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Public Vs Private Banks In The Digital Era Analysing Mobile Banking Complexity

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Abstract

The global rise of mobile banking has seen a widespread adoption of this technology amongst all age groups from various financial backgrounds and expertise. From them, the individuals ranging from age 18 to 60 are most pertinent as those individuals are amongst the highest users of mobile banking to fulfill their daily financial needs. The goal of this research is to explore the role of mobile banking app designs in shaping user experience and influencing their choice on whether to use the mobile banking platform more often or not.

As part of this research, a survey was conducted, collecting data from 92 respondents, both male and female; aged between 18 and 60 years; who use mobile banking services. The responses gathered serve as a primary data source for analysing the relationship between the design aspects of mobile banking applications and their influence on user behaviour. The research affirms that design elements such as colour dynamics, homepage design, security features, and transparency are integral in determining the usability of mobile banking applications.

Keywords: Private Banks, ICICI bank, IDFC First, Public Banks, YONO SBI, PNB One, Mobile Banking, Application Design

Introduction

Mobile banking refers to the ability to conduct various banking activities, such as transferring funds, checking balances, making investments, and paying bills, using mobile phones. All banks that are authorized and have a branch in India are permitted to offer mobile banking services to their customers (N. Singh, 2016).

As the design of mobile banking platforms becomes increasingly sophisticated, understanding the factors that contribute to user complexity has become a focal point for both researchers and banking institutions alike.

This study focuses mainly upon how the service quality and the design aspects of a mobile banking application affect the usability by the common consumers. It is an empirical research conducted with the main purpose of understanding how the various design aspects play a pivotal role in the decisions of a user to whether utilize a or not to utilize a particular mobile banking application.

The objective of this study is to contribute a new perspective to the existing literature and aid the banking service sectors to analyse the elements or factors to be emphasized upon for upgrading their service quality through the aspects of design.

The report provides a comparative analysis between public and private sector banks to deeply understand the pros and cons of each and providing suggestions for the least preference.

Segregating the Design Aspect

Pleasing Aesthetics

Pleasing aesthetics include the graphics, or animations added to provide an interactive feeling that pleases the audience.

Login Time

Login time suggests the amount of time required for an application to process the user information or credentials while logging in and launching itself. For anyone to log in to their destined app, one needs their user credentials, password and a proper Internet connection. An MB app should have the ability to launch itself in or around 5 seconds. The reason being that there should be no space left for anger and frustration from the point of view of the consumers.

Information Navigation

The feature of information navigation simply means how effectively and efficiently can a user navigate the information he/she needs while using the application. It comes down to how each and every data piece is placed for the consumers to easily navigate through it and get what is needed for the time being.

Transparency

Transparency refers to how your private information is shown out directly to you on your devices without hiding anything as well as how the bank's data or information is transparently available to you.

Diverse Features

The diversity of features includes not only the fund transfer systems, but also the availability of mini statements of your transactions, the feature to pay e-taxes, pay for transportation tickets (like train tickets), applying for car loans, a quick service request platform, and much more.

In various ways, we have been witnessing that the private organizations are mostly out much more superior in terms of service quality and pleasing the customers than the public organizations. May it be in health sectors, education sectors, transportation services, business corporations, and much more. It becomes all the more curious for is to find out which amongst the public and the private sector banks turn out to be better than the other in terms of providing qualitative mobile banking services.

Mobile banks specifically taken under study

- ICICI
- IDFC First
- YONO SBI
- PNB One

Research Methodology

This article is based upon exploratory as well as explanatory methodology of research and aims in the collection of qualitative as well as quantitative data by using appropriate measures of collecting them. To understand how these design elements, affect user complexity, this study utilizes a survey-based methodology, focusing on adults aged 18 to 60 who actively use mobile banking.

By examining the responses from 92 survey participants, this research will highlight key patterns and trends that either enhance or hinder user experience, with the goal of providing actionable recommendations for banks looking to improve their mobile banking platforms.

Research Objectives

1. To gain an understanding of the concept of mobile banking in terms of its design and complexity to use.
2. To understand how the design of mobile banking apps affect the adoption and its usage by the customers.
3. To gain an insight upon the kind of population utilising mobile banking in general.

Research hypothesis

H0: The independent variables (App design, login time, information navigation, transparency, diverse features and ease of use) have no significant influence on the usability of mobile banking amongst its users (the dependent variable).

