Cloud Computing: a Tool for the Development of SME's

Gifty Love Cromwell

Abstract: ***Cloud Computing has emerged an effective Information technology engine. This has become imperative due to advancement and technology innovation and its adoption for enterprises, businesses and organizations to aid them stay competitive. After a normative study, comparing and contrasting problems SME's face in their quest for development, this research found out lack of funds and IT needs as in infrastructure as greater problem in all spheres of life which researchers have mentioned CC to be the solution to it but as to how SME's could migrate to CC has been scarce or a lacking factor. This research, however, contributes to a body of knowledge and existing literatures on CC bringing out a lucid and conceptual evidence to aid the none existence or scarcity of information on whether CC is new and how SME's can migrate into CC. It tries to explain what development means in SME's perspective, it further finds the key factors that influence the success and failure of SME's, and the role CC can play in the development of SME's. In addition it talks about CC, some additional features, types, some service providers of CC, implementation and deployment models and its advantages. It further provides the business perspective of cloud computing vs. virtualization and related technologies of CC and finally presents ways SME's could migrate into CC which are guidelines for SME's especially in Sub-Saharan African's development since technology is now the drive force. Future research will consider the technological use and empirical security measures of CC.***

Keywords: Cloud Computing, Small and Medium-sized Enterprises (SME's), Development, Technology Innovation, Virtualization, Migration.

I. INTRODUCTION

With advancement of economic globalization, technology innovation and its adoption and the competitive nature of satisfying customers desires and wishes, it has become impetrative for SME's in their quest for new trend/talents of developing themselves in order to grow and stay competitive get themselves abreast with recent technology. As good quality, high spirited personnel are needed for the development of SME's, (Therefore we must establish a strong market mechanism absorbing the talent in order to optimize the structure of corporate personnel and establishing the needs for encouraging talents). (1).

Their quest for new technology does not only accelerate enterprises' development but also expand the market, making it a driving force for a sustainable development of SME's. Considering a country's GDP, SME's need to expand because they play an incredible role in building a nation. SME's provide greater benefits to society in terms of job creation, hence alleviating poverty. Finance has been identified in many business surveys as the. Most important factor determining the survival and growth of SME's in both developing and developed countries; it allows SME's to undertake productive investments to expand their businesses and to acquire the latest technologies thus ensuring their competiveness and that of the nation as a whole. Since capital is the blood of enterprises' growth, a greater number of SME's lack finance although SME's have different problems for their growth rather finds their core element of success. Research has shown that a number of SME's die for lack of funds, since their quest for its development turns all inputs to increase (raw materials, equipments, staff and salary) hence the need to cut some cost. Cutting cost in this sense means specializing on their core competence, leveraging on the smart ways and use technologies which would allow them hire some of the things that aid their set up move on and increase productivity. In this way enterprises can adapt variations of external environment that is instead of buying equipments for IT set ups and its management; they should resort to Cloud Computing so that the enterprise could concentrate on what they do best in order to develop since they cannot develop without science and technology. In recent years, the importance of affordable access to reliable high-performance hardware and software resources and avoiding maintenance cost and security concerns has encouraged large institution managers and stakeholders of information technology companies to migrate to cloud computing. (2). Cloud computing is useful because it changes all fixed production cost into variables and adapt to manufacturing needs. Positive impact of competiveness for all sectors where expenditures in information technology are crucial (3).

A lot of researchers have spoken at learnt on CC and its benefits but how SME's can migrate into it to develop has been scarce or a lacking factor. This research focuses on theoretical study of some existing research on CC bringing out a conceptual evidence to aid the none existence or scarcity of information. It tries to explain what development means in SME's perspective, finds technology innovation aims about development, it further finds the key factors that influence the success and failure of SME's, and the role CC can play in the development of SME's. In addition it talks about CC, some additional features, types, some service providers, implementation and deployment models and its advantages. It further provides the business perspective of cloud computing vs. virtualization and related technologies of CC and finally presents ways SME's could migrate into CC which are guidelines for SME's development.

II. WHAT IS DEVELOPMENT

According to business directory dictionary, development is the process of economic and social

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Gifty Love Cromwell, School of Management Studies, Yangtze University, No. 1 Nanhuan Road, Jing Zhou City, Hubei Province, China, Kumasi Technical University, P. O. Box 854, Kumasi-Ghana. E-mail: gifcrom@gmail.com/gifallo@ymail.com

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transformation that is based on complex cultural and environmental factors and their interactions. When this term is mentioned all one may think is human development, economic development, social development, poverty alleviation or reduction, sustainability, wealth and health creation. The term is ambiguous and complex since politicians also use it daily, but it all depends on the context in which it is used. It is not about dealing with humans only but also about the conversion of natural resources into cultural, thus increasing the size of the economy with more production of goods and services to aid humans to enjoy good life. It is also a way of making something better than before. "Development is a concept which is contested both theoretically and politically, and is inherently both complex and ambiguous …. Recently it has taken on the limited meaning of the practice of agencies, especially in aiming at reducing poverty and the Millennium Development Goal. (4).

