

Fostering Innovation, Integration and Inclusion Through
Interdisciplinary Practices in Management

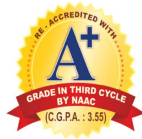
Fostering Innovation, Integration & Inclusion through
Interdisciplinary Practices in Management

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ABSTRACT

Cloud Computing means the data and/or software is hosted on remote servers (i.e. located in place other than on local servers) and data is accessed, modified, retrieved using internet (visualised as a Cloud). Financial Management greatly relies on information for its investment, financing and dividend decisions. It is no wonder that usage of technology for better and quicker decisions in financial systems have resulted into innovative blend called as "Fintech". On the similar lines we see that "Cloud Accounting" is another portmanteau integrating the concepts of traditional accounting systems with internet usage for combined benefits. This paper is aimed at enhancing the comprehension of cloud computing and its role/application in financial management and accounting. The paper also aims to generate an understanding of the issues, challenges and potentials while managing such integrations. The facts and information mentioned, which are utilised to analyse and derive conclusions are available in form of featured articles and news articles in various websites. Thus analytical research methodology (based on analysis of secondary data) is applied in development of this paper. The finding of the paper focuses on the role played by cloud computing in financial management and accounting. It also highlights the future of this fusion considering the issues and challenges that need to be addressed. Time and Finances are limiting factors in conducting the study. The study is majorly based on the secondary data.

KEYWORDS: Cloud Computing, Fintech, Cloud Accounting

INTRODUCTION

"Every once in a while, a new technology, an old problem, and a big idea turn into an innovation"- Dean Kamen, Inventor of Segway. This quote beautifully captures the essence of innovation. Scientific discoveries add to the treasure of existing knowledge. Humans have an unquenchable thirst for knowledge. When this acquired knowledge is applied, we are quick to recognise the scientific manifestations that occur in form of inventions and innovations. Basically we applaud and adapt to anything what eases our labour. Some of these inventions change a lot for us - our behaviours, our lifestyle etc. For example vehicles, computers, internet, and mobile phones etc. There is both vertical as well as horizontal integration of technology. "Information technology and business are becoming inextricably interwoven. I don't think anybody can talk meaningfully about one without the talking about the other".-Bill Gates, Principal Founder of Microsoft

Corporation. Truly, the attitude of businesses in adoption of technology is no more casual. The organizations are increasingly passionate about their investment in Information Technology and its leverages in their business strategies. This is no longer confined to large corporations. One of the important factor of this inevitability and urgency of integration is the generation of current-working population of millennials. "Millennials, and the generations that follow, are shaping technology. This generation has grown up with computing in the palm of their hands. They are more socially and globally connected through mobile Internet devices than any prior generation. And they don't question; they just learn." - Brad D. Smith. Ex-CEO, Intuit. Rightly enough, as this is the generation which witnessed the rise of cell-phones and were exposed to internet and services at a much younger age for their personal purposes. "The workplace has become a psychological battlefield and

the millennials have the upper hand, because they are tech savvy, with every gadget imaginable almost becoming an extension of their bodies. They multitask, talk, walk, listen and type, and text. And their priorities are simple: they come first.”-Morley Safer. As per Dell and Intel Future workforce study conducted in 2016 says that about 82% of millennials believe that workplace technology would influence them when deciding to accept a new job.

Whether it is an interview through conference call or bring your own device (BYOD) or work-from home or attending live sessions of discussions with top management through video conferencing, communication is no longer confined to a written email or orders and approvals through intranet software. Companies now have their dedicated apps and identities are digital. This is possible due to technologies such as cloud computing. *Cloud Computing* means the data and/or software is hosted on remote servers (i.e. located in place other than on local servers) and data is accessed, modified, retrieved using internet (visualised as a Cloud). Google apps is one of the best examples of Cloud computing. Apps can be downloaded from it simultaneously on multiple devices.

It is only little wonder that Financial and Accounting domain is forefront in utilization of such a technology that has an immense potential and possibilities yet to be discovered and fully exploited to use.

Objectives

1. To study the role of cloud computing in Financial management and Accounting
2. To study the current scenario and issues, challenges faced by Financial and Accounting arenas in integrating cloud computing.
3. To obtain an insight into potential and possibilities of cloud computing in financial management and accounting.
4. To suggest measures for gradual and safe adoption of cloud computing for businesses willing to integrate cloud computing.

Methodology

The study for this paper is made using secondary data. The facts and information mentioned, which are utilised to analyse and derive conclusions are available in form of featured articles and news articles in various websites. Study materials of professional institutes were referred for better comprehension of concepts. Thus analytical research methodology (based on analysis of secondary data) is applied in development of this paper.

