**Report on**

Cloud computing and its impact on E-commerce Industry of Developing Economics

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**Abstract:**

**Cloud computing**, in terms of advanced thinking, has a tremendous impact on all walks of life, and e-commerce is no exception, which will bring businesses and customers new mode of experience and more efficient applications. Cloud computing has been one of the most popular topics on information technology. In the past years, cloud computing has become from a theoretical concept into the real applications in different industries such as developing business.

Cloud computing platform gives people the opportunity for sharing resources, services and information among the people of the whole world. In private cloud system, information is shared among the persons who are in that cloud. Presently, different types of internet based systems are running in Cloud Computing environment. **E-commerce** is one of them.

The purpose of this paper is to illustrate the importance of cloud computing to an E-Commerce business. This paper discussed how the traditional E-commerce businesses and industry were influenced by cloud computing. Finally, it concluded that only when the E-commerce enterprises involved cloud computing in **Developing Economics** and established the core competencies, could they realize the actual impacts on E-Commerce Industry.

Keywords: Cloud Computing, E-Commerce, Information Technology, Developing Business & Economics.

**Introduction:**

Cloud computing and E-commerce are two buzzwords now. They are popular because both of them are cost effective. Cloud computing saves the organization from huge cost of IT infrastructure. E-commerce allows continuing a business without buying or renting an entire shop. At present more and more company moving towards cloud.

“Cloud computing is the use of computing resources (hardware and software) that are delivered as a service over a network (typically the Internet)”. It is turning upside down the way we realize computation by enabling the use of storage, processing, or higher level elements such as operating systems or software applications, not by owning them and having them installed on computers that we own - but rather to use these resources simply as a service. Some experts evaluate, as a new business model, the effects of cloud computing is superior to e commerce. The development of e commerce makes more new competitive in the enterprises. It supplies the products and services through internet.

Cloud computing provide positive opportunities for e-commerce. Such as, it offers a synthetic platform for e-commerce transaction and e-commerce services, it is safer way to store data; Data lost can be recovered, provide higher capabilities of data storage, reduce the possibilities of data theft, mobile e-commerce can be connected with cloud. Cloud computing can be extremely beneficial to developing economics by reducing costs of investment in information and communication infrastructure (ICT). Companies can boost their businesses by getting access to the best business applications and infrastructure at a negligible cost. As a result there will be more job creations, improvement in government services, and they can be better competitors in the global market.

Current & Existing situation cloud computing:

For analysis current situation of cloud computing I select 4 country. They already started their economic development by using this important part of ecommerce industry.

I select particular industry also. According to do better use of cloud computing which country are making economic development, I analysis this.

Banking on the cloud in India:

Many new cloud computing providers opening their offices to provide the cloud hosting services for small and medium business firms/clients. But some are already popular in India, which are offering different types of cloud computing services like PaaS, IaaS and SaaS for reasonable and low prices.

Banknet has launched first ever survey in India on Cloud Computing in banking. This industry initiative is to understand the perspective of bankers on adoption of cloud computing in the Indian banking sector. Individual responses will remain strictly confidential.

However most banks in India are wary of the risks and are closely watching from the sidelines, waiting for clear answers to security, data privacy and regulatory issues. Few are simply waiting others to take the lead.   
  
There is also a growing interest for Cloud Technology in small-scale banks, RRBs & cooperative banks as they are not always able to make an upfront investment on core banking solutions. With cloud’s pay per use, the small banks won’t have to worry about investing in infrastructure & skilled manpower.

**List of Top cloud computing providers in India:**

* TCS – Mumbai
* Wipro Technologies – New Delhi
* App Point – Bangalore
* CtrlS – Hyderabad

China Cloud Computing on Telecom:

China is one of the biggest internets using country in the world. China has become one of the countries in the world enjoying the fast-growing cloud computing development in the recent five years. Chinese cloud computing market value is estimated to have continued to witness unprecedented year-on-year growth in 2013 and is likely to sustain robust growth next year. China Mobile and China Unicom announced the beginning of construction on two cloud computing parks with investment totaling 7 billion yuan (1.15 billion U.S. dollars) in southwest China's Guizhou Province.