H1: The independent variables (App design, login time, information navigation, transparency, diverse features and ease of use) has a significant influence on the usability of mobile banking amongst its users (the dependent variable).

Research Tools

To test the hypothesis of the research, I have opted for proving the correlation between the two main variables affecting user complexity. For establishing the correlation between the variables, I have conducted the Karl Pearson's correlation coefficient analysis for each pair of variables.

Sample size

A target population of mobile banking users from mumbai suburban area, ranging from the age group of 18-60. Sample size of 92 users collected through snowball sampling and simple random sampling.

Data Collection

The research includes mostly qualitative data collected through primary as well as secondary sources. The primary source included a survey with 92 participants who have either used or heard about mobile banking in some or the other way. Secondary data collected through research articles, and official websites of mobile banks taken under study.

Relevance of the Study

A lot of researchers have conducted studies related to the service quality of banks in particular while also differentiating between the public and the private sector banks. Although, not much thought has been given to the design factors of Mobile Banking and how it influences the consumers to either use it more or use it less.

Limitations of the study

Although the study focuses on the design aspects of mobile banking application, it does not touch deep upon the UX/UI aspect in technicality. Also, the study includes a very limited range of design elements to know their influence on the user experience of mobile banking.

While providing solutions or suggestions for mobile banks to improve in future, the study has been unable to touch each and every aspect to give a detailed and lengthy suggestion.

Review of Literature

The studies conducted in the field of mobile banking or internet banking, deeply focus upon how the design aesthetics of the mobile banking applications determine the willingness of the consumers to use it. Some reports showed which, amongst the public and the private mobile banking services, is more efficient. Moreover, there were studies conducted that established a reason why the consumers choose mobile banking over traditional banking services

Luniva Chitrakar and others (2024) in their study, 'User-Centric Design of Ui for Mobile Banking Apps' offer user friendly interfaces and real time notifications by user-centric design on mobile banking application UI. To establish this, a survey was conducted with a sample of 103 citizens. The results highlight upon language obstacles, time-consuming loading times, unclear terminology and navigational troubles as the central defects faced by the general public.

Amit Shankar et al (2022) in their work, 'Sustainable Mobile Banking Application: A Text Mining Approach to Explore Critical Success Factors' focused on identifying the critical success factors of a rational mobile banking application by using a text mining approach. Reviews of around 6,073 customers relating to mobile banking apps were looked upon while also conducting a Latent Semantic Analysis (LSA) to meet their study objective. The findings indicated that the security, privacy, navigation and convenience are some of the key aspects of a successful mobile banking app.

A study entitled 'Reconsidering the "what is beautiful is good" effect' by **Walid Chaouali, et al (2019)** examined the effect of design aesthetics of mobile banking applications on users' intentions of using it. To prove this, they applied the stimulus-organism-response model while also conducting a survey including a sample of 213 bank customers who were not yet users of mobile banking. Their results showed that the design aesthetics do indeed positively influence the usability of the app along with gaining a sense of trust amongst the consumers.

Lalit Mohan et al (2015) attempted to assess the usability issues related to mobile banking app and to propose a Mobile App Usability Index (MAUI) to enhance the overall usability of mobile banks through their research article, 'Mobile App Usability Index (MAUI) for Improving Mobile Banking Adoption'. To evaluate it, the researchers adopted the survey methodology with a same size of 1434 participants with diverse backgrounds. They also analysed a total of 26,131 comments of various mobile banking app users on google play store since January 2014. On a concluding note, the survey respondents agreed to the introduction of such a parameter shall prove to be extremely useful. These parameters were later shared by RBI and BIS for establishing usability standards for mobile apps.

