Impact of Digitalization on Select Banks

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Abstract

An economy is said to be cashless where the transaction of money is in the digital form other than cash. Demonetization brought a massive radical change in the transaction mode in the general public, and the positive side to it is our nation took a greater leap towards a cashless economy. The present study focused on the impact of technology on select banks with respect to transactions pertaining to online digital transactions and their contribution towards business per employee of respective banks and to assess the impact of 3G/4G communication technology on select banks with respect to transactions pertaining to credit and debit cards, NEFT, RTGS, mobile phone based transactions, and ECS and their contribution towards business per employee of respective banks.

Keywords: digitalization, cashless economy, demonetization, debit cards, credit cards, mobile bank, RTGS

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Digitalization of banks has opened up new markets, new products, new services, and efficient delivery channels for the banking industry. It has also provided the wherewithal to deal with challenges that new economic frontiers pose. Again, such revolutionary technology has been the cornerstone of financial sector reforms aimed at increasing speed and reliability of banking operations and of initiatives to strengthen the banking sector. In addition, digitalization has significantly influenced delivery channels of banks and has emerged as a vital link for delivery of banking products and services to customers and regulatory authorities. The banking environment has become highly competitive today. To be able to survive and grow in changing market environment, banks are seeking and implementing latest technologies, which is being perceived as an 'enabling resource' that can help in developing a leaner and more flexible structure which can respond quickly to dynamics of a fast changing market scenario. Digitalization of banks is also viewed as an instrument of cost reduction and effective communication with people and institutions associated with the banking business.

Involved technologies of early period of digitalization had limited scope, providing digitized banking solutions aimed at financial accounting practices and back office requirements. However, present day horizon of digitalization encompasses large scale usage in services aimed at customers and regulatory authorities. It includes facilities of new delivery channels in the form of ATM, NEFT, mobile banking, credit and debit cards for use at ATMs and POS terminals, RTGS and ECS, which have been covered in this study. Further, deployment of information technology has assumed such high levels that it is no longer possible for banks to manage their operations on a stand-alone basis. Technological revolution has propelled banks to an era of interconnected computer systems across branches in a city as well as other geographical locations using high-speed network

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infrastructure in a local area and wide area networks configuration riding on Internet backbone. As a result, banking solutions have now got well integrated with society, making them easily accessible to a growing number of customers, which contributes to economic indicators of growth of the country while making business of banking available on the fingertips.

Information technology has basically been used under two different avenues in banking. One is communication and connectivity and the other is business process reengineering. Information technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks, and helps the financial intermediaries to reach geographically distant and diversified markets. In view of this, technology has changed the contours of three major functions performed by banks, that is, access to liquidity, transformation of assets, and monitoring of risks. Further, information technology and communication networking systems have a crucial bearing on the efficiency of money, capital, and foreign exchange markets. The Internet has significantly influenced delivery channels of the banks and has emerged as an important medium for delivery of banking products and services. Development of digital infrastructure by the Government and detailed guidelines of RBI for Internet banking has prepared the necessary ground for growth of Internet banking in India. Thus, being a service-oriented sector, it is important to study the impact of digitalization on select banks (as mentioned) and develop a sense of future trends of banking in India, which is largely being made possible by rapid strides being made in information technology.

A purposeful analysis of present status of impact, identifying factors of growth and stagnation, generating options for periodic course corrections enabling us to take considered decisions in the present day for their positive impact in the future makes this study vital and important.

Review of Literature

Omotunde, Sunday, and John - Dewole (2013) described the cashless economy as the framework where payments are done using the Internet. Gangopadhayay (2009) opined that infrastructure is one of the main influencing factors for the effective implementation of cash less economy in the country. According to Enhancing Financial Innovation & Access (2013), it was inferred that there is a perfect correlation between the proportion that people banked and the proportion of transactions made electronically. He also emphasized that financial inclusion is required in order to transform into a cashless economy.

Adeoti and Osotimehin (2012) noted that despite the general increase in adoption of e-payment instruments, the rate of adoption and use of POS is relatively low when compared to the rest of the e - payment system. Bayero (2015) conducted a study to know the effects of cashless economic policy on financial inclusion in Nigeria. It was found that factors like consumer awareness, user value, and infrastructure had a greater significant relationship with financial inclusion.

Veerakumar (2017) conducted a study to know the effect of demonetization on people in Coimbatore district. The main findings were that the four variables namely, gender, annual income, age, and occupation were the major influential factors.

Narayanaswamy and Muthulakshmi (2017) threw light on various events that happened after demonetization of 500 and 1000 rupee notes in India after November 8, 2016. The information required for the study was collected from media reports. The media reports indicated that 80% of the money transactions were based on physical cash which, in turn, opens the door for the problems like corruption, black money, terrorism funding, etc. Cashless economy (which means use of minimum cash and the rest of the transactions through different electronic modes of transactions) will greatly solve the above problems. Adding to this, the ideology of Bokil Anil of Arthakranthi Foundation on cashless economy and their benefits, if implemented, were also discussed.
Black income comprises of a very significant and fast growing element of India's economy. The various social,

political, and economic consequences of black operations are very serious and have already affected most walks of life and economic activities (Aggarwal, 2017). This paper tried to explore the various types and sources of black income in India in light of the current government schemes to control black income generation. Unlike other studies, it did not restrict itself to an examination of the evasion of personal income tax only, but covered a much wider territory, going from evasion of excise and custom duties to smuggling. It also provided rough estimates of black income over the period of mid-1950s to the present.

Objectives of the Study

(1) To assess the impact of technology on select banks with respect to transactions pertaining to online digital transactions and their contribution towards business per employee of respective banks.

(2) To assess the impact of 3G/4G communication technology on select banks with respect to transactions pertaining to credit and debit cards, NEFT, RTGS, mobile phone based transactions, and ECS and their contribution towards business per employee of respective banks.

