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Perception of Indian banking professionals on E-Banking contribution towards Operational Performance

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Abstract
Improvement of economic background of a country depends upon improvement of smooth and advance banking amenities. Indian banking professionals should well aware and well equipped with updated banking practice with updated technology. The banking performance will enhance after well operational banking practice in terms of technology and service. Present study deals about the perception of Indian banking professionals on E-Banking contribution towards operational performance. 41 statements are identified and clubbed under nine factors, namely, E-banking on Work Pressure of Employees, E-banking on Employees Relation and personal Development, E-banking on Behavioral Factors, E-banking on Employee's Perception on Core Banking Solution, E-banking on Employee's Perception on Electronic Data Interchange, E-banking on Employee's Perception on NEFT and Real Time Gross Settlement and analyse the perception of Indian banking professionals on E-Banking contribution towards operational performance for each 41 statements. The study concludes that due to advancement of banking technology the financial inclusion problem has been eradicated to an extent. And the banking facilities are reaches to last corner.

Introduction

In the beginning of 90's, there were so many deficiencies were prevailing in the Indian economy, particularly in the financial sector in general and in the banking sector in particular. The financial system has to play a crucial role in the mobilization of funds and their allocation to the most productive use to fulfill its role in economic growth. The financial service industry needs to operate by operational flexibility and functional autonomy to enhance efficiency, productivity, and profitability. Despite the impressive quantitative achievements, several distortions have crept into Indian financial system in respect of allocation of resources, productivity and profitability have suffered, and portfolio has deteriorated, work technology is outdated, and transaction costs have mounted.

Review of literature

The research about "the influence of electronic banking on bank performance; a study of first bank of Nigeria. The application relating e-banking has enhanced the profitability through operating profit, profit before tax and other profit after tax of banks. The study also recommends that there is high need for banks to improve and upgrade their information based communication technology infrastructural

facilities, total cost of installing a full sound ICT should be reduced or get influenced by the government (Kamesam .2006).

Evaluated that the relationship of banker-customer was improved by sort of mobile phone and internet banking. The authors establish that through new technology it has made the banks very economical and commercial and also internet has played a vital role in it. Opinion of bank employees and customer satisfaction regarding the use of internet was surveyed. They pin pointed out once consumer usage of remote bank were delivered channels got increased; relationship with management will also become more important feature. Further, the combo mixture of its traditional and new deliverable channels, if as followed, can help to progress their productivity and profitability (Durkin, M. G.2003. et al).

Studied to gather information about bank employee's opinions of the potential benefits and associated risk factors with usage of electronic banking in Pakistan. The study vitally shows that public bank employees who have obtained professional degrees were consider minimizing transaction costs and decline in HR requirements as one of the most and the least important benefits of electronic banking respectively. Masters or bachelor degrees were recruited as private bank employees, with a less than 10 years' experience, for the use of time saving and also minimizing inconvenience was the major benefits of establishing electronic banking. The bankers in Pakistan perceive electronic banking as one of its tool for minimizing inconvenience empirical analysis was suggests, also in reducing transaction costs and saving time (Kaleem, A.2009. et al).

Research on Bahrain customer's perception and satisfaction towards new term e-banking. They sorted out that most of the Islamic bank customers were satisfied with particular Islamic banks' services. The factor affecting were based on the customers dissatisfaction, found that the high cost of the services has been charged by the Islamic banks. The religion were considered as the most influential factor in the selection of these Islamic banking system, but not the return on their investment. Most of the customers have no basic knowledge about the complex influenced on Islamic financial system in the e-banking services of Islamic banks (Metawa and Almossawi 2010).

Studied the User's adoption through e-banking services: the impact and perspective of Malaysian point of view with regards to Internet banking on it monetary and credit policies. As long as the delivery of banking services and facilitator depends on internet and its use for normal payment transactions, it might not cause impact monetary policy. However, when its assumption are staged where private sector initiative produces electronic substitution of change like e-cheque, account reliable credit based cards and digitalize coins, its likely may not have impact on monetary system. Even in some developed countries where i-banking has been quite established, its impact relating to monetary policy has not been that significant. In India, as the Internet banking is still in its developing stage such concern, for the present is not widely addressed (Poon, W.C. 2005).

Provided a specific focus that helped to identify the impact by demographics which influencing Indian Internet users detail in the consumption of different services added through online. The survey was conducted to 570 internet users in Bangalore. The study generally reveals that age and occupation had high significant impact on consumption of different categories within services through online. The study also showed the significance of specific demographics influence that relates in online consumption of

services in the growing Indian market. There are wide ranges of opportunities applicable for online marketers to tap the potential of rapidly increasing through online market space in India (Sakkthivel A. M,2017).

Reported on one particular thought to user's adoption in e-banking services. The result of this study had shown that perceived usefulness, perceived ease of use, consumer awareness and perceived risk are the prime factors that determine an online banking adoption. Study also suggested that usefulness, ease of use of the system awareness with regards to online banking and risks related are the main perusing that causing factors to accept online based banking system (Poon, W.C.2008). "Evaluated consumer point of observations on quality aspect related e-services and Internet banking based adoption in Malaysia. The data was almost collected from 150 retail based banking customers of the Klang Valley area surroundings. Results showed that through Internet banking users and non-users have diverse expectations with related to e-service quality. Not all of the dimensions were preferable by its respondents. The study also have discussed on implications and its recommendations to improve the Internet banking service quality in Malaysia (Qureshi, T.M.2008. et al).

Research Methodology

To examine the impact of E-banking on operational performance of Indian bank. A total of 41 statements are considered that explaining itself about the extent of impact on bank's operational performance. These statements are answered by 500 bank employees based on impact and effectiveness view point. The analysis begins with the estimation of weighted average score (WAS) then ranked the variables based on WAS, which leads to find out the most impacted variables with respect to the corresponding factors. Again to examine the demography specific analysis the ANOVA and t-statistics has been used for all the variables.

The 41 statements are classified under six factors, namely, work pressure of employees, employees relation and personal development, employees behavioral factors, Core Banking solutions, Electronic Data Interchange and Real time Gross Settlement. Categorically, all the factors are segregated by two broad factors i.e. operational performance (work pressure of employee, employee relation and personal development and behavioral factors) and E-banking services (Core Banking solutions, Electronic Data Interchange and Real time Gross Settlement)

Demography wise distribution of sample

The sample has been segregated based on demography, namely, age, gender, bank type, designation, work experience and educational profile and provide simple summaries about the sample and the measures. Together with a simple graphics analysis, they form the basis of virtually every quantitative analysis of data. It depicts about the insights about the employee's perception with regard to contributions of the customers on the technology deployment in Indian banking sector. This is to concentrate light on different corners and working dimensions of banks in the technology era.