Data Analysis

Demographics

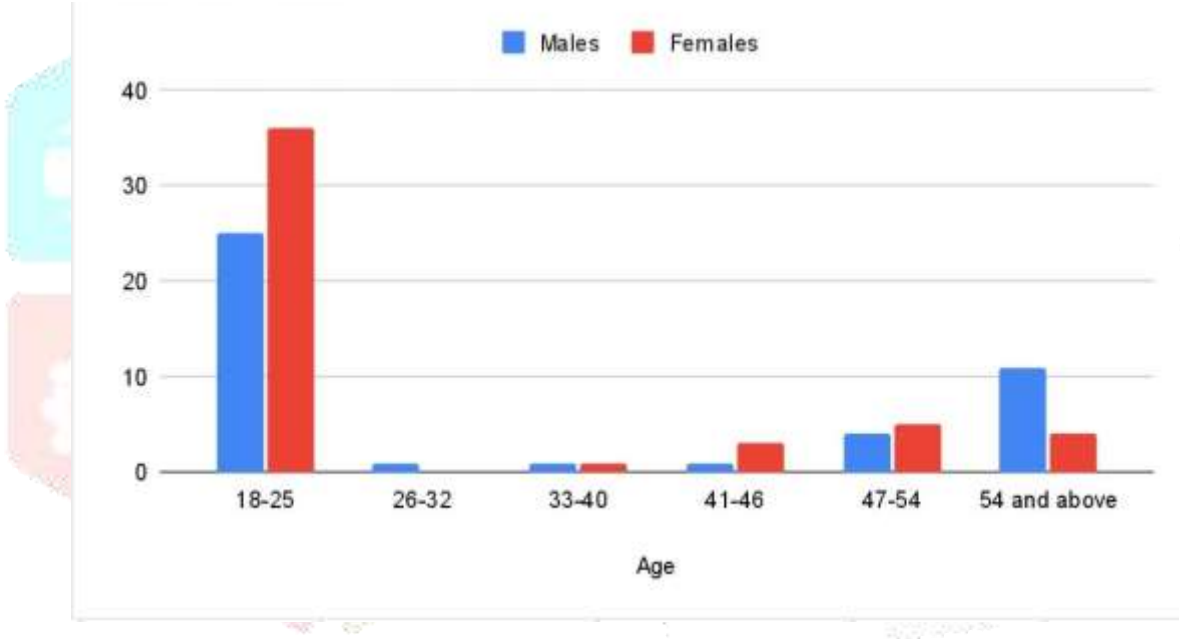
Through the demographic trend given below, we are able to see that females have given more responses than males for this particular study. Also, the sample population meets the target requirement of the study.

Table 1: Demographics by gender

GENDER	NO. OF RESPONDENTS
MALES	43
FEMALES	49
TOTAL	92

(Source: Researcher's own compilation)

Figure 1: Column chart of demographics by age



(Source: Researcher's own compilation)

Analysing mobile banking users

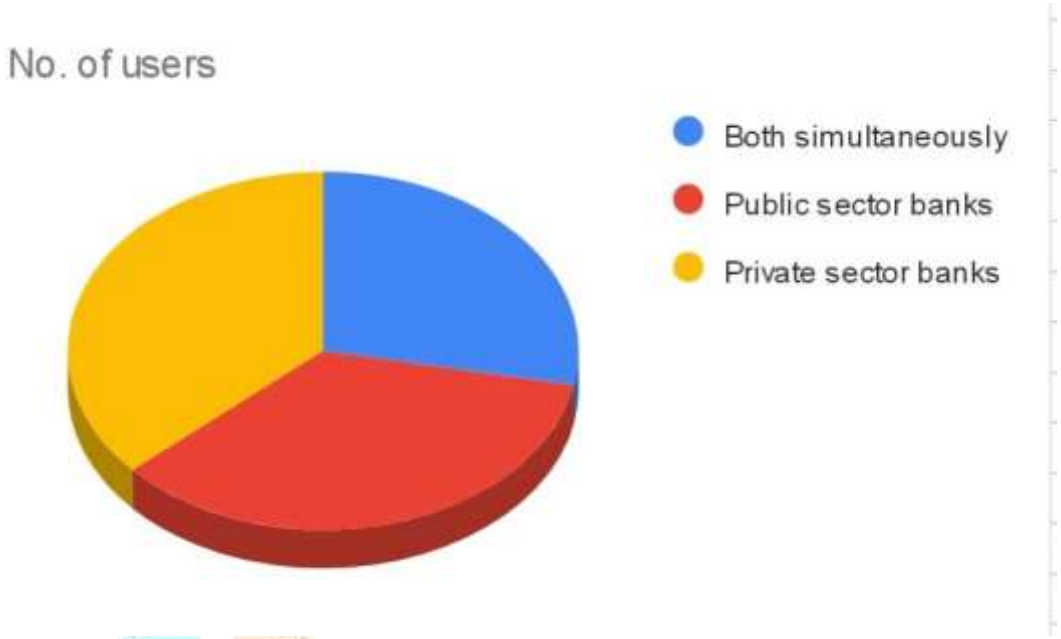
Here we can see that most of the people have opted for private mobile banking (30 + 23 = 53) than the public sector mobile banking (29 + 23 = 52). We have to add the 23 responses who have voted for "both" as they have the public as well as the private MBs in their possession.

