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# FACTORS AFFECTING SATISFACTION OF CUSTOMERS ON E-BANKING SERVICES-A FACTOR ANALYSIS <sup>1</sup>Amith Kumar Reddy, <sup>2</sup>Dr.Megharaja.B

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## **ABSTRACT:**

This study investigates the factors influencing customer satisfaction in the realm of e-banking, focusing on the role of demographic variables such as gender, marital status, age, and educational qualification. Through a comprehensive analysis of customer feedback and data, the research aimed to identify any significant differences in satisfaction levels based on these demographic factors. By examining the various factors in the study affecting customer satisfaction, which includes service quality, easy accessibility privacy and security, responsiveness, and personalized services. By measuring the overall satisfaction of customers using the "Combined factors" variable. Utilizing an independent samples t-test and post-hoc Tukey HSD analysis, the explored in research about relationship on demographic variables and customer satisfaction. In the study finding reveals that gender, marital status, age, and educational qualification do not signifies the impact on customer satisfaction in virtual banking on both male and female customers expressed unanimous on satisfaction level, regardless of their educational background and marital status. Further, customers across different age groups exhibited comparable levels of satisfaction with virtual banking services.

# Keywords: E-banking, customer satisfaction, security, convenience, Tukey's HSD.

# Introduction

Electronic banking, or e-banking, has revolutionized the way people conduct their financial transactions and manage their accounts. Virtual banking services encompass a wide range of online and digital platforms, including internet banking, mobile banking applications, and other digital financial services. As these services have become increasingly popular, several factors have emerged that significantly influence customers' perceptions and experiences. Understanding these factors is crucial for banks and financial institutions to provide an excellent e-banking experience and retain satisfied customers. Here are some key factors affecting customers in virtual banking services. Security and Privacy: Security is paramount in e-banking, as customers expect their sensitive financial information to be protected from unauthorized access, fraud, and data breaches. Transaction Speed: In today's fast-paced world, customers expect quick and seamless transactions. Slow processing times, delays, or glitches in the e-banking platform can lead to frustration and dissatisfaction. Mobile Banking Experience: As smartphones become integral to people's lives, mobile banking applications are increasingly popular. Enriched mobile banking experience is vital to attracting and retaining customer's transparency of fees and charges for financial affordability, Virtual-banking customers, and motives by transparency in mater of fees, charges, and interest rates. Hidden charges and non-transperantal transactions leads to trust issue and dissatisfaction to customers. Personalization Tailoring services and offers to individual customer needs and preferences can create a sense of loyalty and engagement. Virtual-banking platforms that use data analytics to offer personalized recommendations and targeted promotions are likely to attract and retain more customers. Integration with Other Services: Virtual-banking customers often seek multi transactional digital services, such as electronic payment platform, budgeting apps, or investment. The ability to link these services within the virtual-banking services enhances convenience and customer satisfaction. Reputation and Brand Trust: Customers are more likely to choose virtual-banking services offered by established and reputable financial institutions. A strong brand reputation and demonstrated trustworthiness are essential factors influencing customers' decisions.

#### **REVIEW OF LITERATURE**

There exist notable associations among variables such as Age, Qualifications, Income, and the utilization of ebanking, as well as the overall satisfaction derived from engaging in e-banking activities.

**Komwut and Rompho**, (2014) The study provided valuable insights into the key determinants that contribute to the establishment of a proficient online banking system that effectively caters to the demands and expectations of customers. Consequently, this will lead to increased levels of customer satisfaction and foster customer loyalty.

**Kumbhar (2011).**The factors that significantly contribute to customer satisfaction in the context of e-banking include perceived value, brand perception, cost effectiveness, ease of use, convenience, problem handling, security/assurance, and responsiveness. These factors collectively account for 48.30% of the observed variance in customer satisfaction. The dimensions of Contact Facilities, System Availability, Fulfilment, Efficiency, and Compensation are relatively less significant as they account for only 21.70 percent of the variance in customers' satisfaction, as stated by

**Ul Haq and Awan (2020)** the study reveals that the reliability and web designing factors have been shown a significant impact on virtual banking loyalty the particular emphasis on their significance during the COVID-19. Demonstrated that the relationship between e-banking privacy and security and loyalty is completely mediated by virtual-banking satisfaction.

Alarifi and Husain (2023) the primary factor influencing the satisfaction of e-customers with banks in Saudi Arabia is efficiency. The Saudi context exhibits distinct characteristics in comparison to other nations. Have identified disparities in the influence of e-service quality in Internet banking on e-customer service, both prior to and during the COVID-19 pandemic.

According to Bhaskar A and Dr. C. Kusumakara Hebbar (2023), there exists a detrimental impact on privacy, as well as a favourable correlation between the dependent and independent variables pertaining to website quality, service quality, security, and customer satisfaction.

