the number of IT and telecommunication companies in the country and competition in the sector. This shift of monopoly to competition, has led to the establishment of multiple networks, an increase in broadband access through the establishment of submarine cables and fiber-optic networks. This has enabled telecommunication and IT firms to provide more value added services by providing more data centers.

This paper tends to investigate the perception of employees in IT & Telecommunication companies and users of devices that support cloud computing, regarding cloud computing being the next generation of computing technology, the extent of cloud computing adoption and to identify the motivating factors, current issues affecting the adoption of cloud computing in Nigeria, and it will be done as follows: Section 1 of this paper is about technology evolution in Nigeria, section 2 gives brief reviews on cloud computing, Section 3 will discuss the survey and interview carried out to achieve the objectives of the research. Section 4 is the analysis on data, result of the survey and interviews. Section 5 will discuss the findings while Section 6 will give recommendation and conclude the paper.

2. BRIEF REVIEW OF CLOUD COMPUTING

[Youseff et al. (2008)] stated that cloud computing is not a completely new concept but a combination of new and already existing technology. Cloud computing is not a revolution in information technology but an evolution of existing technologies as the main revolution occurred long before the advent of cloud computing [Anjomshoaa, Tjoa (2011)]. For this piece of paper, the author has decided to use the definition of cloud computing as stated by the U.S National Institute of Standards and Technology (2011) because this definition has gained in popularity and the definition captures the unique features of cloud computing. The U.S National Institute of Standards and Technology (NIST) defines Cloud computing from the characteristic point of view as being“a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction” [NIST 2011].

2.1 Cloud Computing Services

Cloud computing services are grouped into three areas: software as a service (SaaS), platform as a service (PaaS) and Infrastructure as a service (IaaS) [Zhang et al. 2010]. These services are arranged in layers and they replace the traditional “in-premises” computing systems [Barnatt, 2010].

**Software as a service (SaaS):** This is the top-most and easiest layer of cloud computing. As Fig 1 shows below, this is because this layer involves applications such as word processors, video editors and databases to be hosted by cloud service provider and is made readily available to the customers on demand or pay as you go, through the internet. Examples of software as a service include Customer Relation Management (CRM) online applications for managing customers, email messaging, Google Document (Doc) [Leavitt, 2009; Barnett, 2010].

**Platform as a service (PaaS):** This is the middle layer between SaaS and IaaS see Fig 1. It consists of operating systems and application development platform which can be accessed and utilized through the Internet [Zhang et al. 2010]. Developers use this platform to develop, test, deploy and host web application as a service via the internet. For example: Google Application Engine, Microsoft Windows Azure and International Business Machine (IBM) are providers of such platforms as a service [Barnett 2010].

**Infrastructure as a service (IaaS):** As Fig 1 illustrate below, this is the bottom layer and is basically what software applications run on and where data is stored [Barnatt 2010]. This service provides available storage, servers, networking, management and support components for organizations, on demand, making use of virtual servers [Vaquero et al. 2009]. These servers and storage infrastructures are accessed through the internet [Leavitt, 2009], thereby, enabling businesses to move their data to cloud and dissolve their in house data centers. Examples of this include Go grid, layered technology and joyent. Each of these services can be deployed by organizations or individuals either as a private cloud, public cloud, hybrid cloud and community cloud.

![Fig 1: Cloud services](http://blog.simplilearn.com/)

2.2 Cloud Computing Development Model

There are four types of cloud computing deployment models, which include private, public, hybrid and community cloud computing.

**Private cloud:** Private cloud also referred to as internal cloud, [Zhang et al. (2010)] is exclusive to the internal use of an organization. It is either managed by the organization itself, or managed by a third party. (It provides the highest form of control over reliability, performance and security).
Public cloud: Involves making services such as application, hardware and servers available to the general public [Dillon et al. 2010]. Some of the applications are made available for free, to the public whilst others are accessed on a pay as you go service. It is easy, and inexpensive, to deploy because it requires no capital investment on infrastructure and cloud service providers are solely responsible for making policy, profiting, cost and value as regarding it.

Hybrid cloud: This is a combination of two cloud models: public, and private or public and community etc. The clouds, which are bound together by standardization, allows for data and application portability [Dillon et al. 2010]. Hybrid cloud computing are used to maximize resources.

Community cloud: Is provided exclusively for a set of users within an organization having a shared and common goal [Dillon et al. 2010]. Example, security requirement.

