

Customer Satisfaction With Digital Banking in India: Exploring the Mediating Role of Demographic Factors

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Abstract

Consumers carry out financial transactions over the internet through a bank's website in digital banking. Thus, this form of banking has fascinated customers. The splendid innovation in technology and hard-hitting blend of banking with information technology created a paradigm shift in the banking industry. This study explored customer satisfaction with digital banking in India by evaluating the role of demographic factors. Various hypotheses were formulated. This study assessed the demographic factors that are significant in finding the satisfaction of customers with digital banking. Banks in India do not employ their websites strategically to enhance customer relationship or to add real value. Digital customers are anxious about the slow speed of the internet and the lack of security features. All these can be dealt with by the management of banks and once started strategically, banks can further gear up the confidence of digital customers and more and more customers will turn to digital banking in India. Once customers are convinced about the diverse advantages of digital banking, they will start asking for other services from banks.

Keywords: Customer satisfaction, demographic factors, digital banking

I. INTRODUCTION

Consumers carry out financial transactions over the internet through a bank's website in digital banking [1]. One key attribute of digital banking is that customers are not required to use any proprietary software installed in their personal computers for obtaining banking services. Digital banking is gaining popularity, particularly among businessmen due to its 1) low transaction costs and 24/7 availability [2]; and 2) its facility to provide a convenient substitute channel [3]. In a nutshell, digital banking is not constrained by time and place [4]. Thus, this form of banking has fascinated customers. The splendid innovation in technology and hard-hitting blend of banking with information technology created a paradigm shift in the banking industry. Technology itself formed its world in the planet of individuals [5]. In Hong Kong, Chan, and Lu [6] reported that essential transactions and securities trading were the most admired types of functions that Hong Kong customers carried out in online banking. The usage of digital banking is also growing in Australia where some resources indicated the prevalence of millions of users [7]. In Thailand, Koedraben and Raviwongse [8] found that in more than 50% of their samples, internet users were attracted to using digital banking facilities for payments for goods

purchased, to pay utility bills, and for fund transfers. It was also found that there was potential for expansion of retail online banking. In Singapore, Teo, Tan, and Peck [9] said that online banking began in 1998 and since then there had been remarkable growth of online service users. In Saudi Arabia, internet banking is yet to be fully employed as a value-adding gizmo to perk up customer relationships and realize cost advantages [1]. In India, Khan and Mahapatra [10] found that internet banking was a new experience for Indian banking customers.

A large number of studies have acquainted us with the customers' decisions of adoption internet banking. There are various studies on adoption of internet banking. Shao [71] did a meta-analysis of literature on internet banking, recognized the various adoption strategies, and asked for further research to observe post adoption issues linked with internet banking. So, an idea came up to understand customer satisfaction with digital banking among users. This is due to highly competitive market conditions for bank providers [72]. Market conditions demand that banks should understand how superlatively they should use digital banking to sustain the changing needs of their customers [11]. In fact, Mattila [12] admitted that customer satisfaction was a priority to make digital banking more successful. Moreover, several e-business researches such as Lewis [73] strongly suggested

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analysis of customer contentment to draw and augment the number of digital customers. Hiltunen et al. [13] remarked that there were atleast two major human computer interaction (HCI) challenges in online banking. The first challenge was associated with the problem of raising the number of services of digital banking and at the same time, assurance of quality of service for individual customers. The second challenge was linked to the problem of comprehending customers' needs, decoding them into targeted content, and providing content through a customized and user friendly interface.

An outline of the economy, e-business infrastructure, and internet banking in India

The population of India was 1,343,062,546 on July 16, 2017 on the basis of the estimates of the United Nations. India's population was equal to 17.86% of the total world population, out of which 32.8 % of the total population was urban (439,801,466 people in July, 2017) [76]. Realizing the size of the domestic market on the basis of population, India's business environment is ready to utilize the internet as a foremost development tool. The government has envisaged an information technology (IT) vision and has begun a range of measures to advance the IT infrastructure and the internet business in the country. The government has taken various steps such as 'Digital India' to boost digital banking. After demonetization, the government is campaigning cashless or less-cash as the way to go. Digital is being anticipated as panacea for many monetary tribulations. Internet usage in India is rising after the mobile phone revolution, but the question that arises is, 'how many Indians have access to the internet?' This is shown in

TABLE I.
KEY STATISTICS OF INTERNET USERS OPERATING IN THE WORLD

Country	Internet Users	Rank	Percentage Estimates
China	692,152,618	1	50.30%
India	340,873,137	2	36.00%
United States	239,882,242	3	74.55%
Brazil	122,796,320	4	59.08%
Japan	118,131,030	5	93.33%
Russia	105,311,724	6	73.41%
Nigeria	86,436,611	7	47.41%
Mexico	72,945,992	8	57.43%
Germany	70,675,097	9	87.59%
UK	59,538,545	10	92.00%

Source: www.statista.com accessed on July 20, 2017

table I.