Analysis and interpretation

Age Profile

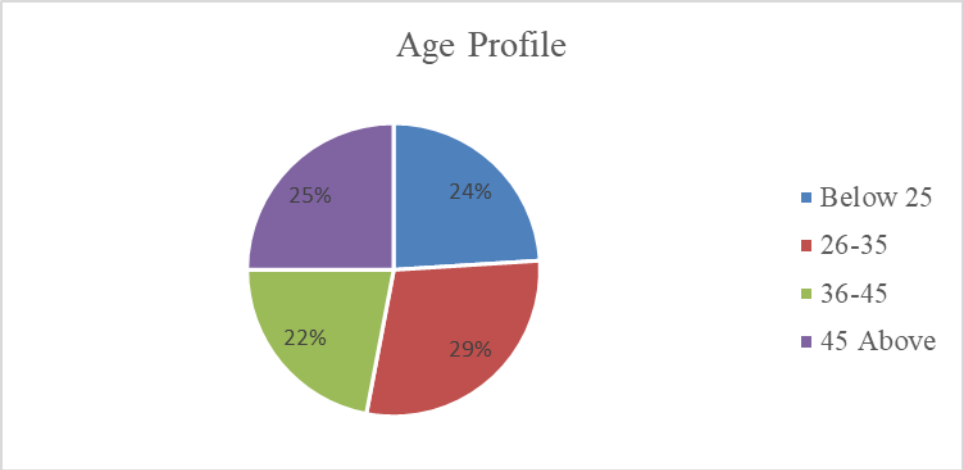
From table 1 it concludes that majority of respondents 29 (29%) are between 26-35 years old, 25 (25 %) of respondents are above 45 years, 24 (24%) of respondents are below 25 years old, 22 (22 %) of

respondents are 36-45 years. Therefore, the majority of respondents are in the age group are between 26-35 years.

Table 1. Age Profile of Bank Employees

Age		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25	24	24.0	24.0	24.0
	26-35	29	29.0	29.0	53.0
	36-45	22	22.0	22.0	75.0
	45 Above	25	25.0	25.0	100.0
	Total	100	100.0	100.0	

Figure 1. Age Profile



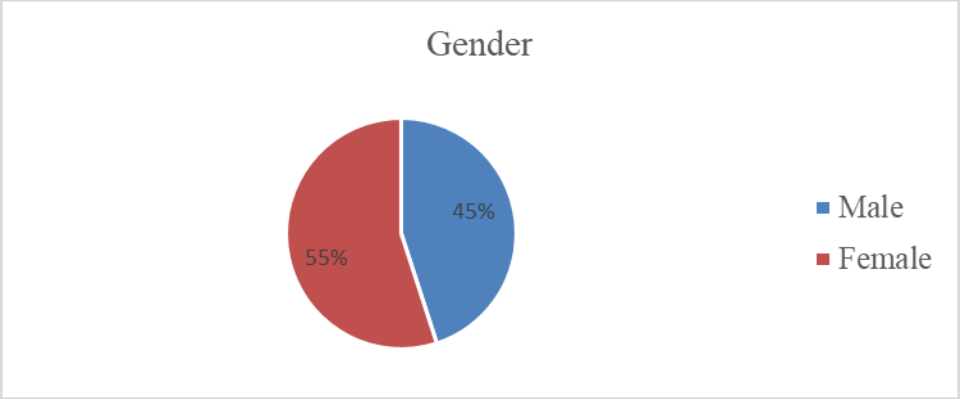
Gender Profile

From table 2 it concludes that majority of respondents are Female as 55 (55%) and Male is 45 (45%). Therefore, the majority of respondents are Female.

Table 2. Gender Profile

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	45	45.0	45.0	45.0
	Female	55	55.0	55.0	100.0
	Total	100	100.0	100.0	

Figure 2. Gender Profile



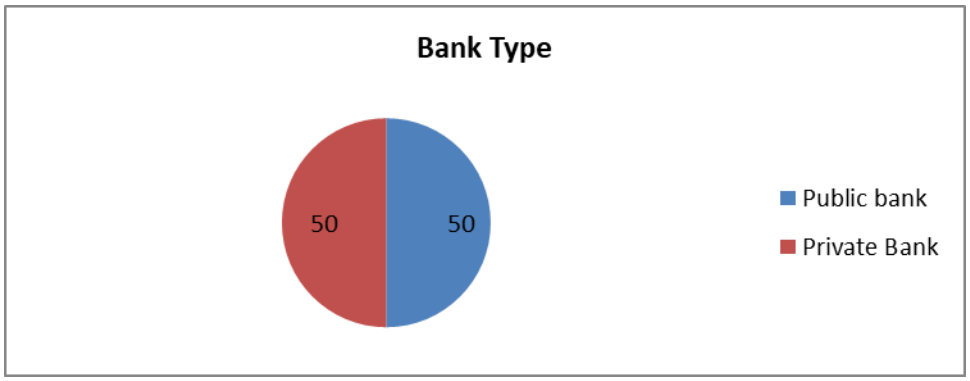
Bank Type

From table 3 it is concluded that the respondents are 50 (50%) from public banks and 50 (50%) from private banks. **Therefore the majority of banks are private and public banks.**

Table 3. Private and Public Bank employees

Bank Type				
	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Public bank	50	50.0	50.0	50.0
Private Bank	50	50.0	50.0	100.0
Total	100	100.0	100.0	

Figure 4: Bank Type



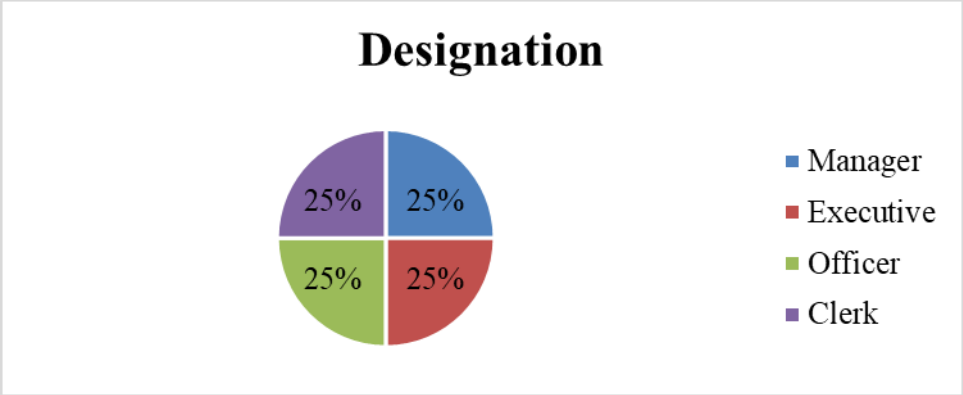
Designation of Employee

From table 4 it concludes that the Designation of the employee. To know the operational performance of Banks equal numbers of employees from a different category of the department.

