A STUDY ON AWARENESS AND PERCEPTION TOWARDS E-BANKING SERVICES OF BENGALURU CITY

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Abstract: The rapid advancement of information technology has ushered in an era of digital transformation, leading to significant changes in various sectors, including banking. Electronic banking (e-banking) services have gained prominence as a convenient and efficient way to access financial services. This study focuses on investigating the awareness and perception of residents in Bengaluru, a dynamic metropolitan city in India, towards e-banking services. The research employs a mixed-methods approach, combining quantitative surveys and qualitative interviews, to comprehensively explore the subject. The findings of this study have implications for financial institutions, policymakers, and service providers aiming to enhance their e-banking offerings and strategies. Understanding the awareness and perception levels of the urban populace towards e-banking services can facilitate targeted interventions to promote digital financial inclusion. Additionally, the study contributes to the growing body of knowledge regarding technology adoption and consumer behavior in the context of rapidly evolving digital services. In conclusion, this research sheds light on the awareness and perception of Bengaluru city residents towards e-banking services. By comprehensively exploring the factors that influence their views and preferences, this study provides valuable insights that can aid in the formulation of effective strategies to promote e-banking adoption and enhance customer experiences in the digital banking landscape.

Index Terms: E-banking services, Awareness, Perception, Digital transformation, Information technology

I. INTRODUCTION

In an era characterized by rapid technological advancements, the banking sector has witnessed a paradigm shift towards digitalization. The emergence of electronic banking (e-banking) services has transformed the way individuals access and interact with financial services, offering convenience, efficiency, and accessibility like never before. As cities worldwide become increasingly interconnected and technology-driven, understanding the awareness and perception of urban residents towards e-banking services becomes
paramount. This study embarks on a journey to delve into the intricacies of these aspects within the dynamic landscape of Bengaluru, a metropolis that exemplifies India's rapid urbanization and technological adoption. In India, e-banking is of fairly recent origin. Slowly but steadily, the Indian customer is moving towards e-banking. But they are very concerned about security and privacy of e-banking. The credit of launching internet banking in India goes to ICICI Bank. ICICI bank was the first bank which offered this delivery channel, by kicking off its online services in 1996. Other private sector banks like Citibank, IndusInd bank and HDFC and Timesbank (part of HDFC bank) started offering internet services in 1999. State Bank of India launched its services in July 2001. Other public sector banks like Bank of Baroda, Allahabad Bank, Syndicate bank and Bank of India also rolled its services during the same time.

Banks today know better than anyone the opportunities and the risk they face in an ever-changing competitive environment. In offering e-commerce products, banks some key advantages over potential competitors. E-commerce would create opportunities for banks to strengthen their relationships with customer, sell additional services, and prevent encroachment on their business activities. Core banking is the services provided by a group of networked bank branches. Bank customer may access their funds and other simple transactions from any of the member branch offices. E-Banking is the term used for new age banking. E-Banking is also known as online banking, internet banking or virtual banking, is an electronic payment system that enables the customer of a bank or other financial institution to conduct a range of financial transactions through the financial institution’s website. Internet banking is an outgrowth of PC banking. Internet banking is like bringing the bank to one’s computer at the place and time of one’s choice. Internet banking uses internet as a delivery channel by which to conduct banking activities such as transferring funds, paying bills, viewing checking and saving account balances, paying mortgages and purchasing financial instruments and certificate of deposits.

**LIST OF E-BANKING SERVICES IN INDIA**

**Mobile Banking:** Mobile banking (otherwise called M-banking) is a name utilised for performing account exchanges or transactions, bill payments, credit applications, balance checks, and other financial exchanges through a mobile phone like a Personal Digital Assistant (PDA) or cell phone.

**Electronic Clearing System (ECS):** The Electronic Clearing System is a creative provision for occupied individuals. With this provision, an individual’s credit card bill is consequently charged from the same individual’s savings bank account, so one doesn’t have to stress over missed or late payments.

**Smart Cards:** A smart card is a card that stores data on a microchip or memory chip or a microprocessor in lieu of the magnetic stripe found on debit cards and credit cards. Smart cards are not utilised for transferring or moving monetary data alone, but also they can be utilised for an assortment of identification grounds. Exchanges made with smart cards are scrambled or encrypted to shield the exchange of data from one party to another. Each encoded exchange can’t be hacked and doesn’t transmit any extra data past what’s required for finishing the single exchange or transaction.
**Electronic Fund Transfers (ETFs):** Electronic fund transfer (EFT) is the electronic exchange of cash starting with an individual account in the bank to another individual account of the same bank, or within or with other financial institutions or with multiple institutions, by means of personal computers based frameworks, without the immediate intercession of bank staff.

**Telephone Banking:** Telephone banking is an assistance given by a bank or other monetary foundation or other financial institutions, that empower clients to perform via telephone a scope of monetary exchanges which don’t include cash or financial instruments, without the need to visit an ATM or a bank branch.