2.3 Extent of Cloud Service Adoption

[Kshetri (2010)] explains the extent of cloud adoption as the amount of cloud services used in businesses in term of the frequency of use and the number of businesses using it. Surveys have been conducted to identify whether the cloud service is mostly adopted in businesses or not. The survey conducted by information Technology (IT) decision makers (2009) stated in its executive summary, that software as service, was the mostly embraced by companies compared to infrastructure as a service and platform as a service. More than 90 % of users were very satisfied with applications of software as a service and more than 60% said they would increase the use of software as a service in the following year, but feared its reliability. Also, the results of the survey conducted by KPMG one of the largest professional services companies in the world and one of the Big Four auditors. KPMG (2010) of 125 decision makers and business managers in the Netherlands, also shows that a larger percentage of people no longer consider cloud computing as “hype”. For example, 41 % believe that cloud computing is the future IT model, 18 % strongly believe that cloud computing is the future IT model, 29 % are undecided and 12 % disagree that cloud computing is the future IT model. This shows that 59 % (which is the sum of those who agree and strongly agree) and just 12 % disagree. However, these surveys show that the perception of cloud computing is improving year after year and companies are beginning to test and use cloud computing.

3. SURVEY AND INTERVIEW

3.1 Data Collection

The data collected for this research were from both primary and secondary sources. The primary source data were collected using questionnaires and interviews, while the secondary source data were gathered from academic Journals, publications, the Internet and literature based on cloud computing. The information gathered from secondary data was the building blocks with which the researcher was able to develop the paper topic and also determine the information necessary in obtaining the primary data for the research.

3.2 Primary Data Collection

3.2.1 Questionnaires

The questionnaires were distributed using survey monkey, an online survey application because this allowed for easy administration of questionnaires once they were designed. It also allowed for easier statistical analysis and then can be administered asynchronously without the need of an administrator.

3.2.2 Interview

The researcher employed a semi-structured interview online through Skype for the participants. This method was used, because it has the potential to provide a wealth of thick description of the research topic and would help to clear the air of any ambiguity regarding the responses of participants. Interviews are also used to discover how participants feel about a subject, in this instance cloud computing and then provide an in-depth response, or answer, to the research questions.

3.2.3 Secondary Data

The secondary data used for this research was obtained from textbooks, academic journals from science direct, Emerald, Google scholar search engines, IEEExplore digital library etc. Also, many useful publications from internet were used. The data from these resources were useful in developing the literature review, the research objectives and research plan.

4. ANALYSIS ON DATA AND RESULT

This section presents an account of the research findings gathered from both questionnaires and interviews tailored at determining the extent of cloud computing adoption in Nigeria. The questionnaires were aimed at addressing the research while semi structured interview questions were used to provide an insight into the research objectives as well as validate the credibility of the findings gathered from the questionnaire.

4.1 Analysis of Questionnaire

In order to know the extent of cloud computing adoption in Nigeria, two separate questionnaires were administered through online survey monkey. One of the questionnaires was targeted at IT managers in 15 different IT and Telecommunication companies, and the other set of questionnaires were addressed to employees in IT and Telecommunication companies & users of devices that support cloud computing in Nigeria. The first questionnaire was sent to 15 IT managers of which all responded. The second questionnaire was sent to the employees and users of devices that support cloud computing. 70 responses were received out of which 55 response represent 78.6% of the sample size, 3 did not consent to take the survey and 12 were not aware of cloud computing [See Fig 2].
The research objectives below were addressed using this sample size.

**Research objective 1:** To investigate the perception of employees in IT & Telecommunication companies and users of devices that support cloud computing, regarding cloud computing being the next generation of computing technology. In order to achieve this goal, a number of questions were asked and the survey revealed that only 7.4% of respondents were very aware about cloud computing and believe it will be the next generation of computing technology. 77.8% were aware and also believe it will be the next generation of computing technology while 14.8% were not very aware. See Fig 3.

**Research objective two:** To know the extent of cloud computing adoption in Nigeria; the level of cloud adoption in Nigeria is perceived to be low with 40 respondents representing 74.1% of the population, 13 respondents representing 24.1% believing that adoption is still on average and just one respondent representing 1.9% says the level of adoption is high. This is represented in fig 4 below.

**Fig 3: Level of awareness**

**Fig 4: Cloud Adoption in Nigeria**

However, the survey revealed that web-based email is the highest cloud service used, which is represented by 100%, in the figure below, followed by cloud based collaborative tools represented by 46.7% and no respondent opted for development software, project management applications, or servers as shown below.
Research objective three: To identify motivating factors for cloud computing adoption in Nigeria.

