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Paradigm Shift in the Banking Workforce During Digital Era

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Abstract

The study aims to identify the factors persuading bank employees' perception towards technology allowed banking and examining the association between the factors and demographic profile of the bankers. A measurable and qualitative approach is used in the study and data is collected from respondents who are part of the banking system across various banks through a well-structured questionnaire and interviews. The pragmatic results show that employee convenience is attained through improving operational efficiency, making decision based on cost effectiveness, better customer service and thereby higher employee morale, performance linked incentives and other perks and benefits and technical support are the main factors influencing the perception of bankers towards technology adoption in India. There are certain fundamental factors like hoax, spam, hacking, and fraud etc. affecting users and thereby the implementation of digitalization in banking is imperative. Also, the perception of bankers differs significantly in terms of the availability of technical support by type of bank. The novelty of the study completely depends upon the perception about the implication of technology enabled banking services and the influence of demographic variables on technology adoption in context to Indian bank employees has been analysed. The results will help the banks from India as well as other developing countries in creating substantial change in strategic planning to increase the adoption of technology that can empower the employees and customers indirectly. Banks can use the findings to encourage their employees

to promote the use and adoption of digital banking in India.

Keywords: Bankers Perception, digitalization, workforce changes, technical novice, banking digital scams

Introduction

Currently, every individual is unprotected and have a severe exposure to technology across the world irrespective of their demography. Every organization in order to capture greater market share must continuously work on their products and processes with the rapidly changing technology. It is the need of the hour to find out the blockages and pave the way for digitalization. The banking sector has been the backbone of every Country whether developed or emerging, having a direct impact on the GDP and other economic factors. Digitalization in banking includes online banking, mobile banking, plastic money (Debit card, Credit card etc), electronic clearing systems, electronic payment systems including IMPS, NEFT, RTGS, UPI etc, ATM, Cash deposit machine, self-service kiosk, payment wallets etc. Digitalization helps the banks in cost reduction and saving employee time thereby more focus could be on customer delight, relationship management and cross marketing. The various initiatives of Indian Government and Reserve Bank of India to go digital paves a way for a huge digital transformation into the banking arena. From the Government point of view, it helps in abolishing the parallel economy existing in the country simultaneously in saving time and building wealth. Every bank has to gradually migrate to digitalization to not only gain competitive advantage over other banks but also provide better customer service.

Digital Banking growth in India

Sr. No.	Particulars	No. of Transactions	Amount (Rs. In Crores)
1	NEFT as on Sept 2021	3359.5	2419688.2
2	NEFT as on Aug 2022	4166.8	2631639.0
3	NEFT as on Sept 2022	4332.5	2922912.8
4	RTGS as on Sept 2021	17456940	11069631.02
5	RTGS as on Aug 2022	18691610	18808020
6	RTGS as on Sept 2022	19830016	13789637.12
7	Mobile Banking as on Sept 2021	39989	1178882
8	Mobile Banking as on Aug 2022	7222775980	18277477801
9	Mobile Banking as on Sept 2022	7286354410	18829676685

10	Internet Banking as on Sept 2021	--	--
11	Internet Banking as on Aug 2022	353774231	73516397998
12	Internet Banking as on Sept 2022	358543938	84333466160

(Source: www.rbi.org.in)

From the above table, we can see that how the volume of transactions in terms of NEFT has increased from 3359.5 in September, 2021 to 4166.8 in August, 2022 to 4332.5 in September, 2022. Similarly, RTGS transactions has also increased from 17456940 in September, 2021 to 18691610 in August, 2022 to 19830016 in September, 2022. Value of transactions for mobile banking has also raised from Rs. 11,78,882 in September, 2021 to Rs. 18,82,96,76,685 in September, 2022. Similarly, for internet banking it has a huge higher jump from Rs. 73,51,63,97,998 in August, 2022 to Rs. 84,33,34,66,160 in September, 2022 within a span of one month.