Mirchandani [14] stated that the commencement of internet banking occurred in early 1990 (Table II). The opening of virtual banking created a unique system, known as internet banking. Internet banking is a class of systems that facilitate individuals or businesses, financial institution customers, to transact business, obtain the information on financial goods and services, or access accounts through the internet.

Sumanjeet [15] explained that the government of India acted out the Information Technology Act, 2000. It came into effect from October 17, 2000. The purpose of the IT act was to grant legal identification to online transactions. The working committee setup by the

TABLE II.
DIGITAL USERS WITH PENETRATION PERCENTAGE

Year	Users	Population	Penetration percentage
1998	1400000	1094870677	0.10%
1999	2800000	1094870677	0.30%
2000	5500000	1094870677	0.50%
2001	7000000	1094870677	0.70%
2002	16500000	1094870677	1.60%
2003	22500000	1094870677	2.10%
2004	39200000	1094870677	3.60%
2005	50600000	1112225812	4.50%
2006	40000000	1112225812	3.60%
2007	42000000	1129667528	3.70%
2009	81000000	1156897766	7.00%
2010	100000000	1173108018	8.50%
2012	137000000	1205073612	11.40%
2015	375000000	1251695584	30.00%
2016	462124989	1266883598	36.50%

Source: Internet Usage Stats and Telecommunications Market Report, www.internetworldstats.com [77].

Reserve Bank of India has been functioning as a supervisory body on the different aspects of digital banking. ICICI bank was the first bank to use online banking for a few of its services in India. In the current scenario, the State Bank of India is the nation's largest lender which was expected to be in the league of the world's top 50 banks by assets in 2017 by merging its five associate banks with itself. The combined balance sheet was rupees 41 lakh crore, five times that of ICICI Bank Ltd. in the year 2015; SBI was ranked 52nd in the world by assets according to *Bloomberg*. After the merger, SBI has 2.77 lakh employees, more than 25,000 branches, 50

crore customers, and 58,000 ATMs [74].

Therefore, the objectives of this research were:

- 1) To determine the existing level of customer satisfaction with digital banking operations offered by banks in India.
- 2) To identify the demographic factors which can elucidate variations in customer satisfaction with digital banking. Addressing these research questions assists in building a cumulative body of knowledge on the success of digital banking. Moreover, an improved understanding of customer satisfaction with digital banking will help the bank management to identify the areas of improvement in their future internet banking offerings from practitioners' viewpoint.

This paper is structured as follows:

The introduction explains customer satisfaction with digital banking and provides an overview of the economy, infrastructure, and digital banking in India. A brief but decisive analysis of the relevant literature on digital banking is described next. In the following sections the research approach is described. Later on, the study discusses the research findings. Finally, it concludes with recommendations for practitioners and researchers.

II. LITERATURE REVIEW

Rod, Ashill, Shao, and Carruthers [16] stated that the literature on digital banking is steadily growing. The data received from consumers were analyzed using SEM based partial least squares (PLS) method. Moreover, the paper critically analyzed existing text and found that studies on internet banking can be categorized into five wide categories depending on the basis of investigation. These were:

- 1) drivers affecting the decision of potential customers;
- 2) behavioral problem of customers towards digital banking;
- 3) factors affecting banks to commence digital banking;
- 4) effect of digital banking on bank performance; and
- 5) distinctiveness of digital bank's websites.

In the following sections, we briefly describe each of these categories with several representative studies highlighting the broad theme of each category and a summary is produced in Table III. We, however, acknowledge that our review is by no means exhaustive but our analysis of literature is an attempt to identify the broad trends in the current internet banking literature.