In SME's perspective, the key feature for developed economy is the development of technology innovation activities, qualified and highly skilled manpower to be able to produce quality goods and services for SME's economy and for international market as a whole. It can also mean promoting the union among countries' standards of living. SME's generally has been acknowledged in both developed and developing countries to be the engine for development and economic growth which in actual sense lack some abilities for development.

SME's are therefore, encouraged to engage in activities that will aid them cope with the increased demands of a competitive environment. Since SME's face a lot of impossibilities in their quest for these technologies due to a number of factors, they will have to solicit to existing structures which aims to support their activities with less use of their resources, in order to be cost-effective and concentrate more on their core competence.

A. Key Factors that Influence the Development of SME's

A lot of research has given various factors that can influence the development of SME's; the following important factors must also be considered:

- Competency based training for small businesses' growth: potential and existing managers of SME's should be giving regular training. Educating them on planning, organizing, directing and controlling of their businesses. They should also be introduced to innovation getting themselves abreast with new technology and ideas that will always help their development.
- Improving access to finance: there should be availability of funds for SME's to access to develop because access to finance for SME's has become the world's difficulty problem to solve completely. Financial institutions, Banks and lending companies should open their doors for SME's to access their facility. According to a 2011 survey of the EC on the access to finance of SME's in the EU, it was determined that access to finance is the second importance.
- SME's should be considered to be for all the populace and not for individuals: SME's should not be seen as belonging to individuals or group of people but must be seen as belonging to the nation of its origin since they help the people and the nation as a whole from providing jobs to adding to the GDP of a nation. This way those SME's employees will work hard to support its development and growth. They are labour intensive, capital saving and capable of helping create most of the one billion new jobs the world will need by the end of the century. (5)
- Adequate infrastructural support by the Government: Governments where SME's belongs to, should aid provide the basic uninterrupted infrastructure and amenities to support SME's development. Success and failure of SME's is not only related to the financial aspect. It also depends on characteristics of the entrepreneur and many more key strategic factors. (6) one of which is aforementioned.

B. Key Factors that Influence the Failure of SME's

Considering the enormous potentials of the SME's sector and despite the acknowledgment of its immense contribution to a sustainable development, its performance still falls below expectation in many developing countries (7).

These economic factors and conditions ranges from: unstable government policies, difficulty in accessing credits from banks and financial institutions, lack of infrastructure, high operational cost, lack of transparency and corruption, government's inability to support SME's, poor management on the part of mangers of SME's, lack of finance to acquire technology (the existing gap between the developed and developing countries is wide, in that the developed produce the technology and the developing buy to use this gives a negative impartation which cause the failure of SME's/ businesses) (8).

All the above factors collapses businesses/SME's and causes loss of capital to SME's, loss of jobs, inflation (due to lack of production and distribution of goods and services), GDP falls (due to Government's inability to salvage revenues and taxes), a fall in the standard of living of society. For these reasons SME's survival must be considered with greatest concern.

III. THE ROLE CC CAN PLAY IN THE DEVELOPMENT OF SME'S

Since SME's in both developed and developing countries have been seen as engines for growth, they should have been considered vibrant also in all economies that have them as their aid but they are the engines that suffer constraints. Research and campaigns on the death of SME's has been attributed to financial problems that bedevil them both in developed and developing countries. China which has been seen in recent years to be successful in the world market takes its strength from its SME's. In China; SME's have gradually become a great force for promoting economic development. (9), which contributes 60% to its GDP way back 2008 and gives 82% employment to its populace according to a research article made by Liu Xiang, (2008), it stated further that even though giants, SME's in China still suffer in technological innovation and limited in financing to aid its growth. Liang, (2007) also proved, it appears that imitation of restricting the technology innovation of SME's which is borne of an inadequacy of funds. According to 2011 EC on factors for development of SME's, access to finance of SME's

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in the EU was second importance among the difficulties faced by SME's in the EU. Most SME's in Nigeria die within their first five years of existence, a smaller percentage goes into extinction between the sixth to tenth year while only about five percent survive, thrive and go to maturity, (10) many of the key factors that contributes to its untimely death included insufficient funds. Ghana's economy shows a record of 90% SME's at the Registrar general's office (Mensah, 2004), small enterprises in Ghana are said to be a characteristic feature of the production landscape and have been noted to provide about 85% of manufacturing employment of Ghana (11). SME's are also believed to contribute about 70% to Ghana's GDP and account for about 92% of businesses in Ghana. Despite SME's contribution to the development of the country's economy, they are still confronted with the problem of raising adequate funds (12).

