Customers Adoption and Employees Problems of Digital Banking with Reference to Hyderabad – A Study

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Abstract: The modern banking system has changed the financial system across the world. The implementation of the digitalization in the banking had increased the customers' service level and the employee friendly operations in the banking. The present study has been emphasized on the banking customers' adoption and the employee problems pertaining to the digital operations. The primary data has been considered from the eight banks in Hyderabad and applied the TAM on the adoption of the digital banking by the customers. The result depicted that the customers' construct effort expectancy and demographic factor education influence is found to more than the other constructs. The factor analysis indicated that the maintenance of the digitalization is having the highest total discriminanat factor among the problems encountered by the banking employees. This study is useful to the bankers, regulators and the policy makers.

Keywords: Adoption of digital banking, Digital banking, Employee performance, TAM model, Maintenance and Social influence.

Introduction:

One of the major advantages offered by digital technologies is that they enable enterprises to modify business processes to attain operational and financial excellence. In addition, they can improve customer experience substantially. The banking sector has been at the forefront of digital adoption- both in business as well as technology. In the past six to seven years, banks in India have evolved to provide digital avenues from Internet banking to mobile banking to more recently, social application banking. Banking will continue to go digital in a wider manner, as Digital India government policies to enable mass financial inclusion across the country will gain steam.

According to a CII report, the banking sector in India is currently worth INR 81 trillion, and is expected to become the fifth largest in the world by 2020. The BFSI sector contributes about 40 percent of the revenue for major IT companies. As digital technologies evolve around the concept of data sharing over public networks on a number of devices, ensuring privacy and security related with banks are the major concerns at all levels. Hence, adoption of digital technologies will impact the core processes of a bank at a much deeper level, requiring them to revisit their legacy IT infrastructure and workflows.

These are but a small percentage of challenges that are shaping the contours of new-age banking. Digital transformation initiatives in this vast industry are gaining momentum due to the increase in consumerization of IT. The use of digital technologies in the sector has enabled banks provide differentiation in terms of services and solution and hence attract new customers as well as retain existing customers. Two major challenges of the Indian banking sector are presence of huge unbanked population and heterogeneous economic and social conditions of the existing customers. These challenges can become opportunities for banks, if strategies are framed by banks to address pain points of all the people.

Review of Literature

Singh Bhupinder Pal (2004)[1]: This study emphasized the impact of banking reforms on technical efficiency of public sector banks, to find interbank variation in technical efficiency, to find impact of banking sector reforms on the total factor productivity growth. It is concluded that banking sector reforms had a favorable impact on productive efficiency of Indian government Sector Banks.

Prasad A & Ghosh Saibal (2005)[2]: This paper analyzed cost reduction & sophisticated benefits. The findings of the study derive that Indian banking industry is as significant as other banking systems in other countries. The

competition of banking sector involves the employer & customer performances, evaluations and as well the acceptance of advancements of today's technology.

Gopinath Shyamala (2007)[3]: This paper analyzed impact of financial sector reforms especially on banks. Financial sector reforms in India improved efficiency, soundness & ensured stability of the entire system.

Singh Ram Pratap & Chatterjee Biswajit (2009-10)[4]: The study carried on the comparison of public and private banks fast replacing sophisticated information technology & automated teller's jobs going away as computing is enhancing efficiency.

Uwafio Jeremaiah, Idialu & Yomere O Gabriel (2010)[5]: The study focused inefficiency of Nigerian banking system including total customer deposits, staff expenses, other earning assets over the specified period of time 2000-2004. The conclusion of the study reveals many other specifications are to be improved as to reduce this inefficiency.

Objectives of The Study
1. To study the customers adoption of digitalization in banking sector.
2. To study the Problems faced by the employee in using the digital based network in the Bank.

Hypothesis of the study:

Null Hypothesis-H0: There is no influence of the customers' demographic factors on the behaviour intension to use the digital banking.

Null Hypothesis-H0: There is no influence of the banking customers' constructs on the behaviour intension to use the digital banking services

Sample Size: The study was carried out on 8 banks customers and the simple random methodology has been applied and collected 530 samples. The employees of Hyderabad region, who are involving in day to day operations of digital branch banking has been considered and applied the Stratified Simple methodology has been applied to collect the data through the questionnaire. The total sample size has been considered as 172 and sample data from the selected public sector banks 92 and the from the private sector banks 80 sample data has been collected.

Tools of Data Analysis: The data and information collected will be classified, tabulated and processed and its findings presented in a systematic manner. Statistical tools such as TAM model has been applied with the linear regression method and factor analysis has been considered.