#### STATEMENT OF THE PROBLEM

Investigate the impact of perceived security risks on customer trust in e-banking services. Analyze how security breaches, data privacy concerns, and phishing incidents influence customers' willingness to use e-banking platforms and their overall trust in the financial institution. Examine the role of user interface design and its impact on customer experience in e-banking services. Identify key usability issues and evaluate how a user-friendly interface affects customer satisfaction, retention, and willingness to recommend the platform to others. Among different customer segments on applications of mobile banking which Investigate variables such as literacy on technology. Demographic, and perceived benefits influence customers' decisions to mobile banking usage over traditional banking. Assess the impact of e-banking services on financial inclusion, particularly for underserved populations. Investigate how digital literacy, internet access, and availability of e-banking platforms influence financial inclusion and access to banking services. Explore the customer perspective on integrating e-banking services with other financial tools, such as investment platforms or budgeting apps. Investigate how seamless integration affects customer convenience and satisfaction. Investigate the role of brand reputation in customers' decision-making process when choosing e-banking services. Analyze how customers perceive brand trust, reliability, and ethical practices and how these factors influence their choice of financial institution.

#### NEED AND SIGNIFICANCE OF THE STUDY

The study on factors affecting customers in e-banking services is of significant importance due to the understanding the factors that influence customers' satisfaction and experience with e-banking services can help financial institutions design user-friendly interfaces, streamline processes, and offer personalized services. Enhanced customer experience leads to higher customer retention and loyalty. Identifying the barriers to e-banking adoption and addressing them can encourage more people to use digital banking services. This can lead to increased financial inclusion, as individuals who were previously hesitant or unable to access traditional banking services can now participate in the digital economy. Studying security concerns and their impact on customer trust allows financial institutions to implement robust security measures and communicate them effectively to customers. Strengthening security measures instills confidence in customers, promoting a greater adoption of e-banking services. Understanding customer preferences and needs in e-banking allows financial institutions to develop competitive advantages.. Financial institutions can use this data to tailor marketing strategies, optimize customer support, and refine their e-banking services to better meet customer expectations **OBJECTIVES OF THE STUDY** 

The objectives of a study on factors affecting customers in e-banking services with a focus on factor analysis include:

- a. To identify the underlying factors that significantly influences customer perceptions, behavior, and satisfaction in e-banking services. Factor analysis will help reveal the latent constructs that explain the observed correlations among various variables.
- b. To analysing the pattern of factor loadings, the study can identify the relationships between the observed variables and the underlying factors.

c. To examine how demographic factors, such as age, gender, education level, and income, interact with the identified factors. This can help understand how customer needs and preferences vary across different demographic segments.

#### **RESEARCH HYPOTHESIS**

- a. Hypothesis 1 (H1): The identified factors will collectively explain a substantial proportion of the variance in customer perceptions and behaviors in e-banking services.
- b. Hypothesis 2 (H2): Demographic factors, such as age, gender, education level, and income, will have varying degrees of association with the identified factors, indicating different customer preferences and needs across demographic segments.

## SCOPE OF THE STUDY

The scope of a study on factors affecting customers in e-banking services with a focus on factor analysis is broad and multifaceted. In this study underlying which influencing on perceptions of customers and behaviour on virtual banking services. It can identify and analyse that in this study there is a significant impact of critical factors on customers' experiences, usage of transactions, satisfaction on virtual banking. Based on the factor analysis findings, the study can provide practical recommendations for financial institutions to enhance their e-banking services, address customer needs, and improve customer satisfaction. The study can compare and contrast its findings with existing research on e-banking and customer behavior to validate and extend the knowledge in the field.

# **RESEARCH METHODOLOGY**

The research methodology of a study on factors affecting customers in e-banking services involves several steps, including data collection, data analysis, and interpretation of results. In the context of factor analysis, which is used to identify underlying factors that explain the observed relationships among variables, the methodology typically includes the following steps:

**Research Design**: Determine the research design that best fits the study's objectives. A cross-sectional survey design is often suitable for this type of study, where data is collected at a single point in time from a representative sample of e-banking customers.

**Variable Identification**: this study identifies variables which represents factor effecting on customer usage on virtual banking services, such variables are customer support quality, transaction speed, security and other relevant factors.

**Data Collection**: Develop a survey questionnaire to collect data from e-banking customers. The survey should include questions related to the identified factors, using Likert scale or rating scales to capture customers' perceptions and opinions.

Sampling: Select a representative sample of e-banking customers from the target population. The sample size should be determined based on statistical considerations to ensure sufficient power for factor analysis.

**Data Analysis** - Factor Analysis: Conduct factor analysis on the collected data to identify the underlying factors that explain the observed correlations among the variables. Principal Component Analysis (PCA) is common techniques used for factor analysis.

