**Analysing the Influence of Demographic Factors on Digital Banking Adoption: A Behavioral Perspective**

**Josna Shaji 1 & Dr. R. Sakthivel 2**

**PG Student, Department of Commerce (PG), Kristu Jayanti College (Autonomous), Bengaluru 1**

**Assistant Professor, Department of Commerce (PG), Kristu Jayanti College (Autonomous), Bengaluru 2**

josnashaji22@gmail.com

**Abstract**

Digital banking, including online banking, is a gradual shift from traditional banking methods. It uses web-based services, process automation, and APIs to provide financial products and streamline transactions, with financial data accessible through automated devices. The study identifies a research gap in digital banking adoption, highlighting factors like perceived security, trust, social influence, and simplicity. Existing research often focuses on a single factor or demographic, overlooking cultural and economic contexts. Additionally, long-term client retention strategies remain underexplored. To address this gap, the study aimed to assess the impact of demographic factors on customer adoption of digital banking, providing insights into how occupation, education, and age influence digital banking usage and engagement. The study surveys 120 respondents in Bangalore using a structured questionnaire and statistical analysis to assess digital banking adoption, satisfaction, convenience, and cybersecurity concerns through stratified random sampling. The study analyzed demographic factors influencing digital banking adoption, highlighting occupation as a key determinant. Most respondents were young, highly educated individuals. Regression analysis showed occupation significantly impacts adoption, with students and professionals prioritizing convenience and accessibility. Findings suggest financial institutions should tailor digital banking services to different user groups for improved adoption and satisfaction.

**Keywords:** Adoption, Customer Perception, Demographic Factors and Digital Banking

**Introduction**

The broader category of digital banking, which includes the delivery of financial services over the internet, includes online banking. With differing levels of digitization in financial services, the shift from traditional to online banking has been gradual and is still going strong. Web-based services and high levels of process automation may be used in digital banking to provide financial products and streamline transactions. APIs that enable cross-institutional service composition could also be included. Financial data is accessible to users through automated teller machine, desktop, and smartphone services.

A digital bank is an online process that comprises online banking, mobile banking, and more. Being an end-to-end solution, digital banking would have to include the front end visible to customers, the back end visible to bankers via their servers and admin control panels, and the middleware that bridges these nodes. In the end, a digital bank should provide all functional levels of banking on all service delivery platforms. That is, it must perform all the same functions as a head office, branch office, online service, bank cards, ATMs, and point-of-sale (POS) machines. The reason digital banking is more than merely a mobile or online platform is that it incorporates middleware solutions. Middleware is software that connects operating systems or databases with other applications. Finance industry departments like risk management, product development, and marketing need to be integrated in the middle and back ends in order to be a complete digital bank. Financial institutions have to be leaders in the most recent technology in order to maintain security and abide by government rules.

**Review of Literature**

**Ibha Rani, Rohan Joseph P, et al., (2024),** This study examines the impact of convenience and accessibility on customer satisfaction in the banking sector, particularly in the context of technological advancements. It aims to identify key drivers of satisfaction and assess the relationships between these factors. The research uses a structured questionnaire and a correlation matrix to collect primary data from customers across various banks, providing valuable insights into the dynamics of convenience, accessibility, and customer satisfaction in contemporary banking.

**Eko Retno (2023),** This study investigates the factors influencing the adoption of digital banking by young people, with a particular focus on Generation Z in Jakarta. The 320 survey participants reported that self-efficacy, costs, usefulness, and aversion to technology all have a direct influence on usage attitudes. However, if attitudes take precedence over consciousness, self-efficacy, and usefulness, resistance to technology is sensed indirectly. The research site was a large metropolis, specific generations were employed, and sociological traits were left out of the analysis.

**Chan R, Troshani I, Rao Hill S & Hoffmann A (2022),** In order to investigate the factors impacting consumers' adoption of Open Banking, this study extends the Unified Theory of Acceptance and Use of Technology (UTAUT) by integrating perceived risk, initial trust, and financial literacy. A dataset of 456 Australian survey participants was used to evaluate the model, which demonstrated performance expectancy, effort expectancy, social influence, and perceived risk to be direct antecedents of consumers' usage intention. While social influence affects usage intention, performance expectancy, effort expectancy, and early trust reduce perceived danger. Consumer mistrust over financial literacy may result from a decrease in initial trust.

**Rahi S, Othman Mansour, et al., (2021),** The study evaluates the effectiveness of web-based Internet banking services by measuring user continuation intention. It applies three theories: commitment trust theory, expectation-confirmation theory, and self-determination theory (SDT). An analysis of users' intentions to stick with commercial bank Internet banking shows that perceived utility explains 68.4% of the variation in users' intentions. The research model shows strong predictive significance, as seen by its Q2 predictive relevance of 50.3%. The findings help policy-makers, bank managers, and financial advisors understand human motivation and expectation-confirmation factors to boost IT ROI and customer retention. The study adds to the corpus of e-commerce literature, particularly in post-adoption scenarios.

