Gender Perception towards Adoption of Cloud Computing in Indian Banking System

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ABSTRACT

The banking business is going through a lot of changes right now. Customers now have control over their deposits, not the bank. As a result of customer demand, new market models are being developed. In addition to advances in social and household contexts, their usage of technology is creating market transformation.

Banks must update their business models and actively adapt to the new customer-driven economy. While combining a large volume of distributed market data and analytics, banks will be able to provide a consistent customer experience across divisions and regions. In order to change the financial system, banks would analyze it from the outside, from the viewpoint of the customer.

New techniques to raising earnings are required by the continuous improvements in banking. Banks can use cloud technology to promote creative customer services, foster amazing teamwork, and shorten time to market while enhancing IT efficiency. Cloud computing is gaining popularity in a variety of fields, including banking.

Keywords: Gender, Indian Banking System, Cloud Computing

1. INTRODUCTION

Cloud computing refers to the on-demand delivery of IT technology over the Internet through pay-as-you-go pricing, as opposed to buying, maintaining, and maintaining traditional data centers and servers. Instead, you can use a cloud provider to access infrastructure resources such as disk space, storage, and databases on an as-needed basis, such as Microsoft Azure, IBM cloud, Amazon cloud, and many others.

Banking is the business of dealing with money, including currency, credit, and other forms of payment. Banks can easily store excess cash and credit. Savings, certificate of deposit, and checking accounts are all available. In the basis of these deposits, banks make loans. These loans include, to name a few, home mortgages, company loans, and car loans

The banking industry is undergoing significant changes. Customers, not the bank, now have discretion of their deposits. New market models are being developed as a result of customer demand. Their use of technology, in addition to improvements in social and household environments, is causing market transition. Banks must modernize their business models and pro-actively adapt to this emerging customer-driven economy. Banks will be able to offer consistent customer experience across divisions and geographies while still integrating a vast volume of distributed market data and analytics. Banks would look at the financial system from the outside, from the perspective of the customer, in order to change everything. The progressive advances in banking necessitate new approaches to increasing profits. . Cloud technologies enables banks to improve innovative customer offerings, cultivate impressive teamwork, and increase time to market while improving IT efficiency. Cloud computing is becoming more popular in a number of industries, including banking.

Cloud banking allows banks to develop new opportunities and tools to distinguish themselves from rivals, as well as new ways for customers to access and use the bank's products and services. Banks that use cloud computing are well positioned to adapt to financial uncertainties, integrated global financial markets, and difficult customers. They'll use data to improve customer segmentation processes and create more centralized structures to meet customer needs. Banks, too, should increase their channel investments and distinguish themselves through superior customer service.

2. LITERATURE REVIEW

According to National Institute of Standard and Technology (NIST) "Cloud computing is a model which provides convenient, on-demand network access to shared pool of networks, servers, storage, application and services which can be rapidly provisioned and deployed with limited management effort or service provider involvement"(Vouk, 2008). Some of its major advantages of cloud computing are providing on-demand network access, resource pooling and measured service for business(Mell & Grance, 2011).

(Buyya, Yeo, Venugopal, Broberg, & Brandic, 2009) Defined cloud computing as a parallel and distributed computing system which consists of collection of inter-connected and virtualised systems that are presented as one or more unified computing resource based on service level agreement (SLA) which is established with the help of negotiation between the customers and service providers.

2.1. Cloud computing in banking sector

Cloud computing is described as an offspring of the new IT age. Presently, cloud computing is being employed in banking sector to fulfil different purposes altogether. With the help of cloud technologies banks are able to provide flexible banking environment which is able to respond quickly to the new business requirements. Deploying cloud technologies is also cost saving as it gives you an advantage of "Pay as you go"(Patani, Kadam, & Jain, 2014).

Although there are many banks which are very confident about the acceptance of cloud technologies but there still are many banks which are waiting for the securities and regulatory challenges to be addressed before they rush into taking any decision which they regret later on. According to a survey taken in 2010, shows that 73% of the customers of the bank have shown interest towards using cloud computing technologies adopted by banks to meet their requests quickly. However, there are still many banks in the sector which still have considerable concerns regarding the privacy, security, confidentiality, data integrity, as well as availability of cloud technologies. The banks are not trustful just for their safety, but also for their commitment and assurance; this is the reason why less cloud technologies are less trusted by the banks because they still have to provide their users with sufficient security and assurance(Apostu, Rednic, & Puican, 2012).
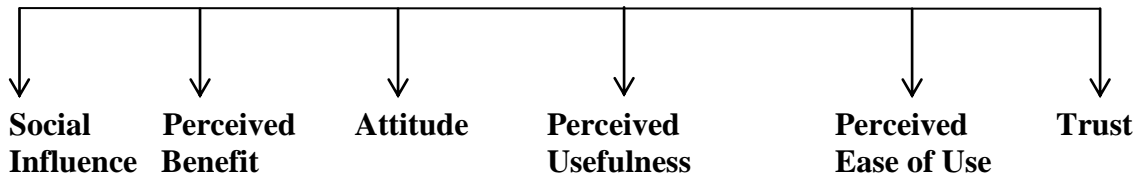
3. RESEARCH OBJECTIVE

The main objective of the study is to analyse the perspective of consumers toward adoption of cloud technologies in Indian banking industry.