Table 4. Designation of employee

Designation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manager	25	25.0	25.0	25.0
	Executive	25	25.0	25.0	50.0
	Officer	25	25.0	25.0	75.0
	Clerk	25	25.0	25.0	100.0
	Total	100	100.0	100.0	

Figure 4. Designation of Employee



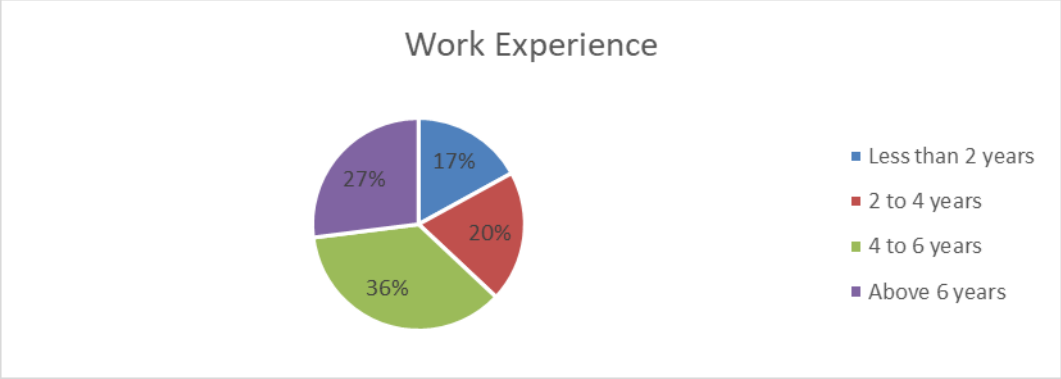
Work Experience of Employees

From table 5 it concludes that majority of respondents 36 (36%) having 4-6 years of experience, 27 respondents (27%) have experience of above 6 years, 20 respondents (20%) having experience of 2 to 4 years, 17 respondents (17%) having an experience of less than 2 years. Therefore, the majority of respondents are having experience of 4 to 6 years.

Table 5. Work Experience

Work Experience		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 2 years	17	17.0	17.0	17.0
	2 to 4 years	20	20.0	20.0	37.0
	4 to 6 years	36	36.0	36.0	73.0
	Above 6 years	27	27.0	27.0	100.0
	Total	100	100.0	100.0	

Figure 5: Work Experience



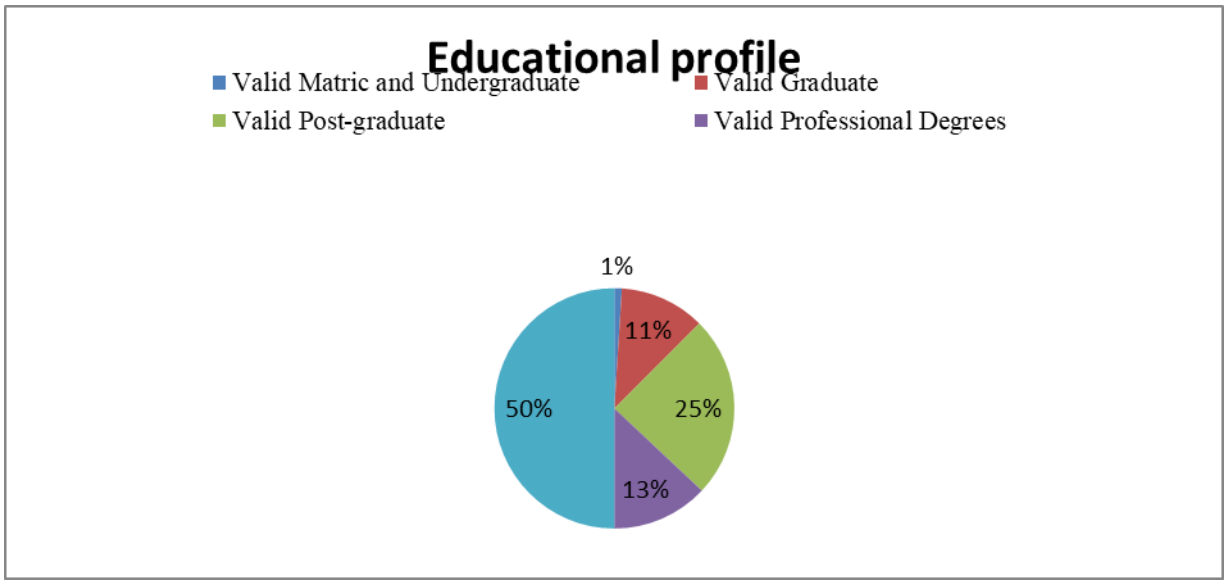
Educational profile

From table 6 , it concludes that the majority of -employees i.e 49% are Post-Graduate, 26% of them have Professional degrees, 23% are Graduate while 2% are either Matriculate or Under-Graduate. An analysis of the table reveals that maximum of employees belong to Post-Graduate category.

Table 6. Educational profile

Educational profile		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Metric and Undergraduate	2	2	2	2
	Graduate	23	23	23	25
	Post-graduate	49	49	49	74
	Professional Degrees	26	26	26	100
	Total	100	100	100	100

Figure 6. Educational profile



The above facts and figures of Indian banking employees clearly indicate the active participation of bank employees diversified by several demography, namely, age, gender, bank type, designation, work experience and educational profile. Further, the responses of bank employees on 39 statements have been analysed through weighted average score to form the rank of the statements with corresponding to the factors.

Estimation of Weighted Average Score

An attempt has been made in the study to find out the key factors influenced in impacting the e-banking on operational performance of bank branches by assigning different ranks through Weighted Average Scores (WAS) among the statements included in different parameters which were used for analysing the operational performance of banks from the scores obtained from the employees of the banks. This is based on the response data collected from the selected bank employees. Weighted Average Scores (WAS) are calculated for different statements and presented in the following tables. Based on the WAS statements were ranked by 1 to 5 ranks which are ranging from highest to lowest. First rank indicates the statements mostly responded by the respondents. The statements are arranged in descending order of their agreeableness from lowest to highest and ranked accordingly from 1 to 5.