Limitations

This study is majorly based on secondary data. The facts and concepts have been corroborated to the extent possible by referring other articles. Time for intensive study and finances to get authentic material and guidance has been the limiting factors.

Cloud Computing: As seen in the introduction, cloud computing basically relies on use of internet. The user in most cases has no information of the location of server where his / her data is stored. At the same time, multiple users can use the services or download apps stored in one location. This is termed as multi-tenancy. Factors like multi-

tenancy and scalability may appear as deterrent. However these factors actually make it more attractive to organisations and users alike. Cloud Service providers (CSP) have to ensure the security compliance of clouds on physical facility. However the cloud users have maximum risk responsibility. But this is not unique to cloud services. There is a mutual understanding about risk responsibilities between users and providers which are agreed upon in service level agreement (SLA). Most importantly the organisations benefit in cost consideration by shifting to clouds because in cloud computing it is “Pay as you go” which is paying for what is needed. Large organisations may opt for private cloud which may be suitable to their volume of operations.

Financial Management: Financial Management is a discipline that is concerned with managing the money resource and includes activities like planning, organizing, controlling and monitoring this resource for the achievement of overall organizational goals. Financial Management greatly relies on information for its investment, financing and dividend decisions. Traditionally Financial management was considered to be only concerning itself with profit maximization. However realizing the unsustainable nature of this objective in long run, wealth maximization emerged to be a better objective.

Role of cloud computing in financial management: Gone are the days when clouds were associated with plain storage of data or sending emails. Now CFOs world over use real time data to take and communicate decisions quickly. Also it is useful to continuously monitor and manage the financial information. By utilising cloud features the finance manager can create alerts to respond to global changes, and also design reports. Even scrapping these features when not necessary is encouraged. In an in-house management of IT infrastructure, this would mean permanent investment even for an irregular event of huge data consumption. If the organizations are adopting cloud computing, can financial services sector be any behind? The usage of technology for better and quicker decisions in financial systems has resulted into innovative blend called as “*Fintech*”. *Fintech* also includes crypto-currencies like Bitcoin, Ripple etc. Wealth management, lending-borrowing, money transfers, retail banking and investment banking etc. services are dispensed on the internet by both banking and non-banking financial companies. Cloud Financial Management is touted as an emerging battleground in itself for CIOs and CFOs of large multinationals and financial industry stars. It is recognized that more cloud capacities would be required in future to meet the growing usage of services like Software as a service (SaaS), Function as a service (FaaS) etc in the field of financial management.

Accounting: Accounting is understood as a process of recording transactions in a systematic fashion that includes recognizing, treatment and presentation of transactions and final reporting. Accounting is a crucial exercise whether the business is small or large. It is important to maintain historic records for forecasting also. Thus we see that accounting forms important basis for financial management. Taxation laws of the country, various authorising and governmental agencies require that organisations maintain systematic accounts. Even one man business benefits from good accounting practices as accounting aids decision making.

Accountancy or accounting is a discipline in itself which has its set of rules or standards that may differ a bit as per local customs and locations of different nations.

Role of cloud computing in Accounting: “Cloud Accounting” is a portmanteau integrating the concepts of traditional accounting systems with internet usage for combined benefits. While transition from manual accounts to digital accounting was considered transformational, cloud computing is step ahead for the organizations in entrusting their data resource to cloud servers. It offers convenience to the users to access data from various locations. For instance we see that travelling salesmen of an organization can use barcode and mobile devices to immediately capture the sales, the record generated simultaneously also alters inventory available with him. He is no longer required to report back to office just to submit his daily records. The back office also obtains immediate reports over internet (read cloud) and can proceed with their further activities. Thus we see that it is time saving, and cost effective. It is also scalable. This means if the demand increases, the CSP shall be asked for additional capacity. This is the flexibility offered by cloud services. The CSP in turn can commence their load balancing activity. This is how scalability works in the cloud accounting scenario. Usually SaaS and PaaS (Platform as a service) is used in case of accounting apps. Again large organizations would prefer private clouds over public clouds as per their volumes, security concerns and extra features offered by cloud providers.

Current Scenario- Recent trends⁴: It is very obvious that usage of cloud computing is growing across all functions in an organisation and also across the industry. Here are some statistics on usage of cloud by users and organisations for financial system and accounting.

1. As per Forbes, cloud computing is expected to make a growth from \$67B in 2015 to \$162B in 2020 securing a compound annual growth rate (CAGR) of 19%. 74% of Tech CFOs had said that cloud computing will have the most measurable impact on their business in 2017.
2. According to the Accenture 2017 Global Risk Management Study, on implementation of cloud in banking industry, 82% of surveyed banking respondents are using cloud in some form. 38% of these banking respondents look to cloud to drive greater operational efficiency and productivity.