Similarly, in South Africa, it is estimated that 91% of the formal business entities are Small, Medium and Micro Enterprises (SMME's), (Hassbroeck, 1996; Berry et al., 2002). They also contribute between 52 and 57% to GDP and provide about 61% of employment (CSS, 1998; Ntsika, 1999; Gemede, 2000; Burry et al., 2002). Mpho M. and Nkequbela R, (2014) stated lot of challenges that facing south Africa's SME's and hindering their growth, among them is financial issues. According to a review research report made by Dalberg, (2011) on SME's in developing countries inability to get financial capital for growth and expansion of the businesses, it was seen that SME's are a fundamental part of the economic fabric and they play a crucial role in the furthering growth, innovation and prosperity. Unfortunately, they are strongly restricted in accessing the capital that they require to grow and expand, with nearly half of SME's in developing countries rating access to finance as a major constraint.

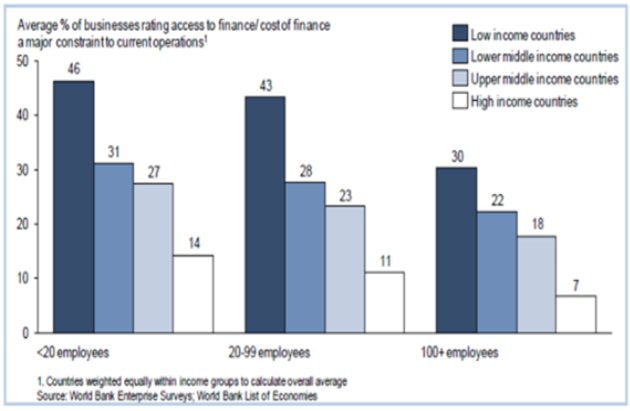

FIG. 1 ACCESS TO FINANCE AS A MAJOR CONSTRAINT TO OPERATION

SME's in these analyses lack financing but needs a lot of funds in their operations since their quest for development turns all inputs to increase.

Research has again indicated that the average SME spends 3-5 percent of its revenues on IT. However, the profile of spending is different for the fastest growing companies – over 30 percent of them spend more than 10 percent of revenues on IT. (See the figure below)

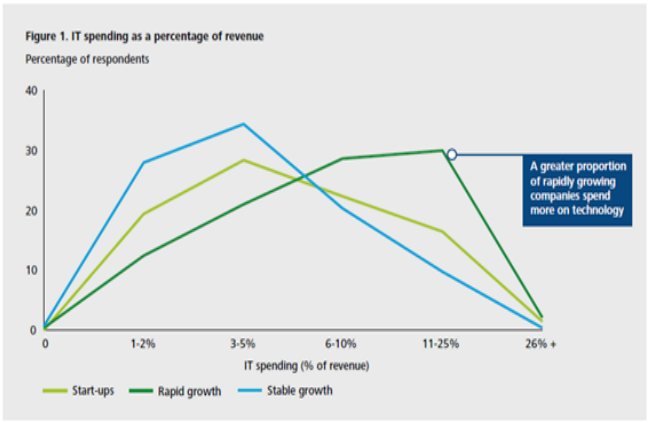

FIG. 2. Source: Deloitte. Google, 2014)

This means before SME's could develop, they need technology innovation but lack the ability to finance it thoroughly, for this reason this paper advices SME's to take advantage to solicit to already existing structures which aims to support their activities with less use of their resources, finding smart ways to cut cost so that they can concentrate more on what they do best. Some of these structures are Cloud Computing which is discussed below. Cloud computing is low cost and can aid SME's to be in good stand to face the competitive nature of today's world. Connecting this research to CC's low cost aspect and whether to rent or buy a car that its need arises not always; came across a research made by Reuven Cohen (Forbes) (14) at New Jersey Institute of Technology on 'is cloud computing really cheap?' The answers he received related to the five most widely used characteristics of cloud computing. It proved that it is easy to rent a car by booking a reservation (on demand service), if the agent does not get for you, they always refer you to another agency around (Broad network). It stated further that car rental companies manage a pool of cars in a given city to meet demand (Resource pooling). Car rental companies move cars into a particular location where there is a large event and they know demand will be high (Rapid elasticity). Above all you pay for the time you use the car once you turn it back in you are done. No maintenance, insurance, fuel, tires etc. (Measured service).

Posing the same question to Joe Weinman a well-regarded cloud computing thought leader and the author of the book cloudonomics, his answer was "The standard argument for the cloud is that large providers achieve economies of scale and thus will be cheaper than a 'do-it-yourself' approach to IT". Due to technology advancement, there is now cheap ways of doing things than the former.