**Ahmed S & Sur S (2021),** The factors influencing rural micro, small, and medium-sized enterprises' (MSMEs') adoption of digital banking services in India are examined in this study. The study found that convenience, self-efficacy, demonetization, performance anticipation, and pandemic effect have a significant impact on views for adopting DBS through the use of a questionnaire survey. The research results will help banks and government agencies update their plans, which would improve India's "cashless economy". The results of the study will enhance the government's and banks' efforts to better support DBS among rural MSMEs. Although digital services are still relatively new in India, their appeal is rising swiftly because of affordable devices, easily available internet, and a range of DBS usage possibilities.

**Ipang Sasono (2021),** This study investigates the relationship between e-satisfaction and e-loyalty in Indonesian private banks, with a focus on e-service quality. The information was given by 25 respondents who had internet bank accounts. Regression analysis was used in the study using SmartPLS 3.0 software and the SEM technique. It was demonstrated that e-satisfaction and e-loyalty were significantly impacted by e-service quality, with e-satisfaction serving as a major mediator in this relationship.

**Akram Garepasha, et al., (2021),** The effects of relationship and service quality on customer loyalty in online banking services are investigated in this study. Structural modelling was employed in the study to evaluate the research assumptions, which involved 651 individuals from Iran. Customer loyalty is significantly impacted by relationship quality, particularly utilitarian and hedonistic quality, according to the research. This cross-sectional study found that as a partnership ages, relationship quality has a diminishing effect on predicting loyalty. The main contributions are the creation of literature on relationship marketing and the evaluation of its long-term effectiveness.

**Nguyen Minh Sang (2021),** This study aims to explore the factors influencing the intention and recommendation of 314 Vietnamese customers to use mobile banking applications. Perceived danger, usability, attitude, social image, trust, and inventiveness are the seven components that are recognized. The findings indicate that in developing nations such as Vietnam, innovativeness, attitude, risk-taking, ease of use, and trust are the main factors influencing consumer behavior during the COVID-19 pandemic.

**Ngoc Anh Tran (2021),** This article examines the factors that encourage young Vietnamese retail clients to use online banking. Data from 525 college students was analysed using multivariate data analysis techniques. The results showed that perceived ease of use, social influence, and customer support had a favorable impact on intentions to use digital banking services. However, research has revealed that perceived convenience, security, and self-efficacy with regard to technology were irrelevant.

**Merhi M, Hone K Tarhini A & Ameen N. (2021),** A cross-national study found that age and gender had a significant impact on customers' intentions and use of mobile banking services. In the study, 897 mobile bankers from Lebanon and Britain took part. The findings showed that whereas gender strongly affected performance expectancy, effort expectancy, enabling conditions, price value, and perceived security, age considerably affected consumer behavioral intention. The findings provide insightful insights into how mobile banking use differs among countries.

**Research Gap**

The reviewed literature highlights several factors that influence the adoption and use of digital banking across various countries and demographics, such as perceived security, trust, social influence, and simplicity of use. However, most research focuses on a single factor or demographic segment, ignoring how these variables interact in different cultural and economic situations. There is a dearth of research comparing the adoption of digital banking in developed and developing nations. Although studies already look at barriers and stimulants, further study is required to evaluate long-term client retention strategies and the impact of digital banking on customer loyalty.

**Statement of Problem**

The rapid growth of digital banking is shaping the banking sector. The new trends in the banking sector are the rise of technology and innovation. And it is also important to know how satisfied the customers are and to adopt these new practices in the banking sector. Digital banking raises a concern in cybersecurity and trust towards adopting digital banking. By addressing these challenges, the study has been conducted.

**Objective of the Study**

* To assess the impact of demographic factors on customers adoption towards digital banking.

**Hypothesis**

**H₁**:There is a significant impact of demographic factors (such as age, gender, education, income, and occupation) on customers' adoption of digital banking.

**Scope of the Study**

This study focuses on customers, mainly working professionals and college students, particularly undergraduates and postgraduate students from different banks, particularly in the areas of Bangalore, namely Kothnur, Hennur, Whitefield, Electronic City, and Sarjapur, and their experiences with digital banking. The study aims to understand customers' perceptions of digital banking, as well as their adoption, satisfaction, convenience, and accessibility of digital banking.

**Research Methodology**

The study collects primary data from 120 respondents using a structured questionnaire on digital banking. It includes demographic and close-ended questions with a 5-point Likert scale to assess customer perceptions, satisfaction, convenience, and accessibility. Regression analysis, chi-square tests, and correlation methods evaluate adoption and cybersecurity concerns. A non-probability stratified random sampling method is used. The study focuses on specific locations in Bangalore, including Kothnur, Hennur, Whitefield, Electronic City, and Sarjapur.