TABLE III.
SUMMARY OF EXISTING LITERATURE ON DIGITAL BANKING

Broad Category	Examples of Studies Representing Each Category	Overall Findings
Drivers affecting the decision of potential customers	Constantinides [17], Yiu, Grant, and Edgar [18], Lee [19], Laforet and Li [20].	The factors comprise the attributes of originality and the characteristics of adopters (i.e. demographic profile).
Behavioral problem of customers towards digital banking	Lin [21], Mols [22], Luarn and Lin [66], Rotchanakitumnuai, and Speece [70], Metawa, and Almossawi [49], Yavas, Benkenstein, and Stuhldreier [50].	Key aspects including price sensitivity of customers, customer attitude, customer satisfaction, customers' expectations of quality attributes.
Effect of digital banking on bank performance	Al-Hawari and Ward [51], Acharya, Kagan, and Rao [52], Sayar and Wolfe [53], Berger, [54], Onay, Ozsoz, and Helvacioğlu [27].	It provides strategic and operational benefits by implementing digital banking.
Characteristics of digital bank's websites	Ndubisi and Sinti [26], Bargiela-Chiappini [55], Diniz [56], and Chauhan Choudhary [57]	Typical characteristics include importance of digital banking to customers' banking needs, complexity, and compatibility.
Factors that led to banks launching digital banking	Pikkarainen, Pikkarainen, Karjaluoto, and Pahnla [29], Sohail and Shanmugham [58], Guriting and Ndubisi [59], Almossawi [61], Metawa, and Almossawi [49].	Attitudinal factors play a significant role in digital banking adoption. Moreover, effects include market-oriented and customer-oriented conditions.

The first category, which directs the existing digital banking literature focuses on the drivers affecting the decision of potential customers to use digital banking. In general, the factors comprise the attributes of originality (e.g. perceived usefulness, complexity, ease of use, security), and the characteristics of adopters (i.e. demographic profile). The studies of Constantinides [17], Yiu, Grant, and Edgar [18], Lee [19], Laforet and Li [20], and Lin [21] used theoretical urging drawn from such theories as Theory of Planned behavior (TPB), Technology Adoption Model (TAM), and Theory of Reasoned Action (TRA) to elucidate an individual's adoption of digital banking. These studies were done with cross-sectional survey and employed statistical

techniques. The findings of this category of studies are vital since a deep understanding of the factors inhibit consumers from adopting digital banking practices is useful for the bank management. This stream of studies, however, does not signify how satisfied customers are with digital banking.

The second category of literature points out the behavioral problem of customers with respect to digital banking. In particular, this stream of studies decides the attitude and satisfaction of customers with digital banking. The works of Mols [22], Luarn and Lin [66], Rotchanakitumnuai and Speece [70], Metawa, and Almossawi [49], and Yavas, Benkenstein, and Stuhldreier [50] characterize this stream. These studies as well relied on cross-sectional surveys and inspected key aspects including price sensitivity of customers, customer attitude, customer satisfaction, and customers' expectations of quality attributes from digital banking. The strong point of these studies is that they throw useful light on post-adoption facets of digital banking. However, these studies did not look at how a variety of demographic factors may influence those behavioral aspects.

Contrasting the previous two categories of research, the third category considers factors affecting banks to commence digital banking. It considers digital banking from the outlook of the bank management. This stream of study glances at the drivers of banks for commencing digital banking services. This stream of research includes typical works of Pikkarainen, Pikkarainen, Karjaluoto, and Pahlila [29], Sohail and Shanmugham [58], Guriting and Oly [59], Almossawi [61], and Metawa and Almossawi [49]. This stream stated that the primary motivator of digital banking included market-oriented, and customer-oriented conditions. This stream also sought to explain why some banks prefer to offer a comparatively wider array of digital banking products and services.

Similar to the previous category, the fourth category of research is concerned with digital banking from the standpoint of the bank management. It focuses on the effect of digital banking on bank performance. The works of Al-Hawari and Ward [51], Acharya, Kagan, and Rao [52], Sayar and Wolfe [53], Onay, Ozsoz, and Helvacioğlu [27], and Berger [54] are notable illustrations of this line of research. Ekata [64] investigated the relationships among IT, bank profitability, and productivity in the two groups of Asia-Pacific banks and concluded that both banks through massive utilization of digital banking had enlarged

productivity and got both strategic and operational benefits. On the other hand, Acharya, Kagan, and Rao [52] stated that the increasing use of internet created an additional channel of marketing banking services, which considerably enhanced the financial performance of banks.

Finally, the fifth category of research is related with the characteristics of internet banking websites. The works of Ndubisi and Sinti [26], Bargiela-Chiappini [55], Diniz [56], and Chauhan, and Choudhary [57] are notable illustrations of this line of research. For illustration, Ndubisi and Sinti [26] revealed the major constructs that are important for digital banking needs of customers as complexity and compatibility. Diniz [56] studied the websites of 121 banks in the United States and assembled the functionalities presented by digital banking websites into three broad areas: customer relationship, information delivery, and transaction. According to Diniz [56], large banks were working at the superior level. In France, Bargiela-Chiappini [55] described that all domestic banks had a web presence but few of them had transactional capabilities.