Table 7: Impact of E-banking on Work Pressure of Employees

	Degree of Agreement		

Statements	Very Large Extent	Large Extent	Not At All	Little Extent	Very Little Extent	WAS	Rank
Increase in number of Hours	4	2	19	53	22	2.77	2
Increase in Decision making Process	9	59	27	2	3	2.31	3
Division of Work	24	43	20	10	3	2.25	5
Increase in Productivity	35	44	10	4	7	1.84	8
Increase in Knowledge	31	55	9	3	2	1.90	7
Reduction in Processing Time	28	39	29	3	1	2.10	6
Team Performance	18	45	23	12	2	2.27	4
Minimization of Cost	4	18	20	39	19	3.51	1

Table no 7 shows the impact of e-banking on work pressure of employees and their performance and productivity. To know the impact of e-banking both positive and negative statements are taken into consideration. It was observed that a large number of employees are of opinion that E-banking with quick decision making process, separation of work along with well defined objectives improving in knowledge of employee has resulted in productivity of the banks with minimal cost. However employees are not satisfied with the increase in their working hours. There is a very little increase in working hours of their job. Further it has seen that it has minimized the transaction processing time as minimum employ of manual work for entering and processing of data is required. Moreover, the decision making capacity of employee has also increased to a large extent. So, as far as the work pressure of employee is concerned, it has been minimized by division of work and quick processing time.

Table no 8: Impact of E-banking on Employees Relation and personal Development

Statements	Degree of Agreement					WAS	Rank
	Excellent	Very Good	Good	Fair	Poor		
Human Resource Policies of Bank	24	34	25	14	3	3.62	4
Environment after adoption of E-banking	29	36	29	4	2	3.86	1
Training aspects to the employee	22	29	41	6	2	3.63	3
Upgraded knowledge of employee	24	27	32	16	1	3.57	6
Relationship between Employee and Customer	20	35	33	9	3	3.60	5
Relationship between Employee and Employee	19	43	26	6	6	3.63	3

Advise to Customer	17	39	31	9	4	3.56	7
Quickness in Rendering Service	35	28	22	12	3	3.80	2

Table no 8 reveals the impact of E-banking on the operational performance of employee with relation to personal development and relations. It also depicts that there is a transformation in personal development and relations after adoption of E-banking. Majority of employee expressed that the environment they are working has improved after adoption of E-banking with a Weighted Average Score of 3.86. Similarly, it has assisted to provide quick service (3.80) to the customers. Further, employees are efficient in working environment due to proper training (3.63) and they are also satisfied with the HR policies of the bank (3.62). No doubt, personal interaction with customer has reduced, but due to quick responses to their queries the relation with them has increased. The employees' knowledge about E-banking environment has been upgraded continuously. Therefore the study found that personal development of employees has been improved and with the customer is good due to quick mode of banking.

Table no 9: Impact of E-banking on Behavioral Factors

Statements	**Degree of Agreement**					**WAS**	**Rank**
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**		
Helped in reducing work stress	29	39	27	2	3	3.89	2
Helped in reducing chaos and confusions	30	25	20	13	12	3.48	5
Helped to do routine work more efficiently	29	24	19	15	13	3.41	6
Increased interest in work	31	25	19	14	11	3.51	4
Increased level of motivation	37	42	13	7	1	4.07	1
Increased level of job satisfaction	17	44	25	11	3	3.61	3

Table no 9 describes the impact of E-banking on behavioral factors of employees. Majority of employees are of opinion that E-banking has increased the level of their motivation in the work (4.07). Again due to E-banking the work stress of employees has been reduced to a large extent (3.89). As such employees are less burdened and satisfied with their job (3.61). Further employees are motivated with working environment under E-banking; they are more interested in their work (3.51). Similarly it also eliminates the chaos and confusions among the employees while performing their work (3.48). Since E-banking is a systematically designed banking tool, it has helped employees to do their routine work more efficiently.

Table no 10: Impact of E-banking on Employee's Perception on Core Banking Solution

Statements	Degree of Agreement					WAS	Rank
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
Facilitate Centralized Data Base	32	23	30	5	10	3.62	5
Online Real Time Data Availability	27	33	27	27	6	4.08	1
Any Branch Banking	32	35	27	2	4	3.89	3
Facilitative in Lunch of New Product	36	41	16	3	4	4.02	2
Shifting of Time Consuming Activities to Data Centre	35	34	14	7	10	3.77	4
High Pressure on Concentrated Branches	23	38	21	9	9	3.57	6

Table 10 reveals employees' perception about impact of E-banking on operational performance of banks with relation to Core Banking Solution. From the above data, it is very clear that large number of employee is of opinion that due to E-banking, new products and services of banks can be easily lunched, the reason being majority of customers access different modes of E-banking and fulfill their needs relating to online shopping, online ticketing, share trading, mutual fund transactions etc. the latest and updated information regarding all these can be easily available through E-banking. In Core Banking Solution system of banking, customer can transit online fund transfer at any branch of bank. It was also found from the table that implementation of Core Banking Solution enables the bank to keep reliable centralized data reposition. Moreover, E-banking has facilitated new technology like data warehousing, data mining for their business analysis and growth. However, Core Banking Solution has put a high work load on the branches settled in industrial areas. From the above table, it can be concluded that employees are of opinion that Core Banking Solution connected all branches of bank with each other by providing safety and reliable services all the time.

Table no 11: Impact of E-banking on Employee's Perception on Electronic Data Interchange

Statements	Degree of Agreement					WAS	Rank
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
Reduces cash holding	30	44	16	6	4	3.90	1
Less mailing cost	24	42	25	2	7	3.74	3
Automatic reconciliation of remittance	24	39	28	7	2	3.76	2

Less reliance on human interpretation	27	37	22	12	1	3.74	3
Enables paperless transaction	28	43	14	7	8	3.76	2

Table 11 shows the impact of Electronic Data Interchange on working culture of the banks. From the above table it can be said that Electronic Data Interchange helped in exchanging computerised based data with minimal use of manual work in it. Large numbers of employees have agreed that Electronic Data Interchange has reduced inventory holding (3.90) as the data of customer is warehoused in soft copy form. So no physical record is required to be kept. Employees also have statement that adoption of E-banking eliminates larger amount of human interpretation (3.74). It also reduced the cost providing information relating to banking products and services to the customers by mailing those (3.74). It also reduced the use of larger amount of paper work (3.76). no papers and files are required for record keeping as almost all information regarding the customer are stored in system in form of PDF, excel and word files.

Table 12: Impact of E-banking on Employee's Perception on NEFT and Real Time Gross Settlement

Statements	**Degree of Agreement**					**WAS**	**Rank**
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**		
Processing and Settlement on Real Time	32	39	20	5	4	3.90	2
Payments are Settled transaction by transaction	27	31	33	7	2	3.74	4
Reduced settlement Risk	29	29	30	8	4	3.71	5
Immediate finality of transaction	27	37	26	7	3	3.78	3
Settlement on FIFO Basis and Priority Wise	23	24	33	11	9	3.41	6
Immediate Credit and Transparent pricing	27	37	38	6	10	4.19	1

Table 12 explains employees' perception about E-banking on their operational performance with regard to Real Time Gross Settlement system. The RTGS system is primarily for online real times inter-bank payment and settlement of heavy funds. Majority of employees agreed that adoption of E-banking helps in quickly transfer of funds (4.19). In this system (RTGS) processing time is on real time basis (3.90). Further, employees are agreed that funds are quickly transferred (3.78) without any security risk. Moreover, employees also agreed that payments are settled transaction by transaction (3.74) and also eliminated the settlement risk (3.71). The study also found that while making settlement, FIFO basis and priority wise both are considered in a secured manner.