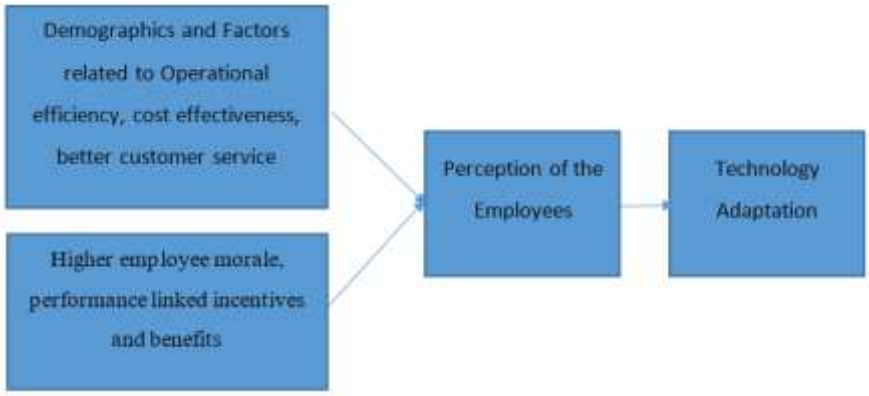
Issues in the implementation of Digital banking

Perception plays a significant role in shaping one's behaviour and attitude. Employee's perception towards technology plays a vital role in switching to a complete digital mode. Indian economy has been witnessing that the elder employees are resistant to technological changes. They try to escape as they reach in that phase of career where they have few working years before retirement. They usually find it difficult to learn in that age which proves to be a hurdle on the way towards digital inclusion which indirectly reduces organizational performance.

Secondly and significantly, the rising fraud cases including spam calls, hoax messages, increasing news of cybercrimes, hackers and people with malicious interests is leading to loss of security and trust among honest citizens. Thus, despite various efforts from bank employees to promote digitalization, some users resist to switch from traditional banking.

Last but not the least is the technical outage. This is a universal problem in every field of technology. System crash or server breakdown is a continuous ongoing maintenance process.

Theoretical Framework:



Literature Review

Banks can offer improved customer services by implementing digitalization. Customers are benefitted by way of saving in their time and convenience. Digitalization reduces human mistakse and increases client trust. (**Harchekar, 2018**). Digitalization of banking processes promotes coordination of actions and increasing efficiency on the transformation of credit organisations and banking systems worldwide. (**Litvishko et al., 2020)**. Since automation can complete tasks without depending on employees at physical branches at a reasonable cost, the development in digitalization in the banking sector could result in a rising trend of unemployment for bank employees.

The workforce believed that as technology advanced, the requirement for human labour in the banking industry decreased. (**Meena & Parimalarani, 2020).** In the background of the digitalization of the economy as a whole and banking sector in particular, the possibility to identify potential directions for improving the regulatory framework and structure of the Russian banking system, particularly in the direction of developing interbank competition with the aim of improving banking services for the actual sector of the economy.

(**Rodrigues et al., 2020)**. Many issues will be resolved when the banking system develops with the aid of end-to-end technologies. End-to-end technologies like machine learning, artificial intelligence and robotics, block chain, peer-to-peer lending for instance, will bring about technological change, personalized offers, speeding up banking operations, increase calculation accuracy, and lower the danger of deliberate falsification of reporting data. Analytical, modelling, and analogous approaches were employed to formulate and address issues. (**Kuznetsova and Petrova, 2020**).

(**Ivanova et al., 2019).** The crisis underscores that banks must integrate their physical presence and online offerings, but it also suggests that institutions may be able to continuously reduce risks through digitalization. The banks would protect themselves from potential crises through this digital transformation and thereby their capacity to reinvent. They would be less prone to such crises if they adopted a more open and digital conduct because they would have adequate strategic plans, be better equipped to deal with challenges, and be more ready to turn those risks into opportunities. (**Romdhane, 2021).** Cash-based transactions become a little more challenging, and internet banking transactions are needed to support the healthy growth of economic activity. The article tries to assess the level of banking sector digitalization as well as the causes and variables influencing the actual movements of digital banking, keeping in mind that each country's approach to bank digitalization is unique. **(Mostean et al., 2020).**

Need of Study/ Statement of the problem

The author, being a bank employee for almost a decade, could understand and relate the need of the hour for switching to digitalization for banks on one side and the operational difficulties faced by the employees.