Research Methodology

It is proposed to carry out a study of select banks by capturing monthly time series secondary data mainly from RBI. Data pertains to business per employee (₹ million) and financial transactions executed over a period of time by use of credit and debit cards at ATMs and POS, mobile phone, NEFT, RTGS and ECS in terms of volume and value. The period of the study commences from June 2008, the year from which the required data were available from RBI. Data pertaining to ECS transactions is available only for SBI. The period is again divided into two sub-periods. The sub - periods are :- (a) June 2008 to March 2010 and (b) April 2010 to March 2017. The first period of the study from June 2008 to March 2010 takes cognizance of prevalence of 2G technology, and the second period of study being April 2010 to March 2017 studies banks who were in the process of adopting 3G/4G technology in their march towards digitalization. The second period of the study from April 2010 to March 2017 saw maximum benefit of digitalization being derived by banks, regulatory authorities, and customers alike.

The raw data in the form of different classification variables were first recorded in a master table which facilitated tabulation of monthly data from June 2008 to March 2017 in the desired monthly time series form. To make the work manageable and effective, it has been confined to four banks. The sample represents State Bank of India and its associates, new private banks (ICICI Bank and HDFC Bank), and foreign bank (Citibank - India). Of the raw data collected, only the following have been analyzed for each of the four banks for the entire period of the study, including impact of 2G and 3G/4G.

The overall impact of digitalization on banking technologies and their contribution to business per employee of each bank was derived. The independent variables were divided from financial transactions executed over a period of time by use of credit and debit cards at ATMs and POS, mobile phone, NEFT, RTGS and ECS, in terms of volume and value was regressed against the dependent variable : business per employee for each bank separately. The regressors in the estimated equation were similar in nature of use of technology like ATMs + credit card + debit card (numbers, volume, and value) transactions. The coefficients of the independent variables and their statistical significance generated by the analysis were studied for interpretation and goodness of the model. A dummy variable was introduced in each of the regression equations to assess the impact of changing communication technology from 2G to 3G/4G technology on the dependent variable, that is, to capture the categorical impact of 2G and 3G/4G on 'business per employee'.

Data Analysis and Results

Data stationarity was achieved by using Augmented Dickey Fuller test and other associated tests at first and second level difference. Regression equation was estimated by using least squares method. The goodness of the model was established by using Breusch - Godfrey serial correlation LM test. Analysis of the bank wise results is subsequently dwelt upon. All tests have been carried out for 95% confidence level.

Table 1. Variable Specification - Model Wise

S. No	Name of the Variable	Independent Variable	Dependent Variable	Dummy Variable	Stationarity at which level
1	No of ATMs	✓	-	-	Second difference
2	No of POS machines	✓	-	-	Second difference
3	No of transactions : Credit cards	✓	-	-	Second difference
4	Total value of credit card transactions	✓	-	-	Second difference
5	RTGS	✓	-	-	Second difference
6	Technology 2G/3G/4G	-	-	✓	Second difference
7	Business merchant employee	-	✓	-	

The Table 1 shows the independent and dependent variables of digital banking transactions that have been tested for stationarity with the help of Augmented Dicky Fuller test (ADF). The time series historical data has been considered and was found significant at second difference for the stationarity.

(1) Analysis of SBI and Associates : The monthly data set of dependent variable 'business per employee' of SBI was regressed with monthly data set of number of ATMs and POS of SBI, number of outstanding credit cards at month end, monthly total value of credit card transactions of SBI, and a dummy variable. The results are presented in the Table 2.

(i) Impact of Credit Card Transactions : It is evident from the Table 2 that the probability of value of credit card transactions, though being statistically significant (< 0.05), has its coefficient negative, which implies that its contribution to business per employee is negative. This goes against the grain of the time series data which shows growth in credit card transaction value. Thus, this variable is statistically insignificant. The probability value of the

Table 2. Analysis of SBI and Associates : Impact of Credit Cards

Dependent Variable : DDSBIBXN

DDSBIBXN = C(1) + C(2) * DSBIATM + C(3)*DSBICC + C(5) * DDSBICCVAL + C(6)* DDUMMY1

	Coefficient	Std. Error	t - Statistic	Prob.
C(1)Constant	0.124028	0.323217	0.383729	0.7020
C(2)DSBIATM	3.72E-05	3.88E-05	0.959429	0.3397
C(3)DSBICC	-1.66E-05	8.91E-06	-1.859219	0.0660
C(5)DDSBICCVAL	-0.000200	7.39E-05	-2.706567	0.0080
C(6) DDUMMY1	0.338171	3.425549	0.098720	0.9216
R - squared	0.227930	Mean dependent var		0.000000

dummy variable is, however, more than 92% and has a positive coefficient, which is a strong indicator of growth in business per employee from 2G to 3G/4G. An important aspect to note is the significance of F - statistic and its significant probability of 0.00, which is less than 0.05, which implies that though independent variables are insignificant individually, however, in a combined form, together they significantly contribute to the business per employee of SBI. The goodness of the model is also established by statistical significance of observed R - squared probability value, which is less than 0.05.

(ii) Impact of Debit Cards: As debit cards can only be used at ATMs and POS, the monthly data set of dependent variable 'business per employee' of SBI was regressed with monthly data set of number of ATMs and POS of SBI, number of outstanding debit cards at month end, monthly total value of debit card transactions of SBI, and a dummy variable. The results are presented in the Table 3.

The Table 3 implies that the independent variables are statistically insignificant in their contribution to business per employee of SBI. The probability value of the dummy variable is, however, more than 75% and has a positive coefficient, which is a strong indicator of impact on business per employee in the transition from 2G to 3G/4G communication technology. An important aspect to note is the significance of F-statistic and its significant probability of 0.001, which is less than 0.05, which implies that though independent variables are insignificant individually, however, in a combined form, together they significantly contribute to the business per employee of SBI. The goodness of the model is also established by statistical significance of observed R - squared probability value, which is less than 0.05.