**Analysis and Interpretations**

**Analysis of frequency distributions of demographic information.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No** | **Demographical Variables** | **Frequency** | **Percentage** |
| **1.** | **Age** |  |  |
|  | Below 20 Years | 8 | 6.7% |
|  | 21 Years - 30 Years | 88 | 73.3% |
|  | 31 Years - 40 Years | 7 | 5.8% |
|  | 41 Years - 50 Years | 10 | 8.3% |
|  | Above 50 Years | 7 | 5.8% |
|  | Total | 120 | 100% |
| **2.** | **Gender** |  |  |
|  | Male | 50 | 41.7% |
|  | Female | 70 | 58.3% |
|  | Total | 120 | 100% |
| **3.** | **Education** |  |  |
|  | Bachelor's Degree | 64 | 53.3% |
|  | Master's Degree | 45 | 37.5% |
|  | Doctorate | 3 | 2.5% |
|  | Professional studies | 6 | 5.0% |
|  | Medicine / Nursing | 2 | 1.7% |
|  | Total | 120 | 100% |
| **4.** | **Occupation** |  |  |
|  | Student | 60 | 50% |
|  | Working Professional | 60 | 50% |
|  | Total | 120 | 100% |

The survey data reveals that most respondents (73.3%) are aged 21–30 years. Females (58.3%) outnumber males (41.7%). A majority hold a bachelor's degree (53.3%), followed by master's (37.5%). Equal representation exists between students (50%) and working professionals (50%), indicating balanced participation across educational and occupational backgrounds.

**Regression analysis on Customer Adoption Towards Digital Banking**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
|  | (Constant) | 1.229 | .197 |  | 6.250 | .000 |
| How frequently do you use digital banking services? | .021 | .050 | .041 | .430 | .668 |
| Which digital banking services do you use? | .083 | .060 | .133 | 1.378 | .171 |
| How did you first learn about digital banking services? | .053 | .040 | .124 | 1.323 | .189 |
| Have you switched from traditional banking to digital banking? | -.062 | .049 | -.121 | -1.262 | .210 |

From the table 4.2, it depicts the regression test conducted on the dependent variable, i.e., occupation (Student and Working Professional), and the independent variables. The test revealed that the majority of the variables were above the significant level, i.e., 0.05, which led to the acceptance of hypothesis.

**Findings**

The study analyzed data collected from 120 respondents. The demographic information showed that 58.3% of the respondents are female, while 41.7% are male. The age distribution indicates that 73.3% are between 21 and 30 years old, making it the largest group. This is followed by 8.3% who are aged between 41 and 50 years, 6.7% who are under 20 years, 5.8% aged between 31 and 40 years, and 5.8% who are over 50 years, the smallest group. Regarding education, 53.3% hold a Bachelor's degree (undergraduate), 37.5% have a Master's degree (postgraduate), 5.0% possess a professional degree, 2.5% have a doctorate, and 1.7% are in the medicine or nursing fields, the least represented category. In terms of occupation, 50% of respondents are both students and working professionals.

The objective of the study was to assess the impact of demographic factors on customer adoption of digital banking. This objective was assessed using five statements and analyzed through regression analysis. In this analysis, the dependent variable was occupation (students and working professionals), while the independent variables were the statements measuring customer adoption of digital banking. The results of the regression analysis indicated that most of the variables had significant values greater than 0.05, specifically 0.668, 0.171, 0.189, and 0.210. Since these values exceed the significance threshold, we can accept the hypothesis, concluding that there is significant impact of demographic factors (occupation) on customer adoption of digital banking.

**Conclusions**

The study examined the impact of demographic factors on customer adoption of digital banking, with a focus on occupation as a key determinant. The demographic analysis revealed that the majority of respondents were female (58.3%) and between the ages of 21 and 30 (73.3%), indicating that younger individuals form the primary user base of digital banking. Additionally, educational qualifications showed that most respondents held a Bachelor's degree (53.3%) or a Master's degree (37.5%), reflecting a highly educated population.

Regression analysis was used to determine the significance of occupation in influencing digital banking adoption. The results indicated that the significance values for most variables were above 0.05 (0.668, 0.171, 0.189, and 0.210), suggesting that occupation has a notable impact on digital banking adoption. As students and working professionals constituted 50% of the respondents, their engagement with digital banking may be influenced by factors such as convenience, accessibility, and technological awareness.

Based on these findings, the study concludes that demographic factors, particularly occupation, significantly impact digital banking adoption. These insights can help financial institutions develop targeted strategies to enhance digital banking services for different user groups, ensuring broader adoption and user satisfaction.

**Limitations of the Study**

* This study focuses on specific geographical areas in Bangalore, which may limit the generalizability of its findings. The insights obtained from Kothnur, Hennur, Whitefield, Electronic City, and Sarjapur may not be applicable to other regions within Bangalore or to other cities.
* This study is limited in its scope as it exclusively examines working professionals and college students, particularly undergraduates and postgraduate students, potentially restricting the applicability of its findings to other demographic groups.
* The study is limited to only 120 respondents; the sample size may not capture the full range or entire population of customers attitudes and experiences towards digital banking.
* The study is limited to response biases because of self-reported data, where individuals might not provide socially desirable answers to rather than their perceptions of digital banking.
* The study faces time constraints; the study is conducted only for 6 months; hence, the study cannot perform in-depth analysis on factors influencing digital banking adoption.

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