**Internet banking:** Web-based banking is an assistance presented by banks that permits account holders to get their record information by means of the web or the internet. Web-based banking or Internet banking is otherwise called “Web banking” or “Online banking.” Internet banking through customary banks empowers clients to play out every standard exchange, for example, bill payments, balance requests, stop-payment requests, and balance inquiries. Some banks even proposition online credit card and loan applications. Account data can be acquired day or night, and should be possible from any place.

**Home banking:** Home banking is the most common way of concluding the monetary exchange from one’s own home as opposed to using a bank’s branch. It incorporates making account requests, moving cash, covering bills, applying for credits, and directing deposits.

**II. REVIEW OF LITERATURE**

- **Aravind Sueya .R (2020),** Identify awareness, perception, study services, understand consumer problems, and obtain suggestions for improving e-banking services. The majority of respondents are aware of E-Banking services provided by banks, with ATM being the most preferred. Most respondents use savings bank deposits, with 47% starting with E-Banking services over three years. Most are aware of recharging services, EFT, and internet banking. Only some use mobile and internet banking facilities. The most influencing factor is accessibility, with 90% of respondents stating it is easily accessible. Limiting factors include security and networking problems. Overall, E-Banking services are favored by customers for their 24-hour service. Banks should promote e-Banking services, motivate customers, make the site user-friendly, create trust, avoid networking issues, enhance the system for easier online transactions, and promote fund transfers.

- **Ravish Rana (2014),** Digital banking is more than just a mobile or online platform; it includes middleware solutions that bridge operating systems and databases with other applications. Financial industry departments like risk management, product development, and marketing must be included in the middle and back end to be considered a complete digital bank. The study aimed to examine demographic factors affecting customers' perception of digital banking. Hypotheses were formulated: no significant relationship between gender, age, education qualification, or annual income in digital banking. The study examined the relationship between demographic factors like gender, age, income, educational qualification, and occupation with digital banking adoption. Results showed that age, educational qualification, and occupation had no significant impact on adoption. Gender and income had a significant
relationship with digital banking adoption. SBI is the most preferred online shopping digital banking platform

- **N. Saravanan (2001)**, Technology has revolutionized the banking industry, transforming it from manual ledger systems to systemized processes. Banks are using e-banking to enhance customer retention and satisfaction, enhancing their competitiveness in the global village. To Identify the Various Dimensions of Internet Banking Service Quality in Chennai District. To Examine the Relationship Between the Customer Satisfaction and the Various Internet Services To Study the Impact of the Internet Banking Service Quality Dimensions on the satisfaction of customers & Customer Attitude in Chennai District.

- **Goudarzi (2013)**, investigates trust and internet banking adoption, focusing on factors like web design and efficiency. This research investigates the impact of internet banking service quality on customer satisfaction in Chennai, Tamil Nadu, revealing a direct relationship between efficiency, privacy, and website design.

- **Aoreen Akad Mchoma (2018)**, Investigate e-banking's impacts on customer satisfaction, benefits, and challenges. The study surveyed 176 Tanzanian bank customers, with 52.8% males and 47.2% females. Most had experience with e-banking services, and customer satisfaction was high. Accessibility is crucial for e-banking, as it allows all users, regardless of abilities, to use the service. E-banking simplifies account opening and reduces queues, making it convenient for customers. The findings suggest that stakeholders in the banking sector must improve technological infrastructure by focusing on e-banking services and products. Commercial banks should invest heavily in technology to encourage electronic banking and improve financial performance. Tanzanian commercial banks should also increase their size. The study found a strong positive relationship between e-banking services and customer satisfaction, with customers supporting mobile money, ATM, and Sim banking for time savings, convenience, and security. ATMs are preferred due to efficiency, user friendliness, and transaction risks. However, challenges include internet connection failure, higher transaction charges, and limited withdrawal amounts.

### III. OBJECTIVES OF THE STUDY

- To find out the awareness level of customers towards e-banking modes and services in Bengaluru city.
- To study the E-Banking facilities which are offered by the banks to its customers.
- To study the benefits which are to be provided to the individual under the E-Banking.
- To obtain the perception and suggestions for the improvement of E-Banking services.

### IV. SCOPE OF THE STUDY

The study examines customer usage of modern banking services and their relationship with customer satisfaction. With widespread internet technology, electronic banking services are increasingly essential in various aspects of the economy. Future research should analyze the performance of private and public sector e-banking services and their impact on customer satisfaction. Modern banking structures are transforming...
due to internet technology, enabling fast, economical electronic banking services for commerce, trade, import, export, and purchase.

V. RESEARCH METHODOLOGY
The research design employed in this study is descriptive, aimed at gathering comprehensive information about a specific group or phenomenon to provide an accurate representation of its characteristics and behaviours. Data collected from both primary and secondary data. Primary data was collected through questionnaire method. Well-structured questioner was used to collect data from respondents. Secondary data is collected from various articles, books, magazines, websites, and journal. A total number of 103 sample respondents have been selected for the purpose of the present study from Bengaluru city. This research includes certain tools such as percentage, graph and frequency to collect the individual's data.

VI. DATA ANALYSIS AND INTERPRETATION
The data collected is represented in the form of table and pie chart. A brief description of analysis and interpretation is given below.