Table 3. Analysis of SBI and Associates : Impact of Debit Cards

Dependent Variable: *DDSBIBXN*

DDSBIBXN = C (1) + *C* (2) * *DSBIATM* + *C* (3) * *DSBIDC* + *C* (5)* *DSBIDCVAL* + *C* (6) * *DDUMMY*1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1) Constant	0.159387	0.338382	0.471027	0.6387
C(2) *DSBIATM*	-3.01E-05	2.13E-05	-1.413927	0.1605
C(3) *DSBIDC*	-4.18E-08	5.15E-08	-0.813081	0.4181
C(5) *DSBIDCVAL*	-1.32E-06	4.85E-06	-0.271622	0.7865
C(6) *DDUMMY*1	1.100859	3.588959	0.306735	0.7597
R-squared	0.156810	Mean dependent var		0.000000

Table 4. Analysis of SBI and Associates : Impact of RTGS Transactions

Dependent Variable: *DDSBIBXN*

Included observations: 104 after adjustments

DDSBIBXN = C (1) + *C* (4)* *DDSBIRTVOL* + *C* (5) * *DDSBIRTVAL* + *C* (6) **DDUMMY*1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	0.038145	0.268202	0.142226	0.8872
C(4) *DDSBIRTVOL*	-3.80E-06	1.13E-06	-3.356673	0.0011
C(5) *DDSBIRTVAL*	-1.93E-07	9.82E-08	-1.970263	0.0516
C(6) *DDUMMY*1	1.499268	2.769385	0.541372	0.5895
R - squared	0.443559	Mean dependent var		0.000000

(iii) Impact of RTGS Transactions : The monthly data set of dependent variable 'business per employee' of SBI was regressed with monthly data set of volume of RTGS transactions, monthly total value of RTGS transactions of SBI, and a dummy variable. The results are presented in the Table 4.

The Table 4 reveals that though volume of RTGS transactions is significant, but has a negative coefficient, implying that its effect on the dependent variable is negative, which goes against the grain of the time series data. It implies that the independent variables are statistically insignificant in their contribution to business per employee of SBI. The probability value of the dummy variable is, however, more than 58% and has a positive coefficient, which is an indicator of the moderate impact on business per employee in the transition from 2G to 3G/4G communication technology. An important aspect to note is the significance of F- statistic and its significant probability of 0.00, which is less than 0.05, which implies that though independent variables are insignificant individually, however, in a combined form, together they significantly contribute to the business per employee of SBI. The goodness of the model is also established by statistical significance of observed R - squared probability value, which is less than 0.05.

(iv) Impact of NEFT Transactions : The monthly data set of dependent variable 'business per employee' of SBI was regressed with monthly data set of volume of NEFT transactions, monthly total value of NEFT transactions of SBI, and a dummy variable. The results are presented in the Table 5.

Table 5. Analysis of SBI and Associates : Impact of NEFT Transactions

Dependent Variable: *DDSBIBXN*

DDSBIBXN = C (1) + C (4)* DSBINFVOL + C (5)* DSBINFVAL + C (6)* DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
*C(1)*Constant	-0.053025	0.349229	-0.151834	0.8796
C(4) *DSBINFVOL*	-1.53E-07	7.91E-08	-1.940410	0.0551
C(5) *DSBINFVAL*	2.61E-06	1.38E-06	1.894899	0.0610
C(6) *DDUMMY1*	3.972000	3.638374	1.091697	0.2776
R - squared	0.056953	Mean dependent var		0.000000

The Table 5 reveals that the independent variables are statistically insignificant in their contribution to business per employee of SBI. The probability value of the dummy variable is only 27%. Though it has a positive coefficient, but indicates only moderate impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F-statistic probability is 0.11, which is more than 0.05, which implies that independent variables are insignificant individually, and in a combined form, they do not contribute towards business per employee of SBI. The goodness of the model is established by statistical significance of observed R-squared probability value, which is less than 0.05.

(v) Impact of Mobile Transactions : The monthly data set of dependent variable 'business per employee' of SBI was regressed with monthly data set of volume of mobile transactions, monthly total value of mobile transactions of SBI, and a dummy variable. The results are presented in the Table 6.

The Table 6 indicates that the independent variables are statistically insignificant in their contribution to business per employee of SBI. The probability value of the dummy variable is only 14%. Though it has a positive coefficient, but it indicates only weak impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F - statistic probability is 0.53, which is more than 0.05, which implies that

Table 6. Analysis of SBI and Associates : Impact of Mobile Transactions

Dependent Variable: *DDSBIBXN*

DDSBIBXN = C (1) + *C*(4)* *DDSBIMOBVOL* + *C*(5)* *DDSBIMOBVAL* + *C*(6) **DDUMMY1*

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	-0.052443	0.355683	-0.147444	0.8831
C(4) *DDSBIMOBVOL*	-1.07E-08	7.38E-08	-0.144739	0.8852
C(5) *DDSBIMOBVAL*	5.71E-07	6.90E-06	0.082664	0.9343
C(6) *DDUMMY1*	5.362078	3.623885	1.479649	0.1421
R-squared	0.021678	Mean dependent var		0.000000

Table 7. Analysis of SBI and Associates: Impact of ECS Transactions

Dependent Variable: *DDSBIBXN*

DDSBIBXN = C(1) + *C*(4)* *DSBIECSVOL* + *C*(5)* *DSBIECSVAL* + *C*(6) * *DDUMMY*1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	-0.050558	0.352012	-0.143625	0.8861
C(4) *DSBIECSVOL*	3.49E-08	2.36E-07	0.148321	0.8824
C(5) *DSBIECSVAL*	7.18E-06	2.00E-05	0.359624	0.7199
C(6) *DDUMMY1*	5.356725	3.590578	1.491884	0.1389
R - squared	0.040011	Mean dependent var		0.000000

independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of SBI. The goodness of the model is established by statistical significance of observed R - squared probability value, which is less than 0.05.

(vi) Impact of ECS Transactions : The monthly data set of dependent variable 'business per employee' of SBI was regressed with monthly data set of volume of ECS transactions, monthly total value of ECS transactions of SBI, and a dummy variable. The results are presented in the Table 7.

The Table 7 reveals that the independent variables are statistically insignificant in their contribution to business per employee of SBI. The probability value of the dummy variable is only 13%. Though it has a positive coefficient, but it indicates only weak impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F-statistic probability is 0.25, which is more than 0.05, which implies that independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of SBI. The goodness of the model is established by statistical significance of observed R - squared probability value, which is less than 0.05.

(2) Analysis of ICICI Bank

(i) Impact of Credit Cards : The monthly data set of dependent variable 'business per employee' of ICICI Bank was regressed with monthly data set of number of ATMs and POS of ICICI Bank, number of outstanding credit cards at month end, monthly total volume, value of credit card transactions of ICICI Bank, and a dummy variable. The results are presented in the Table 8.