China Telecom says the new cloud computing facility will serve enterprises through a mix of co-location and cloud-based services. The company claims it already has clients ready to move up to 120,000 servers to the new facility which, when completed, will house up to one million servers.

SAP AG (SAP) and China Telecom Corp. Ltd. (CHA) recently entered into a strategic partnership to expand cloud based offerings in the Chinese enterprise cloud market. As per the partnership, SAP will be providing its cloud portfolio services to small and large organizations in China by China Data Communication Corporation Limited (:CDC), a joint venture between SAP and China Communication Services which is a subsidiary of China Telecom Group.

Cloud Computing in Taiwan on basis education:

Taiwan’s cloud computing industry could be driven by the nation’s competitive advantages resulting from its geographic location, undersea cable construction and hardware manufacturing capability

Cloud computing is a new form of application that evolved after the Internet matured. Cloud Computing Industry Development Program” designed education cloud to maintain information technology in the field of cloud computing technology for the Students in the Taiwan University. An education cloud that would allow students access to teaching materials online, which could also keep teachers informed about the progress of their students. Cloud education Provides a user friendly, intelligent, lively, sharing, and interactive e-leaning environment among students, teachers and parents. It also does equal learning opportunity, online tutoring, social network, platform educational, and wiki online security.

Healthcare Cloud Computing in Turkey:

Cloud computing is a novel phenomenon that paves the way for provisioning of infinitely scalable, re-usable, multi-purpose, flexible, cost-saving, efficient and customizable on-demand information technology services and products. This paper aims at providing an analysis of cloud computing in Turkey by exploring the players and the domestic patterns of cloud system. As cloud computing is very new in Turkey.

Cloud computing is in the early stages of adoption by healthcare providers, but its popularity is growing in Turkey. Because meaningful data will be more readily available to healthcare professionals, the results can translate to more productive office visits, more accurate diagnoses based on trend data, and faster responses to patient emergencies.

Every state and many municipalities have established health information exchanges (HIEs), which are cloud-based information clearing houses that enable easy sharing of information among hospitals, physicians, health systems, and clinics. Dozens of service providers are building cloud HIE solutions, and many big pharmacy companies including Pfizer, Eli Lilly, and Johnson & Johnson are already using cloud computing to improve research and development in Turkey. Amazon, Oracle, and IBM have designed clinical research cloud applications specific to pharmacy, aimed at lowering the cost for developing new drugs.

In Turkey, Cloud computing increases efficiency for providers, lowers costs for healthcare facilities, and gives patients greater control of their health. Some of the security issues that should be considered by both Cloud service providers and their health care customers are role-based access, network security mechanisms, data encryption, digital signatures, and access monitoring.

**Methodology:**

This section is dedicated to identify the methods how we collected the data that we have used to conduct this research. We will explain about our data collection methods and the types of data that we will collect in our research. When conducting a research, it is vital to set the methods that are going to be used for knowledge acquisition. There are two main methods for gathering the required knowledge in the study. One is theoretical approach and other one is empirical approach. Theoretical approach consists of extensive investigation in the existing work and textual material and data. For example: Internet sources, different journals, publications etc. Empirical Approach consists of direct and indirect observation or experience. In this study we use the theoretical approach to obtain a comprehensive knowledge on the subject of cloud computing, its impacts on e-commerce, benefits and limitation. Empirical approach is being used to collect information about the current state of cloud computing in the country, the ICT infrastructure of the country, etc through indirect observation. There are two main data collection methods; quantitative methods and qualitative method. We used qualitative method mostly the qualitative data collection method is the best option for us to collect the required data and information in order to draw the best results. The required data for our research can be gathered via studying the literature review (the work of other researchers), observing the facts and the current on-going events and observations.