Hypothesis

H0: There is no significance relation between the demographic factors and employee perception

H1: There is a significance relation between the demographic factors and employee perception

Objectives:

1) To understand the perceptions of Bankers on digital banking
2) To assess the impact of operational difficulties factors in the implementation of digital banking
3) Suggestions on switching the banking methodologies to completely digital

Research gap:

The study wants to target the learning and training gap of the employees which is seldom addressed in many of the researches. The bankers will face the issue of inability and lack of sources for learning the modified technology. This study will help the financial institutions on understanding the factors that

could develop the employee morale by learning new technology and creating edge over other bankers.

Research methodology

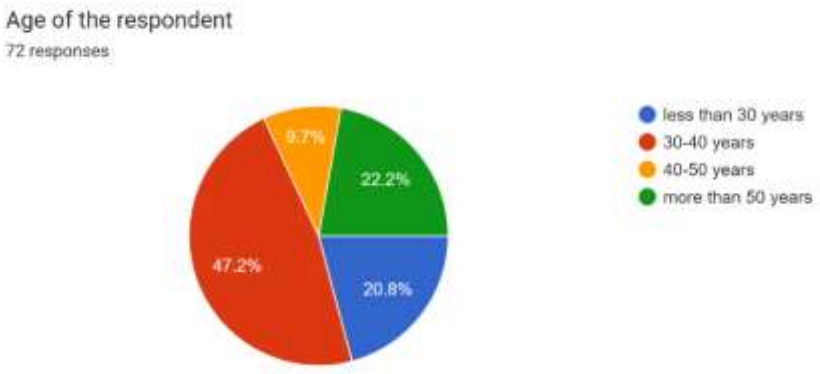
Primary Data: With the prominent questionnaire and interview schedule, we have approached the top, middle and bottom level bank employees and their level of technological adaptations.

Descriptive Analysis: The study is build based on designing and deriving outputs through descriptive analysis

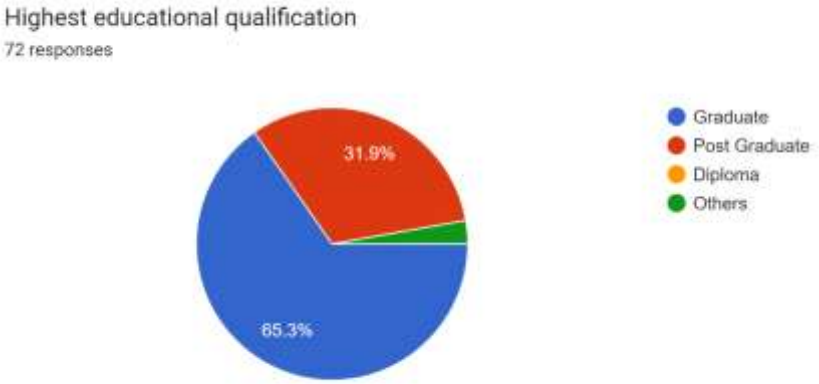
Tools: T-Test and Linear regression are the basic tools used for the study.

Data collection and analysis

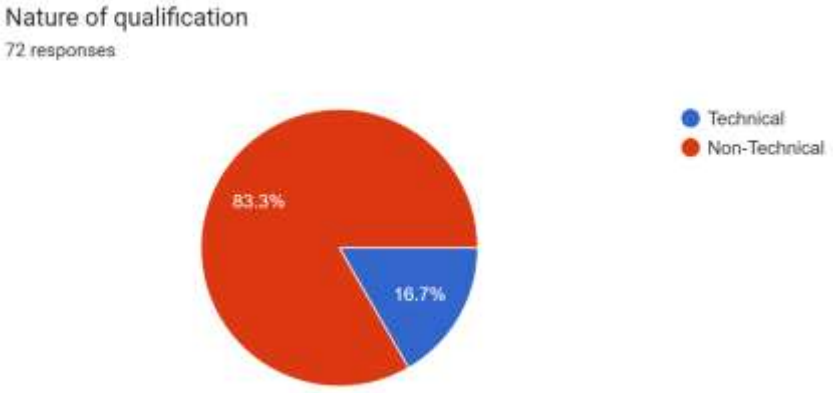
As most of the bank branches are overcrowded especially the public sector banks and most of the bank employees are too busy, very few face-to-face interviews we conducted, thus, a well structure questionnaire covering two sections: socio demographic factors and work-related factors. The questionnaire was circulated through another technology platform called google forms. In total 72 responses were collected and analysed. Out of these, the gender ratio is exactly 50%.