The intention of CC is to enable users to concentrate on their core competencies. CC has been seen as an engine for growth of SME's. Research has shown that SME's who resorted to the use of cloud computing save 80% of their IT energy cost (15). Small businesses using cloud technology to overcome their growth challenges grow 26% faster and delivers 21% higher gross profits, 85% of those surveyed believe cloud enables their businesses to scale and grow faster. (16).

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IV. DEFINITION AND FEATURES OF CLOUD COMPUTATION

Many researchers have defined Cloud Computing in various ways, below are some views. Cloud Computing is a rapidly emerging paradigm for computing, whereby servers, storage, content, applications or other services are provided to customers over a network, typically on an on-demand, pay-per-use basis (Joe Weinman, 2011). National Institute of Standard and Technology (NIST) whose definition is officially accepted also defined "Cloud Computing as a model for enabling 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 has stated again that, "Cloud Computing" can also be defined as the on-demand delivery of IT resources and applications via the internet with pay-as-you-go pricing. (NIST)

Considering the above definitions, this paper defines Cloud Computing as the provision and management of applications, information and data as a service on the internet in a pay-per-use basis.

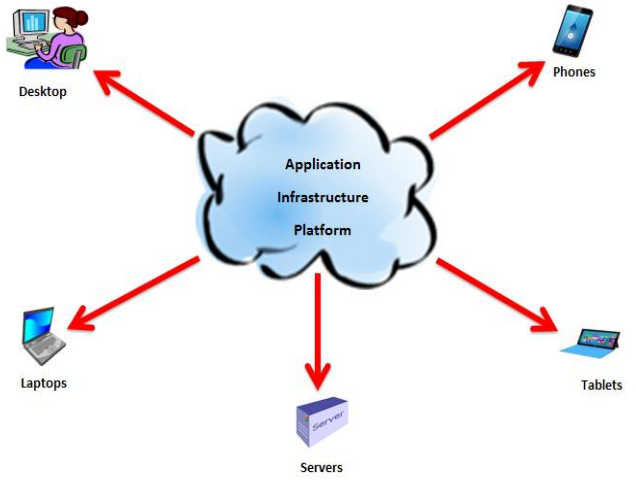

FIG 3. CLOUD COMPUTING

Researchers have summarized some features as being agility, Broad Network access, resource Pooling, rapid elasticity, measured service, scalability and on-demand network access. Added in this paper are the following useful features: lower cost, less risk, convenient, on-demand capabilities, easy maintenance, performance monitoring and increased productivity.

A. Lower cost

Cloud computing is cheap in the sense that it is usually measurable service (pay-as-you-go). If you don't use it, you don't pay for it. Its delivery models convert capital expenditure to operational expenditure. It also enables the sharing of resources and costs across a pool of users thus allowing for centralization of infrastructure in locations with lower cost such as real estate, electricity, water or heat. It becomes a utility paid just like real estate, electricity water or heat [danchsdn.techgarget]. This means it is better to use cloud computing rather than purchasing IT equipments, installing and maintaining them. Instead of having to invest heavily in data ventures and servers before you know how you are going to use them, you can only pay when you consume computing resources, and only pay for how much you consume {NIST}.

B. Less Risk/Convenient

On-demand capabilities, businesses usually secure cloud-hosting services through a cloud host provider which is a software vendor. Users have access to services and have the power to change services through online control panel users can choose which other users they wish to share cloud service with and subscribe storage networks and software as needed from other provider. Subscribers usually pay for what they use which is an advantage of service without providers assistance.

C. Easy Maintenance

Instead of businesses buying, storing and maintaining the IT equipments, they subscribe to data storage with cloud providers, the cost of maintenance then become the providers, they maintain the system without installing applications on the PC's of subscribers allowing them to focus on their projects that improve their businesses rather than spend.

D. Performance Monitoring Increased Productivity

The providers of the service to cloud users in this sense have the sole responsibility to monitor the performance of service provided, the software maintenance, high level of reliability and security is also the burden of the providers, giving the users the advantage to increase their productivity rather than worrying about how to get IT staff to monitor them.

V. ADVANTAGES OF CLOUD COMPUTATION

Cloud computing as any other has advantages and disadvantages which its advantages outweighs the disadvantages, in all these much depends on the service provider the user chooses to work with, among these advantages this paper has agreed that its adoption offers increased flexibility, virtualization, ubiquity, scalability, user bound payments models, convenience and huge cost saving.

A. Increased Flexibility

Cloud-based services are ideal for businesses with growing or fluctuating bandwidth demands. If your needs increase it's easy to scale up your cloud capacity, drawing on the service's remote servers. Likewise, if you need to scale down again, the flexibility is baked into the service. This level of agility can give businesses using cloud computing a real advantage over competitors – it's not surprising that CIOs and IT Directors rank 'operational agility' as a top driver for cloud adoption.