**Limitation/ constraints of cloud computing:**

Security and privacy:

The main challenge to cloud computing is how it addresses the security and privacy concerns of businesses thinking of adopting it. **Hacking and various attacks** to cloud infrastructure would affect multiple clients even if only one site is attacked, also privacy in the cloud is another huge issue. Companies and users have to belief their cloud service vendors that they will protect their data from unauthorized users.

Dependency and vendor lock-in:

One of the major limitations of cloud computing is the hidden dependency on the provider. This is what the industry calls “vendor lock-in” .it is difficult and sometimes impossible, to migrate from a provider once. If a user wishes to switch to some other provider, then it can be really painful to transfer huge data from the old provider to the new one.

Technical Difficulties and Downtime:

Definitely the smaller business will not enjoy having to contract with the everyday technical issues and will favor handing those to an established IT company.

**Reliability and Availability:**

Now cloud providers lack round-the-clock service. It is essential to monitor the service being provided using internal or third-party tools.

**Portability:**

It is another crucial problem of cloud computing. Portability is also good system for cloud. So without it, impossible doing cloud system.

**Performance and Bandwidth Cost:**

Cloud computing can save money on hardware but it have to spend extra for the bandwidth. So it is also big limitation for cloud computing to getting good result in E- commerce industry.

**Service Delivery and Billing:**

As if cloud computing system is running with huge data and backup file, it needs good service and comfortable billing system. Budgeting and assessment of the cost will be very difficult unless the provider has some good and comparable benchmarks to offer.

**Uploading Large Documents:**

Uploading large documents, files and pictures can take more extra time with cloud computing. This can be extremely problem of cloud system.

Data Transfers:

It can be extremely slow to transfer a large amount of data into or out of a cloud environment. So low data transfer is also major limitation of can be failure to cloud computing system.

Support:

Support can be a challenge with cloud computing. Many companies have a slow turn-around time to answer customer questions. Typically customers must search through online forums to find immediate answers. Without support it not possible to answer client problem. So it is great issue for cloud computing system.

**Solution/recommendation of cloud computing limitations:**

Security and privacy:

Before implementing this technology, everybody must know that cloud is submitting all the company’s information to third party cloud provider. This cloud system may put to business in to the great threat. So it is most sure that everybody and businessmen will be choosing right and a reliable provider to keep company’s data totally secure. These risks can be mitigated by using security applications, encrypted file systems, data loss software, and buying security hardware to track unusual behavior across servers.

Dependency and vendor lock-in:

Enterprise cloud users should look for a software vendor that knows how to support the different cloud providers with its API. It should also use the services of a software vendor that provides an abstraction layer between personal code and the cloud provider, suggested by Keidar.

Another strategy to avoid vendor lock-in is to keep implementations as "plain vanilla" as possible. This will reduce costs and complexities of switching to another platform.

Technical Difficulties and Downtime:

Everybody (such as person, company, and all cloud users) should keep in mind that all systems might face bad functions from time to time. Outage and downtime is possible even to the best cloud service providers. As a minor detail, also keep in mind that it might take several minutes for the cloud to detect a server fault and launch a new instance from an image snapshot.

**Reliability and Availability:**

Furthermore, we should remember that the whole setup is dependent on internet access, so any network or connectivity problems will render the setup useless. it is so important to best cloud computing system launching, reliable and available internet access. Network or connectivity all-time will stay for using cloud in the E-commerce business.

**Portability:**

Businesses should have the control of migrating in and out of the cloud and switching providers whenever they want, and there should be no lock-in period. Cloud computing services should have the capability to integrate smoothly with the on-premise IT.

**Performance and Bandwidth Cost:**

This can be a low cost for smaller applications but can be extensively high for the data-intensive applications. Delivering intensive and complex data over the network requires sufficient bandwidth. Because of this, many businesses are waiting for a reduced cost before switching to the cloud.