In order to achieve this, the benefits of cloud computing were used as the determining factors. The result identified three important reasons for adopting the cloud which are represented in the figures below.

**Increased focus on core business:** 88.5% of the sample size strongly agreed that increased focus on core business is a major factor for adopting the cloud while 11.5% of respondents were neutral, but no respondent strongly disagreed. This is shown in the figure below.

**Easy Accessibility:** 85.5% of sample size strongly agreed that easy accessibility of data using any device and at any time was a motivating factor for adopting cloud computing, while 9.1% of respondents were neutral and 5.5% strongly disagreed as shown in the graph below.

**Collaboration:** 83.3% of respondents strongly agreed that collaboration was a motivating factor for cloud adoption while 16.7% of the sample size where neutral and no respondent strongly disagreed. This is shown in the figure below.

Research objective four: To identify current issues affecting the adoption of cloud computing in Nigeria.

To achieve this objective, many factors were considered and some were considered significant. The result identified three major factors affecting adoption rate in the country.

**Poor awareness:** Poor awareness of cloud computing representing 88.9% of respondents who strongly agreed, 9.1% of respondents who strongly agreed, 9.1% of respondents who strongly agreed.

**Reduction in IT staffs:** However, 21.8% of respondents strongly disagreed that the reduction in IT staff will motivate the adoption of the cloud computing. See the fig below.
Unstable Power: Unstable power supply in which 87.3% respondents strongly agreed, 12.7% respondents were neutral about it but no respondent disagreed as shown in Fig 11.

Inconsistency: Inconsistency as well as high cost of internet services, was also a huge factor in which 83.6% of respondents strongly agreed and 16.4% respondents were neutral, as shown in Fig 12.

Trust of a cloud provider: Trust of a cloud provider was also highlighted and the percentage of respondents that strongly agreed were 56.4% and 38.2% of respondents were neutral while 5.5% of respondents strongly disagreed, as shown below.

Cost of cloud computing: 50.9% of respondents were neutral about the cost of cloud computing being high in the future and 29.1% strongly agreed, while 20.0% strongly disagreed as shown in the graph below.

4.2 Qualitative Data Analysis-Interview
The author sent an individual email to seven participants describing what the study entails, plus an invitation letter asking for a suitable date and time for the interview to take place, together with an informed consent. Their approval of the informed consent form and invitation were delivered back through mail to the researcher. The researcher sent a confirmation email to the seven participants who agreed to be interviewed. The interviews were conducted between January and February 2014. The interview was conducted through Skype, as this method was considered more cost effective and convenient. The interview lasted approximately forty to forty-five minutes for each participant. And the discussions were based on the research objectives.
Research Objective one: To investigate the perception of employees in IT & Telecommunication companies and users of devices that support cloud computing, regarding cloud computing being the next generation of computing technology. Participant were asked their opinion of cloud computing. All respondent agreed that cloud computing is the next computing technology. However, when asked if Nigeria was ready for cloud computing, there were varying responses. Respondent A said I don’t think so, because only few people know about the technology. Respondent B said ‘not really until the factors affecting adoption of cloud computing is addressed’. Respondent C said ‘I think we will be ready for cloud computing in a couple of years’ time but for now, we are not ready’. Respondent D said ‘yes and No’. ‘Yes because there is an available market and businesses if aware of the benefit, will adopt cloud services’. ‘No’ because ‘the basic infrastructure needs to be put in place and IT personnel have to be trained to handle necessary tasks with regards to the use of those services where necessary’. Respondent E said ‘Nigeria is always ready for anything but people are just lazy to start’ and Respondent F said ‘yes because ‘some companies have already taken the bold step of adopting the cloud’. However, few respondents stated that Nigeria is ready for cloud computing.

Research Objective two: To know the extent of cloud computing adoption in Nigeria. Respondents were asked if they use or have deployed any cloud computing service and what they think or know about cloud deployment and usage in Nigeria. All respondents indicated that they use some form of cloud service in their company. But most of them stated that they are basic cloud services. Respondent A said ‘we use software as a service, like human resource cloud services, web-based email and infrastructure as a service but they are the basic cloud service’. However his company is currently working on a project to provide infrastructure as a service to clients, but he thinks large scale companies will be the first to adopt their services because ‘based on the infrastructure by the provider, the service it’s quite expensive’. Respondent B said they have adopted both software as a service and infrastructure as a service. Respondent C said we use public cloud, and I think ‘most small and medium IT firms use public cloud usually in form of software as a service’. Respondent D said they have adopted software as a service and thinks ‘large scale companies will adopt private cloud computing because most small scale companies either do not have knowledge of cloud computing or do not have the fund to deploy such services’.