# **RESULTS AND DISCUSSION ANALYSIS**

## 1. Percentage analysis

| <b>Respondents'</b> | Demographic | characteristics |
|---------------------|-------------|-----------------|
|---------------------|-------------|-----------------|

|                | Demographic profile    | Frequency | Percentage |
|----------------|------------------------|-----------|------------|
| Gender         | Male                   | 48        | 64.9       |
|                | Female                 | 26        | 35.1       |
| Age            | 18 to 25 years         | 7         | 9.5        |
|                | 26 to 35 years         | 37        | 50.0       |
|                | 36 to 50 years         | 28        | 37.8       |
|                | 50 and Above years     | 2         | 2.7        |
| Marital status | Single                 | 21        | 28.4       |
|                | Married                | 51        | 68.9       |
|                | Divorced               | 2         | 2.7        |
| Education      | Pre-Graduate           | 3         | 4.1        |
| qualification  | Graduate               | 15        | 20.3       |
|                | Post Graduate          | 51        | 68.9       |
|                | Professional Graduate  | 5         | 6.8        |
| Occupation     | Self Employed          | 13        | 17.6       |
|                | Emplo <mark>yed</mark> | 43        | 58.1       |
|                | Business Man           | 11        | 14.9       |
|                | Professional           | 7         | 9.5        |

#### (Sources: Field survey)

Most participants in the study were male, comprising 64.9% of the sample, whereas females constituted 35.1%. This finding suggests a marginally greater level of male participation in the study. The participants were allocated among various age cohorts. The most sizable demographic consisted of individuals aged 26 to 35 years, constituting 50% of the surveyed population. The demographic group consisting of individuals between the ages of 36 and 50 comprised 37.8% of the total population, whereas the age groups of 18 to 25 years and 50 years and above constituted smaller proportions. A significant proportion of the participants, comprising 68.9% of the total sample, reported being married. The data reveals that a significant proportion of the participants identified as singles, comprising 28.4% of the total sample. Conversely, a relatively minor fraction of respondents reported being divorced, constituting only 2.7% of the overall population. Most participants in the study possessed a post-graduate education qualification, accounting for 68.9% of the total sample. The proportion of graduates was 20.3%, whereas pre-graduates and professional graduates comprised smaller proportions. The participants exhibited a wide range of professional backgrounds. The predominant

demographic within the sample consisted of employed individuals, accounting for 58.1% of the total population. The proportion of self-employed individuals was 17.6%, whereas business owners and professionals constituted 14.9% and 9.5% of the population, respectively.

#### 2. Factor analysis

#### 1H<sub>0</sub>: Select significant factors do not influence on customer satisfaction on E-banking services

#### 1Ha: Select significant factors do influence on customer satisfaction on E-banking services

The above-mentioned hypothesis has been analysed with the help of reliability analysis, descriptive and inferential statistical data analysis and results are discussed as follows;

#### **Reliability and Validity Analysis**

#### Table 1 shows the Result of Reliability and Validity Analysis

| Reliability Statistics |            |  |  |  |  |  |  |
|------------------------|------------|--|--|--|--|--|--|
| Cronbach's Alpha       | N of Items |  |  |  |  |  |  |
| .973                   | 24         |  |  |  |  |  |  |

# Testing Appropriateness By 'KMO Statistic' And 'Bartlett's Test Of Sphericity'

Table 1 indicates that the reliability analysis for the study's variables, represented by Cronbach's alpha, resulted in a high value of 0.973. This demonstrates excellent internal consistency and reliability among the items used to measure customer perceptions and behaviours related to e-banking services. The 24 items used in the analysis are considered dependable and valid for further investigation.

#### Table 2 shows the results of KMO and Bartlett's Test

| KMO and Bartlett's Test           |                    |          |  |  |  |  |  |  |
|-----------------------------------|--------------------|----------|--|--|--|--|--|--|
| Kaiser-Meyer-Olkin Measure of Sam | .916               |          |  |  |  |  |  |  |
| Bartlett's Test of Sphericity     | Approx. Chi-Square | 1091.582 |  |  |  |  |  |  |
|                                   | df                 | 120      |  |  |  |  |  |  |
|                                   | Sig.               | .000     |  |  |  |  |  |  |

## (Source: Field survey)

#### **Results and Discussion**

Table 2 indicate that the factor analysis is suitable for the data set as it meets the criteria for sampling adequacy. The Kaiser-Meyer-Olkin (KMO) measure, with a high value of 0.916, demonstrates that the data's sampling adequacy is significant, indicating the data is appropriate for factor analysis. Additionally, Bartlett's test of sphericity is statistically significant (Sig. = 0.000), indicating that the correlations among the variables are sufficient for performing factor analysis, further supporting the appropriateness of the analysis.