**Service Delivery and Billing:**

**Service delivery and billing system must be good for good cloud system. Increasing expert it person, to be done good service for customer. Also need good software for billing system to take and delivery customer demand.**

**Uploading Large Documents:**

**More need bandwidth speed for uploading large documents. Also need best internet connectivity.**

Data Transfers:

Data transfer need to other customer sharing data via cloud using internet. so it is important of bandwidth for this limitation.

Support:

Above all to getting best cloud service using network to be needed powerful backup and supporting technology and team within short time.

**Conclusion:**

The main contribution of this paper is an empirical application of the endogenous market structures approach to a real world phenomenon, the introduction another useful policy is the direct adoption of cloud computing solutions in the public sector (that, however, may generate legal problems for the handling of reserved data). We should remark that the adoption of cloud computing in the public sector generates gains from cost savings, but does not generate gains from business creation that characterize the adoption in the private sector of a general purpose technology which is not directly augmenting total factor productivity, but that is reducing the fixed costs of entry and production in the e-commerce. Further work may generalize this theoretical framework and the cost reduction process. The empirical part of the paper translates the impact of a cost reducing innovation on the world economy by e-commerce. Moreover, alternative methodologies for the estimate of the impact of cloud computing would be welcome to crosscheck the validity of our results. Beside our quantitative results, our main contribution remains in the description of the competitive mechanism through which cloud computing is likely to create a positive effect on business creation, GDP and employment.

**REFERENCE:**

1. Ovidius University of Constanta – Research paper by university faculties - www.univ-ovidius.ro

2. Khulna University of Engineering and Technology - Research paper by university students - www.kuet.ac.bd

3. Research paper by Chunling Sun – School of Information Science and Technology Heilongjiang University

4. Research paper by Danping Wang - Shanghai University of Finance and Economics

5. International Review on Computers & Software - Nov2012, Vol. 7 Issue 6

6. Journal of Software Engineering and Applications, 2013 - Published Online June 2013

7. www.itif.org/events/impact-cloud-computing-developing-economies

8. www.diplointernetgovernance.org/profiles/blogs/cloud-computing-opportunities

9. thomasdalejay.blogspot.com/2013/11/the-cloud-of-nations.html

10. www.academia.edu/3832983/Cloud\_Computing\_and\_E-commerce

11. www.enterprisecioforum.com/en/blogs/richa-pokhriyal/cloud-computing-impacts-e-commerce-indus

12. www.crunchyhub.com/advantages-and-disadvantages-of-cloud-computing

13.www.javacodegeeks.com/2013/04/advantages-and-disadvantages-of-cloud-computing-cloud-computing-pros-and-cons.html

14. www.cloudtweaks.com/2012/08/top-five-challenges-of-cloud-computing

15. www.cloudcomputingadvices.com/top-cloud-computing-companies-india/

16. www.banknetindia.com/ccloud.htm

17. www.kellyocg.com/Knowledge/Ebooks/Just\_What\_the\_Doctor\_Ordered\_-\_Cloud\_Computing\_for\_Healthcare/

18. www.sciencedirect.com/science/article/pii/S1877050910004527

19. www.prweb.com/releases/chinese-cloud-computing/market-trends-forecasts/prweb11375333.htm

20. www.news.xinhuanet.com/english/sci/2013-12/16/c\_132972604.htm

21. www.taipeitimes.com/News/biz/archives/2012/02/13/2003525316

22. www.superb.net/blog/2013/03/04/top-9-disadvantages-of-cloud-computing/

23. www.blog.softwaremedia.com/2013/07/advantages-and-disadvantages-of-cloud-computing-in-business/

24. www.linuxinsider.com/story/79417.html#sthash.YbIekfkc.dpuf

25. www.wantchinatimes.com/news-subclass-cnt.aspx?id=20130322000112&cid=1102