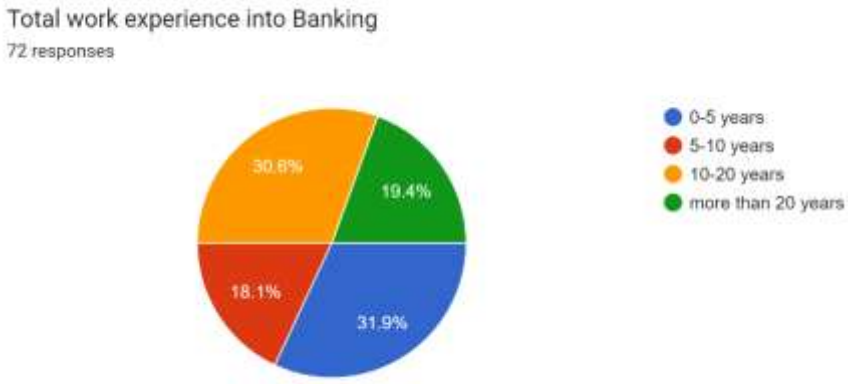


As can be seen from the above chart, 47.2%, the majority of the respondents were in the age group of 30 to 40 years.



The highest educational qualification of the respondent is mostly graduate (65.3%) and post graduates (31.9%) with a very few in others category. As can be seen from the below chart most of the bank employees are from the non-technical side. This is not only from the sample selected but if seen the overall qualification of bank employees is majorly non-technical.





As can be seen from the above chart, a diversified sample of respondents in terms of experience into banking were selected ranging from 0-5 years to more than 20 years. The sample included new joinees to retired employees who have put in more than 30 years of career into banking.

The following work-related questions were part of the survey form:

1) Technology helps employees to complete the job in more efficient manner: (t1)
2) Is automation creating threat to the job (t2)
3) The top management support gives motivation to work (t3)
4) The presence or absence of recognition for your personal contribution affects your motivation (t4)
5) Organisational policies motivate you for better performance (t5)
6) The supervisor provides enough support for work. (t6)
7) The reward and punishment policy are fair in the organisation (t7)
8) You have recognition of work accomplishment by seniors (t8)
9) The organization makes performance appraisal on the basis of merit and performance. (t9)
10) The pay raise in the organisation is satisfactory. (t10)
11) The organization will promote from within before looking for employees externally. (t11)
12) The compensation provided by the organization helps you in maintaining a socially desirable standard of living. (t12)
13) Digitalization has improved the banking services (t13)
14) It increases the accessibility to finance by the poor firms and people thus promoting financial inclusion. (t14)

15) My bank promotes digital access and facilitates trust in data use. (t15)
16) My bank continuously updates the employee skills needed in digital era. (t16)
17) My bank had redefined the style of banking through digitalization. (t17)
18) My bank provides performance linked incentives for promoting digital banking(t18)
19) Customer satisfaction has increased post digital implementation (t19)
20) Customers is not very co-operative to digital implementation (t20)

Most of the respondents were of the view that technology helps employees to complete the job in more efficient manner. With the rising technology, robotics and artificial intelligence is definitely seen to play a major role in banking sector also. Along with automation comes the big data and analytics, marketing and relationship management which need human intervention. Thus, automation does not seem have a big threat to banking job. Most of the respondents strongly agreed to this. Digitalization being the need of the hour, most of the bank's top and middle managements are giving motivation to the employees in terms of promotions, rewards and recognitions, performance linked incentives, perks and benefits to increase the digital customer base. In terms of supervisor support and organisational policies, there seems to be not much positive feedback considering the workload in banks, huge documentations, and organizational politics.