B. Virtualization

Cloud computing allows a lot of machines (businesses that have one goal) to be connected to one server sharing the cost involved bringing the cost saving advantage to being. This is an advantage because not considering the deployment model a business chooses, cloud computing seeks to make available the necessary infrastructure that brings a number of users on board.

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C. Ubiquity

With Cloud computing customers can access their information wherever they would be using their PC's, laptops, and smart phones with a reliable internet access. With the aforementioned you can access any information kept in the cloud from anywhere. Cloud computing can allow accessibility to a wide range of computing resources through standard network access mechanisms. (17).

D. Scalability

Cloud computing delivers a scalable IT resource over the internet and allows it to be operated locally. Scalability in cloud computing allows businesses to easily upmarket or downscale your IT requirement as and when required. Some cloud computing providers allows you to increase your resources to fit the expansion of your business at no expensive cost to your IT system, making it flexible as well to use.

E. Convenience

The use of Cloud computing is convenient in the sense that consumers need not curry their buck-ups and computers with them wherever they go but at a click of their mobile phones and any device that is connected to the internet they can get access to their data anywhere. This allows employees of businesses to conveniently access their files internally and externally using their web-based smartphones, ipads and the like. With cloud computing many employers are trying to implement a 'bring your own device (BYOD)' policies which will save businesses from buying a lot of computers for employees. Cloud computing then promotes the use of mobile technology in this way.

F. Huge cost saving

Clients on Cloud computing are able to save a lot of money because they need not bear the cost of ensuring that the application is installed and run. Users are always free from seeing to it that the software they are using is the most recent version, its updates and the like also lays in the hands of the services providers hence given users the ability to save.

VI. SOME SERVICE PROVIDERS, IMPLEMENTATION AND DEPLOYMENT MODELS OF CLOUD COMPUTATION

This paradigm has a lot of its service providers; few are mentioned as follows Amazon Web Service (AWS), Google Computer Engine (GCE), Cloud Bees, Rackspace, Cloud sigma, IBM, Intel, Salesforce.com, Microsoft, HP and more. The enjoyment of its advantages most depends on the provider a client selects.

In cloud computing IT service providers group their services into these categories, Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS), Communication as a Service (CaaS) and Network as a Service (NaaS).

A. Infrastructure as a Service (IaaS)

According to EITF (Internet Engineering Task Force), providers of IaaS offer computers – physical or more often virtual machines and other resources such as data storage space. IaaS provides users with the highest level of flexibility and management control over their IT resources. It usually offers additional resources such as virtual-machine disk image library, raw block storage and file or object storage, firewalls, load balancers, IP addresses, virtual local area networks (VLans) and software bundles. In this model, the cloud users covers and maintains the operating systems and the application software whilst the cloud providers typically bill IaaS services on a utility computing basis: cost reflects the amount of resources allocated and consumed. An added advantage of this type of service is that one can access infrastructure from anywhere, any location on the device.

B. Platform as a Service (PaaS)

In this type of service model, the cloud provider delivers a computing platform, including operating systems; programming language execution environment, database, and web server this allows users to create new computer applications on a cloud platform without cost and complexity of buying and managing the underlying hardware and software layer. It usually allows users to focus on deployment and management or their applications making them more efficient since the need of resource procurement, software maintenance, patching etc. becomes a thing of the past.

C. Software as a Service (SaaS)

In Software as a Service (SaaS), service users are provided with a complete product that is run and managed by the service provider. They are usually referred to as the end-user applications. In this type of service the user needs not think about how the service will be maintained or how the infrastructure will be managed. All the user thinks about is how to use the software. Examples of such services are business applications, HR programs, customer relations and support (CRM), finance (ERP), online payments, electronic marketplace for SME's etc.

D. Communication as a Service (CaaS)

Communication as a Service (CaaS) is a type of service with multi-platform communications over the network and packaged by the service provider. The services are provided in devices such as computers and mobile devices which includes audio/videos communication services, collaborative services, unified communications, e-mail, instant messaging, data sharing, web conference, IP telephony, unified messaging, video conferencing and mobile extension (NIST).

E. Network as a Service (NaaS)

In Network as a Service, users' access cloud computing using networked client devices. The only thing required is to create an information technology (IT) Network with one computer, an internet connection and access to the providers NaaS portal. This concept can be appealing to new businesses. SME's can use this through cloud computing because it saves them from spending money on network hardware and the staff it takes to manage a network in-house. Cloud computation popularly has four deployment models or types which in any case businesses should consider the one which will best go with their situation before choosing in other to enjoy its advantages. They

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are Public cloud, Private cloud, Hybrid cloud and Community cloud computing.

F. Public Cloud

Cloud computing is usually referred to as public when its services are rendered on a network that is open to the public. It may be free or offered on pay-as-use model. Technically the security consideration in the sustainability of cloud draws the difference between public and private cloud. In public cloud the applications, storage and other resources are made available by the service provider for a public audience and communication is effected over a non-trusted network. Some service providers have their own means of operating the infrastructure at their own service centre even if public. This gives users the opportunity to check before choosing service providers.