It can be inferred from the Table 8 that the independent variables are statistically insignificant in their

Table 8. Analysis of ICICI Bank : Impact of Credit Cards

Dependent Variable: *DICBXN*

Variable	Coefficient	Std. Error	*t* - Statistic	Prob.
C	-0.194544	0.405609	-0.479633	0.6325
DICATM	1.24E-05	2.16E-05	0.576293	0.5657
DICCC	-2.57E-06	2.53E-06	-1.016382	0.3119
DICCCVOL	1.14E-06	1.08E-06	1.047002	0.2976
DICCCVAL	-0.000132	0.000445	-0.296593	0.7674
*DDUMMY*1	-1.448729	4.208141	-0.344268	0.7314
R - squared	0.040367	Mean dependent var		-0.157143

Table 9. Analysis of ICICI Bank : Impact of Debit Cards

Dependent Variable : *DICBXN*

Variable	Coefficient	Std. Error	*t*-Statistic	Prob.
C	-0.264645	0.404109	-0.654884	0.5141
DICATM	2.59E-05	1.87E-05	1.383451	0.1697
DICDC	5.93E-07	2.45E-07	2.425217	0.0171
DICDCVOL	2.37E-08	1.24E-07	0.191380	0.8486
DDICDCVAL	1.02E-06	1.91E-05	0.053284	0.9576
*DDUMMY*1	-0.249230	4.224654	-0.058994	0.9531
R - squared	0.074324	Mean dependent var		-0.158654

contribution to business per employee of ICICI Bank. Though the probability value of the dummy variable is more than 73%, but it has a negative coefficient, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F - statistic probability is 0.52, which is more than 0.05, which implies that independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of ICICI Bank. The goodness of the model, however, could not be established as the statistical significance of observed R - squared probability value is 0.98, which is more than 0.05.

(ii) Impact of Debit Cards : As debit cards can only be used at ATMs and POS, the monthly data set of dependent variable 'business per employee' of ICICI Bank was regressed with monthly data set of number of ATMs and POS of ICICI Bank, number of outstanding debit cards at month end, monthly total volume, value of debit card transactions of ICICI Bank, and a dummy variable. The results are presented in the Table 9.

It can be inferred from the Table 9 that only number of outstanding debit cards is significant and other independent variables are statistically insignificant in their contribution to business per employee of ICICI Bank. Though the probability value of the dummy variable is more than 95%, but it has a negative coefficient, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F-statistic probability is 0.17, which is more than 0.05, which implies that independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of ICICI Bank. The goodness of the model, however, could not be established as the statistical significance of observed R - squared probability value is 0.99, which is more than 0.05.

(iii) Impact of NEFT Transactions : The monthly data set of dependent variable 'business per employee' of ICICI

Table 10. Analysis of ICICI Bank : Impact of NEFT Transactions

Dependent Variable: *DICBXN*				
Variable	**Coefficient**	**Std. Error**	*t* **- Statistic**	**Prob.**
C	-0.118801	0.409862	-0.289856	0.7725
DDICNFVOL	-9.26E-08	3.84E-07	-0.241109	0.8100
DDICNFVAL	-8.81E-07	3.70E-06	-0.237942	0.8124
DDUMMY1	-2.958249	4.180572	-0.707618	0.4808
R - squared	0.014061	Mean dependent var		-0.158654

Table 11. Analysis of ICICI Bank : Impact of RTGS Transactions

Dependent Variable: *DICBXN*				
Variable	**Coefficient**	**Std. Error**	*t* **- Statistic**	**Prob.**
C	-0.107816	0.407884	-0.264330	0.7921
DDICRTVOL	-4.20E-06	3.01E-06	-1.396198	0.1657
DICRTVAL	1.67E-09	6.53E-09	0.255170	0.7991
DDUMMY1	-3.554460	4.185044	-0.849324	0.3977
R - squared	0.023684	Mean dependent var		-0.158654

Bank was regressed with monthly data set of volume of NEFT transactions, monthly total value of NEFT transactions of ICICI Bank, and a dummy variable. The results are presented in the Table 10.

The Table 10 reveals that the independent variables are statistically insignificant in their contribution to business per employee of ICICI Bank. Though the probability value of the dummy variable is more than 48%, but it has a negative coefficient, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F-statistic probability is 0.70, which is more than 0.05, which implies that the independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of ICICI Bank. The goodness of the model, however, could not be established as the statistical significance of observed R - squared probability value is 0.99, which is more than 0.05.

(iv) Impact of RTGS Transactions : The monthly data set of dependent variable 'business per employee' of ICICI Bank was regressed with monthly data set of volume of RTGS transactions, monthly total value of RTGS transactions of ICICI Bank, and a dummy variable. The results are presented in the Table 11.

It can be inferred from the Table 11 that the independent variables are statistically insignificant in their contribution to business per employee of ICICI Bank. Though the probability value of the dummy variable is more than 39%, but it has a negative coefficient, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F-statistic probability is 0.49, which is more than 0.05, which implies that the independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of ICICI Bank. The goodness of the model, however, could not be established as statistical significance of observed R-squared probability value is 0.99, which is more than 0.05.

(v) Impact of Mobile Phone Transactions : The monthly data set of dependent variable 'business per employee' of ICICI Bank was regressed with monthly data set of volume of mobile phone transactions, monthly total value of mobile phone transactions of ICICI Bank, and a dummy variable. The results are presented in the Table 12.

The Table 12 implies that the independent variables are statistically insignificant in their contribution to

Table 12. Analysis of ICICI Bank : Impact of Mobile Phone Transactions

Dependent Variable: *DICBXN*				
Variable	Coefficient	Std. Error	*t* - Statistic	Prob.
C	-0.159315	0.415416	-0.383507	0.7022
DICMOBVOL	2.00E-07	4.11E-07	0.486014	0.6280
DDICMOBVAL	-5.74E-06	9.17E-06	-0.626293	0.5325
DDUMMY1	-2.841446	4.188189	-0.678443	0.4991
R - squared	0.008778	Mean dependent var		-0.158654

business per employee of ICICI Bank. Though the probability value of the dummy variable is more than 49%, but it has a negative coefficient, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F- statistic probability is 0.82, which is more than 0.05, which implies that independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of ICICI Bank. The goodness of the model, however, could not be established as the statistical significance of observed R - squared probability value is 0.99, which is more than 0.05.