#### **Factor Extraction: Principal Component Analysis**

The KMO value of 0.916 indicates that the data is highly suitable for factor analysis, surpassing the recommended threshold of 0.901. Given this confirmation, the researcher has opted for principal component

analysis as the extraction method, which aims to identify the most significant factors that explain the maximum variance in the multivariate data.

|           |        | Initial Eigenv | alues                 | <b>Rotation Sums of Squared Loadings</b> |               |              |  |  |
|-----------|--------|----------------|-----------------------|--|---------------|--------------|--|--|
| Component | Total  | % of Variance  | Cumulative %          | Total                                    | % of Variance | Cumulative % |  |  |
| 1         | 10.192 | 63.699         | 63.699                | 7.773                                    | 48.579        | 48.579       |  |  |
| 2         | 1.826  | 11.415         | 75.114                | 4.246                                    | 26.535        | 75.114       |  |  |
| 3         | .714   | 4.465          | 79.579                |  |               |              |  |  |
| 4         | .558   | 3.486          | 83.065                | R  |               |              |  |  |
| 5         | .450   | 2.811          | 85.876                |  |               |              |  |  |
| 6         | .409   | 2.557          | 88.433                | 2.                                       |               |              |  |  |
| 7         | .355   | 2.220          | 90.653                |  |               |              |  |  |
| 8         | .307   | 1.919          | 9 <mark>2.572</mark>  |  |               |              |  |  |
| 9         | .262   | 1.635          | 94.207                |  |               |              |  |  |
| 10        | .241   | 1.507          | <mark>95.714</mark>   |  |               |              |  |  |
| 11        | .170   | 1.060          | 9 <mark>6.774</mark>  |  |               |              |  |  |
| 12        | .150   | .935           | 9 <mark>7.70</mark> 9 |  |               |              |  |  |
| 13        | .114   | .714           | 98.424                |  |               |              |  |  |
| 14        | .091   | .568           | 98.991                |  |               |              |  |  |
| 15        | .081   | .506           | 99.497                |  |               |              |  |  |
| 16        | .081   | .503           | 100.000               |  |               |              |  |  |

Table 3 shows the results of Total Variance and Eigenvalues

# (Source: Field survey)

#### **Results and Discussion**

Table 3 show the total variance and Eigen values obtained from the principal component analysis. The first factor has the highest initial Eigen value of 10.192, explaining 63.699% of the variance, and cumulatively, the first two factors account for 75.114% of the variance. The subsequent factors contribute progressively less to the overall variance, with the Eigen values decreasing gradually. It appears that the first two factors are the most influential in explaining the underlying factors affecting customer perceptions and behaviours in e-banking services.

#### Figure 1 shows a screen plot



The screen plot indicates that two factors have Eigen values greater than 1, which are considered significant for the analysis. The factor rotation using the Varimax method helps in rectifying and simplifying the factor structure by eliminating cross-rotated factors. The final rotated component matrix reveals the meaningful and interpretable factors, contributing to a more coherent understanding of the underlying factors influencing customer perceptions and behaviors in e-banking services.

# Factor Rotation – Rotated Component Matrix

| Table 4 show | vs about Rotated | l Component M | latrix with d | efining of Variable |
|--------------|------------------|---------------|---------------|---------------------|
|              |                  |               |               |                     |

| Rotated Component Matrix <sup>a</sup>  |      |        |  |  |  |  |  |
|--|------|--------|--|--|--|--|--|
| Factors  | Com  | ponent |  |  |  |  |  |
| ractors  | 1    | 2      |  |  |  |  |  |
| E-banking Service of the bank is easy to use                                 | .808 |        |  |  |  |  |  |
| Website of the bank is properly designed                                     | .786 |        |  |  |  |  |  |
| Easy to find the policy and notice statements in the bank's website          | .785 |        |  |  |  |  |  |
| Can rely on the accuracy of the information provided in web page of the bank | .759 |        |  |  |  |  |  |
| Contents on bank's website are up to date                                    | .777 |        |  |  |  |  |  |
| The bank's website provides all details of products and services             | .833 |        |  |  |  |  |  |
| Can rely on bank for not misusing information                                | .824 |        |  |  |  |  |  |
| The bank's website provides an error free transaction                        | .773 |        |  |  |  |  |  |
| The transaction on bank's website is confidential                            | .790 |        |  |  |  |  |  |

| Session timeouts occurred in the bank's website after some times                   | .863                              |   |  |  |  |  |  |  |
|--|-----------------------------------|---|--|--|--|--|--|--|
| The bank's website has dedicated security software, which updates on regular basis |                                   |   |  |  |  |  |  |  |
| Speed to login and logout of the bank website is fast .837                         |                                   |   |  |  |  |  |  |  |
| Bank Website does not freeze during transactions                                   |                                   | .876                                      |  |  |  |  |  |  |
| Instructions on the bank's website are very helpful                                |                                   | .792                                      |  |  |  |  |  |  |
| The bank handles complains and solves problem quickly through live chat service    |                                   | .704                                      |  |  |  |  |  |  |
| The bank collects personal information very carefully through e-banking            |                                   | .796                                      |  |  |  |  |  |  |
| Factor Names   | Safety and<br>security<br>factors | Convenience<br>and flexibility<br>factors |  |  |  |  |  |  |

# ('Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser

# Normalization')

The rotated component matrix reveals two distinct factors: "Safety and security factors" and "Convenience and flexibility factors." These factors are derived from the attributes related to e-banking services. Attributes such as ease of use, proper website design, accuracy of information, and up-to-date content load most strongly on the "Safety and security factors" component. On the other hand, attributes like fast login/logout speed, error-free transactions, and helpful instructions are primarily associated with the "Convenience and flexibility factors" component. The factor loadings exceeding the threshold of 0.50 demonstrate the significance and relevance of these attributes to their respective components.