Table 2: The no. of users of public and private mobile banking

Mobile banking sector	No. Of users
Public	29
Private	30
Both simultaneously	23

(Source: Researcher's own compilation)

Figure 2: Pie Chart Representing the Number of Users of Public and Private Mobile Banking



(Source: Researcher's own compilation)

Analysing the ease of use

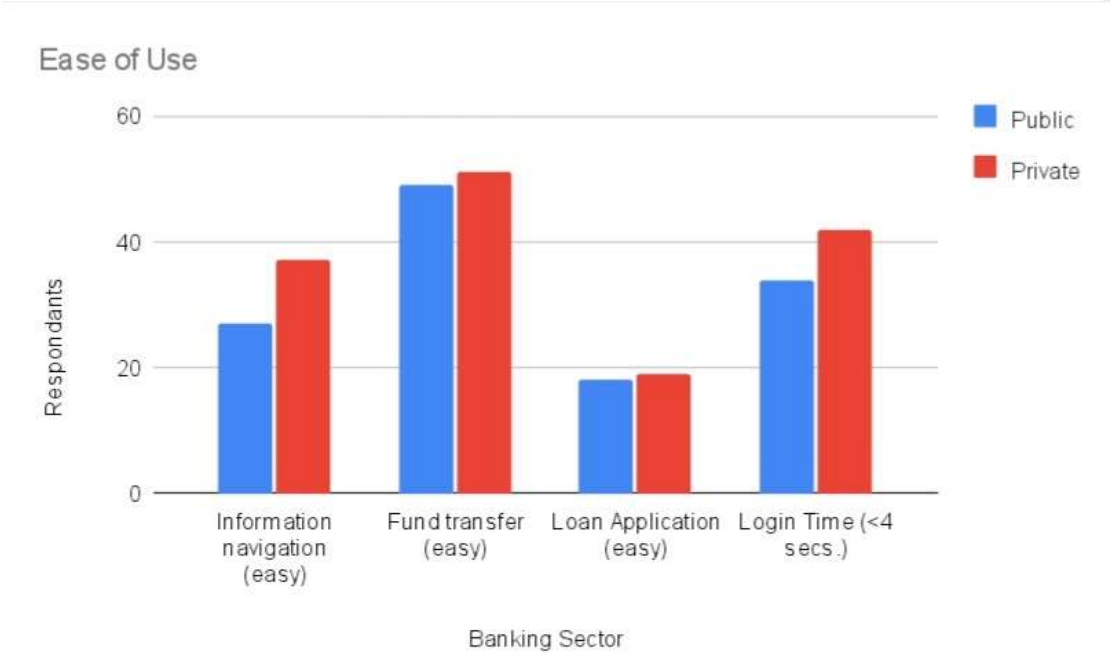
If we look closely at the table, we can witness that out of 53 individuals, 37 users (69%) say that private banking is easier to navigate; while out of 52 individuals, 27 users (51%) say that it is easier to navigate information in public mobile banking. Hence, we can say that, the private sector mobile banking apps are more efficient than the public sector in terms of information navigation.

Table 3: Analysis of mobile banking efficiency from the ease of users in navigating information

Banking sector	Information navigation (easy)	Fund transfer (easy)	Loan application (easy)	Login time (<4 secs.)
Public	27	49	18	34
Private	37	51	19	42

(Source: Researcher's own compilation)

Figure 3: Column chart representing the ease of use



(Source: Researcher's own compilation)

Analysing the correlation between information navigation and ease of use

To prove that there is a correlation between the ease in navigating information and the ease of use of mobile banking amongst users, I have applied the Karl Pearson's correlation coefficient analysis. Here, +1 indicates a perfectly positive relationship, while -1 indicates a perfectly negative relationship.