G. Private cloud

Private cloud is an infrastructure operated solely for a single organization, either managed by the organization itself or by third party, or hosted either internally or externally. The organization usually bears all the cost involved in the design and establishment which brings out the benefits of cloud. A. Jula et al, 2014.

H. Hybrid cloud

The hybrid cloud is a combination of two or more cloud services that is either with private, community or public. A. Jula et al, 2014 states that it is a combination of two or more different clouds (public, private or community) led to the creation of cloud model called hybrid cloud computing which constitutive infrastructure not only keep their specific properties but also require standardized or agreed functionalities to enable them to communicate with each other with respect to interoperability and portability of applications and data.

I. Community cloud

In the community cloud infrastructure, it is shared between several organizations that share the same view. It is either managed internally or by the service provider and its hostage could be the same way. The cost involved is shared among the users making it manageable and low cost. A third party service provider or a series of community members can be responsible for providing the required infrastructure of the cloud computing. Lowering costs and dividing expenses between community members along with supporting high security are the most important advantages of community cloud (18). SME's could find this kind of service useful and adapt to it to cut IT expenses since the sales force and the Human resource aspects of any establishment needs a proper and less expensive storage systems that will aid the business move on and most especially concentrate on what the business could do best.

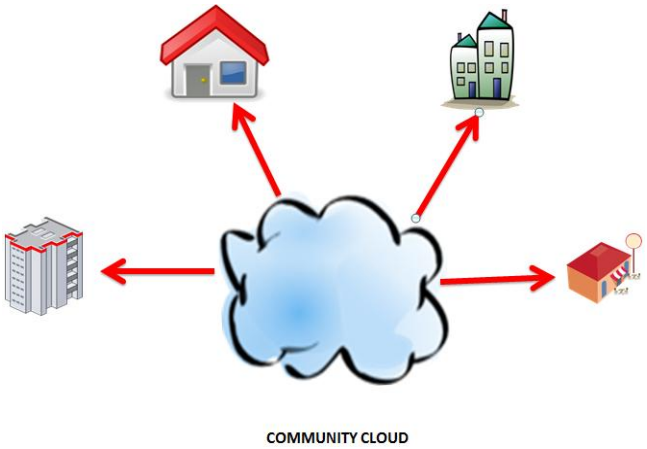

Fig. 4 Below is a CC2 Model which Depicts How Businesses Share Cloud Computing Service in Common and Share the Cost Involved.

VII. BUSINESS PERSPECTIVE OF CLOUD COMPUTING VS. VIRTUALIZATION AND RELATED TECHNOLOGIES

Technology as a driving force for businesses to attain height surfaced cloud computing. It is the fundamental change in the way IT services came into being, deployed, adapted and maintained. Cloud Computing uses the internet to provide its services in a pay-as-you-go. These services are scalable on demand and can be priced on a pay-as-you-go basis (19). This means that SME's or establishment could pay for only what they use so that they can grow fast without wasting much on technological equipments and its maintenance. (20). Cloud computing has gone far and has more business functions, collaboration tools, data management, communications and so on to help SME's maintain their own software, servers and infrastructures ; help management to make decision with already prepared key data. It also helps speed internal and external communications which streamlines the supply chain and increases agility. Cloud hosting facilities includes all types of information sharing such as: email services, application hosting, web-based phone systems, data storage and more. With cloud computing one need not be an expert in IT before its usage so businesses should not hesitate to migrate or go into it since it is not an entirely new technology but a new operational model that emanated through a set of already existing technologies that most businesses used in the past. Cloud computing concept is based on a lot of pre-existing and well researched concepts such as grid distributed computing and virtualization. It is specifically designed to manage a large collection of infrastructure such as CPU's, storage and networking in a convenient way. The base of cloud computing is virtualization and utility based pricing which are not new. Virtualization manipulates hardware while cloud computing refers to service that results from that manipulation. Cloud computing unlike other technical terms, is not a new technology, but rather a new operations model that brings together a set of existing technologies to run business in a different way. Indeed, most of the technologies used by computing such as virtualization and utility-based pricing are not new (21a).

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Cloud computing is also similar to Grid computing because it also coordinates networked resources to achieve its objective. Cloud computing is similar to Grid computing in that it also employs distributed resources to achieve application-level objective. Although the concept is not new, the real innovation of cloud computing emanated from the way it provides computing services to customers (22). However, cloud computing takes one step further by leveraging virtualization technologies (21b). Cloud computing can also be compared to utility computing since it provides resources on-demand and charge customers based on what the one uses and not flat rated. Utility computing represents the model of providing resources on-demand and charging customers based on usage rather than a flat rate (21c).