(3) Analysis of HDFC Bank

(i) Impact of Credit Cards : The monthly data set of dependent variable 'business per employee' of HDFC Bank was regressed with monthly data set of number of ATMs and POS of HDFC Bank, number of outstanding credit cards at month end, monthly total volume, value of credit card transactions of HDFC Bank, and a dummy variable. The results are presented in the Table 13.

The Table 13 reveals that the independent variables are statistically insignificant in their contribution to business per employee of HDFC Bank. The probability value of the dummy variable is 14%, indicating a weak impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F-statistic probability is 0.56, which is more than 0.05, which implies that independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of HDFC Bank. The goodness of the model is established as statistical significance of observed R - squared probability value is 0.00, which is less than 0.05.

Table 13. Analysis of HDFC Bank : Impact of Credit Cards

Dependent Variable : *DDHDBXN*				
DDHDBXN = C(1) + C(2)*DHDATM + C(3)* DHDCC + C(4)* DDHDCCVOL + C(5)*DHDCCVAL + C(6)*DDUMMY1				
	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	-0.076836	0.429529	-0.178885	0.8584
C(2) *DHDATM*	-3.24E-06	3.53E-05	-0.091688	0.9271
C(3) *DHDCC*	5.55E-07	1.80E-06	0.308486	0.7584
C(4) *DDHDCCVOL*	-2.02E-07	1.77E-07	-1.141777	0.2563
C(5) *DHDCCVAL*	1.11E-05	0.000120	0.093007	0.9261
C(6) *DDUMMY1*	6.305818	4.323665	1.458443	0.1479
R - squared	0.038208	Mean dependent var		0.000000

(ii) Impact of Debit Cards : As debit cards can only be used at ATMs and POS, the monthly data set of dependent variable 'business per employee' of HDFC Bank was regressed with monthly data set of number of ATMs and POS of HDFC Bank, number of outstanding debit cards at month end, monthly total volume, value of debit card transactions of HDFC Bank, and a dummy variable. The results are presented in the Table 14.

It can be inferred from the Table 14 that the independent variables are statistically insignificant in their contribution to business per employee of HDFC Bank. The probability value of the dummy variable is only 16%, indicating weak impact on business per employee in the transition from 2G to 3G/4G communication technology. Even F-statistic probability is 0.14, which is more than 0.05, which implies that independent variables are insignificant individually and in a combined form, they do not contribute towards business per employee of HDFC Bank. The goodness of the model is established as statistical significance of observed R-squared probability value is 0.00, which is less than 0.05.

(iii) Impact of NEFT Transactions : The monthly data set of dependent variable 'business per employee' of HDFC Bank was regressed with monthly data set of volume of NEFT transactions, monthly total value of NEFT transactions of HDFC Bank, and a dummy variable. The results are presented in the Table 15.

The Table 15 reveals that the independent variables are statistically insignificant in their contribution to business per employee of HDFC Bank. The probability value of the dummy variable is only 13%, indicating weak impact on business per employee in the transition from 2G to 3G/4G communication technology. However, the

Table 14. Analysis of HDFC Bank : Impact of Debit Cards

Dependent Variable: *DDHDBXN*

DDHDBXN = C(1) + C(2)* DHDATM + C(3)* DHDDC + C(4)*DHDDCVOL + C(5)*DHDDCVAL + C(6)* DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	-0.029989	0.419240	-0.071531	0.9431
C(2) *DHDATM*	1.50E-05	3.37E-05	0.445985	0.6566
C(3) *DHDDC*	3.86E-07	3.93E-07	0.982811	0.3281
C(4) *DHDDCVOL*	-3.01E-07	1.44E-07	-2.089132	0.0393
C(5) *DHDDCVAL*	8.00E-06	3.14E-05	0.255032	0.7992
C(6) *DDUMMY1*	5.892854	4.228409	1.393634	0.1666
R - squared	0.078610	Mean dependent var		0.000000

Table 15. Analysis of HDFC Bank : Impact of NEFT Transactions

Dependent Variable: *DDHDBXN*

Included observations: 104 after adjustments

DDHDBXN = C(1) + C(2)* DDHDNFVOL + C(3)* DDHDNFVAL + C(4) *DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	0.003505	0.383731	0.009135	0.9927
C(2) *DDHDNFVOL*	-5.14E-07	3.20E-07	-1.604337	0.1118
C(3) *DDHDNFVAL*	-1.53E-06	1.97E-06	-0.779479	0.4375
C(4) *DDUMMY1*	5.926879	3.915589	1.513662	0.1333
R- squared	0.194659	Mean dependent var		0.000000

F - statistic probability is 0.00, which is less than 0.05, which implies that independent variables are insignificant individually, but in a combined form, they do contribute towards business per employee of HDFC Bank. The goodness of the model is established as statistical significance of observed *R*-squared probability value is 0.00, which is less than 0.05.

(iv) Impact of RTGS Transactions : The monthly data set of dependent variable 'business per employee' of HDFC Bank was regressed with monthly data set of volume of RTGS transactions, monthly total value of RTGS transactions of HDFC Bank, and a dummy variable. The results are presented in the Table 16.

It can be inferred from the Table 16 that though volume of RTGS transactions is significant, but it has a negative coefficient, implying that its effect on dependent variable is negative, which goes against the grain of the time series data. It implies that all independent variables are statistically insignificant in their contribution to business per employee of HDFC Bank. The probability value of the dummy variable is more than 34%, indicating moderate impact on business per employee in the transition from 2G to 3G/4G communication technology. *F*-statistic probability is 0.00, which is less than 0.05, which implies that independent variables are significant in a combined form, and they do contribute towards business per employee of HDFC Bank. The goodness of the model is established as statistical significance of observed *R*-squared probability value is 0.00, which is less than 0.05.

(v) Impact of Mobile Phone Transactions : The monthly data set of dependent variable 'business per employee' of HDFC Bank was regressed with monthly data set of volume of mobile phone transactions, monthly total value of mobile phone transactions of HDFC Bank, and a dummy variable. The results are presented in the Table 17.