From the graph below, we can clearly see that both the variables; the independent variable (Information navigation) and the dependent variable (ease of use) are positively correlated.

The Karl Pearson' formula goes by:

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}}$$

Where,

X = Independent Variable (In this case, information navigation)

Y = Dependent Variable (In this case, ease of use)

Table 4: Calculating the correlation coefficient between Information Navigation and Ease of use.

X	Y	X-mean	Y-mean	x^2	y^2	xy
27	**49**	-5	-1	25	1	5
37	**51**	5	1	25	1	5
64	**100**			**50**	**2**	**10**

(Source: Researcher's own compilation)

By applying the formula mentioned above to the data in table 3, we get the correlation coefficient value as: **1.** That is, perfectly correlated.

Table 5: Analyzing the correlation between Information Navigation and the ease of Fund transfer.

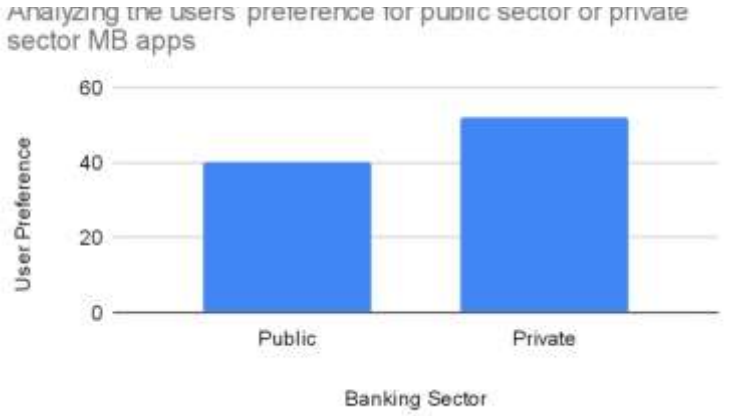
Banking sector	How easy is it to navigate information on mb apps? (easy)	Ease of fund transfer and loan application through mb apps (easy)
Public	27	49
Private	37	51

(Source: Researcher's own compilation)

Analyzing user preference for either private or public sector mobile banking

The sample was asked one final question after their survey, and it was, "Based on your overall experience, what would you likely use more, public sector mobile banking services or private sector mobile banking services?" The answer was perfectly compatible to their previous responses: private sector.

Figure 4



Testing of hypothesis

The hypothesis for this research highly depends upon the existence of correlation amongst the variables defined in the article. Hence, to prove if there is a relationship between the dependent and the independent variables, I have utilized Karl Pearson's correlation coefficient analysis which gave us a result of 1 (perfect correlation), we reject the null hypothesis (H0) and accept the alternate hypothesis (H1), which states that:

H1: The independent variables (App design, login time, information navigation, transparency, diverse features and ease of use) has a significant influence on the usability of mobile banking amongst its users (the dependent variable).

Findings and Conclusion

The findings from this research report indicate that the design aspects, particularly the homepage visuals, information navigation, ease of use, login time, and diversity of features have a significant impact on the usability of mobile banking applications. These factors directly and perfectly correlate with user complexity, shaping the overall experience of mobile banking users.

The results suggest that both, public and private banking apps, must prioritize these design elements to enhance usability to reduce user complexity, and foster high levels of customer satisfaction.

Future research could delve deeper into the specific differences between public and private banking apps in terms of user complexity and explore additional design elements which have not yet been covered in this study.

Suggestions

Suggestion 1: Login Time

My first suggestion would be on the amount of login time taken by mobile banks. In most of the cases, the login time is out of human's bounds as it totally depends upon the internet connectivity. Although, in some cases the mobile banks have some tedious login processes that may make the journey to the main point more monotonous and frustrating for the individuals.

Hence, a suggestion would be to keep the steps of logging in to the mobile banks as simple and short as possible.

Suggestion 2: Information Navigation

A second suggestion would be that the placement if the information should be in such a way that the users find it easy to navigate through the most important ones quickly and easily. The pieces of information used most of the times, can be placed right in front of the user's view and reach while keeping in mind not to hide the complex features in the backdrop.

Suggestion 3: Enhancing Transparency

When it coms to banking or financial transactions, things are expected to be transparent for both, the consumers as well as the service providers.

All the users' information should be available to the consumers on their screen so that the users gain a sense of trust towards that particular mobile bank.

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Links:

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