Social Media and Cloud Computing: An Empirical Study Based On E-Commerce Organizations of Delhi NCR

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Abstrac:t- Information is an essential source for organizations, industry and economy as well. Focus and priority has been shifted from traditional production factors-capital, manpower, material etc. to information first. The objective of this paper is to highlight the co-relational sides between cloud computing and social media towards the enhancement of the relation between E-commerce organizations and costumers. Now a day's right and on-time information is must for any organization, which is being possible to access through cloud computing. So cloud computing has become as a key to success for these firms. E-commerce organizations heavily depend upon social media as the cloud computing facilitates the operation of the E-commerce business in the respective organization through timely and accurate data. It further expedites the reach of wide range of customers globally. The paper is based on the impact of social media and cloud computing on E-commerce industry. Data has been analyzed through statistical tools like average, frequency analysis and chi square test etc. SPSS-19 software package has been used to find out data analysis. Based on the analysis a conclusion has been drawn that cloud computing and use of social media in E-commerce organizations is the key for the success of the same.

Keywords: -- Cloud Computing, Social media, E-commerce.

I. INTRODUCTION

With the rise of vast social networking platforms, the customer is no longer limited to a passive role in his or her relationship with a company. In addition to having more information about competitive products available anywhere on mobile devices, customers can easily express and distribute their opinions to large audiences, and companies are likely to find it increasingly difficult to manage the messages that customers receive about their products/services [1]. The Internet is becoming an increasingly vital tool in our everyday life, both professional and personal, as its users are becoming more numerous. It is not surprising that business is increasingly conducted over the Internet. Perhaps one of the most revolutionary concepts of recent years is Cloud Computing [2]. Social media is nothing but web based and mobile technology that facilitate effective communication. The term cloud computing implies the use of internet with the help of computing machine-computer. The usage of cloud i.e. internet and computing i.e. electronic devices and reaching to the customers through social media has caused significant changes in the way of communication in today's grooving competition arena of E-commerce Industry. The cloud computing and social media seems to acquire pivotal position in the tools of E-commerce

to interact with customers and taking advantages of technological changes. Cloud computing technology enhances the business due to its great revolution and adoptability by the people and client around the business enterprise.

This paper is keen to find the significance of cloud computing and social media in the said industry. As such this paper examines how the Cloud computing and social media can enhance the relationship of the E-commerce organizations with their customers.

II. REVIEW OF THE LITERATURE

A. Cloud computing:

Cloud computing is broken down into three segments: "application" "storage" and "connectivity." Each segment serves a different purpose and offers different products for businesses and individuals around the world [2]. Furht and Escalante (2010) [3] highlighted that the Cloud Computing is a new style of computing in which dynamically scalable and often virtualized resources are provided as a service over the Internet. Cloud computing represents both the software and the hardware delivered as services over the Internet. It is a new concept that defines the use of computing as a utility, that has recently attracted

significant attention. In Figure 1 below it is illustrated the computing paradigm shift on the last half century through six distinct phases: [4]

- ♣ Phase 1: people used terminals to connect to powerful mainframes shared by many users.
- ♣ Phase 2: stand-alone personal computers became powerful enough to satisfy users' daily work.
- ♣ Phase 3: computer networks allowed multiple computers to connect to each other.
- ♣ Phase 4: local networks could connect to other local networks to establish a more global network.
- ♣ Phase 5: the electronic grid facilitated shared computing power and storage resources.
- ♣ Phase 6: Cloud Computing allows the exploitation of all available resources on the Internet in a scalable and simple way.

B. Social Media:

The term Social Media refers to the use of web-based and mobile technologies to turn communication into an interactive dialogue. Kaplan and Haenlien (2010) [5] define social media as "a group of Internet-based applications that build on the ideological and technological foundations of web and that allow the creation and exchange of user generated content. Kietzmann et al (2011) [6] illustrate that the best way to define social media is to break it down. Media is an instrument on communication, like a newspaper or a radio, so social media would be a social instrument of communication.
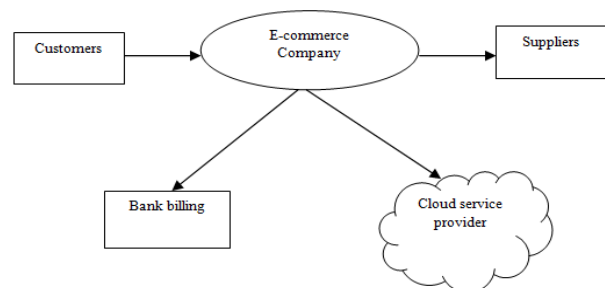
C. E-Commerce:

One of the most weightily changes currently emerging in the world of business is the introduction of EC. The impact of EC on shopping, procurement, customer services, and business collaboration as well as on delivery of diverse services is so dramatic that almost every organization is affected. EC is increasing in importance and significant levels. This will make a direct and indirect horizon relating to the ways, thoughts, and views of doing business everywhere around the world [7]. The term E-commerce refers to the use of electronic information technology to conduct business transactions among buyers, sellers, and other trading partners. It combines business and electronic infrastructure, which allows traditional business transactions to be conducted electronically, ignoring the physical or geographic boundaries separating them [8]. The scope of E-commerce reaches from simple web presence to shared business processes connecting different organizations. It involves the use of information and communication technology (ICT) in making commerce between customers and organizations, organizations and organizations, customers and customers [9]. Above

information clearly having focus on buying and selling process of product and services which includes transportation aspect of the product and services too which linked with the end user of the product and services. As far as "e" is concerned it is electronic. So meaning of E-commerce is electronic commerce means buying and selling process of product and services on a large scale, between different places or communities with the help of electronic media. This electronic media is nothing but use of internet in the business process.

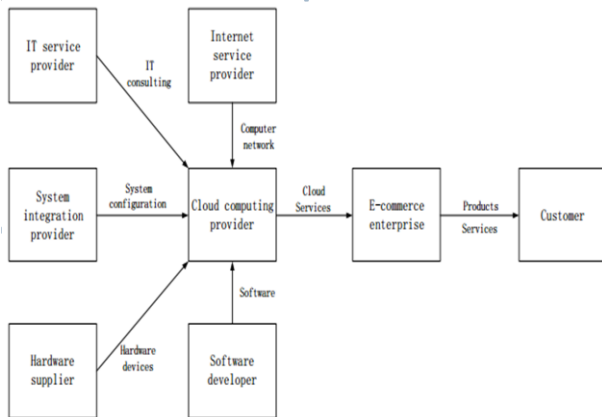### D. Based on Cloud Computing E-commerce Models:

The cloud computing is companied with the economic and commercial community, based on Cloud Computing E-commerce models is the specific application in the economy, commerce and management, this model finally will lead to the significant change of enterprise organization, the profits, marketing management and knowledge management, this model is called E-commerce model. It is a variety of entities that have business activities capability and demands. To cross the time limit in the role of improving business, making good use of the cloud technology application in the business field, it is necessary to take effective use of resources and to reduce the costs. This will cause enchanting enterprise's kernel competitive power and eventually finishing goods and services trading. The new trend of enterprise use E-commerce service is based on the electronic outsourcing of cloud computing technology. Enterprises only need to access the software libraries that build by the services provider, then the enterprise will get the management processes and commercial database information they need, there is no need to solo invest and establish the whole internal software and procedures, the cost is relatively low, it only need to pay the rent. In fact, electronic outsourcing is a form of E-commerce that "changes by the demands" [10]. Figure 1 Illustrate E-commerce activity participants in the Cloud.

Fig.1. E-commerce Activity Participants after Adopting Cloud [11]

E. Cloud computing: Greater Efficiencies for Business:

Perhaps, the biggest benefit of the cloud computing is its ability to help businesses and organizations to increase their productivity and reduce their cost of operations and maintenance while providing new products to their customers [12]. Cloud computing has ability to offer efficiencies enhancement and collaboration of people and content what E-commerce organization offers. It is cloud computing that minimizes the risk as well. Risk minimization is being achieved by this technology through usage of this technology in the organization and with fast and shatter former models of time to market. Here technology is being democratize and helps to all stakeholders of the E-commerce organizations such as clients, owners, staff of the organizations etc. In many ways, cloud technology is an unstoppable revolution because it advances the performance of the business. Wang (2013) [13] illustrate that when the cloud computing is migrated into E-commerce industry; one cloud service provider can supply almost all the necessary products and services to an E-commerce website. As a result, the structure of E-commerce industry chain will be changed (Figure 2).

Fig.2. E-commerce industry chain based on cloud computing [13]

F. Social computing can fundamentally change enterprise relationships with clients, partners and staff:

Better business innovation needs can be done better by product development, better customer care and quality process. Put it differently social brings to organizations a new way of managing business. There is a heavy organizational change that is to be done to make sense of the information gathered and the content shared through the social web. There was a time when structure of knowledge use to predefined through knowledge management systems, but now it is no longer predefined in today's time. It is

coming time that cloud computing be the only option to cope with the growth of digital info [14].

III. METHODOLOGY

It is possible to clarify the methodology of this work through the following main features.

A. Problem Identification

The research problem can be identified through raising the following two questions:
(1) Does organizational performance depends upon cloud computing and social media in E-commerce Industry?
(2) Does cloud computing and social media helps in managing customer relationship management CRM?