From the above analysis, i.e. ranking of weighted average score the variables of corresponding factors have been ranked based on most impacted variables to least impacted. The rank have been estimated on the basis overall perception of bank employees. Again, to analyse demography specific perception of bank employees on two broad categories i.e. operational performance and E-banking services, one-way ANOVA and t-test respectively have been used. To achieve the effective purposive result the broad factor, i.e. operational performance have been analysed through designation demography and the E-banking service have been analysed through t-test. To test the hypothesis $H_0$1 one-way ANOVA and to test the hypothesis H02 t-test have been used as follows.

$H_0$1: there is no significant difference of perception for operative performance with respect to designation of Indian banking employees

$H_0$2: there is no significant difference of perception for E-banking services with respect to employees of private sector and public sector bank.

Demography wise perception analysis

As discussed earlier the demography specific perception of bank employees on two broad categories i.e. operational performance and E-banking services, one-way ANOVA and t-test respectively have been used. And to achieve the effective purposive result the broad factor, i.e. operational performance have been analysed through designation demography and the E-banking service have been analysed through t-test. The factors under the two broad category have also been briefly analysed as follows.

Perception analysis of operative performance

The broad factor operative performance further segregated as three sub-factors with corresponding variables, namely, work pressure of employee (8 variables), employees relation and personal development (8 variables) and behavioural factor (6 variables). The desired descriptive statistics and ANOVA have been explained briefly as follows for further analysis.

Employee Designation and Operative performance for E-Banking on work pressure of employees

Table 13 depicts the descriptive statistics for Operative performance for E-Banking on work pressure of employees indicating mean and standard deviation for each variable of sub-factors work pressure of employees.

Table 13. Descriptive for Employee Designation and Operative performance for E-Banking on work pressure of employees

		N	Mean	Std. Deviation
Increase in number of Hours	Manager	25	3.22	1.414
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.76	1.464
Increase in Decision making Process	Manager	25	3.16	1.375
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201

	Total	100	2.75	1.452
Division of Work	Manager	25	3.16	1.434
	Executive	25	3.08	1.441
	Officer	25	2.52	1.610
	Clerk	25	2.12	1.201
	Total	100	2.72	1.471
Increase in Productivity	Manager	25	3.12	1.364
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.74	1.447
Increase in Knowledge	Manager	25	3.16	1.375
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.75	1.452
Reduction in Processing Time	Manager	25	3.04	1.428
	Executive	25	3.20	1.472
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.75	1.473
Team Performance	Manager	25	3.20	1.414
	Executive	25	3.20	1.472
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.79	1.479
Minimization of Cost	Manager	25	3.08	1.382
	Executive	25	3.20	1.472
	Officer	25	2.64	1.604
	Clerk	25	2.10	1.201
	Total	100	2.76	1.464

Table 13 depicts the variables and descriptive statistics, i.e. mean and standard deviation for the factor work pressure of employees with designation (Manager, Executive, Officer, Clerk) as demography. The mean ranges from 3.22 to 2.10 for Increase in number of Hours (Manager) and Minimization of Cost (Clerk) respectively.

Table 14 ANOVA for Designation and operative performance for E-Banking on work pressure of employees

		Sum of Squares	df	Mean Square	F	Sig.
Increase in number of Hours	Between Groups	18.000	3	6.000	2.965	.036

	Within Groups	194.240	96	2.023		
	Total	212.240	99			
Increase in Decision making Process	Between Groups	17.150	3	5.717	2.864	.041
	Within Groups	191.600	96	1.996		
	Total	208.750	99			
Division of Work	Between Groups	18.080	3	6.027	2.951	.037
	Within Groups	196.080	96	2.043		
	Total	214.160	99			
Increase in Productivity	Between Groups	16.360	3	5.453	2.743	.053
	Within Groups	190.880	96	1.988		
	Total	207.240	99			
Increase in Knowledge	Between Groups	17.150	3	5.717	2.846	.055
	Within Groups	191.600	96	1.996		
	Total	208.750	99			
Reduction in Processing Time	Between Groups	17.390	3	5.797	2.820	.057
	Within Groups	197.360	96	2.056		
	Total	214.750	99			
Team Performance	Between Groups	20.190	3	6.730	3.290	.024
	Within Groups	196.400	96	2.046		
	Total	216.590	99			
Minimization of Cost	Between Groups	18.000	3	6.000	2.965	.036
	Within Groups	194.240	96	2.023		
	Total	212.240	99			

1. There was a statistically significant difference between groups for Increase in number of Hours as determined by one-way ANOVA (F (3, 96) = 2.965, p = 0.036 with the p-value less than 0.05 so, the null hypothesis has been rejected. It indicates that eventually E-banking service will reduce the traditional labor and decrease the number of working hours.
2. There was a statistically significant difference between groups for Increase in Decision making Process as determined by one-way ANOVA (F (3, 96) = 2.864, p = 0.041) with the p-value is less than 0.05 so, the null hypothesis has been rejected. It indicates eventually that E-banking reduces the decision making process and quick decision can be easily possible.
3. There was a statistically significant difference between groups for Division of Work as determined by one-way ANOVA (F (3, 96) =2.951, p = 0.037) with the p-value is less than 0.05 so, the null hypothesis has been rejected. It indicates that due to E-banking service the work will be centralized and the top level work will be increased, as the clerical work will done by computer automation system.
4. There was no statistically significant difference between groups for Increase in Productivity as determined by one-way ANOVA (F (3,96) = 2.743,p = 0.053) then the p-value is more than 0.05 so, the null hypothesis has been accepted. It indicates eventually that E-banking helps in increase the productivity of bank with lesser time.

5. There was no statistically significant difference between groups for Increase in Knowledge as determined by one-way ANOVA (F (3, 96) = 2.846,p = 0.055) then the p-value is more than 0.05 so, the null hypothesis has been accepted. Due to E-banking, the information with regards to internal and external banking practice are conveniently available to the bank employees.
6. There was no statistically significant difference between groups for Reduction in Processing Time as determined by one-way ANOVA (F (3, 96) = 2.820,p = 0.057) then the p-value is more than 0.05 so, the null hypothesis has been accepted. Cheque truncation system, online banking, mobile banking, queue management system, direct benefit transfer (DBT) are the fundamental benefits of E-banking that reduce processing time.
7. There was a statistically significant difference between groups for Team Performance as determined by one-way ANOVA (F (3, 96) = 3.290, p = 0.024) then the p-value is less than 0.05 so, the null hypothesis has been rejected. Due to advent of banking technology customers perform their banking practice themselves. So it reduces work pressure on bank employees. Thus interdependence of employees will be reduced.
8. There was a statistically significant difference between groups for Minimization of Cost as determined by one-way ANOVA (F (3, 96) = 2.965, p = 0.036) then the p-value is less than 0.05 so, the null hypothesis has been rejected. For E-banking heavy investment required for technical support, software development, training to employees and maintenance. So E-banking is an expensive operation.