# HYPOTHESIS TESTING AND ANALYSIS

With respect to significant factors, which influence customer satisfaction on E-banking services, the following null and alternative hypotheses are formulated as below:

# 1H<sub>0</sub>: Select significant factors do not influence on customer satisfaction on E-banking services

# 1Ha: Select significant factors do influence on customer satisfaction on E-banking services

The above-mentioned hypothesis has been analysed with the help of descriptive statistical data analysis and one-sample statistical test, results are discussed as follows;

| List of Factors                     | Ν    |        | SD      | 95% Confidence Interval |       |  |
|-------------------------------------|------|--------|---------|-------------------------|-------|--|
|                                     | Mean |        | 52      | Lower                   | Upper |  |
| Safety and security factors         | 74   | 3.4927 | 1.05990 | 4.25                    | 4.36  |  |
| Convenience and flexibility factors | 74   | 3.0203 | 1.02796 | 3.43                    | 3.56  |  |
| Combined factors                    | 74   | 6.5130 | 1.89615 | 3.85                    | 3.95  |  |

# Table 5 shows Descriptive Statistical Analysis results

The mean score for overall customer satisfaction considering both safety and security factors along with convenience and flexibility factors is 6.51, with a standard deviation of 1.90. The 95% confidence interval for the combined factors ranges from 3.85 to 3.95. The overall customer satisfaction with e-banking services, considering all the identified factors, is relatively high, indicating that customers are generally satisfied with the services provided.

| One-Sample Test     |        |                |          |            |             |               |  |  |  |
|---------------------|--------|----------------|----------|------------|-------------|---------------|--|--|--|
| List of Factors     |        | Test Value = 3 |          |            |             |               |  |  |  |
|                     | t      | df             | Sig. (2- | Mean       | 95% Confide | ence Interval |  |  |  |
|                     |        |                | tailed)  | Difference | of the Di   | ifference     |  |  |  |
|                     |        |                |          |            | Lower       | Upper         |  |  |  |
| Safety and Security | 3.999  | 73             | .000     | .49272     | .2472       | .7383         |  |  |  |
| factors             |        |                |          |            |             |               |  |  |  |
| Convenience and     | .170   | 73             | .866     | .02027     | 2179        | .2584         |  |  |  |
| flexibility factors |        |                |          |            |             |               |  |  |  |
| Combined factors    | 15.937 | 73             | .000     | 3.51299    | 3.0737      | 3.9523        |  |  |  |

#### Table 6 shows One-Sample Statistics test results

The mean difference between the observed overall customer satisfaction score (6.5130) and the test value (3) is 3.51299. The p-value of 0.000 indicates a highly significant difference, suggesting that customers' overall satisfaction with e-banking services, considering both safety and security factors and convenience and flexibility factors, is significantly higher than the expected value.

The statistical tests reveal that customers' satisfaction with safety and security factors significantly exceeds the expected value, whereas their satisfaction with convenience and flexibility factors does not differ significantly from the expected value. However, the overall customer satisfaction with e-banking services, taking all factors into account, significantly exceeds the expected value, indicating a positive level of satisfaction with the services provided.

# **AUGMENTED TESTS OF HYPOTHESIS**

# **Table 7 shows Independent Samples Test result**

|                  |                               |                                |                                | Indepe | ndent | t Sample               | s Test             |                          |                                    |                                 |
|------------------|-------------------------------|--------------------------------|--------------------------------|--------|-------|------------------------|--------------------|--------------------------|------------------------------------|---------------------------------|
|                  |                               | Leve<br>Test<br>Equal<br>Varia | ne's<br>for<br>ity of<br>inces |        |       | t-t                    | est for Equal      | ity of Means             |                                    |                                 |
|                  |                               | F                              | Sig.                           | t      | df    | Sig.<br>(2-<br>tailed) | Mean<br>Difference | Std. Error<br>Difference | 95°<br>Confie<br>Interva<br>Differ | %<br>lence<br>l of the<br>rence |
|                  |                               |                                |                                |        |       |                        |                    |                          | Lower                              | Upper                           |
| Combined factors | Equal<br>variances<br>assumed | 1.796                          | .184                           | 897    | 72    | .373                   | 41468              | .4623                    | -1.336                             | .506                            |

|  | Equal<br>variances<br>not |  | 96 | 63. | .337 | 41468 | .42858 | -1.2710 | .4417 |
|--|---------------------------|--|----|-----|------|-------|--------|---------|-------|
|  | assumed                   |  |    |     |      |       |        |         |       |