Data Analysis:
1. To study the customers adoption of digitalization in banking sector.

Citizen Validating Factors Influence On Behavioral Intension in Using Digital Banking Services

Table No:				
Behavioral Intension (dependent variable)				
Independent variables	**β coefficient**	**t value**	**R2 value**	**F value**
Performance Expectancy	0.631	6.572	0.697	31.646
Effort Expectancy	0.793	4.453	0.784	53.104
Social Influence	0.371	2.615	0.921	25.138

* Statistic is significant at 5% level of significance.
Source: Compiled Data through SPSS Version – 20.

The table depicts the citizen validating factors influence at 5% significance on the behavioral intension of digital banking services. The beta coefficient values of performance expectancy and social influence (0.631 and 0.371) had influenced the behavioral intension of the citizen. The independent variable effort expectancy is having high influence (0.793) on the citizen behavioral intension to use digital banking services. The R^2 value for three independent variables found to be above slab value of 60%. The linear regression result reveals that citizen constructs are having influence on intensions of citizen behavior for adaption of digital banking services.

Demographic Factors Influence on Citizen's Behavioral Intension in Adapting Digital Banking

Table No:				
Behavioral Intension (dependent variable)				
Independent	**β coefficient**	**t value**	**R2 value**	**F value**
Age	0.421	5.284*	0.583	32.263
Gender	0.204	4.523*	0.624	42.062
Education	0.712	3.162*	0.856	13.138

| Occupation | 0.361 | 4.728* | 0.722 | 24.592 |
| Annual Income | 0.525 | 1.483* | 0.528 | 36.825 |

* Statistic is significant at 5% level of significance

Source: Compiled Data through SPSS Version – 20.

The table 6.102 depicts the linear regression beta coefficient values of demographic variables influence at 5% of district, age, gender, education and profession influence is observed on citizen's behavioral intension in adopting the e-banking. The gender influence (0.204) is having the least influence but education influence (0.712) is observed high on behavioral intension in adopting e-banking. The R^2 values for all the demographic factors with behavioral intension to adopt e-banking are found above 60% i.e., moderate to strongly correlate.

Behavioral Intension Influence on Citizen's Adaption of E/Digital - Banking.

Table No:				
Adaption of E/Digital -Banking (dependent variable)				
Independent	**☐ coefficient**	**t value**	**R2 value**	**F value**
Behavioral Intension	0.501	4.158	0.813	26.415

Source: Compiled through SPSS Version - 20

The table 6.103 depicts the beta coefficient value of behavioral intension influence at 5% on the citizen's adaption of digital banking services. The citizen's behavioral intension is having the influencing the adaption of digital banking services. The R^2 value is observed to be above 60% base value i.e., 81.3%.

Validating Factors Affecting Digital Banking Adaption by the customers in Hyderabad Region Selected banks.

Effect of Demographic Factors Influence on Behavioural Intension
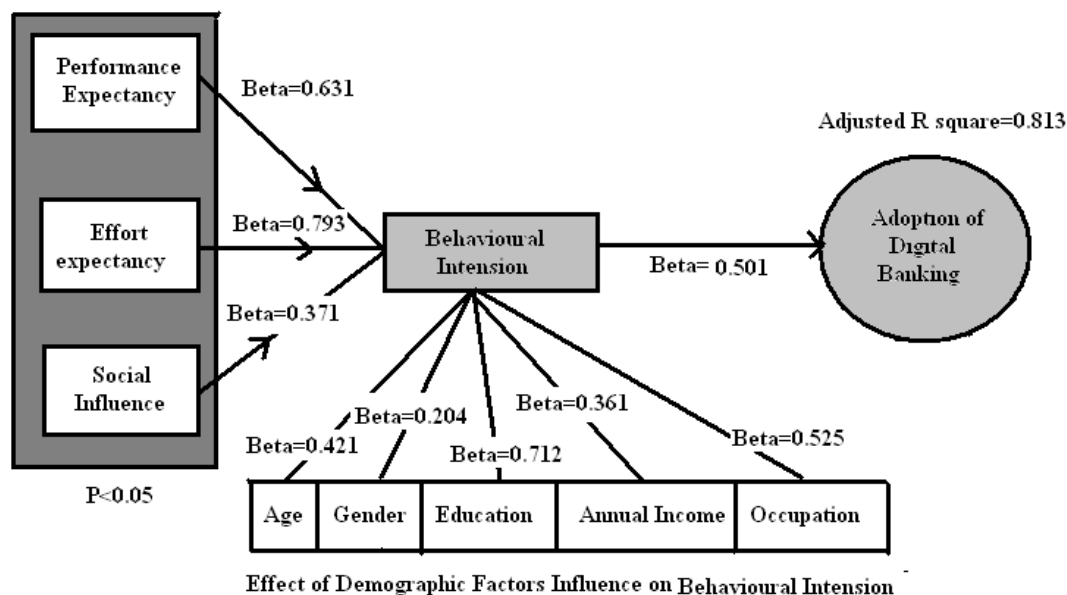
2. To study the Problems faced by the employee in using the digital based network in the Bank.