Table 15. Descriptive for Employee Destination and Operative performance for E-Banking on Employees Relation and personal Development

		N	Mean	Std. Deviation
Human Resource Policies of Bank	Manager			
	Executive	25	3.20	1.472
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.78	1.467
Environment after adoption of E-banking	Manager	25	3.24	1.363
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.77	1.455
Training aspects to the employee	Manager	25	3.20	1.414
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604
	Clerk	25	2.16	1.214
	Total	100	2.77	1.462
Upgraded knowledge of employee	Manager	25	3.08	1.382
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604

	Clerk	25	2.04	1.207
	Total	100	2.71	1.458
Relationship between Employee and Customer	Manager	25	3.20	1.414
	Executive	25	3.20	1.472
	Officer	25	2.64	1.604
	Clerk	25	2.08	1.201
	Total	100	2.79	1.479
Relationship between Employee and Employee	Manager	25	3.20	1.414
	Executive	25	3.08	1.441
	Officer	25	2.52	1.610
	Clerk	25	2.12	1.201
	Total	100	2.73	1.469
Advise to Customer	Manager	25	3.20	1.414
	Executive	25	3.00	1.500
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.74	1.474
Quickness in Rendering Service	Manager	25	3.20	1.414
	Executive	25	3.08	1.441
	Officer	25	2.56	1.583
	Clerk	25	2.12	1.201
	Total	100	2.74	1.461

Table 15 depicts the variables and descriptive statistics, i.e. mean and standard deviation for the factor Employees Relation and personal Development with designation (Manager, Executive, Officer, and Clerk) as demography. The mean ranges from 3.24 to 2.08 for Environment after adoption of E-banking (Manager) and Relationship between Employee and Customer (Clerk) respectively.

Table 16 ANOVA for Designation and Operative performance

		Sum of Squares	df	Mean Square	F	Sig.
Human Resource Policies of Bank	Between Groups	19.400	3	6.467	3.204	.027
	Within Groups	193.760	96	2.018		
	Total	213.160	99			
Environment after adoption of E-banking	Between Groups	18.910	3	6.303	3.171	.028
	Within Groups	190.800	96	1.988		
	Total	209.710	99			
Training aspects to the employee	Between Groups	16.750	3	5.583	2.749	.047
	Within Groups	194.960	96	2.031		
	Total	211.710	99			
Upgraded knowledge of employee	Between Groups	18.190	3	6.063	3.025	.033
	Within Groups	192.400	96	2.004		

	Total	210.590	99			
Relationship between Employee and Customer	Between Groups	20.190	3	6.730	3.290	.024
	Within Groups	196.400	96	2.046		
	Total	216.590	99			
Relationship between Employee and Employee	Between Groups	18.990	3	6.330	3.121	.030
	Within Groups	194.720	96	2.028		
	Total	213.710	99			
Advise to Customer	Between Groups	16.840	3	5.613	2.716	.056
	Within Groups	198.400	96	2.067		
	Total	215.240	99			
Quickness in Rendering Service	Between Groups	18.600	3	6.200	3.090	.058
	Within Groups	192.640	96	2.007		
	Total	211.240	99			

1. There was a statistically significant difference between groups for Human Resource Policies of Bank as determined by one-way ANOVA (F (3, 96) =3.204, p = 0.027) then the p-value is less than 0.05 so, the null hypothesis has been rejected. The HR policy in bank is strong enough as like other corporate. It was observed form questionnaire and personal interview the banking employees are facing more labor intensive work and found less human resource worthiness in banking industry.
2. There was a statistically significant difference between groups for Environment after adoption of E-banking as determined by one-way ANOVA (F (3, 96) = 3.171, p = 0.028) then the p-value is less than 0.05 so, the null hypothesis has been rejected. As old bank employees are not well equipped the knowledge of banking technology and rigid to acquaint E-banking interruption.
3. There was a statistically significant difference between groups for Training aspects to the employee as determined by one-way ANOVA (F (3, 96) =2.749,p = 0.047) then the p-value is less than 0.05 so, the null hypothesis has been rejected. It was observed form questionnaire and personal interview that Institute of Banking Personnel Selection (IBPS) recruits employees and placement them with inadequate training with high responsibility.
4. There was a statistically significant difference between groups Upgraded knowledge of employee as determined by one-way ANOVA (F (3,96) = 3.025,p = 0.033) then the p-value is less than 0.05 so, the null hypothesis has been rejected. As bank technology are frequently upgraded employees are not trained the technology in real time.
5. There was a statistically significant difference between groups for Relationship between Employee and Customer as determined by one-way ANOVA (F (3, 96) = 3.920, p = 0.024) then the p-value is less than 0.05 so, the null hypothesis has been rejected. E-banking creates distance between employee and customer through automation process.
6. There was a statistically significant difference between groups for Relationship between Employee and Employee as determined by one-way ANOVA (F (3, 96) = 3.121, p = 0.030) then the p-value is less than 0.05 so, the null hypothesis has been rejected. E-banking creates distance between employee and customer through automation process

7. There was a statistically significant difference between groups for Advise to Customer as determined by one-way ANOVA (F (3, 96) = 2.716, p = 0.056) then the p-value is more than 0.05 so, the null hypothesis has been accepted. E-banking protects customers interest and resource through enhancing cyber security, disclaimer notice, one time password (OTP) as digital advise to the customer.
8. There was a statistically significant difference between groups for Quickness in Rendering Service as determined by one-way ANOVA (F (3, 96) = 3.090, p = 0.031) then the p-value is less than 0.05 so, the null hypothesis has been accepted. Due to enhancement of technology advancement it is quite obvious quick services can be rendered.