Research Objective three: To identify motivating factors for cloud computing adoption in Nigeria. All respondents indicated that for businesses to be highly encouraged, major factors regarding basic infrastructure and awareness need to be addressed.

Research Objective four: To identify current issues affecting the adoption of cloud computing in Nigeria. Most respondents stated poor awareness of cloud computing as the major problem affecting its adoption in Nigeria. Respondent A said awareness is the basic for cloud adoption. Respondent B stated it is ‘mainly ignorance of its availability’. Respondent C said the primary factor is knowledge of cloud computing. If there is no knowledge of it, then it can’t be adopted. Also, Basic infrastructure is a major factor affecting the adoption of cloud computing. Respondent D said ‘we still have power outages and it’s quite expensive to host a cloud 24/7’. Most of the respondents stressed on awareness and inadequate infrastructure before referring of the issue of trust and security. Only few respondent regarded security as the first major issue affecting the adoption of cloud computing in the country. Respondent E said the key factor is more of privacy and security. And then said that ‘there is no direct solution to this, I believe that an awareness of basic security principles would go a long way to help the Nigerian society adopt this service’. Respondent F said lack of cloud computing knowledge, some people even who use devices that support cloud, use the technology without knowing. Like converting their word to PDF or vice versa online. Respondent G said security, trust and poor power supply.

5. DISCUSSION OF FINDINGS

This research seeks to evaluate the factors affecting the adoption of cloud computing in Nigeria. This was achieved quantitatively with the use of online surveys and qualitatively, with interviews. The findings gathered have been analyzed in the previous chapter. The finding of both research methods will be discussed in relation to the research objectives and literature reviewed.

5.1 Discussion of findings

Research objective 1: To investigate the perception of employees in IT & Telecommunication companies and users of devices that support cloud computing, regarding cloud computing being the next generation of computing technology. The survey revealed that a large percentage of employees in the IT and telecommunication companies and users of devices that support cloud computing have some knowledge of cloud computing which amounted to 78.6% of the sample size. The survey also showed that employee’s perception of cloud computing as the next generation of computing technology was very high. This corresponds to the results obtained from the qualitative research (All respondent agreed that cloud computing is the next computing technology). The majority of the respondent believed that the adoption of cloud computing in the country is still very low.
This is because most companies utilize majorly basic cloud services as represented in the graph., such as web based email and collaboration tools and only a few indicated that Nigeria is cloud computing ready. These shows that while cloud computing is perceived as the next generation in computing technology, there are still factors affecting its adoption [Leavitt, 2009] and that transition to cloud computing is still at an early stage.

**Research objective 2:** To know the extent of cloud computing adoption in Nigeria.

Majority of the respondent believed that the adoption of cloud computing in the country is still very low. Though the survey and interview revealed that a large percentage of companies use mostly Software as a service (SaaS) and very few companies use Infrastructure as a service (IaaS). This validates findings from Colt a leading provider of integrated managed IT and networking solution, commissioned industry research (2011) and KPMG (2010) that Software as a service (SaaS) has a higher rate of adoption than Platform as a service (PaaS) and Infrastructure as a service (IaaS).

**Research objective 3:** To identify motivating factors for cloud computing adoption in Nigeria.

Findings from both survey and interview differed on this point. The difference in the findings could be as a result of the closed ended questions, which did not provide the participants view to be disclosed. From the survey, most respondents regarded an increased focus on primary services, collaboration and easy access of data were the main causes of adoption. On the other hand, findings from the interviews showed that the major motivating factor for cloud adoption requires the provision of a basic infrastructure. Furthermore, a lack of basic infrastructure will impact on cloud providers due to relatively few clients. However, providers will have to find alternative ways to encourage growth of cloud usage before infrastructure are provided.

Also, findings from the survey showed that a reduction of IT expertise was less of a motivating factor for adopting cloud computing. This is because cloud adoption is seen as a disadvantage rather than an advantage for most IT personnel. [Khajeh-Hosseini et al. 2010] highlighted that cloud computing would lead to the downsizing of staff in IT departments if they are major into providing hardware and software support.