The Table 17 reveals that all the independent variables are statistically insignificant in their contribution to

Table 16. Analysis of HDFC Bank : Impact of RTGS Transactions

Dependent Variable : *DDHDBXN*

DDHDBXN = C(1) + *C*(2)*DDHDRTVOL + *C*(3)* *DHDRTVAL* + *C*(4)*DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	0.033118	0.345448	0.095870	0.9238
C(2) *DDHDRTVOL*	-7.59E-06	1.08E-06	-7.061264	0.0000
C(3) *DHDRTVAL*	2.57E-09	2.11E-09	1.219681	0.2255
C(4) *DDUMMY1*	3.384970	3.545387	0.954753	0.3420
R - squared	0.346987	Mean dependent var		0.000000

Table 17. Analysis of HDFC Bank : Impact of Mobile Phone Transactions

Dependent Variable: *DDHDBXN*

DDHDBXN = C(1) + *C*(2)*DDHDMOBVOL + *C*(3)* *DDHDMOBVAL* + *C*(4) *DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	-0.037547	0.404670	-0.092785	0.9263
C(2) *DDHDMOBVOL*	-3.68E-07	1.74E-07	-2.110901	0.0373
C(3) *DDHDMOBVAL*	-6.01E-06	5.52E-05	-0.108900	0.9135
C(4) *DDUMMY1*	6.337032	4.123808	1.536694	0.1275
R - squared	0.103880	Mean dependent var		0.000000

business per employee of HDFC Bank. The probability value of the dummy variable is 12%, indicating a weak impact on business per employee in the transition from 2G to 3G/4G communication technology. However, F-statistic probability is 0.01, which is less than 0.05, which implies that independent variables are significant in a combined form, and they do contribute towards business per employee of HDFC Bank. The goodness of model is established as statistical significance of observed R-squared probability value is 0.00, which is less than 0.05.

(4) Analysis of Citibank

(i) Impact of Credit Cards : The monthly data set of dependent variable 'business per employee' of Citibank was regressed with monthly data set of number of ATMs and POS of Citibank, number of outstanding credit cards at month end, monthly total volume, value of credit card transactions of Citibank, and a dummy variable. The results are presented in the Table 18.

It can be inferred from the Table 18 that only the numbers of outstanding credit cards are statistically significant and other independent variables are not significant in their contribution to business per employee of Citibank. Probability value of the dummy variable is 0%, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. F-statistic probability is 0.00, which is less than 0.05, which implies those independent variables in a combined form do contribute towards business per employee of Citibank. However, the goodness of the model could not be established as statistical significance of observed R - squared probability value is 0.90, which is more than 0.05.

(ii) Impact of Debit Cards : As debit cards can only be used at ATMs and POS, the monthly data set of dependent variable 'business per employee' of Citibank was regressed with monthly data set of number of ATMs and POS of Citibank, number of outstanding debit cards at month end, monthly total volume, value of debit card transactions of Citibank, and a dummy variable. The results are presented in the Table 19.

The Table 19 depicts that no independent variables are statistically significant in their contribution to business per employee of Citibank. Probability value of the dummy variable is 0%, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. F-statistic probability is 0.00, which is less than 0.05, which implies that independent variables in a combined form do contribute towards business per employee of Citibank. However, the goodness of model could not be established as statistical significance of observed R - squared probability value is 0.58, which is more than 0.05.

Table 18. Analysis of Citibank : Impact of Credit Cards

Dependent Variable: *DCIBXN*

DCIBXN = C(1) + C(2)* DCIATM + C(3)* DCICC + C(4)*DDCICCVOL + C(5) *DCICCVAL + C(6)*DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	1.140605	0.547035	2.085067	0.0397
C(2) *DCIATM*	-0.000353	0.000135	-2.611843	0.0104
C(3) *DCICC*	4.65E-05	1.78E-05	2.610052	0.0105
C(4) *DDCICCVOL*	-7.11E-07	8.42E-07	-0.843932	0.4008
C(5) *DCICCVAL*	8.06E-05	0.000256	0.315071	0.7534
C(6) *DDUMMY1*	-25.13025	5.522820	-4.550257	0.0000
R - squared	0.224067	Mean dependent var		1.104712

Table 19. Analysis of Citibank : Impact of Debit Cards

Dependent Variable: *DCIBXN*

DCIBXN = C(1) + C(2)*DCIATM + C(3)* DCIDC + C(4)*DCIDCVOL + C(5) *DCIDCVAL + C(6)*DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	1.297298	0.551789	2.351074	0.0207
C(2) *DCIATM*	-0.000118	0.000278	-0.426488	0.6707
C(3) *DCIDC*	1.87E-06	2.72E-06	0.688013	0.4931
C(4) *DCIDCVOL*	3.30E-06	1.84E-06	1.798588	0.0751
C(5) *DCIDCVAL*	-0.001080	0.000513	-2.106848	0.0377
C(6) *DDUMMY1*	-24.98313	5.588688	-4.470304	0.0000
R - squared	0.198045	Mean dependent var		1.094190

Table 20. Analysis of Citibank : Impact of NEFT Transactions

Dependent Variable : *DCIBXN*

DCIBXN = C(1) + C(2)*DCINFVOL + C(3)* DCINFVAL + C(4)*DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	1.633531	0.539498	3.027872	0.0031
C(2) *DCINFVOL*	1.64E-06	1.10E-06	1.495559	0.1379
C(3) *DCINFVAL*	-2.79E-05	1.10E-05	-2.540991	0.0126
C(4) *DDUMMY1*	-24.73820	5.433416	-4.552973	0.0000
R - squared	0.226163	Mean dependent var		1.094190

(iii) Impact of NEFT Transactions : The monthly data set of dependent variable 'business per employee' of Citibank was regressed with monthly data set of volume of NEFT transactions, monthly total value of NEFT transactions of Citibank, and a dummy variable. The results are presented in the Table 20.

The Table 20 shows that the coefficient of the variable is negative, which is against the grain of the collated data, which renders the variable insignificant. Other independent variable individual values are greater than 0.05 level of significance, which implies that no independent variables are statistically significant in their contribution to business per employee of Citibank. Probability value of the dummy variable is 0%, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. *F*- statistic probability is 0.00, which is less than 0.05, which implies that independent variables in a combined form do contribute towards business per employee of Citibank.