Table 17. Descriptive for Employee Destination and Operative performance for E-Banking on Behavioral Factors

		N	Mean	Std. Deviation
Helped in reducing work stress	Manager	25	3.20	1.414
	Executive	25	3.12	1.394
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.77	1.455
Helped in reducing chaos and confusions	Manager	25	3.18	1.414
	Executive	25	3.08	1.441
	Officer	25	2.68	1.651
	Clerk	25	2.12	1.201
	Total	100	2.77	1.476
Helped to do routine work more efficiently	Manager	25	3.16	1.414
	Executive	25	3.16	1.491
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.78	1.481
Increased interest in work	Manager	25	3.18	1.414
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.76	1.464
Increased level of motivation	Manager	25	3.16	1.414
	Executive	25	3.08	1.441

	Officer	25	2.68	1.574
	Clerk	25	2.08	1.201
	Total	100	2.77	1.455
Increased level of job satisfaction	Manager	25	3.16	1.434
	Executive	25	3.08	1.441
	Officer	25	2.64	1.604
	Clerk	25	2.12	1.201
	Total	100	2.75	1.466

Table 17 depicts the variables and descriptive statistics, i.e. mean and standard deviation for the factor Behavioral Factors with designation (Manager, Executive, Officer, and Clerk) as demography. The mean ranges from 3.20 to 2.08 for Helped in reducing work stress **(**Manager) and increased level of motivation (Clerk) respectively.

Table 18 ANOVA for Designation and Operative performance

		Sum of Squares	df	Mean Square	F	Sig.
Helped in reducing work stress	Between Groups	18.670	3	6.223	3.127	.029
	Within Groups	191.040	96	1.990		
	Total	209.710	99			
Helped in reducing chaos and confusions	Between Groups	17.790	3	5.930	2.876	.053
	Within Groups	197.920	96	2.062		
	Total	215.710	99			
Helped to do routine work more efficiently	Between Groups	19.400	3	6.467	3.139	.059
	Within Groups	197.760	96	2.060		
	Total	217.160	99			
Increased interest in work	Between Groups	18.000	3	6.000	2.965	.056
	Within Groups	194.240	96	2.023		
	Total	212.240	99			
Increased level of motivation	Between Groups	17.790	3	5.930	2.966	.054
	Within Groups	191.920	96	1.999		
	Total	209.710	99			
Increased level of job satisfaction	Between Groups	17.150	3	5.717	2.806	.052
	Within Groups	195.600	96	2.038		
	Total	212.750	99			

1. There was a statistically significant difference between groups for Helped in reducing work stress as determined by one-way ANOVA (F (3, 96) = 3.127, p = 0.029) then the p-value is less than 0.05 so, the null hypothesis has been rejected. E-banking facilities increase the work stress within managerial level as banking protocols are quiet rigid in term of reporting and technical issue .

2. There was not statistically significant difference between groups as for Helped in reducing chaos and confusions determined by one-way ANOVA (F (3, 96) = 2.876, p = 0.053) then the p-value is less than 0.05 so, the null hypothesis has been accepted. As
   E-banking simplifies the banking practice and help in reducing chaos and confusions.
3. There was not statistically significant difference between groups for Helped to do routine work more efficiently as determined by one-way ANOVA (F (3, 96) = 3.139, p = 0.059) then the p-value is less than 0.05 so, the null hypothesis has been accepted. Banking helps in day-to-day banking practice.
4. There was not statistically significant difference between groups as Increased interest in work determined by one-way ANOVA (F (3, 96) = 2.965, p = 0.056) then the p-value is less than 0.05 so, the null hypothesis has been accepted. Ease of doing work enhanced the level of interest in work environment.
5. There was a statistically significant difference between groups for Increased level of motivation as determined by one-way ANOVA (F (3, 96) = 2.966, p = 0.054) then the p-value is less than 0.05 so, the null hypothesis has been accepted. Easy and convenient operation of E-banking increases the level of motivation.
6. There was a statistically significant difference between groups for Increased level of job satisfaction as determined by one-way ANOVA (F (3, 96) = 2.806, p = 0.052) then the p-value is less than 0.05 so, we reject the null hypothesis. Easy and convenient operation of E-banking increases the level of job satisfaction.

Perception analysis of E-banking Services

The broad factor E-banking services further segregated as three sub-factors with corresponding variables, namely, Core Banking Solution (6 variables), Electronic Data Interchange (5 variables) and Real Time Gross Settlement (6 variables). The desired descriptive statistics and Independent sample t-test have been explained briefly as follows for further analysis.

Bank type and E-banking services on Core Banking Solution

Table 5.19 depicts the descriptive statistics of perception for E-banking services on Core Banking Solution indicating mean and standard deviation for each variable of sub-factors Core Banking Solution.

Table 19. Descriptive for Bank type and E-banking services on Core Banking Solution

		N	Mean	Std. Deviation
Facilitate Centralized Data Base	Public bank	50	2.56	1.296
	Private bank	50	3.28	1.386
Online Real Time Data Availability	Public bank	50	2.60	1.340
	Private bank	50	3.24	1.422
Any Branch Banking	Public bank	50	2.56	1.296
	Private bank	50	3.20	1.457
Facilitative in Lunch of New Product	Public bank	50	2.62	1.338
	Private bank	50	3.26	1.397
Shifting of Time Consuming Activities to Data Centre	Public bank	50	2.54	1.313
	Private bank	50	3.26	1.386
High Pressure on Concentrated Branches	Public bank	50	2.56	1.296
	Private bank	50	3.24	1.422

Table 19 depicts the variables and descriptive statistics i.e. mean and standard deviation for the factor Core Banking Solution with bank type (public bank and private bank) as demography. The mean ranges from 3.28 to 2.54 for Facilitate Centralized Data Base **(**private bank) and Shifting of Time Consuming Activities to Data Centre (public bank) respectively.

Table 5.20 Independent t-test Bank type and E-banking services on Core Banking Solution

Independent Samples Test						
Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)
Facilitate Centralized data base	Equal variances assumed	.459	.500	-2.683	98	.059
	Equal variances not assumed			-2.683	97.566	.059
Online real- time data availability	Equal variances assumed	.381	.538	-2.316	98	.053
	Equal variances not assumed			-2.316	97.655	.053
Any branch banking	Equal variances assumed	1.401	.239	-2.321	98	.052
	Equal variances not assumed			-2.321	96.691	.052
Facilitative launch of new products	Equal variances assumed	.276	.601	-2.339	98	.056
	Equal variances not assumed			-2.339	97.821	.056
Shifting of time consuming activities to data center	Equal variances assumed	.286	.594	-2.742	98	.058
	Equal variances not assumed			-2.742	97.714	.058
High pressure on concentrated branches	Equal variances assumed	.866	.354	-2.499	98	.051
	Equal variances not assumed			-2.499	97.167	.051

Table 20 depicts from one sample t-test that all the variables with regard to E-banking services on Core Banking Solution, namely, Facilitate Centralized data base, Facilitate Centralized data base Any branch banking, Facilitative launch of new products, Shifting of time consuming activities to data center and High pressure on concentrated branches have been accepted the hypothesis $H_0$2. It indicate that there is no difference in perception between private and public bank employees with regards to these variables as the significance level is more than 0.05 at 95% significance level.