**Research objective 4:** To identify current issues affecting the adoption of cloud computing in Nigeria.

The survey revealed that three major factors which have greatly affects the adoption of cloud computing. 89.1% of respondents indicated that poor awareness of cloud computing had been a setback for using cloud computing. Findings from the interview also supported this fact that people are not aware of the benefits of cloud computing. The major issue of adoption is awareness. Just a few businesses have identified with cloud computing because the awareness level is still low. Unstable power supply was another major factor which can lead to loss of data and inaccessibility of cloud service [Greengard, 2010]. Also, the high cost of bandwidth when transferring data-intensive application through the internet, unreliability of internet service due to distance barrier and low bandwidth capacity [Leavitt, 2009]. In addition, the position of [Qamar et al 2010] on the issue of security and privacy was supported by some respondents. This finding was also supported with the result gathered from the survey conducted by CIO (Chief Information Office) stating cloud adoption considered as a risk due to insecurity and loss of privacy. This shows that security will continually be a concern as regards adoption. However, it was interesting to find out that security was not a major concern for cloud adoption as compared to survey findings of developed country.

However the survey showed that more respondents were neutral as regards cost of cloud computing. Different reviews on cost of cloud computing show it is still uncertain that the cost of cloud computing will eventually cost more or if it will actually be cost effective. Moreover, [Durkee (2010)] associated increased cost of computing with cloud service providers but Ambrust et al. (2010) said cloud computing will remain cost effective due to elasticity and transference of risk during under provisioning and over provisioning of IT resources.

6. RECOMMENDATION AND CONCLUSION

6.1 Recommendation: In this section the author will discuss briefly the recommendations, contribution to knowledge, future work, and conclude this paper based on the outcome of the research. Following the outcome of the research, the following recommendations are put forth to boost the growth of cloud computing in Nigeria.

1. Proper awareness by the cloud service providers on the risk and benefits of cloud, for instance, what it takes to migrate to cloud and how to migrate to cloud should also be given consideration by cloud service providers.
2. Availability of more cloud service providers will encourage adoption of cloud computing. This will increase the awareness of cloud computing and reduce issues of inaccessibility due to wide geographical distance between computing resources and consumers.
3. Cloud providers should provide free trial of cloud services to clients for a stipulated period to encourage adoption of cloud computing.

6.2 Contribution to knowledge:

The findings showed that Cloud computing will be the next generation computing model in Nigeria. (Refer to Research objective one under section 5.1 Discussion of findings.)

The adoption of cloud computing in Nigeria is low as surveyed in this research. (Refer to Research objective two under section 5.1 Discussion of findings.)
SaaS (Software as a service) is the most used cloud service in Nigeria.
(Refer to Research objective two under section 5.1 Discussion of findings.)

Increased focus on primary services, collaboration, easy access of data and provision of basic infrastructures were identified as the motivating factors for cloud computing adoption in Nigeria.
(Refer to Research objective 3 under section 5.1 Discussion of findings.)

The research revealed three factors that have greatly affected the adoption of cloud computing in Nigeria. These factors are:
1. Poor awareness of cloud computing
2. Unstable power supply
3. High cost of internet bandwidth and unreliability of internet service.
(Refer to Research objective 4 under section 5.1 Discussion of findings.)

6.3 Future works: Based on the outcome of the research. The extent of cloud adoption in Nigeria is low, current factors affecting the adoption of cloud computing were analyzed and the factors that will motivate the adoption were stated in this paper. Future research on this topic should focus on identifying the extent of adoption of cloud computing, after the current factors identified in this research have being considered.

6.4 Conclusion: the following are the core finding of the research. Overall, cloud computing is no longer a hype but a technology that is set to change the way business operation are implemented. It allows computing resources readily available on demand, flexible and scalable. This study reveals that the perception of cloud computing being the next computing tool is similar with findings of previous surveys. Cloud computing is the next computing technology but the extent of adoption in Nigeria is low compared to some countries. This shows that the adoption of cloud computing varies across countries as stated by [Wyman 2008]. This can be as a result of lack of adequate infrastructure as in the case of Nigeria.

This study also reveals there is need for continuous improvement on basic infrastructure. The availability of basic infrastructure and awareness of cloud computing are necessities for more businesses to consider cloud adoption. While in developed countries, the major factor slowing down the adoption of cloud computing is security. This is also a concern for cloud adoption in Nigeria but awareness and availability of adequate infrastructure are the major determinant for cloud adoption.

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