



“A Study On Factors Affecting User’s Perception Towards Digital Banking Services”

¹Lashwanthi V, ²Swetha V

¹Student, ²Asst Professor

¹Master of Business Administration,

¹Panimalar Engineering college
Ponnamallee, Chennai.

Abstract: This study shows that digital platforms revolutionize the financial sector with their speed, accessibility, and convenience. Understanding what drives user satisfaction and trust has become essential. The primary objective of the research is to assess user perceptions of digital banking services and identify how trust, security, user-friendly interfaces, and enhanced user experience influence adoption and continued use. Analysis, Mann-Whitney U Test, Kruskal-Wallis H Test, Spearman’s Rank Correlation, and Chi-Square Test to examine relationships between demographic characteristics and perception variables.

Keywords: User’s perception, Experience, Trust & Security, User’s Interfaces

I. INTRODUCTION

With the rapid advancement of financial technology, digital banking services have become an essential component of modern banking. The increasing reliance on online platforms, mobile banking applications, and other digital financial tools has transformed the way users interact with banking services. However, user perception towards digital banking is influenced by multiple factors that determine adoption, satisfaction, and continued usage. The rapid advancement of technology has significantly transformed the banking sector, leading to the widespread adoption of digital banking services. Digital banking encompasses a range of online financial services, including mobile banking, internet banking, digital payments, and automated customer support.

KEY FACTORS:

This study aims to explore the key factors affecting users' perceptions of digital banking services. By identifying and analyzing these factors, the research will provide valuable insights for banks and financial institutions to enhance user experience, improve service quality, and increase customer adoption. Understanding users' concerns and preferences will help in developing strategies that ensure a seamless and secure digital banking experience. This study aims to explore how these factors influence users' perception and acceptance of digital banking services. By understanding these determinants, financial institutions can enhance their digital platforms to improve customer trust, accessibility, and satisfaction, ultimately driving higher adoption rates. Digital banking refers to the digitization of all traditional banking activities and services that were historically available only in physical branches.

CONCLUSION:

These objectives are grounded in the understanding that banking in the digital age is no longer just a utility but a personalized and interactive experience. The scope of this analysis further includes examining demographic factors, such as age, gender, education, and work experience, that may impact user behavior and preferences. In conclusion, digital banking has emerged as a transformative force in the financial sector, reshaping customer expectations and redefining service delivery models. It empowers users with control,

accessibility, and real-time financial management, while enabling banks to drive innovation, efficiency, and inclusivity. However, for digital banking to achieve its full potential, it must address the challenges of security, usability, and digital literacy, especially in diverse user populations.

I. RESEARCH METHODOLOGY

The methodology section outlines the plan and method that the study is conducted. This includes Universe of the study, a sample of the study, the Data and Sources of Data, the study's variables, and the analytical framework. The details are as follows;

3.1 Population and Sample

The study uses a descriptive research design to examine the relationship between perception and user's experience. A sample size of 217 users was selected using convenience sampling. Data collection follows quantitative methods, and since the data is not normally distributed, non-parametric tools were applied for analysis.

3.2 Data and Sources of Data

In this study, primary data is collected through a Questionnaire. Primary data are those which are collected afresh and for the very first time and thus happens to be original in the character. Primary data collection refers to the process of directly obtaining data from original sources using techniques such as surveys. In this study, secondary data is obtained from Research Publications and journals. Secondary data are those which are already collected by someone else and that have been passed through statistically process. Secondary data collection refers to the utilization of pre-existing data that has been gathered and examined by another researcher for a different objective.

3.3 Statistical tools

The following statistical tools are used for analysing the data

- Mann-Whitney U Test
- Kruskal Wallis H Test
- Spearman's rank correlation
- Chi-Square Test

3.3.1 Descriptive Statistics

The research design used for this study is a Descriptive research design. Descriptive research design is the research design technique employed in this research. A technique used in research to characterize and describe the features of a population or phenomenon under study is called descriptive research design. Observing and recording current circumstances, behaviors, or attitudes without changing any factors is the main goal of descriptive research. Rather than exploring the reasons behind specific phenomena, it aims to provide answers to questions like "What, Who, Where, When, How".

3.3.2 MANN-WHITNEY U TEST

The Mann-Whitney U test is a non-parametric statistical test used to compare differences between two independent groups when the data is not normally distributed. The Mann-Whitney U Test is used to determine whether there is a statistically significant difference between two independent groups on a continuous or ordinal variable. It is an alternative to the independent samples t-test, especially when the data does not meet the assumption of normality. Instead of comparing means (like a t-test), it compares the ranks of the values.

$$U = n_1n_2 + (n_1(n_1 + 1))/2 - R_1$$

3.3.3 KRUSKAL WALLIS H TEST

The Kruskal-Wallis test (H test) is a non-parametric statistical test used to compare three or more independent groups to determine if there are statistically significant differences between them. It is an extension of the Mann-Whitney U test, which is used for comparing two groups. It is the non-parametric alternative to one-way ANOVA, and it's used when the data is not normally distributed.

$$H = 12 / (N(N+1)) * \sum (R^2_i / n_i) - 3(N+1)$$

3.3.4 SPEARMAN'S RANK CORRELATION

Spearman's Rank Correlation Coefficient (often denoted as ρ or r_s) is a non-parametric measure that evaluates how well the relationship between two variables can be described using a monotonic function. It measures the strength and direction of association between two ranked variables. It helps to determine whether an increase in one variable corresponds to an increase or decrease in another variable based on their ranks.

$$\rho = 1 - (6 * \Sigma d^2) / (n * (n^2 - 1))$$

3.3.5 CHI-SQUARE TEST

The chi-square (χ^2) test is a statistical method used to examine whether there is a significant association between categorical variables or if observed frequencies differ from expected frequencies. It is widely used in hypothesis testing, especially for goodness-of-fit tests and tests of independence. Chi-square measures how much the actual data differs from what we expected, and helps decide if the difference is meaningful.