The research conducted in this paper falls into the second category of research. However, this research sought to extend this category by investigating the influence of several demographic factors in the variations in customer satisfaction with digital banking in the context of India.

III. RATIONAL OF INCLUSION OF CUSTOMER SATISFACTION AND DEMOGRAPHIC FACTORS

The elementary assertion underlying with research sculpt is that customer satisfaction with digital banking is likely to diverge depending on demographic factors. Out of all, seven demographic factors were considered significant which have been previously studied. These factors are related with customer satisfaction with information technology and e-business applications. These comprise occupation, gender, age, educational level, area of residence, marital status, and income. The insertion of demographics uncovered noteworthy predictors of digital banking utilization [46]. However, it has produced contradictory results too [69], [28]. Within the context of e-banking, it revealed that demographic factors such as gender, age, income, and occupational level played significant role in consumer's adoption of digital banking technology and revealed that it is not only the demographics factors but personal attitude towards

digital banking also remained significant. Lee [65] studied the role of demographics in South Korea and found that effects of demographic factors were reasonable on the benefits of electronic commerce. On the basis of these assertions, our research model comprises these variables and comprehensive explanations are presented in fig. 1 discussing how each of these factors may affect customer satisfaction with digital banking.

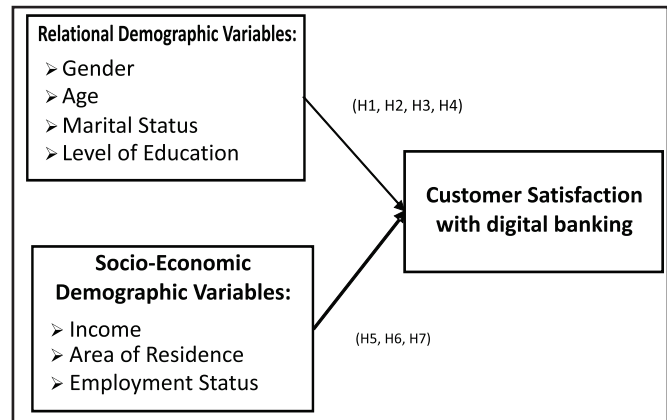
IV. RESEARCH GAP

Digital banking is changing the scenario of the whole banking industry, its effects on banking performance, and customer relationship. So, this aspect cannot be ignored and it needs to be examined thoroughly. The aforementioned literature review reveals that so far that most of the studies have focused on the drivers (perceived usefulness, complexity, ease of use, and security) affecting the decision of potential customers to use digital banking. It used theoretical urging drawn from theories such as Theory of Planned behavior (TPB), Technology Adoption Model (TAM), Theory of Reasoned Action (TRA), ANOVA, Factor analysis to elucidate an individual's adoption of digital banking (Constantinides, Yiu, Grant, and Edgar [18], Lee, Laforet, and Li [20], and Lin [21]). Most of the studies were done outside India. Hardly any study was conducted in India on customer satisfaction with digital banking service of SBI. Moreover, most of the studies were limited to one or two aspects of digital banking. This study explored customer satisfaction with digital banking in India and evaluating the role of demographic factors.

V. HYPOTHESES AND CONCEPTUAL MODEL

Conceptual model is a descriptive model which is based on qualitative assumptions about system boundaries, its variables, and their inter-relationships [63]. Conceptual models utilize diagrams, narratives, and tables to characterize a set of causal association in a simplified mode. In this paper, the model was used to investigate the effect of demographic factors on digital banking. At this junction, on the basis of literature review, an attempt was made to prepare a framework for this study. The conceptual model is depicted in fig. 1.

Fig. 1. Conceptual Model



A. Gender

There were various gender-based studies and researchers considered the variable from various dimensions. There is an argument regarding the impact of gender on the study of customer satisfaction towards digital banking use and it was found that males had more positive attitudes towards computer use as compared to females [33]. Seyal et al. [46] found that men tend to be more interested in digital banking than women on average contributing to gender difference in e-banking use. Again, Venkatesh and Morris [34] found gender difference in individual adoption and continual usage of technology in the job place. However, there are contradictory results. To know the association between gender and digital banking customer satisfaction, the hypothesis is:

H₁: There is a significant difference between gender and customer satisfaction with digital banking.