If we observe the trends, we see growth in cloud services and solutions and in demand of hybrid clouds. We see the cloud storage is getting cheaper due cloud cost wars. But there are increasing security breaches being witnessed, though which are being addressed immediately. More IoT connected devices like cars, electronic appliances are being favoured by consumers. Efficiency of developers is rising as they can address their applications. Cloud based container systems (Docker etc) are very popular for backend.

Issues and challenges faced by financial and accounting arenas in integrating cloud computing³.- As cloud computing is still growing, the issues and challenges come to surface. Certain important issues are:

1. Security Issues- As it is storing data and running your program on some other entity's drive may seem risky to organizations. Sharing of resources may invite risks like

phishing etc. Security is the number one concern of cloud users.

2. Interoperability concerns- This is a major concern. This basically means the compatibility between existing architecture and prospective. Even in clouds, different vendors have different and mismatching systems. So switching is not easy. The complexity of integration may look more cumbersome than costs.
3. Cost Benefit analysis- The pay as you use model may look very attractive. Sometimes however the economics of cost saving may fall flat. Migration and integration cost may be higher for Hybrid clouds. The cost analysis in itself is more complicated in case of clouds.
4. Service Level Agreements (SLA): Different cloud options (SaaS, IaaS, PaaS) need to have different SLA specifications. Cloud is a self-service mechanism. However it is expected to be served in automatic fashion and at a quicker pace. At times users request may not be entertained if it is beyond SLA. As such SLA needs to be more flexible to user's demands and use customisation features also.

Potential and possibilities presented by cloud computing integration in financial management and accounting: It is now commonly said that “Data is the new oil”, Big Data is touted as the next big thing. Cloud computing and Big Data are actually complementary to each other.

Clouds are evolving to process these technological advancements. It is predicted by industry stalwarts that demand for hybrid clouds (hybrid between public and private clouds) will be on rise. Also, usage of container like the Linux containers would be extensive for the developers for creating new stacks to aid micro-services development.

Measures for gradual and safe adoption of cloud computing for businesses willing to integrate cloud computing²: The benefits of cloud far outweigh its limitations. A new business would definitely benefit by investing in cloud computing at very outset. An established business can also shift to cloud computing gradually. It is necessary to understand how this switch be less knee jerk and more calculated integration. Some measures that can be applied are:

1. Taking baby steps: Clouds are scalable hence the organization can request addition of features later. The usage of cloud facilities by employees must be monitored. Gradual adoption and continuous review is essential.
2. Ensuring internet availability: It is no brainer that if the cloud computing facilities are to be used, internet availability must be ensured continuously. Hence internet with proper bandwidth and continued fast speeds are crucial.
3. Consideration of interoperability: In case of established businesses which maintain digital software's, it would be very essential to evaluate if shift to cloud would necessitate the change of existing software. This would prove very expensive. However some organizations make the move after a proper cost benefit analysis. In many of the instances the existing software's are obsolete and loose relevancy and that necessitates a change anyway.
4. Security: Encryption of data on clouds can prove very vital for security. Apart from that it is important to study service level agreement to understand various security features offered like firewalls. Various access privileges and overriding controls to top management must be

examined. This is important as the server's physical location and team of CSP may be in another time zone and there could be blocking of database due to perceived threat. As far as possible backing up data and proper recovery plan is also essential safeguard.

5. Preference of type of cloud: As iterated earlier, as per budget and volume of transactions an organization must make a choice of private or public clouds. Usually small and medium sized of enterprises can be easily catered to by public clouds where as private clouds suit large organizations.

Implications of the study

Through this paper an attempt has been made at comprehending cloud computing and its role in financial management and accounting in simple language. It is observed that when proper caution is exercised, risk can be reduced to an acceptable level. This is inevitable and tolerated as risk cannot become zero. Hence it is expected that more and more enterprises would innovatively integrate cloud computing into their financial and accounting systems considering the huge benefits that can be reaped.

Conclusion

World has definitely become fast-paced. Technology itself undergoes a faster rate of obsolescence in today's world. We are quick to discard the old in favour of new, improved and better things and methods. Cloud Computing has dynamic applications and is here to stay. Needless to say future of

cloud computing is bright. The caveat is the issues such as a major issue of interoperability. However not all organizations will face all the challenges. And many of them are manageable. Considering potentials and possibilities, it is sensible for organizations to adopt cloud computing in financial management and accounting and gain the benefits of the fusion of these prodigious disciplines.

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