Problem faced by the employee while using the digital transaction at bank is varies from private bank to public bank employee and is observed through factors such as Security, Power system, GPRS problem, Drive problem, highly speed, Highly development cost, non-availability, maintenance, Technical errors, virus problem, data security, Resistance of UPS among the group of employee with t-statistics and strength of association wilks lambda have been calculated and resultant as below.

No.	Factors	Means Score of the Employee		Mean Difference	T- Statistics	Wilks Lambda
		Private bank	**Public bank**			
1	Security	3.618	3.284	0.334	2.573*	0.164

2	Power System	3.173	3.138	0.035	2.529	0.482
3	GPRS Problem	2.935	3.583	-0.648	-3.482*	0.471
4	Drive Problem	3.483	3.178	0.305	2.638*	0.285
5	Highly Speed	3.499	3.169	0.33	2.839*	0.174
6	Highly Developmen Cost	3.195	3.588	-0.393	-2.517	0.025
7	Non-Availability technical person	3.289	3.835	-0.546	-2.814*	0.358
8	Maintenance	4.618	4.175	0.443	2.586*	0.152
9	Technical Error	3.661	3.142	0.52	2.882*	0.187
10	Virus Problem	3.803	3.255	0.548	2.154*	0.472
11	Data Security	2.691	2.821	-0.13	-2.183*	0.277
12	Resistance of UPS	3.589	3.952	-0.363	-2.518	0.285

Source: Compiled through SPSS version – 20 on Primary data.

In private sector, digital based network problem is high in factors i.e., Maintenance, Virus problems, technical error, and security and their mean score values are 4.618, 3.803, 3.661 & 3.618.The Maintenance, Resistance in UPS, Non-availability, Highly development cost, GPRS problem for public sector banks with the mean score of 4.175, 3.925, 3.835, 3.588, & 3.583 as their significant value is five per cent. Regarding the core issue, the significant difference among the public and private sector employee have been identified in the all the case of problem faced by the employee. Strength of association Wilks lambda of various issue faced among the public and private bank employee is identified more in power system and GPRS problem with 0.482 and 0.471 respectively.

The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for analysis. The KMO calculated is found to b 0.823. This indicates that the sample is "meritorious" for factor analysis. The correlations between the items were sufficient for factor analysis. Both these results indicate the validity of data for EFA. The factors influencing problem faced by the employee at bank is extracted from principal component analysis of preferred issues with factor analysis and rotated component matrix as shown in the below table.

No	Variables	1	2	3	4
1	Security	0.7841			
2	Power System	0.7258			
3	Drive Problem	0.6235			
4	Resistance of UPS		0.8565		
5	GPRS Problem		0.8219		
6	Highly Speed		0.6825		
7	Highly Development Cost			0.6358	
8	Non-Availability			0.5815	
9	Maintenance				0.8514
10	Technical Error				0.8192
11	Virus Problem				0.7955
12	Data Security				0.6839
	Eigen values	6.2735	5.8261	4.7293	2.6935
	Percent of variance Explained	24.6836	16.7365	10.6835	5.8265
Extraction Method: Principal component analysis					

Source: Compiled through SPSS version – 20 on Primary data.

The above table reflects the principal component analysis of preferred network issue at banks with twelve Variables among which the four loading factors namely hardware, Internet, maintenance, security are seemed to be highly affecting issue for employee of both the sector banks.

Variables considered for selected problem

No.	Factors	No. of Variables	Reliability Coefficient	Eigen Value	Percent of variables Considered	Cumulative Percentage of variables considered
1	Hardware	3	0.8265	6.2735	24.6836	24.6836
2	Internet	3	0.7825	5.8261	16.7365	41.4201
3	Maintenance	2	0.8152	4.7293	10.6835	52.1036
4	**Security**	**4**	**0.8572**	**2.6935**	**5.8265**	**57.9301**

Source: Compiled through SPSS version – 20 on Primary data.

The table signifies the various loading factor that are mostly affected by the employee while dealing with digital based network. Among all the issues, the important network issues namely hardware, Internet, Maintenance, security are considered and their respective Eigen values are 6.2735, 5.8261, 4.7293, & 2.6935 respectively.