Virtualization which is the base of cloud computing, it is a technology which existed in thought with details of physical hardware and provides virtualized resources for high level applications. It usually uses a machine called virtual machine (VM) to provide services. Virtualization uses a software called hypervisor to manage cloud computing. With it SME's need not install any physical infrastructure which are required before one could access data processing and storage the business need, allowing the business to stay focused and concentrates on their core capabilities. IBM during the 1960's to better utilize mainframe computing, virtualization allows the computing power of a single machine to be sub-divided into a smaller virtual machines by permitting a single piece of hardware to run multiple operating systems or multiple sessions of the same operating systems. This allows end users to share the same machine while giving the appearance that end user's application was running on separate, dedicated machine. (23). The technology allows servers and storage devices to be shared and utilization in increased application can be easily migrated from one physical server to another. (24).

Knowing that cloud computing is not an entirely new technology SME's should not panic migrating into it. The information of businesses could be stored internally to prevent fear. The present lack of standards, combined with the fear of present technology growing obsolete all too soon, is what discourages most business establishments from adopting cloud computing technology. (http://mobiledevices.about.com/od/additionalresources/a/cloudcomputing).

SME's must also bear in mind that to have a well-used technology and be cost saving, they need to know their business, access the people involved to the base before they can choose the technology measures to close the gap. In the past technology solutions required much investment using large skilled men to manage it; now technology driven especially with cloud computing allows software to be selected, used and paid for as-you-use on the internet. It is now easily used at low cost.

VIII. THE RELEVANCE OF IT SERVICE IN SME'S LIFE

Since the inception of research on SME's the sphere has confirmed that SME's are engines of growth in every nation. Therefore, there should always be new ways that can improve them to attain higher height; this can be done through the use of technology which the use of IT is the route. As to whether SME's really need IT services this research came across a survey explored by Reza Schandi et al; on "what were the reasons behind using cloud computing". In summary is confirmed that they really need IT services because it increases computing capability and provides greater IT efficiency hence SME's need to migrate into cloud computing. It further stated that SME's have planned to use cloud computing for new business operations, making use of business agility in cloud computing.

This research wanting to go further into whether SME's really need IT services, planned to know from the environment of SME's because every business needs to makes changes based on its Internal and External factors that affect its performance. These factors affect the business either in a positive or a negative way. In this regard the business needs to emphasis rightly on those that affect it positively in order to outweigh those that affects it negatively.

IX. SME'S INTERNAL AND EXTERNAL ENVIRONMENT

SME's Internal and External Environment and how they affect the use of IT this research mentions below. The Internal Environment are the CEO's (managers), employees, culture and financial changes. The following are the immediate Internal Environment:

A. The Protagonist of SME's CEO's

Most SME's CEO's as sole proprietors are also the managers of the organization so need to perform all the managerial functions as in planning, organizing. Staffing, leading and monitoring. Considering this huge task managers need to perform this paper affirms that SME managers' need intensive training and use of IT to aid them perform their task efficiently and effectively, again IT provides managers with critical data to make sound decisions, since miscommunication can easily spell disaster and cause the company to either make profit or have a drastic loss. As stated by Domenico Consoli that for good and effective performance of an SME, they need ICT services (25). Even though many researchers are of the view that the need for the use of IT services lies on the owner of the organization.

B. Employees

For a business to run efficiently and effectively employees should also be provided with IT services to help run the day to day activities of the firm. Employees are always confident, flexible and mobile when they have IT services at hand when delivery services. It helps them give responses to correspondence quickly and serve the businesses'' customers with speed and manage them well. IT services also helps employees to be accountable to their bosses on targets they set. for this reason employees always endorses the use of IT. As stated by Attewell and Love et al., employees will be supportive of a new IT technology, if relevant trainings are made available (26). SME's External environments are its competitors, government, suppliers, customers, wholesalers and retailers.

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The external environment of the business is always hard to control so the business needs to be tactical in its dealing with them.

C. Competitors

Competitors are every business' rivals, they always find strategic ways to beat its counterpart so in order for SME's to gain competitive advantage over its rivals, they should resort to the use of Information technology which allows the use of internet to fish out for information from various parts of the world on how to be innovative to aid managers gain a better understanding of their routine, since it is up to management to get an adequate infrastructure to satisfy its organization's strategic objective. With the use of IT SME's can take advantage of ERP software, which allows them to integrate management information within and outside of the organization.

D. Government

Since SME's are engine of growth in every nation the government can accelerate their development by taking initiatives to aid SME's in their establishment in a form of financial and non-financial grants, It can also help SME's in promoting their product in an innovative way building their capacity to make more profit for their sustainable development, almost all of these are IT and internet based which involves filling of forms etc. It can also pass a law that will affect the SME's without their knowledge. For these reasons SME's must adopt IT.