B. Age

Age is considered a major variable for studying customer satisfaction for various digital banking services; though, in various studies it has produced varying results. According to Karjaluoto, Mattila, and Pento [67], the negligible amount (0.9%) of use of online banking was done by customers below 24 years of age. Luo, Li, Zhang, and Shim [68] showed that the age group 25 to 34 was most likely to use mobile banking. Likewise, Polatoglu and Ekin [25] supported age as a decisive factor in internet adoption. Conversely, Ramayah, and Jantan [31] found that age was negatively allied with students' use of internet. Therefore, the hypothesis is:

H₂: Age positively influences customer satisfaction with digital banking.

C. Educational Level

Based on the prevailing trends in many countries in which persona computers and the internet have become an enduring feature of the educational system. Internet technology has continued to pervade wider spheres of the society. Over the years since 1999, a bigger number of citizens around the world have become more 'techno-savvy' [32]. Several researchers have pinpointed the importance of education not only in the creation of positive approach towards technology practice but also as a factor that is important in the actual usage of digital banking. Kay [33] said that people with higher educational credentials have a favorable tendency with regards to IT use. Seyal et al. [34] revealed the relationship of educational qualifications with positive attitudes towards online banking. Hence, it is the contention that the greater the level of education of a banking client, the more likely he/she will satisfy with digital banking and vice-versa. Based on this, we hypothesized:

H₃: There is a significant difference between educational level and customer satisfaction with digital banking.

D. Marital Status

Marital status appears to be the demographic factor least accounted for in existing studies on digital banking in India as very few scholars have included this factor in their studies. Nie and Hillygus [24] stated that individuals used more digital services while married people and single parents spent less time on e- services. However, Gillwald, Milek, and Stork [35] found that generally married individuals use more digital services than single individuals. Hence, this study pointed out that marital status had positive effect on digital banking customers in India, and so the hypothesis:

H₄: There is a significant difference between marital status factor and customer satisfaction with digital banking.

E. Income

Numerous previous studies examined the impact of income as one of the key factors related with the use of internet banking. People with regular and high income are more likely to adopt digital banking services than those with either lower or no income [32], [30]. Naser, Jamal, and Al-Khatib [23] found that income level was a significant factor in Islamic banking. Awamleh, and

Fernandes [36] noticed that income emerged to be an important factor in transaction security among customers' satisfaction. The hypothesis is:

H₅: There is a significant difference between income factor and customer satisfaction towards digital banking.

F. Occupation Status

People have different employment status, for example, agriculturists, expert, self- employed, retired, part-time employee etc. Employment status is a crucial factor likely to affect digital banking customers. This is because being employed means a steady flow of earnings. Cullen [37] expressed that a privileged employment status is also likely to signify a higher level of income. Empirical evidence has shown that employed people are more likely to try digital banking services than unemployed people, and that citizens in higher levels of employment are more likely to use digital services than those in lower levels of employment [38]. Therefore, the hypothesis:

H₆: There is a significant difference between occupation factor and customer satisfaction towards digital banking.

G. Area of Residence

Generally, area of residence was not taken as a demographic factor for research, but in today's era, it is playing an important role. According to Harrison, Onyia, and Tagg [62], people residing in metro cities are using more digital services than people residing in rural areas. Similar results were given by Chowdary [39]. Whether an individual lives in an urban city or in a rural village or in a semi-urban city is therefore, a strong factor likely to affect the Indian customer's satisfaction with digital banking. Consequently, we hypothesize:

H₇: There is a significant difference between area of residence and customer satisfaction towards digital banking.

H. Customer Satisfaction

The researchers have been conducting various studies for the evaluation of MIS success Schewe [40], Delone, and McLean [41]. The researchers allied the internet triumph to the overall satisfaction of users [42]. Within the context of e-banking, Mattila [12] admitted that customer satisfaction was a solution for making internet banking successful and banks used different media to

tailor goods and services to fit customers' specific requirements in future. Moreover, few other studies have focused on websites users' satisfaction in common [43] and online banking in particular [44]. From the above discussion, it is evident that measuring customers' satisfaction is the principal goal to make digital banking successful. Thus, to fill-in the gap, the current study was used to determine customer satisfaction with digital banking in India. It is, though, necessary to get a reply for the subsequent research questions so that based upon the study findings, it could propose some implications for appropriate authorities.

The primarily objective was to focus on customers' satisfaction with digital banking to and assess the demographic factors that are noteworthy predictors in appraising digital banking customers' satisfaction with banks in India.