(iv) Impact of RTGS Transactions : The monthly data set of dependent variable 'business per employee' of Citibank was regressed with monthly data set of volume of RTGS transactions, monthly total value of RTGS transactions of Citibank, and a dummy variable. The results are presented in the Table 21.

The Table 21 implies that no independent variables are statistically significant in their contribution to business per employee of Citibank. Probability value of the dummy variable is 0%, indicating no impact on business per employee in the transition from 2G to 3G/4G communication technology. *F*-statistic probability is 0.00, which is less than 0.05, which implies that independent variables in a combined form do contribute towards business per employee of Citibank. Goodness of model is established as statistical significance of observed *R*-squared probability value is 0.04, which is less than 0.05.

Table 21. Analysis of Citibank : Impact of RTGS Transactions

Dependent Variable: *DCIBXN*

DCIBXN = C(1) + C(2)* DDCIRTVOL + C(3)* DCIRTVAL + C(4) * DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	1.459882	0.475828	3.068091	0.0028
C(2) *DDCIRTVOL*	-7.51E-05	1.23E-05	-6.105655	0.0000
C(3) *DCIRTVAL*	1.79E-08	1.65E-08	1.081722	0.2820
C(4) *DDUMMY1*	-30.68947	4.945313	-6.205768	0.0000
R-squared	0.387913	Mean dependent var		1.104712

Table 22. Analysis of Citibank : Impact of Mobile Phone Transactions

Dependent Variable: *DCIBXN*

DCIBXN = C(1) + C(2)* DDCIMOBVOL + C(3)* DDCIMOBVAL + C(4) DDUMMY1

	Coefficient	Std. Error	*t* - Statistic	Prob.
C(1)Constant	1.366595	0.547773	2.494819	0.0142
C(2) *DDCIMOBVOL*	-1.29E-05	1.97E-05	-0.656756	0.5128
C(3) *DDCIMOBVAL*	-0.000404	0.001508	-0.268016	0.7892
C(4) *DDUMMY1*	-24.73310	5.581802	-4.431024	0.0000
R - squared	0.188830	Mean dependent var		1.104712

(v) Impact of Mobile Phone Transactions : The monthly data set of dependent variable 'business per employee' of Citibank was regressed with monthly data set of volume of mobile phone transactions, monthly total value of mobile phone transactions of Citibank, and a dummy variable. The results are presented in the Table 22.

From the Table 22, the probability statistics of independent variables, it can be seen that individual values are greater than 0.05 level of significance, which implies that the independent variables are statistically insignificant in their contribution to business per employee of Citibank. The probability value of the dummy variable is 0%, indicating a weak impact on business per employee in the transition from 2G to 3G/4G communication technology. However, the F-statistic probability is 0.00, which is less than 0.05, which implies that independent variables are significant in a combined form, and they do contribute towards business per employee of Citibank. However, the goodness of the model could not be established as statistical significance of observed R-squared probability value is 0.64, which is more than 0.05.

Findings

The findings of the data analyzed are summarized in the Table 23.

(1) State Bank of India & Associates : From the analysis and Table 23, it can be inferred that SBI and its associates have leveraged the power of banking technology verticals of credit and debit cards and RTGS transactions in their contribution towards business per employee. Moreover, SBI has stood to gain due to adoption of 3G/4G communication technologies as the banking technology verticals have shown immense impact towards business per employee of SBI.

(2) ICICI Bank : From the analysis and Table 23, it can easily be seen that ICICI Bank's technology verticals have not shown any contribution towards business per employee and the impact of 3G/4G communication technology on the same parameter is also non - existent. Though the model is not a good fit, however, it can be reasonably assumed that impact of banking technologies and communication technologies have had no effect on business per employee of the bank. Clearly, ICICI Bank depends on other verticals / products to generate business per employee such as insurance products, foreign exchange management, etc.

(3) HDFC Bank : From the analysis and Table 23, it can easily be observed that HDFC Bank has leveraged its banking technologies of NEFT, RTGS, and mobile based transactions to contribute towards business per employee. Moreover, the bank has stood to gain due to adoption of 3G/4G communication technologies as its banking technology verticals have shown an immense impact towards business per employee of SBI.

(4) Citibank : From the analysis and Table 23, it can be observed that Citibank has leveraged the power of banking technology verticals of credit and debit cards, NEFT, RTGS, and mobile phone based transactions in their contribution towards business per employee. However, it is evident that 3G/4G communication technologies have had no impact on its banking technological verticals. It is reasonable to assume that Citibank generates its business by other banking delivery models such as personalized banking with house visit for customers from the time the bank has existed in India. Hence, it can be qualified that constant impact of communication technologies is heavily prevalent by facilitating their banking products to customers in a different way, but change in impact due to switch over from 2G to 3G/4G communication technologies cannot be registered as the methodology of transactions has not changed and has remained constant.

The complex nature of this relationship of information technology and performance has been analyzed using

Table 23. Analysis of All Banks

Bank	Dependent Variable (Business per employee of respective banks.)	Credit Card			Debit Card			NEFT			RTGS			Mobile Phone			ECS		
		Contribution to Dependent Variable (Y/N)	Impact of 2G to 3G/4G (Y/N)	Goodness of Model (Y/N)	Contribution to Dependent Variable (Y/N)	Impact of 2G to 3G/4G (Y/N)	Goodness of Model (Y/N)	Contribution to Dependent Variable (Y/N)	Impact of 2G to 3G/4G (Y/N)	Goodness of Model (Y/N)	Contribution to Dependent Variable (Y/N)	Impact of 2G to 3G/4G (Y/N)	Goodness of Model (Y/N)	Contribution to Dependent Variable (Y/N)	Impact of 2G to 3G/4G (Y/N)	Goodness of Model (Y/N)	Contribution to Dependent Variable (Y/N)	Impact of 2G to 3G/4G (Y/N)	Goodness of Model (Y/N)
SBI & Associates	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y
ICICI Bank	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Data not available ;
HDFC Bank	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	hence, analysis
Citibank	Y	Y	N	N	Y	N	N	Y	N	N	Y	N	Y	Y	N	N	N	not done.

the regression analysis. Regression coefficient of performance as a function of technology is positive for SBI, and to an extent, for HDFC Bank; wherever negative, it is statistically insignificant. The study shows that technology is a significant determinant of performance in case of SBI and its associates and a weak determinant in case of new private banks and foreign bank. The study confirms that contribution of technology to bank's performance has a differential behaviour. It varies with size, scale, ownership, and phase of technology adoption. It contributes positively only to those banks where some preconditions conducive to performance are existing, for example, trained manpower, size, scale of business, and technology adoption rate. It shows that a bank's performance is related not just to its technological stance, but to other areas of competencies. Banks which give greater stress both to use of advanced IT and human resource strategies experience superior performance gains; whereas in some other banks, higher IT investments are not associated with higher performance. This implies that every investment decision relating to technology must be evaluated in the light of its interaction with other inputs and its contribution to performance.