E. Suppliers

SME's who deals in goods can track products that sells best and always order ahead before suppliers run out of goods, this way the manufacturers are also able to satisfy their customers preferences. Manufacturers also use IT to find suppliers prices of materials they need and how to get the best of them online to save the cost of going round in search for them. Suppliers in the technological world also use this means to advertise their goods linking the businesses and its suppliers together.

F. Customers, Wholesalers and Retailers

Now development is driven by the accessibility of the internet which helps companies deliver their services through electronic transactions, delivery of digital information, goods and services. This means that, before a business can stay competitive it needs to get abreast with the use of IT when dealing with Customers, Wholesalers and Retailers since they enjoy and sell the organization's products and services. In today's world e-business is the order of the day. Businesses who owe the largest share of Customers, Wholesalers and Retailers are IT and internet oriented which allows them to trade globally. E-business has been seen as a broad generic term for the development of strategies for firms to use the internet. (27).

X. HOW SME'S CAN MIGRATE INTO CLOUD COMPUTING

A. Need for a More Concerted National Effort Led by Government and State Bodies

Considering SME's position in every economy and their sustainable development, there should be the need for a more concerted national effort led by Government and State bodies to support SME's who plan to migrate into Cloud computing. The reason being that, today's quest for knowledge and development are based on technology. Failure for its implementation jeopardies or limits a nation's success, since technology is associated with innovativeness and essential tools for a speedy development of nations.

The Governments can bring this to pass by giving awareness of the preparatory steps SME's should undertake to ensure efficient migration into cloud computing. Thus, giving awareness programs and training on IT (the importance and benefits of using the internet) to SME's CEO's and employees for them to be abreast with time. This can aid them to take advantage of innovative free applications and trade secrets online that they should pay for when not in touch with technology for a rapid development of their businesses.

B. Should be Studied as a Literature in Academic Institutions

Within the academic institutions and communities, a greater focus needs to be placed on developing a literature base which is specific to cloud computing adoption in SME's. Therefore, measures should be put in place by Governments and stakeholders should facilitate, support and strengthen the mechanisms needed for the incorporation of the study of cloud computing into academic institutions' (both public and private) syllabuses and supply the necessary infrastructure it takes for its successful implementation and study. With this individuals who are potential SME owners, managers and employees will be equipped with knowledge on technology ahead of time for the development of their nations.

C. Uninterrupted power supply

For SME's to successfully migrate into CC, the Government where such SME's belong to should partner with developed countries, public and private sector infrastructural providers and make efforts to provide an uninterrupted power supply since it is the basic supporting mechanism that can aid CC' use. Any failure in the supply of power will lead to unavailability of all the process. Electricity failure also affects economic activities particularly the industrial and production sectors, which can be said to be a surviving factor of any SME.

D. Broadband Speeds Availability of Network

There should also be a concerted Broadband speed availability of network on national basis, without which SME's cannot migrate to CC since it usage is based on network infrastructure or the internet. Migrating to CC and getting use to IT will help SME's be on the web always to get into contact with new opportunities and markets to stay competitive. It will also aid them have the knowledge on how to protect their properties example their web page and products they advertise since some of the SME's do not have knowledge on search issues and loose huge sums of monies they could claim on use of their patent by others and vice versa.

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XI. CONCLUSION

Today's advancement of economic globalization, technology innovation the driven force of development and its adoption and the competitive nature of satisfying customers desires and wishes, cloud computing has become a must to aid businesses become innovative, thus specializing on their core competence, leveraging on the smart ways and use technologies which would allow them hire some of the things that aid their set up move on and increase productivity for their development. Cloud computing provides IT services for businesses in a unique way absorbing the pressure of funding for IT equipments and how it would be manned. This means cloud computing is low cost and convenient to use since the maintenance of equipments are also manned by its providers.

Lack of access to finance possess a serious problem for SME's; to help bridge this gab SME's should use their initial capital on things they propose to do and do it best to stay competitive globally and gain prosperity for its national development. This can be gained by investing in the adoption of tools and technologies that deliver efficiency and cost saving. Their actions to make the right technology evaluation and its implementation must be considered carefully hence introducing Cloud computing. SME's quickly should adapt to cloud computing since it can aid their development through diverse means, they have also the power to access their application and data from any place at any time. CC is not an entirely new technology since virtualization is its bases, this means SME's should not panic to migrate into it.

At this stage Governments should help SME's to be able to migrate into CC and enjoy its benefits for a sustainable development by teaming up with other State bodies to create awareness of CC and organize training programs for CEO's and employees of SME's, in addition CC should be studied as a literature in academic institutions, there should be an uninterrupted power supply by Governments liaising with public and private infrastructural providers and finally provide a broadband speed availability of Network. Then actively, SME's can be abreast with time using technology for its sustainability and the nation's development.

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