Bank type and E-banking services on Electronic Data Interchange

Table 21 depicts the descriptive statistics of perception for E-banking services on **Electronic Data Interchange** indicating mean and standard deviation for each variable of sub-factors Real Time Gross Settlement.

Table 21. Descriptive for Bank type and E-banking services on Electronic Data Interchange

		N	Mean	Std. Deviation
Reduces cash holding	Public bank	50	2.56	1.296
	Private bank	50	3.20	1.414
Less mailing cost	Public bank	50	2.54	1.296
	Private bank	50	3.18	1.438
Automatic reconciliation of remittance	Public bank	50	3.38	1.227

	Private bank	50	2.76	1.302
Less reliance on human interpretation	Public bank	50	2.58	1.295
	Private bank	50	3.18	1.410
Enables paperless transaction	Public bank	50	2.58	1.295
	Private bank	50	3.18	1.410

Table 21 depicts the variables and descriptive statistics i.e. mean and standard deviation for the factor Employees Relation and personal Development with bank type (public bank and private bank) as demography. The mean ranges from 3.38 to 2.54 for Automatic reconciliation of remittanc**e (**public bank) and Less mailing cost **(**public bank) respectively.

Table 22 Independent t-test Bank type and E-banking services on Electronic Data Interchange

Independent Samples Test						
	Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)
Reduces Cash holdings	Equal variances assumed	.811	.370	-2.359	98	.051
	Equal variances not assumed			-2.359	97.265	.051
Less mailing cost	Equal variances assumed	1.035	.311	-2.264	98	.056
	Equal variances not assumed			-2.264	96.956	.056
Automatic reconciliation of remittance	Equal variances assumed	.802	.373	2.450	98	.064
	Equal variances not assumed			2.450	97.654	.064
Less reliance on human interpretation	Equal variances assumed	.630	.429	-2.216	98	.062
	Equal variances not assumed			-2.216	97.303	.062
Enables paperless transaction	Equal variances assumed	.630	.429	-2.316	98	.057
	Equal variances not assumed			2.316	97.303	.057

Table 22 depicts from one sample t-test that all the variables with regard to E-banking services on Electronic Data Interchange, namely, Reduces Cash holdings, Less mailing cost, Automatic reconciliation of remittance, Less reliance on human interpretation, Enables paperless transaction have been accepted the hypothesis $H_0$2. It indicate that there is no difference in perception between private and public bank employees with regards to these variables as the significance level is more than 0.05 at 95% significance level.

Bank type and E-banking services on Real Time Gross Settlement

Table 23 depicts the descriptive statistics of perception for E-banking services on Real Time Gross Settlement indicating mean and standard deviation for each variable of sub-factors Real Time Gross Settlement.

Table 23. Descriptive for Bank type and E-banking services on Real Time Gross Settlement

		N	Mean	Std. Deviation
Processing and Settlement on Real Time	Public bank	50	2.58	1.295
	Private bank	50	3.20	1.385

Payments are Settled transaction by transaction	Public bank	50	2.58	1.295
	Private bank	50	3.18	1.410
Reduced settlement Risk	Public bank	50	2.58	1.295
	Private bank	50	3.10	1.418
Immediate finality of transaction	Public bank	50	2.58	1.295
	Private bank	50	3.26	1.397
Settlement on FIFO Basis and Priority Wise	Public bank	50	2.54	1.313
	Private bank	50	3.24	1.397
Immediate Credit and Transparent pricing	Public bank	50	2.58	1.295
	Private bank	50	3.22	1.433

Table 23 depicts the variables and descriptive statistics i.e. mean and standard deviation for the factor Real Time Gross Settlement with bank type (public bank and private bank) as demography. The mean ranges from 3.26 to 2.54 for Immediate finality of transaction (private bank) and Settlement on FIFO Basis and Priority Wise (public bank) respectively.

Table 24 Independent t-test Bank type and E-banking services on Real Time Gross Settlement

Independent Samples Test						
	Levene's Test for Equality of Variances	t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)
Processing and settlement on real time.	Equal variances assumed	.465	.497	-2.312	98	.061
	Equal variances not assumed			-2.312	97.561	.061
Payment are settled transaction by transaction	Equal variances assumed	.630	.429	-2.216	98	.058
	Equal variances not assumed			-2.216	97.303	.058
Eliminated settlement risk	Equal variances assumed	.509	.477	-1.915	98	.060
	Equal variances not assumed			-1.915	97.207	.060
Immediate finality of transaction	Equal variances assumed	.689	.408	-2.524	98	.058
	Equal variances not assumed			-2.524	97.443	.0158
Settlement on FIFO basis and priority wise	Equal variances assumed	.449	.504	-2.656	98	.063
	Equal variances not assumed			-2.656	97.622	.063
Immediate credit and transparent pricing	Equal variances assumed	1.178	.280	-2.343	98	.069
	Equal variances not assumed			-2.343	97.017	.069

Table 24 depicts from one sample t-test that all the variables with regard to E-banking services on Real Time Gross Settlement, namely, Processing and settlement on real time, Payment are settled

transaction by transaction, Eliminated settlement risk, Immediate finality of transaction, Settlement on FIFO basis and priority wise, Immediate credit and transparent pricing have been accepted the hypothesis $H_0$2. It indicate that there is no difference in perception between private and public bank employees with regards to these variables as the significance level is more than 0.05 at 95% significance level.

Conclusion

In the era of digitization Indian banking industry have been disrupted in the way of advancement in term of technology. Advanced technology minimises working hour, convenient operations, and flexibility in implementing new product, expectation and development at large. The analysis begins with the estimation of weighted average score (WAS) then ranked the variables based on WAS, which leads to find out the most impacted variables with respect to the corresponding factors. For the factor work pressure of employees, the variable reduce processing time of transaction; for the second factor employees relation and personal development, the variable post E-banking environment; for the third factor behavioral factor, the variable increased level of motivation; for the fourth factor core banking solution, the variable lunch of new product; for the fifth factor electronic data interchange the variable reduced cash holding secured as first rank. E-banking service will reduce the traditional labor and decrease the number of working hours. E-banking reduces the decision making process and quick decision can be easily possible. E-banking service the work will be centralized and the top level work will be increased, as the clerical work will done by computer automation system. E-banking helps in increase the productivity of bank with lesser time. E-banking, the information with regards to internal and external banking practice are conveniently available to the bank employees. Cheque truncation system, online banking, mobile banking, queue management system, direct benefit transfer (DBT) are the fundamental benefits of E-banking that reduce processing time. So it reduces work pressure on bank employees. Thus interdependence of employees will be reduced. For E-banking heavy investment required for technical support, software development, training to employees and maintenance. So E-banking is an expensive operation. Private Banks implement E-banking service more quickly as compared to public banks.

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