Another major hindrance in a developing country like India are the rural population who do not have accessibility to technology including internet, mobile phones etc. Also, financial, and technical literacy poses a major challenge for covering the rural population. However, with the introduction of digitalization, every corner of the country can access and avail banking facility. The banking operations in terms of deposits and credit has also increased drastically after the digitalization. "Faster credit decisions, vastly improved customer experience, 40 percent lower costs, and a more secure risk profile. Here's how to get there." By Gerald Chappell, Holger Harreis, András Havas, Andrea Nuzzo, Theo Pepanides, and Kayvaun Rowshankish in their article inside in websige Mckinsey.com- The lending revolution: How digital credit is changing banks from the inside.

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
gender - t3	-.375	.680	.080	-.535	-.215	-4.676	71	.000
gender - t4	-.750	1.110	.131	-1.011	-.489	-5.733	71	.000
gender - t5	-.431	.932	.110	-.650	-.212	-3.921	71	.000
gender - t6	-.236	.911	.107	-.450	-.022	-2.198	71	.031
gender - t7	-.264	1.007	.119	-.501	-.027	-2.224	71	.029
gender - t8	-.306	.973	.115	-.534	-.077	-2.663	71	.010
gender - t9	-.694	1.182	.139	-.972	-.417	-4.983	71	.000
gender - t10	-.347	1.023	.121	-.588	-.107	-2.880	71	.005
gender - t11	-.361	.954	.112	-.585	-.137	-3.212	71	.002
gender - t12	-.569	1.197	.141	-.851	-.288	-4.038	71	.000
gender - t13	-.444	1.099	.130	-.703	-.186	-3.431	71	.001
gender - t14	-.292	1.054	.124	-.539	-.044	-2.348	71	.022
gender - t15	-.167	.822	.097	-.360	.027	-1.720	71	.090
gender - t16	-.319	.990	.117	-.552	-.087	-2.737	71	.008
gender - t19	-.264	.964	.114	-.490	-.037	-2.323	71	.023
gender - t20	-.653	1.153	.136	-.924	-.382	-4.806	71	.000

From the above table, we can conclude that gender does have a significant Impact on any of the factors in the implementation of digital banking mentioned above.

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
exp - t1	.736	1.636	.193	.352	1.121	3.818	71	.000
exp - t2	.806	1.598	.188	.430	1.181	4.278	71	.000
exp - t3	.500	1.343	.158	.184	.816	3.160	71	.002
exp - t5	.444	1.383	.163	.119	.769	2.727	71	.008
exp - t6	.639	1.367	.161	.318	.960	3.967	71	.000
exp - t7	.611	1.439	.170	.273	.949	3.602	71	.001
exp - t8	.569	1.432	.169	.233	.906	3.374	71	.001
exp - t10	.528	1.404	.165	.198	.858	3.190	71	.002
exp - t11	.514	1.363	.161	.193	.834	3.198	71	.002
exp - t13	.431	1.555	.183	.065	.796	2.350	71	.022
exp - t14	.583	1.489	.176	.233	.933	3.323	71	.001

exp - t15	.708	1.305	.154	.402	1.015	4.606	71	.000
exp - t16	.556	1.462	.172	.212	.899	3.224	71	.002
exp - t17	.681	1.351	.159	.363	.998	4.273	71	.000
exp - t18	.653	1.416	.167	.320	.985	3.912	71	.000
exp - t19	.611	1.439	.170	.273	.949	3.602	71	.001

From the above table, we can conclude that bank employees having more experience are involved in implementing digital banking systems more comfortably than the new comers. However, old employees, especially those on the verge of retirement are not very keen to switch into the digital world.

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
natureofqual - t2	.264	.822	.097	.071	.457	2.724	71	.008
natureofqual - t4	-.417	1.045	.123	-.662	-.171	-3.384	71	.001
natureofqual - t9	-.361	1.166	.137	-.635	-.087	-2.627	71	.011
natureofqual - t15	.167	.650	.077	.014	.319	2.176	71	.033
natureofqual - t20	-.319	1.046	.123	-.565	-.074	-2.592	71	.012
natureofqual - t22	-.431	1.136	.134	-.698	-.164	-3.216	71	.002
natureofqual - t23	-.361	1.166	.137	-.635	-.087	-2.627	71	.011
natureofqual - t27	-.347	1.090	.128	-.603	-.091	-2.704	71	.009

From the above table, we can say that, the nature of qualification does not have much impact on the factors as stated pertaining to digital banking.