Problem regarding hardware are seemed to be high and its percent of variance explained value is 24.6836 and consists of 3 variable whereas internet also consist of 3 variable but the percent of variance explained with 16.7365. Maintenance issues consist of 2 variables with percent of variance explained of 10.6835 and lowest percent of variance explained in security with 5.82656 which consisting of 4 variables. Further it reveals that Hardware problem are considered as the important problem faced by the employee and their reliability coefficient value is 0.8265.

DISCRIMINANT FACTORS AMONG THE EMPLOYEES: -
The most important issues which are faced by the employee while using the digital based network are Hardware, Internet, Maintenance and security have been analyzed in order to find the major issue among the group of employee mean scores, Mean difference, T-statistics and strength of association wilks lambda. The following table is resulting analysis.

No.	Factors	Mean Score Among employee		Mean Difference	T- Statistical	Wilks Lambda
		Private bank	Public Bank			
1	Hardware	3.242	3.335	-0.093	-2.104*	0.178
2	Internet	3.3223	3.3116	0.0107	2.581*	0.116
3	Maintenance	3.953	4.005	-0.052	-2.642*	0.268
4	Security	3.436	3.2925	0.1435	2.5623*	0.249

* Significant at five percent level. Source: Primary data

The significant mean difference is found in all the issue like Hardware issue, internet issue, Maintenance issue and Security issues among the public and private bank employee and their respective t-statistics are significant at five per cent level. The higher mean difference is noticed high in security issues and the strength of association Wilks lambda is identified in all the aspects but high in Maintenance and security issue i.e., 0.268 and 0.29 respectively.

The relative contribution in TDS of discriminant factor is summarized with respective mean difference of the factors are as shown in below table…

No.	Factors	Discriminate Coefficient	Mean Difference	Relative Contribution in TDS
1	Hardware	-0.1825	-0.093	18.56
2	Internet	0.2359	0.0107	11.65
3	Maintenance	-0.2631	-0.052	41.12
4	Security	0.2495	0.1435	28.67
	Total			100

Source: Compiled from Primary data

The higher discriminate coefficient is observed in security and Internet issue and their respective coefficient values are 0.2495 and 0.2359.This analysis indicates that two major issue mentioned above are

more specific discriminate co-efficient. The relative contribution in TDS observes to be higher in Maintenance issue with 41.12% followed by 28.67 in security issue. Further it reveals that Internet and security problem are the core issue faced by the both the public and private bank employees.

Findings of the Study:
1. The study observed that the banking customers constructs of digitalization of banking has been analyzed with the TAM. The linear regression method has been applied and the beta coefficient values depicted that the influence of the effort expectancy (0.793) on the behaviour intension to use. The study observed that the effort expectancy influence is more than the other constructs of the banking customer.
2. The study indicates that the performance expectancy influence (0.631) on the banking customer behaviour intension to use the digital banking.
3. The linear regression of beta coefficient result reveals the banking customers social influence on the behaviour intension to use the digital banking. The social influence impact is observed to be less than other constructs of the banking customers.
4. The study found to the customer behaviour intension to use of the digital banking (0.371) impact on the adoption of digital banking by the customers.
5. The demographic factor education (0.721) influence on the behaviour intension to use the digitalization of banking is found to be more than the other demographic factors.
6. The problems encounter by the employees in digital banking, the factor analysis has been applied and the result states that the factor maintenance of the digitalization in the banking is found to be 41.12% with highest discriminant factor among the four major problems experienced by the employees.
7. The study indicates that the security of the digital banking is having the 28.67%, which is the second biggest problem encountered by the banking employees.
8. The study observed that the internet issue is having the lowest total discriminant value with 11.65 % among the employee problem in dealing the digitalization in the banking.

Conclusion of the Study:
The study concludes the titled "customers adoption and employees problems of digital banking with reference to Hyderabad" has been done based on the primary data of eight banks. The study mainly focuses the customers' adoption of digital banking in receiving the services. The study also emphasizes on the problems encountered by the banking employees in dealing with the digitalization of the banking operations. The Technology adoption model has been applied by considering the banking customers constructs the demographic factors influence on the behaviour intension to use. The customers' behaviour intension to use influence on the adoption of digital banking has been measured. Effort expectancy and the customers' education influence has been more on the adoption of the digital banking. The problems encountered by the banking employees and the study result indicated that the maintenance of digital operations is found to be the biggest problem to the banking employees. Hence there is further scope to do research in this area by considering the foreign banks digital operations influence on the customers' comparison with the Indian banking digitalization influence on the banking customers.

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