IV. RESULTS AND DISCUSSION

4.1 Results of Demographics information

Table 4.1: Demographics information

| Categories | Sub categories | No. of respondents | Percentage (%) |
|---------------|-----------------------|--------------------|----------------|
| Age | 18-30 | 150 | 69 |
| | 31-40 | 45 | 21 |
| | 40-50 | 19 | 9 |
| | Above 50 | 3 | 1 |
| Gender | Male | 95 | 44 |
| | Female | 122 | 56 |
| Qualification | HSC | 13 | 6 |
| | Diploma | 18 | 8 |
| | UG | 78 | 36 |
| | PG | 97 | 45 |
| | Others | 11 | 5 |
| Experience | Below 2 years | 117 | 54 |
| | 2-5 years | 55 | 25 |
| | 6-10 years | 30 | 14 |
| | Above 10 years | 15 | 7 |
| Total | All categories | 217 | 100 |

INFERENCE:

- It is inferred that 56% of the respondents are Female.
- The majority of the population are between the age group of 31 to 40.
- The majority of the respondents' educational qualification is post-graduation (PG).
- The majority of the respondents' work experience is below 2 years.

4.2 Results of the MANN-WHITNEY U TEST

Null Hypothesis: There is no significant difference between the mean rank of male and female with respect to all four variables.

Alternative Hypothesis: There is significant difference between the mean rank of male and female with respect to all four variables.

Table 2: Mann-Whitney U-test

| | User's perception | User's Trust & Security | User's - Friendly | User's experience |
|------------------------|-------------------|-------------------------|-------------------|-------------------|
| Mann-Whitney U | 5755.000 | 5391.000 | 5676.000 | 5721.500 |
| Wilcoxon W | 13258.000 | 9951.000 | 13179.000 | 13224.500 |
| Z | -.089 | -.891 | -.263 | -.162 |
| Asymp. Sig.(2- tailed) | .929 | .373 | .793 | .871 |

INFERENCE

This hypothesis can be tested using the Mann-Whitney U test, with the significance level indicated by the asymptotic significance (2-tailed) values for each variable. If the significance value (p-value) is less than 0.05, the null hypothesis would be rejected.

Since the p-value (0.929) is greater than 0.05, we fail to reject the null hypothesis. There is no significant difference between groups in terms of users' perception of trust & security towards digital banking.

The p-value (0.373) is greater than 0.05, we fail to reject the null hypothesis. There is no significant difference between groups regarding the impact of user-friendly interfaces on digital banking.

Since the p-value (0.793) is greater than 0.05, we fail to reject the null hypothesis, (0.871) is greater than 0.05, and there is no significant difference in evaluating how digital banking enhances the user experience.

4.3 Results of KRUSKAL WALIS TEST

Null Hypothesis: There is no significant difference between age groups, with respondents in the enhancement of user experience, user-friendly interfaces, trust and security, and perception of digital banking services

Alternative Hypothesis: There is a significant different between age groups, with respondents in the enhancement of user experience, user-friendly interfaces, trust and security, and perception of digital banking services.

TABLE 3-KRUSKAL WALIS T-TEST

| | User's perception | User's Trust & Security | User-Friendly | User's experience |
|------------|-------------------|-------------------------|---------------|-------------------|
| Chi-Square | 4.068 | 1.516 | 2.417 | .964 |
| df | 3 | 3 | 3 | 3 |
| Asymp.Sig. | .254 | .679 | .491 | .810 |

INFERENCE

From the Kruskal-Wallis H test, since all p-values are less than 0.05, we reject the null hypothesis (H_0). This indicates that there is a significant difference in the perceptions of users.

4.4 Results of chi-square test

Null Hypothesis: There is no significant difference between Users' qualification and their perception of digital banking services.

Alternative Hypothesis: There is a significant difference between Users' qualification and their perception of digital banking services.

TABLE 4- CHI-SQUARE TEST

| | Value | df | Asymp.Sig. (2- sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 82.522 ^a | 48 | .001 |
| Likelihood Ratio | 77.708 | 48 | .004 |
| Linear-by-Linear Association | 8.651 | 1 | .003 |
| N of Valid Cases | 217 | | |

INFERENCE

The Chi-Square test results reveal that there is a statistically significant association between users' perception of digital banking services and their qualification level.

The Pearson Chi-Square statistic is a p-value (0.001) is less than the standard significance level (0.05). with 48 degrees of freedom and a p-value of 0.001 ($p < 0.05$), indicating significance, hence we reject the null hypothesis and conclude that users' perceptions towards digital banking services vary significantly across different qualification levels.

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