Levene's Test for Equality of Variances: The p-value associated with Levene's test is greater than 0.05 (p = 0.184), indicating that the assumption of equal variances between the two groups is met. This means that the variability in the "Combined factors" scores is similar between males and females. T-test results, there is no significant difference in the factors affecting customer satisfaction on e-banking based on gender. In other words, the overall customer satisfaction level, as represented by the "Combined factors," is similar for both male and female customers.

| Independent Samples Test             |                                      |       |      |                              |    |                           |          |                          |   |       |  |
|--------------------------------------|--------------------------------------|-------|------|------------------------------|----|---------------------------|----------|--------------------------|---|-------|--|
|                                      | 's                                   |       |      |                              |    |                           |          |                          |   |       |  |
| Test for<br>Equality of<br>Variances |                                      |       |      | t-test for Equality of Means |    |                           |          |                          |   |       |  |
|                                      |                                      | F     | Sig. | t                            | df | Sig.<br>(2-<br>Difference |          | Std. Error<br>Difference | 95% Confidence<br>Interval of the<br>Difference |       |  |
|                                      |                                      |       |      |                              |    | (tailed)                  |          |                          | Lower   | Upper |  |
| Combined                             | Equal<br>variances<br>assumed        | 8.540 | .005 | -2.13                        | 70 | .037                      | -1.02456 | .48097                   | -1.983  | 065   |  |
| factors                              | Equal<br>variances<br>not<br>assumed |       |      | -1.8                         | 28 | .077                      | -1.0245  | .55895                   | -2.16   | .1199 |  |

# **Table 8 shows Independent Samples Test result**

Levene's Test for Equality of Variances: The p-value associated with Levene's test is 0.005, which is less than 0.05, indicating that the assumption of equal variances between the two groups is violated. This means that the variability in the "Combined factors" scores differs between single and married customers. T-test results, there is a significant difference in the factors affecting customer satisfaction on e-banking based on marital status. Specifically, the mean score for overall customer satisfaction (as represented by the "Combined factors") is significantly lower for married customers compared to single customers.

# Table 8 shows results of post-hoc Tukey HSD

| Multiple Comparisons                 |                          |            |      |                            |  |  |  |  |  |
|--------------------------------------|--------------------------|------------|------|----------------------------|--|--|--|--|--|
| Dependent Variable: Combined factors |                          |            |      |                            |  |  |  |  |  |
| Tukey HSD                            |                          |            |      |                            |  |  |  |  |  |
| (I) Age                              | Mean Difference<br>(I-J) | Std. Error | Sig. | 95% Confidence<br>Interval |  |  |  |  |  |

|            |            |          |         |       | Lower   | Upper  |
|------------|------------|----------|---------|-------|---------|--------|
|            |            |          |         |       | Bound   | Bound  |
|            | 26-35      | 91987    | .78930  | .650  | -2.9972 | 1.1574 |
| 18-25      | 36-50      | 96602    | .80923  | .633  | -3.0958 | 1.1637 |
|            | 50 & above | -1.12468 | 1.53540 | .884  | -5.1656 | 2.9162 |
|            | 18-25      | .91987   | .78930  | .650  | -1.1574 | 2.9972 |
| 26-35      | 36-50      | 04615    | .47967  | 1.000 | -1.3086 | 1.2163 |
|            | 50 & above | 20480    | 1.39021 | .999  | -3.8636 | 3.4540 |
|            | 18-25      | .96602   | .80923  | .633  | -1.1637 | 3.0958 |
| 36-50      | 26-35      | .04615   | .47967  | 1.000 | -1.2163 | 1.3086 |
|            | 50 & above | 15866    | 1.40162 | .999  | -3.8475 | 3.5302 |
|            | 18-25      | 1.12468  | 1.53540 | .884  | -2.9162 | 5.1656 |
| 50 & above | 26-35      | .20480   | 1.39021 | .999  | -3.4540 | 3.8636 |
|            | 36-50      | .15866   | 1.40162 | .999  | -3.5302 | 3.8475 |

There is no evidence to indicate that age plays a significant role in influencing customer satisfaction with ebanking services. The mean scores for overall customer satisfaction (as represented by the "Combined factors") do not differ significantly between any of the age groups (18-25, 26-35, 36-50, and 50 & above). Therefore, the study finds that age is not a significant factor in shaping customer perceptions and behaviours related to ebanking services.