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
heq - t3	-.500	.712	.084	-.667	-.333	-5.958	71	.000
heq - t4	-.875	1.138	.134	-1.142	-.608	-6.527	71	.000
heq - t5	-.556	.933	.110	-.775	-.336	-5.054	71	.000
heq - t6	-.361	.893	.105	-.571	-.151	-3.432	71	.001
heq - t7	-.389	1.042	.123	-.634	-.144	-3.166	71	.002
heq - t8	-.431	.990	.117	-.663	-.198	-3.689	71	.000
heq - t9	-.819	1.092	.129	-1.076	-.563	-6.368	71	.000
heq - t10	-.472	.872	.103	-.677	-.267	-4.597	71	.000
heq - t11	-.486	.919	.108	-.702	-.270	-4.488	71	.000

heq - t12	-.694	1.146	.135	-.964	-.425	-5.141	71	.000
heq - t13	-.569	1.005	.118	-.806	-.333	-4.810	71	.000
heq - t14	-.417	.960	.113	-.642	-.191	-3.681	71	.000
heq - t15	-.292	.795	.094	-.478	-.105	-3.113	71	.003
heq - t16	-.444	.886	.104	-.653	-.236	-4.255	71	.000
heq - t17	-.319	.819	.097	-.512	-.127	-3.309	71	.001
heq - t18	-.347	.966	.114	-.574	-.120	-3.048	71	.003
heq - t19	-.389	.943	.111	-.610	-.167	-3.500	71	.001
heq - t20	-.778	1.153	.136	-1.049	-.507	-5.722	71	.000
heq - t21	-.514	1.035	.122	-.757	-.271	-4.215	71	.000
heq - t22	-.889	1.228	.145	-1.178	-.600	-6.141	71	.000
heq - t23	-.819	1.237	.146	-1.110	-.529	-5.621	71	.000
heq - t24	-.528	1.126	.133	-.792	-.263	-3.979	71	.000
heq - t25	-.472	1.126	.133	-.737	-.208	-3.560	71	.001
heq - t26	-.583	1.207	.142	-.867	-.300	-4.100	71	.000
heq - t27	-.806	1.146	.135	-1.075	-.536	-5.964	71	.000

We can see that highest educational qualification does not have a significant impact on the implementation of digital banking. Employees who are graduates are also open to switching to complete digital mode as well post graduates and with other educational qualifications also, learning technology and its implementation into the banking sector is wide and welcoming.

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
age - t1	.694	1.562	.184	.327	1.062	3.772	71	.000
age - t2	.764	1.496	.176	.412	1.116	4.332	71	.000
age - t3	.458	1.233	.145	.169	.748	3.155	71	.002
age - t6	.597	1.401	.165	.268	.926	3.618	71	.001
age - t7	.569	1.432	.169	.233	.906	3.374	71	.001
age - t8	.528	1.520	.179	.171	.885	2.947	71	.004
age - t10	.486	1.424	.168	.151	.821	2.896	71	.005
age - t11	.472	1.332	.157	.159	.785	3.009	71	.004
age - t14	.542	1.352	.159	.224	.859	3.398	71	.001
age - t15	.667	1.245	.147	.374	.959	4.545	71	.000
age - t16	.514	1.332	.157	.201	.827	3.273	71	.002
age - t17	.639	1.346	.159	.323	.955	4.028	71	.000
age - t18	.611	1.420	.167	.277	.945	3.652	71	.000
age - t19	.569	1.382	.163	.245	.894	3.496	71	.001

age - t21	.444	1.342	.158	.129	.760	2.811	71	.006
age - t25	.486	1.482	.175	.138	.834	2.783	71	.007
age - t26	.375	1.560	.184	.008	.742	2.039	71	.045

From the above table, we can come to a conclusion that young bankers are more tech friendly. Though automation does not seem to have much threat in the minds of relatively older bank employees. However, employees above the age of 50 seem to be more insecure in its usage and implementation.