B. Hypothesis

It is possible to answer the questions faced in the research problem through the following hypotheses:
Hypothesis 1:
H0: Performance of Organization does not depend upon use of cloud computing and social media.
H1: Performance of Organization depends upon use of cloud computing and social media.
Hypothesis 2:
H0: Use of Cloud Computing and Social media does not help in managing CRM.
H1: Use of Cloud Computing and social media helps in managing CRM.

C. Importance of research

The important of this research arises through highlighting a very important sector in the society that is Dot Com Organizations. That is due to its major services that clearly appear on their way to do marketing. Furthermore, E-commerce organizations websites can be generally considered as an important source of information ton which the customer may seek his need. This will moreover yield to attain higher speed in selecting the convenient products or services according to the customer desires, and according also to the available needs at the respective companies. Thus, under the atmospheres of globalization and high competition all the organizations, including E-commerce organizations, seek to promote their services, especially the electronic services, aiming to attain outperformance. Therefore, they assert to achieve high quality of the relation with the costumers that could be easier through Merge Cloud Computing with the Social Media.

D. Objectives

This paper is keen to achieve several objectives, amongst these are:

1- To explore the Significance of social media and cloud computing in E-commerce industry.

2- To know the impact of social media cloud computing in context of organizational performance.

3- To explore the significance of social media and cloud computing in E-commerce industry from the view point of customer relationship management CRM.

E. Samples

In order to complete the practical side of this paper, and also to examine the presented two hypotheses, a specific "Questionnaire" has been formulated. The data analyses were achieved through the respective said questionnaire, based on the Statistical Package for Social Sciences SPSS-19. A list of E-commerce companies has been taken from internet randomly and out of 100 organizations (universe), 30 sample organizations had been selected based on probability sampling technique i.e. simple random sampling technique. Within the selected 30 organizations four employees from each organization has been taken on convenience basis to make them respondents. Amongst these organizations are: Jabong.com, Snapdeal.com, Indiandailydeals.com, Shopclues.com, Yebhi.com, Policybazaar.com, Easycabs.com, Imagesbazaar.com. The rest of these E-commerce organizations have not been listed in this paper due to space limitation. More details are in [7].

IV.   ANALYSIS AND DISCUSSION

This side discusses the results achieved, through analyzing the data gathered from the handled E-commerce organizations. Describe these results in statistical manner in order to examine the presented hypotheses.

Table -2- User Response Cross tabulation

Count	Response			Total
	Neutral	Agree	Strongly Agree	
User Group that does not believe in technology much	2	9	1	12
User Group that believe in technology	0	0	108	108
Total	2	9	109	120

Source: SPSS results

It is quite clear from Table -2- that the majority of Subtotal respondents agreed about the importance of the use

of cloud computing and social media technology in the E-commerce organizations.

V.   HYPOTHESIS TEST FINDINGS

Recalling Hypothesis 1 of Subsection III-*B*, the pertinent test result is exhibited in Table -3.

The results from table -3- indicator that the null hypothesis has been rejected. Since Sig<0.05 H0 is rejected which means there is no association or: Performance of Organization depends upon use of cloud computing and social media.

Table -3- Chi-Square Tests

Count	Value	DF	Sig.
Pearson Chi-Square	108.991[a]		.000
Likelihood Ratio	66.646	1	.000
Linear-by-Linear Association	96.739	119	.000
N of Valid Cases	120		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .20.

Source: SPSS results

Table -4- Chi-Square Tests

Count	Value	DF	Sig.
Pearson Chi-Square	46.957[a]		.000
Continuity Correction	37.101		.000
Likelihood Ratio	25.269	1	.000
Linear-by-Linear Association	46.565	119	.000
N of Valid Cases	120		

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .50.

Source: SPSS results

Recalling Hypothesis 2 of Subsection III-*B*, the pertinent test result is exhibited in Table -4.

As per the table -4- There is high correlation between use of Cloud Computing and Social Media towards helping in target market and managing costumer's relations.

VI.   CONCLUSIONS

Based on the secondary and primary research author would like to conclude that it is the impact of social media and cloud computing that has been facilitating efficient use of information technology and enable E-commerce organizations to enhance their performance. Further authors would like to conclude that E-commerce organizations are generally overburdened by huge data of their global customers, and its proper management. Cloud computing is help in increasing efficiency of computing and better data analysis and management and service to customers. On the other hand it could be concluded that use of social networks by E-commerce organizations is very vital for the organization to market their product and services based on customer relationship management. It is cloud computing that facilitate prompt and accurate information to manage CRM.

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