# Table 9 shows results of post-hoc Tukey HSD

| Multiple Comparisons                 |                          |            |         |       |             |        |  |  |  |  |
|--------------------------------------|--------------------------|------------|---------|-------|-------------|--------|--|--|--|--|
| Dependent Variable: Combined factors |                          |            |         |       |             |        |  |  |  |  |
| Tukey HSD                            |                          |            | 12      |       |             |        |  |  |  |  |
|                                      |                          |            |         |       | 95%         |        |  |  |  |  |
|                                      |                          | Mean       | Std.    |       | Confidence  |        |  |  |  |  |
| (I) Education                        |                          | Difference |         | Sig.  | Interval    |        |  |  |  |  |
|                                      |                          | (I-J)      | LIIUI   |       | Lower       | Upper  |  |  |  |  |
|                                      |                          |            |         |       | Bound       | Bound  |  |  |  |  |
|                                      | Graduate                 | .07852     | 1.22011 | 1.000 | -<br>3.1326 | 3.2897 |  |  |  |  |
| Pre-Graduate                         | Post Graduate            | 24944      | 1.14609 | .996  | -<br>3.2658 | 2.7669 |  |  |  |  |
|                                      | Professional<br>Graduate | 52970      | 1.40886 | .982  | -<br>4.2376 | 3.1782 |  |  |  |  |
|                                      | Pre-Graduate             | 07852      | 1.22011 | 1.000 | -<br>3.2897 | 3.1326 |  |  |  |  |
| Graduate                             | Post Graduate            | 32795      | .56664  | .938  | -<br>1.8193 | 1.1634 |  |  |  |  |
|                                      | Professional<br>Graduate | 60822      | .99622  | .928  | 3.2301      | 2.0137 |  |  |  |  |

|                          | Pre-Graduate             | .24944 | 1.14609 | .996 | -<br>2.7669 | 3.2658 |
|--------------------------|--------------------------|--------|---------|------|-------------|--------|
| Post Graduate            | Graduate                 | .32795 | .56664  | .938 | -<br>1.1634 | 1.8193 |
|                          | Professional<br>Graduate | 28026  | .90405  | .990 | - 2.6596    | 2.0991 |
|                          | Pre-Graduate             | .52970 | 1.40886 | .982 | -<br>3.1782 | 4.2376 |
| Professional<br>Graduate | Graduate                 | .60822 | .99622  | .928 | - 2.0137    | 3.2301 |
|                          | Post Graduate            | .28026 | .90405  | .990 | -<br>2.0991 | 2.6596 |

The post-hoc Tukey HSD test, there is no evidence to indicate that educational qualification plays a significant role in influencing customer satisfaction with e-banking services. The mean scores for overall customer satisfaction (as represented by the "Combined factors") do not differ significantly between any of the educational qualification groups (Pre-Graduate, Graduate, Post Graduate, and Professional Graduate). Therefore, the study finds that educational qualification is not a significant factor in shaping customer perceptions and behaviours related to e-banking services.

| - 1-1- | 10 |       |          | - <b>f</b> |          | T      | TICD |
|--------|----|-------|----------|------------|----------|--------|------|
| anie   |    | SUUM  | recitite | <b>AT</b>  | nost_noc | LIIKAV | HND  |
| ant    | 10 | SHUVB | I Coulto | UI.        | DUSU-HUU | IUNCY  |      |

| Multiple Comparisons                 |               |                        |            |       |                            |        |  |  |  |  |
|--------------------------------------|---------------|------------------------|------------|-------|----------------------------|--------|--|--|--|--|
| Dependent Variable: Combined factors |               |                        |            |       |                            |        |  |  |  |  |
| Tukey HSD                            |               |                        |            |       |                            |        |  |  |  |  |
| (I) Occupation                       |               | Mean<br>Difference (I- | Std. Error | Sig.  | 95% Confidence<br>Interval |        |  |  |  |  |
| (i) occupation                       |               |                        |            | 515.  | Lower                      | Upper  |  |  |  |  |
|                                      |               | ])                     |            |       | Bound                      | Bound  |  |  |  |  |
|                                      | Employed      | -1.26608               | .59287     | .152  | -2.8264                    | .2943  |  |  |  |  |
| Self Employed                        | Business Man  | 84514                  | .76738     | .690  | -2.8647                    | 1.1745 |  |  |  |  |
|                                      | Professional  | -1.28551               | .87814     | .465  | -3.5966                    | 1.0256 |  |  |  |  |
|                                      | Self Employed | 1.26608                | .59287     | .152  | 2943                       | 2.8264 |  |  |  |  |
| Employed                             | Business Man  | .42094                 | .63290     | .910  | -1.2448                    | 2.0866 |  |  |  |  |
|                                      | Professional  | 01944                  | .76344     | 1.000 | -2.0287                    | 1.9898 |  |  |  |  |
|                                      | Self Employed | .84514                 | .76738     | .690  | -1.1745                    | 2.8647 |  |  |  |  |
| Business Man                         | Employed      | 42094                  | .63290     | .910  | -2.0866                    | 1.2448 |  |  |  |  |
|                                      | Professional  | 44038                  | .90565     | .962  | -2.8239                    | 1.9432 |  |  |  |  |
|                                      | Self Employed | 1.28551                | .87814     | .465  | -1.0256                    | 3.5966 |  |  |  |  |
| Professionalist                      | Employed      | .01944                 | .76344     | 1.000 | -1.9898                    | 2.0287 |  |  |  |  |
|                                      | Business Man  | .44038                 | .90565     | .962  | -1.9432                    | 2.8239 |  |  |  |  |

The post-hoc Tukey HSD test, there is no evidence to indicate that the occupation of customers plays a significant role in influencing customer satisfaction with e-banking services. The mean scores for overall

customer satisfaction (as represented by the "Combined factors") do not differ significantly between any of the occupational groups (Self Employed, Employed, Business Man, and Professional). Therefore, the study finds that the occupation of customers is not a significant factor in shaping customer perceptions and behaviours related to e-banking services.