VI. RESEARCH METHODOLOGY

The study uses a survey approach. The respondents are customers in banks. Fifteen hundred questionnaires were provided to various members of society randomly who included students, business employees of public and private sector institutions, professionals such as advocates, doctors, scientists, agriculturists. 250 questionnaires were dropped out as they were not filled-in properly. Therefore, 1250 questionnaires were retained for the purpose of the research with the response rate of 80.6%. The response rate was found acceptable for the logical deduction of the analysis. Primary data was used in the form of questionnaire. The questionnaire was divided into two parts: The questionnaire was self-administered by the researcher. According to Hair [48], a research study planned to disclose factor structure should have more observations than variables, Part 1 is the demographic study and it consisted of questions pertaining to the respondents' demographic profiles, such as age, gender, marital status, educational qualification, occupation, employment sector, designation, and monthly income. Part 2 (Consumer Opinion) had questions related to major factors of online customer satisfaction. All the 25 questions of the questionnaire from part 2 used a Likert scale ranging from 1 = Very Dissatisfied to 5 = Highly Satisfied. Secondary data were collected through newspapers, research papers, journals, websites, books, project reports etc.

A. Questionnaire Design and Data Collection

The objective of this study was to investigate customer satisfaction towards digital banking services and to identify the demographic factors that affect the usage of digital banking based on customer satisfaction in India. Thus, data for paper survey were collected from individual bank customers in India. 1500 questionnaires were distributed to clients of banks but 1250 questionnaires were completed by digital banking customers. The questionnaire consisted of two parts A and B. Part A was related with customers' demographic characteristics such as gender, age, marital status, income, occupation, educational level, and area of residence. Part B was about customer satisfaction with digital banking. It has been framed according to the five point Likert scale model from strongly disagree to strongly agree (1-Strongly Disagree, 2-Disagree, 3-Not Certain, 4- Agree, and 5-Strongly Agree). 32 questions were asked in the survey in order to collect data about bank customers who use digital banking.

B. Methodology

After data were obtained from 1250 respondents, SPSS 23 was used for evaluation. SPSS (Statistical Package for the Social Sciences) is a computer software that provides statistical analysis of data and tables of statistics. Firstly, conceptual model was created. Then, reliability analysis, regression analysis, frequency, and descriptive analysis were conducted in SPSS 23 computer software. According to the results obtained, questionnaire was evaluated. Finally, these evaluations are discussed in terms of customer satisfaction with digital banking in India.

VII. EMPIRICAL ANALYSIS

This section analyzes the valid survey responses with appropriate statistical tools and techniques.

TABLE IV.
CUSTOMER DEMOGRAPHIC CHARACTERISTICS
(N=1250)

Variable	Type	N	Percentage
Gender	Female	280	22.4
	Male	970	77.6
Age	18-24	300	24
	25-34	720	57.6

Educational Level	35-44	120	9.6
	45-54	10	0.8
	55 above	100	8
	Matric	50	4
	Secondary	160	12.8
	Graduate	300	24
	Post Graduate	420	33.6
	Doctors	20	1.6
Marital Status	Professional	300	24
	Married	930	74.4
	Unmarried	320	25.6
Income Level (per month)	Less than or equal to 50,000	430	34.4
	50,001 -1 Lakh	390	31.2
	1,00,001-1,50,000	330	26.4
	1,50,001 above	100	8
Occupational Status	Pofessional/Expert	50	4
	Self-Employed	130	10.4
	Agriculturist	490	39.2
	Part-time	310	24.8
	Retired	70	5.6
	Unemployed	200	16
Area of residence	Urban(Cities)	830	66.4
	Rural	320	25.6
	Sub-Urban	100	8

Source: Statistical analysis of field data

Demographics

Among 1250 customer respondents, 22.4% are female, and 77.6% are male. The finding supports past studies in India on digital banking users. Majority of the customers, i.e. 57.6% are aged between 25 and 34, and 24% of customers are between 18 and 24 years, indicating younger the age, more the inclination to use digital banking. Majority of the customers are married, 74.4% show marriage does not make difference in utilizing digital banking services. About 33.6% of customers are post graduates and 24% are graduates, 24% are professionals, indicating 81.6% customers are well educated. Regarding occupation, majority are self-employed, 39.2% followed by 24.8% are part-time employees, about 16% are unemployed. About 10.4% are agriculturist and 5.6% of customers are retired employees. Among monthly income levels, 34.4% of customers are earning less than Rs. 50,000, followed by 31.2% of customers between Rs. 50,001 to 1,00,000, 26.4% of customers earning between Rs. 1,00,001 to Rs.

1,50,000, and about 8% of customers earning above Rs. ,50,000. The majority of people reside in cities i.e.