Descriptive Analytics

	Gender of the respondent	Age of the respondent	Highest educational qualification	Nature of qualification	Total work experience into Banking	Type of Branch	Type of Bank
Mean	1.5	2.333333	1.375	1.833333	2.375	1.638889	1.569444
Standard Deviation	0.503509	1.048137	0.542231	0.375293	1.13134	1.104479	0.747322
Sample Variance	0.253521	1.098592	0.294014	0.140845	1.27993	1.219875	0.55849
Kurtosis	-2.05797	-0.93832	0.1286	1.375901	-1.41477	0.548117	2.674058

	Factors [Technology helps employees to complete the job in more efficient manner]	Factors [Is automation creating threat to the job]	Factors [You have recognition of work accomplishment by seniors]	Factors [Digitalization has improved the banking services]	Factors [My bank promotes digital access and facilitates trust in data use.]
Mean	1.875	2.25	1.847222	1.666667	1.694444
Standard Deviation	0.501757	0.98938	0.898508	0.581402	0.642155
Sample Variance	0.251761	0.978873	0.807316	0.338028	0.412363
Kurtosis	0.793163	-1.03715	0.131928	-0.62719	-0.66183
Skewness	-0.24728	0.19072	0.909266	0.196569	0.377051

From the above table, we can see the significant relationship between the socio demographic and other factors. The standard deviation for the second factor is 0.98938 and age factor is 1.048. Thus, automation creating threat to the job has a direct relationship with the age factor. The employees with higher age group have an insecurity pertaining to digital banking. The Mean value for demographic factor total work experience into banking is 2.375. This factor is directly

proportional to the first factor mentioned in the above table technology helps employees to complete the job in more efficient manner. This means that higher the work experience into banking higher the usage of technology and implementation of digital banking.

Regression Analysis:

Multiple R	0.730414	
R Square	0.685256	
Adjusted R Square	0.610049	
Standard Error	0.475504	
Observations	72	
	Coefficients	**Standard Error**
Intercept	2.2794	0.384967
X Variable 1	0.044689	0.102108
X Variable 2	0.008566	0.113219
X Variable 3	-0.33691	0.185899
X Variable 4	0.187335	0.198942
X Variable 5	0.208378	0.100763

$Y = 2.2794+0.044X_1+0.008X_2-0.33X_3+0.18X_4+0.208X_5$

Y= Level of Technological Adaptation

X_1 Factors [Technology helps employees to complete the job in more efficient manner]

X_2 Factors [Is automation creating threat to the job]

X_3 Factors [You have recognition of work accomplishment by seniors]

X_4 Factors [Digitalization has improved the banking services]

X_5 Factors [My bank promotes digital access and facilitates trust in data use.]

If the employees are growing more efficiency by developing the effective learning over a technology that can create impact on the quickness in adaptation of technology. Threat can be a motivational factor, automation can bring more motivation and improve the levels of adaptation. Work accomplishments has not been chose for the major impact factor. When digitalization is an integral part of the business then the services of the business can be modified.

Conclusion

There are not many inventions that have changed the business of banking as dramatically as the technological revolution.

Most of the Indian banks have switched to core banking solutions including post bank from the traditional branch banking which used manual ledger entry. Banks in different parts of the world are revamping their traditional strategies in order to explore the opportunities offered by digitalization. The survival and success of a 'pure' digital bank is relatively not possible in the near future in a developing economy like India. Not because of the lack of market, but because 'brick and mortar' branches provide the Indian customers, especially the aged generation, a sense of security and confidence. Cyber security measures, strict telecom regulatory policies, insurance and strong legal remedy has to be implemented to prevent spams, hoax and malicious hackers and bring about a sense of security among the digital banking users. The role of the Indian government in providing a conducive environment to foster positive attitude among customers, is also indispensable. Advertisements, financial literacy and financial inclusion programmes are some of the ways to cover the rural and semi-urban population. Hence, despite the appeal of digital offers, banks need to balance their traditional physical presence along with digitalization. Banks need to realise that they are no longer the sole players in the industry, and that the new entrants, in the form of fintech start-ups, have a lot to offer to a digitalized clientele, and that both of them can achieve a win-win situation by collaborating, rather than competing, with one another.

Lastly, Indian banks need to deal with the possible negative outcomes of digital disruption on their value by stimulating digital awareness and achieving critical mass- which would ultimately lead to word of mouth promotion.

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