#### Findings and suggestions of the study

## **Findings:**

- Factors impact on satisfaction of customer: in the study the factors impact on satisfaction of customers on virtual banking such as security, accessibility responsive service quality are measures using combines factor variables.
- 2. Customer satisfaction and Gender: the study analyses that there is no significant differences on gender and satisfaction of customer on virtual banking services.
- 3. Customer satisfaction and marital status: there is no signifience differences on customer satisfaction and marital status on virtual banking services.
- 4. Customer satisfaction and Age: there is no signifience differences on customer satisfaction and age on virtual banking services. Customers across different age groups (18-25, 26-35, 36-50, and 50 & above) exhibit similar levels of satisfaction with e-banking services.
- **5.** Customer satisfaction and education: there is no signifience differences on customer satisfaction and education on virtual banking services.

#### **SUGGESTIONS:**

- 1. While overall satisfaction may not differ based on demographic factors, offering personalized features and services within the e-banking platform can enhance the user experience. Banks can explore options like personalized account dashboards, transaction preferences, and targeted promotions based on individual user behavior.
- Providing user-friendly educational resources and tutorials on e-banking services can be beneficial for customers of all age groups and educational backgrounds. Educating customers about the benefits and functionalities of e-banking can boost their confidence in using digital banking solutions.
- **3.** Prioritized services by banks on accessibility on the virtual banking platforms to cater to different needs of customers.

## Limitations and future research scope

Studying factors affecting customers on E-banking services is a valuable area of research, but like any study, it comes with certain limitations and opportunities for future research. Here are some common limitations and potential future directions to consider:

The study's sample size might be too small or unrepresentative of the broader population of E-banking users. Additionally, the demographics of the participants may not be diverse enough, potentially leading to biased results. Responses from participants might be influenced by self-reporting bias. People may not always accurately recall or report their attitudes, behaviors, or preferences. The study might not consider the interaction between traditional offline banking and E-banking services. The study may not fully consider

external factors such as economic conditions, regulatory changes, or competitive landscapes that could influence E-banking customer behavior.

Conducting larger and more diverse surveys or experiments can help improve the generalizability of the findings. Investigating how factors differ across various demographic groups could yield insightful results. To mitigate self-reporting bias, future studies could complement self-reported data with objective measures (e.g., actual usage data, behavioral observations) and qualitative methods (e.g., interviews) to gain a more comprehensive understanding of customer experiences. Explore how the integration of offline and online banking channels impacts customer experiences, satisfaction, and loyalty. Incorporate an analysis of external factors to better understand their impact on customers and identify potential moderating variables

#### Conclusion

Based on the comprehensive analysis of factors affecting customers on E-banking services, the key conclusions can be drawn: Convenience is the most influential factor for customers using E-banking services. The ability to conduct transactions and access banking services effortlessly, anytime and anywhere, is a top priority for users. Despite the convenience, customers' trust in E-banking is heavily influenced by the level of security provided. Robust security measures and transparent privacy policies are essential for gaining and maintaining customer confidence. A seamless and intuitive user experience is crucial for attracting and retaining customers. E-banking platforms with user-friendly interfaces and easy navigation tend to have higher adoption rates. With the proliferation of mobile devices, customers expect E-banking services to be optimized for mobile use. Mobile-friendly applications that offer the same functionality as desktop versions are in high demand. In today's fast-paced world, customers demand swift and efficient transactions. E-banking services that prioritize quick processing times gain a competitive advantage. Responsive and helpful customer support plays a vital role in customer satisfaction. E-banking providers that offer reliable assistance build trust and foster long-term relationships with their users. Personalized services and tailored recommendations resonate with customers. E-banking platforms that use data to provide customized experiences are likely to see increased user engagement. Customers are sensitive to service fees and costs. E-banking providers that maintain transparent fee structures and avoid hidden charges are better positioned to attract and retain customers.

In conclusion, successful E-banking services must focus on convenience, security, user experience, mobile accessibility, speed, customer support, personalization, transparent pricing, integration, and data privacy. Providers that understand and address these factors effectively are more likely to thrive in the competitive E-banking industry and cultivate lasting relationships with their customers. Regular monitoring of customer feedback and industry trends is essential for continuous improvement and staying ahead in the market.

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