4. RESEARCH METHODOLOGY

The study is based on the primary data collected with the help of sampling approach and has chosen Indian banking users who are already using the online banking services offered by banks. To do the research survey- based methodology has been adopted as it has been described as one of the most appropriate approach, when we have to draw a conclusion on a population based on a sample drawn from the population. Microsoft excel has been used as a tool to analyze the data received from the customers.

For conducting the survey, a questionnaire was floated among the Indian banking users to record their response. The questionnaire consists of total 11 questions which have been designed while keeping the six constructs in mind which are –

Constructs

| Social Influence | Perceived Benefit | Attitude | Perceived Usefulness | Perceived Ease of Use | Trust |

5. ANALYSIS AND INTERPRETATION

Social Influence

t-Test: Two-Sample Assuming Unequal

Variances

Table No.1

	The media influences your decision to use a cloud-based platform in a financial operation for Female	The media influences your decision to use a cloud-based platform in a financial operation for Male
Mean	1.54	1.425925926
Variance	0.70244898	0.626484976
Observations	50	54
Hypothesized Mean Difference	0	
df	100	
t Stat	0.712260047	
P(T<=t) one-tail	0.238981142	
t Critical one-tail	1.660234326	
P(T<=t) two-tail	0.477962283	
t Critical two-tail	1.983971519	

6. RESEARCH HYPOTHESIS

H0: Average of mass media affects female to use the cloud based application in banking transaction = Average of mass media affects male to use the cloud based application in banking transaction

H1: Average of mass media affects female to use the cloud based application in banking transaction ≠ Average of mass media affects male to use the cloud based application in banking transaction $\alpha = 0.05$

Since, the value of p (two tail) is more than α value, so there is no statistical observation to eliminate HO. Therefore, H0 stands and there is no difference in the effect of mass media on female and male to use cloud based applications in banking transaction.

Table No.2

	The decision to use a cloud-based platform for financial transfers is influenced by expert advice for Female	The decision to use a cloud-based platform for financial transfers is influenced by expert advice for Male
Mean	1.32	1.296296296
Variance	0.466938776	0.401118099
Observations	50	54
Hypothesized Mean Difference	0	
df	100	
t Stat	0.183058531	
P(T<=t) one-tail	0.427561364	
t Critical one-tail	1.660234326	
P(T<=t) two-tail	0.855122728	
t Critical two-tail	1.983971519	

7. RESEARCH HYPOTHESIS

H0: Average of expert opinions affects female to use the cloud based application in banking transaction = Average of expert opinions affects male to use the cloud based application in banking transaction

H1: Average of expert opinions affects female to use the cloud based application in banking transaction ≠ Average of expert opinions affects male to use the cloud based application in banking transaction $\alpha = 0.05$

Since, p value (two tail) is more than α value, so there is no statistical observation to eliminate H0. Therefore, H0 stands and there is no difference in the effect of expert opinion on female and male to use cloud based applications in banking transaction

Table No.3

	The use of cloud-based computing is a status symbol for Females in banking transaction.	The use of cloud-based computing is a status symbol for males in banking transaction.
Mean	2.42	2.277777778
Variance	0.82	0.921383648
Observations	50	54
Hypothesized Mean Difference	0	
df	102	
t Stat	0.777476425	
P(T<=t) one-tail	0.219338636	
t Critical one-tail	1.659929976	
P(T<=t) two-tail	0.438677272	
t Critical two-tail	1.983495259	

8. RESEARCH HYPOTHESIS

H0: Average of using cloud based apps solution is a symbol of status for female in banking transaction = Average of using cloud based apps solution is a symbol of status for male in banking transaction

H1: Average of using cloud based apps solution is a symbol of status for female in banking transaction ≠ Average of using cloud based apps solution is a symbol of status for male in banking transaction α = 0.05

Since, p value (two tail) is more than α value, so there is no statistical observation to eliminate HO. Therefore, H0 stands and there is no difference between female and male regarding the use of cloud based apps for banking transaction as status symbol.