TABLE V.
CUSTOMER SATISFACTION TOWARDS DIGITAL
BANKING SERVICES - FACTOR ANALYSIS

Factor	Factor loadings of varimax rotated	Factor Loadings	Eigen Value	Percentage of Variance	Factor name (Reliability)
Principal Components					
F1	Digital Banking (IB) is compatible with my banking needs	0.963	4.061	21.571	Compatible (0.993)
	Digital banking is compatible with my lifestyle	0.913			
	Digital banking is comfortable to use	0.863			
	Digital banking is better than offline banking	0.933			
F2	I don't know how to use digital banking	0.712	2.084	12.956	Utility (0.915)
	SBI does not offer digital banking	0.791			
F3	My friends are using digital banking	0.574	2.07	11.619	Security (0.706)
	Doing transaction is safe	0.655			
	Secure to use digital banking services	0.685			
F4	You can do transactions at anytime	0.592	2.043	9.858	Convenient (0.710)
	Is a sign of modernity	0.515			
	It has convenient timings	0.712			
	Is digital banking convenient to you	0.712			
F5	The image of SBI is appealing you	0.555	2.04	9.118	Efficiency (0.549)
	It provides additional benefits to you	0.615			
	I prefer transactions at the branch	0.504			
	My bank is encouraging to use digital banking	0.597			
F6	Services offered are satisfactory	0.737	1.822	7.329	Ease of use (0.616)
	It takes a long time to resolve issues	0.717			
	It is the cheapest source to access	0.666			

Extraction Method: Rotated component analysis; Rotation with Kaiser Normalization converged in 7 iterations.

66.4%, followed by rural areas (25.6%), and 8% are residing in towns.

VIII. DATA ANALYSIS AND INTERPRETATION

The six-dimensions of customer satisfaction variables have coefficient alpha of 0.748, good score and satisfactory, compared to the standard 0.70 [45]. KMO and Bartlett's test of Sphericity is significant ($p < 0.000$). The KMO measure of sampling adequacy is higher at 0.748 and the value exceeds the recommended value of 0.60 [75]. The two results of KMO and Bartlett's suggest that the data is suitable to continue with factor analysis. Principal Component Analysis reveals six factors with Eigen value exceeding 1.0, explaining variance upto 72.451, first item variance 21.57%, second factor 12.95%, third factor 11.61%, fourth factor 9.85%, fifth factor 9.11%, and sixth factor 7.32% respectively.

To determine the important factors of customer satisfaction with digital banking services, Varimax rotation was performed for 25 items, resulting in six factors that explain 72.45% of total variance. The factors are labeled according the variables below them, on factor loading greater than 0.50. The variables, 'Are you satisfied with digital banking' (0.345); 'I don't trust digital banking services' (0.398); 'It is expensive to use' (0.463); 'You can do transactions anytime' (0.419), 'When you have a problem, you get a proper response from the concerned employee' (0.438) were excluded, as they could not load significantly on any factor. The extracted six factors are referred as constructs (Table V). Thus, factor analysis resulted in six factors, namely,

TABLE VI.
ANOVA - CUSTOMER DEMOGRAPHICS AND SATISFACTION WITH DIGITAL BANKING

		S.S	Df	Mean Score	F	Sig.
Gender	Between Groups	1.186	1	1.186	6.09	0.015
	Within Groups	23.952	123	0.195		
	Total	25.138	124			
Age	Between Groups	1.952	4	0.488	2.525	0.044
	Within Groups	23.186	120	0.193		
	Total	25.138	124			
Educational level	Between Groups	1.129	5	0.226	1.119	0.354
	Within Groups	24.01	119	0.202		
	Total	25.138	124			

Marital Status	Between Groups	1.803	1	1.803	9.503	0.003
	Within Groups	23.335	123	0.19		
	Total	25.138	124			
Income level	Between Groups	0.56	3	0.187	0.919	0.434
	Within Groups	24.578	121	0.203		
	Total	25.138	124			
Occupation	Between Groups	2.891	5	0.578	3.092	0.012
	Within Groups	22.248	119	0.187		
	Total	25.138	124			
Area of Residence	Between Groups	3.294	2	1.647	9.198	0.000
	Within Groups	21.844	122	0.179		
	Total	25.138	124			

Source: Statistical analysis of field data

compatible, utility, security, convenience, efficiency, and ease of use. The reliability measures exceeded the minimum value of 0.50. These factors influence customer satisfaction with digital banking services provided by select sample banks.

A. ANOVA Analysis

The mean score of digital banking variables derived from factor analysis was considered for dependent variable and customer demographic variables were considered as independent variables to perform ANOVA.