Conclusion

In this context, the study makes an attempt to analyze the impact of digitalization on select banks of the Indian banking industry, which forms a cross section of nationalized banks, private sector banks, and foreign banks. From the study, it is evident that banks use ICT innovatively as direct or indirect methods to generate business and the existing banking technologies of each bank have helped their customers in banking with ease. These technologies ride on 3G/4G communication technology and are getting faster every day to meet customer expectations. SBI and its associates and HDFC Bank are found to be ahead of ICICI Bank and Citibank in adoption and leveraging digitalization in the assessed metric of business per employee. However, other banking technologies that have not been analyzed in this study may be playing a prominent role in performance of the banks.

The broad conclusion that emerges from analysis of technology parameters is that the Indian model of banking is characterized by opening up of traditional public sector and private sector banks to a stiff competition from new private and foreign banks armed with state of the art technology. This competitive environment serves as a catalyst for public sector and private sector banks to go for up-gradation of technology base and their size, scale, and spread gave them the advantage in this regard. Technology adoption in public and old Indian private sectors banks is slightly slow, but its scale and size is massive and robust. The system is in its transitory mode in adoption of technology ; back-end technologies have already been adopted, the front-end orientation of the system is in progress and is constantly evolving.

Initially, private banks and foreign banks were dominating the scene. The entry of the private banks and foreign banks resulted in great competitive pressure for nationalized banks, and they responded to these challenges of economic environment by initiating tectonic measures such as up scaling their management capabilities, resorting to state of the art IT architecture, and increasing customer focus by technologically empowering them with banking technologies. Nationalized banks are competing relatively effectively with private banks and foreign banks, and now they enjoy a prominent position among various private banks and foreign banks, and they have emerged as an important driver of economic growth and overall development.

Technological forays are indicative of the fact that fast technology adoption growth is associated with public sector banks or nationalized banks. Slow growth is associated with new private banks and foreign banks. This is attributed to the fact that nationalized banks have gone for gradual adoption of technology, but slow growing new private and foreign banks have gone for one-time abrupt adoption of technology and continued with the same level. It is concluded that impact of digitalization on new private sector banks and foreign banks has resulted in

technology adoption in the initial few years, but the impact of digitalization has been predominant in the rapidly growing public sector banks.

Limitations of the Study and Scope for Further Research

In the study, data is taken combined for 2G/3G /4G technology period, and was not separated for 2G, 3G, and 4G technology periods, respectively. The data were taken only for a few selected banks. There are still several areas related to digital financial services and firm's performance that require deeper attention in future.

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Appendix. Abbreviations Explained

DDSBIBXN	-	SBI business per employee
DSBIATM	-	SBI asynchronized transfer mode or any time money transaction
DSBICC	-	SBI credit card transaction volume
DDSBICCVAL	-	SBI credit card transaction value
DSBIDC	-	SBI debit card transaction volume
DDSBIRTVOL	-	SBI RTGS transaction volume
DDSBIRTVAL	-	SBI RTGS transaction value
DSBINFVOL	-	SBI NEFT transaction volume
DSBINFVAL	-	SBI NEFT transaction value
DDSBIMOBVOL	-	SBI Mobile transaction volume
DDSBIMOBVAL	-	SBI Mobile transaction value
DDICBXN	-	ICICI Bank business per employee
DICATM	-	ICICI Bank asynchronized transfer mode or any time money transaction
DICCC	-	ICICI Bank credit card transaction volume
DDICCCVAL	-	ICICI Bank credit card transaction value
DICDC	-	ICICI Bank debit card transaction volume
DDICRTVOL	-	ICICI Bank RTGS transaction volume
DDICRTVAL	-	ICICI Bank RTGS transaction value
DICNFVOL	-	ICICI Bank NEFT transaction volume
DICNFVAL	-	ICICI Bank NEFT transaction value
DDICMOBVOL	-	ICICI Bank Mobile transaction volume
DDICMOBVAL	-	ICICI Bank Mobile transaction value
DDHDBXN	-	HDFC Bank business per employee
DHDATM	-	HDFC Bank asynchronized transfer mode or any time money transaction
DHDCC	-	HDFC Bank credit card transaction volume
DDHDCCVAL	-	HDFC Bank credit card transaction value
DHDDC	-	HDFC Bank debit card transaction volume
DDHDRTVOL	-	HDFC Bank RTGS transaction volume
DDHDRTVAL	-	HDFC Bank RTGS transaction value
DHDNFVOL	-	HDFC Bank NEFT transaction volume
DHDNFVAL	-	HDFC Bank NEFT transaction value
DDHDMOBVOL	-	HDFC Bank Mobile transaction volume
DDHDMOBVAL	-	HDFC Bank Mobile transaction value
DDCIBXN	-	Citibank business per employee
DCIATM	-	Citibank asynchronized transfer mode or any time money transaction
DCICC	-	Citibank credit card transaction volume
DDCICCVAL	-	Citibank credit card transaction value
DCIDC	-	Citibank debit card transaction volume
DDCIRTVOL	-	Citibank RTGS transaction volume
DDCIRTVAL	-	Citibank RTGS transaction value
DCINFVOL	-	Citibank NEFT transaction volume
DCINFVAL	-	Citibank NEFT transaction value
DDCIMOBVOL	-	Citibank Mobile transaction volume
DDCIMOBVAL	-	Citibank Mobile transaction value

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