Table No.4

	The use of cloud-based computing for financial transfers has been trendyfor females.	The use of cloud-based computing for financial transfers has been trendyfor males.
Mean	2.36	2.333333333
Variance	0.847346939	0.905660377
Observations	50	54
Hypothesized Mean	0	

Difference		
df	102	
t Stat	0.145222891	
P(T<=t) one-tail	0.442410739	
t Critical one-tail	1.659929976	
P(T<=t) two-tail	0.884821478	
t Critical two-tail	1.983495259	

9. RESEARCH HYPOTHESIS

H0: Average of using cloud based apps solution for banking transaction is a representation of fashion in female = Average of using cloud based apps solution for banking transaction is a representation of fashion in male

H1: Average of using cloud based apps solution for banking transaction is a representation of fashion in female ≠ Average of using cloud based apps solution for banking transaction is a representation of fashion in male

α = 0.05

Since, p value (two tail) is more than α value, so there is no statistical observation to eliminate HO. Therefore, H0 stands and there is no difference between female and male regarding the use of cloud based apps for banking transaction as fashion.

Table No.4

ANNOVA: Single Factor

Groups	*Count*	*Sum*	*Average*	*Variance*
Mass media affects you to use the cloud based application in banking transaction.	104	154	1.48076923	0.65982076
Expert opinions affect you to use cloud based application in banking transaction.	104	136	1.30769231	0.42867812
Using Cloud based apps solution for banking transaction is a representation of fashion.	104	244	2.34615385	0.86930545
Using the Cloud based apps solution is a symbol of status in banking transaction.	104	244	2.34615385	0.86930545

Table No.5

ANNOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	95.7980769	3	31.9326923	45.1806895	0.0000000000	2.62656135
Within Groups	291.192308	412	0.70677745			
Total	386.990385	415				

10. RESEARCH HYPOTHESIS

H0: Average of mass media effects on the use of cloud based applications in banking transaction = Average of expert opinions effects on the use of cloud based applications in banking transactions = Average of Using cloud based apps solutions of banking transaction as fashion = Average of using cloud based apps solutions as status symbol

H1: Average of mass media effects on the use of cloud based applications in banking transaction ≠ Average of expert opinions effects on the use of cloud based applications in banking transactions ≠ Average of Using cloud based apps solutions of banking transaction as fashion ≠ Average of using cloud based apps solutions as status symbol

α = 0.05

Since, p value (two tail) is less than α value, so there H0 get rejected. Therefore, H1 accepted and there is difference between effect of mass media in using cloud based applications, effect of expert opinion on using cloud based applications, using cloud based apps as fashion and using cloud based apps as status symbol in banking transaction.

Table No.6

Regression Statistics	
Multiple R	0.858246489
R Square	0.736587036
Adjusted R Square	0.725944088
Standard Error	0.225069632
Observations	104

Table No.7

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95%*
Intercept	0.151	0.083	1.810	0.073	-0.015	0.316	-0.015	0.316
Using the cloud based application enable me to do online transactions faster.	0.281	0.090	-3.139	0.002	-0.459	-0.103	-0.459	-0.103
Using the cloud based application improves my online financial transaction performance.	0.986	0.078	12.580	0.000	0.831	1.142	-0.831	1.142
The use interface of the cloud based application is user-friendly.	0.356	0.116	3.068	0.003	0.126	0.585	-0.126	0.585
I believe that cloud applications in bank are secure.	0.187	0.073	-2.550	0.012	0.333	0.042	-0.333	-0.042

H0: x1 = x2 = x3 = x4 = 0

H1: x1 ≠ x2 ≠ x3 ≠ x4 ≠ 0

α = 0.05

Since, p value (two tail) is less than α value, so there H0 get rejected. Therefore, H1 accepted and there is difference between x1, x2, x3 and x4

Model: y = 0.151 - 0.281 x1 + 0.986 x2 + 0.3556 x3 - 0.187 x4

where y = Enjoy trying new technology and services for my banking transaction

x1 = Cloud based application enables to do transactions faster

x2 = Cloud based application improves financial transaction performance

x3 = Interface of cloud based application is user-friendly

x4 = Cloud applications are secure

11. CONCLUSION

In today's world, cloud computing has taken a leading role with such attractive features such as – pay as you go, scalability, speed, cost reduction. Despite all these advantages there still are various banks and users who have their considerable concerns while using or adopting cloud technologies. This paper presented a study which aimed at investigating the perspective of Indian banking users toward the adoption of cloud computing in banking industry. It analyses the response received from users with the help of Microsoft excel. Factors such as privacy, trust, social influence etc. are major drivers of cloud technologies.

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