B. Hypotheses Test Results

ANOVA (Table VI) were used to test the study hypotheses. The result is shown in table V, indicating that F-value 6.09, $p = 0.015$ is significant. Further analysis reveals that there is moderate significant difference in mean scores of customer satisfaction with digital banking between male and female customers. p value is less than 0.05, so null hypothesis (H_0) is accepted, indicating that there is a significant difference between gender and customer satisfaction with digital banking. It implies that both males and females are significantly inclined towards using digital banking. F-value is 2.525, p is 0.04 for customer age and satisfaction with digital banking is statistically significant. The results reflect that satisfaction significantly differed across customer age groups (H_2 accepted). Age positively influences customer satisfaction with digital banking. A Turkey HSD *post hoc test* was executed to make multiple customer age groups comparisons. The test results shows that the mean difference scores for 18-24 group is significantly different from 25-34 age group; 35-44 age

group and 45-54 age group are not significantly dissimilar from each other. Moreover, the mean difference of customer age groups are significant *with* $p < 0.05$. However, ANOVA indicates that the F-value 1.119, $p = 0.354$ is statistically not significant. There is difference between educational level factor and customer satisfaction towards digital banking. As the p value is greater than 0.05, null hypothesis H_3 is rejected. Analysis reveals that education does not affect customer satisfaction with digital banking. In today's era, everyone is using digital banking whether he is a graduate, a postgraduate, or a diploma holder etc. Variance analysis resulted in F-value 9.503, $p = 0.003$. It is statistically strongly significant for customer marital status and satisfaction with digital banking services. p value is less than 0.05, therefore, H_4 is accepted. Thus, there is significant difference between customer satisfaction with digital banking in case of married and unmarried people. The analysis of variance indicates F-value of 0.919, $p = 0.434$. This is not statistically significant for relationship between customer income levels and satisfaction. p value is greater than 0.05, so H_5 is rejected. It reflects that satisfaction levels not significantly differed across customer income levels. Whereas, the ANOVA results indicate the F-value 3.092, $p = 0.012$ is statistically significant, H_6 is accepted. Thus, there is significant difference between occupation of customer and satisfaction with digital banking. Further, analysis for multiple comparisons results that the mean difference scores of professionals are significantly different with $p < 0.05$ from and no significant difference between self employed and unemployed. The ANOVA value signifies the F value 9.198, $p = 0.000$ which is statistically strongly significant for area of residence and customer satisfaction towards digital banking. p value is 0.000, so H_7 is accepted which implies that location of residence affects customer satisfaction.

C. Managerial Implication

The present study provides empirical facts and several propositions to the management of banks. The findings suggest that five of the seven demographic variables are significant predictors of customer satisfaction with digital banking. The study reveals compatible, utility, security, convenient, ease of use, and efficiency as factors that affect customer satisfaction with digital banking services. The findings support past studies such as Sohail and Shanmugham [58], and Ankit [60]. Banks should give more priority to using latest packages for customers' information privacy, security, and latest

communication tools. Regular contact with customers for security and latest transaction particulars would be more beneficial to avoid mistreatment of customer information and for augmenting customer awareness. Customers' gender, age, marital status, and area of residence play a significant role in shaping customer satisfaction with digital banking services. Education and income level do not affect satisfaction. Banks have to tailor goods and services irrespective of age and gender of customers. Though, the results signify moderate gender difference, current business environment provides employment opportunities, HRA benefits, and fringe benefits irrespective of gender. Age is an important factor in adoption of digital banking. Professionals with good salary are more inclined to use digital banking services compared to the unemployed or the retired. Bank websites have to provide various options like investments, financial planning, risk coverage, retirement plans, various loans for buying assets, and education for customers, and assist in building stronger customer relationships. The income level and education of customers does not significantly affect customers' satisfaction with digital banking, though banks have to depend on each and every demographic factor to provide services in a better way.

IX. CONCLUSION

This study is the first of its kind conducted in India and has fulfilled its objectives. It assessed the demographic factors that are significant in finding the satisfaction of customers with digital banking. Banks in India do not employ their websites strategically to enhance customer relationship or add real value. Digital customers are anxious about slow speed of the internet and the lack of security features. All these can be dealt with by the management of banks and once started strategically, banks can further gear up the confidence of digital customers and more and more customers will turn to digital banking in India. Once customers are convinced about the diverse advantages of digital banking, they will start asking for other services from banks.

The study is limited to exploring customer satisfaction with digital banking services provided by India and effect of demographics on satisfaction. The present research does not focus on the attitudinal dimension of the customers. So, future studies can consider attitude of customers towards digital banking.

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