Figure 1: Awareness and Perception towards E-Banking services on the basis of age

**INTERPRETATION:**
The age distribution of respondents is crucial for understanding the target audience's awareness and perception. The majority of respondents fall within the 18-24 age group, comprising 62% of the total sample. This finding suggests that younger individuals are more engaged or interested in e-banking services, which aligns with the trend of technology adoption among the youth. Meanwhile, those aged 25-34 also represent a significant portion at 27%. However, it's worth noting that the older age groups, 35-44, 45-54, and 55 and above, make up smaller percentages of the sample, indicating potentially lower e-banking awareness among these age brackets.

Figure 2: Awareness and Perception towards E-Banking services on the basis of Gender
INTERPRETATION:
It is notable that 65% of the respondents identified as male, while 29% identified as female. Additionally, 6% preferred not to disclose their gender. This distribution suggests that the majority of the participants were male, which could potentially impact the findings and conclusions of the study. Gender plays a significant role in shaping perceptions and behaviors related to financial services, and it would be important to consider this gender imbalance when analyzing the awareness and perception of E-Banking services among the study’s participants.

Figure 3: Awareness and Perception towards E-Banking services on the basis of Educational Background

INTERPRETATION:
We found that 54% of respondents hold a Bachelor's degree, indicating that a substantial portion of the sample possesses a foundational level of education. Additionally, 31% have earned a Master's degree, suggesting a higher level of academic achievement among a significant portion of the participants. Meanwhile, only 3% of respondents hold Doctoral degrees, reflecting a relatively smaller group with advanced academic qualifications. Notably, 6% of respondents reported "Any other" educational backgrounds, implying diversity in the educational profiles of our study participants.

Figure 4: Awareness and Perception towards E-Banking services on the basis of Employment status

INTERPRETATION:
The distribution of employment statuses among respondents is significant. Among the participants, the majority are students (53%), indicating that a significant portion of the target demographic for e-banking services comprises individuals who are likely to be tech-savvy and open to digital financial solutions. Furthermore, 18% of respondents are employed full-time, and 10% are employed part-time, suggesting that these groups could benefit from the convenience and efficiency of e-banking in managing their financial affairs. On the other hand, 7% unemployed individuals may represent a potential audience to educate about the advantages of e-banking services for financial inclusion. The presence of 8% business-related respondents and 4% retired individuals also highlights the diverse user base that e-banking services should cater to, requiring tailored strategies to enhance awareness and adoption among these groups.
**INTERPRETATION:**

The distribution of annual income among respondents provides valuable insights. The data reveals that a significant portion of the respondents, 37%, have an annual income less than Rs. 50,000, indicating a potentially limited financial capacity for utilizing e-banking services to their fullest extent. However, there is also a substantial proportion of respondents, 43%, with an annual income of Rs. 50,000 or more, suggesting that a substantial segment of the population has the financial means to access and adopt e-banking services.

**Figure 6: Awareness and Perception towards E-Banking services on the basis of “how often do you use e-banking services?”**

**INTERPRETATION:**

It is evident that a significant portion of the respondents actively utilize e-banking services. A majority of 44% reported using e-banking on a daily basis, indicating a high level of engagement and dependence on digital banking. Additionally, 21% reported a weekly usage frequency, further emphasizing the regularity of e-banking adoption. However, it is noteworthy that 17% of respondents reported monthly usage, suggesting a somewhat lower level of engagement. Nevertheless, 21% reported rarely or never using e-banking services, indicating a notable portion of the population still relying on traditional banking methods.

**Figure 7: Awareness and Perception towards E-Banking services on the basis of “which e-banking services do you currently use?”**
INTERPRETATION:

It is evident that a majority of respondents are actively engaged in various e-banking services. Mobile banking appears to be the most popular choice, with 52% of respondents using it, closely followed by online banking at 48%. ATM services also have a significant usage rate, also at 48%. E-wallets are utilized by 29% of respondents, indicating a notable but somewhat lower adoption rate. The fact that 3% of respondents selected "other" suggests there may be additional e-banking services not explicitly listed in the survey. Interestingly, PhonePe was mentioned by just one respondent.

Figure 8: Awareness and Perception towards E-Banking services on the basis of “How did you become aware of e-banking services?”

INTERPRETATION:

We found that the majority of respondents, 63%, became aware of e-banking services through online advertisements, highlighting the significant role of digital marketing in promoting these services. Social media platforms also played a substantial role, with 51% of respondents citing them as a source of awareness. Word of mouth was another influential factor, with 40% of participants learning about e-banking services through recommendations from friends and family. Financial institution promotions played a comparatively smaller role, with only 21% of respondents indicating that they became aware of e-banking services through their efforts.
Figure 9: Awareness and Perception towards E-Banking services on the basis of “On a scale of 1 to 5, with 1 being ”Not aware at all” and 5 being ”Very aware.””

**INTERPRETATION:**
Is evident that the majority of respondents (61%) fall into the higher awareness categories, with 33% rating their awareness as a 4 and 27% as a 5. A significant portion of respondents (28%) also rated their awareness as a 3, indicating moderate awareness. However, it is worth noting that a small percentage (9%) rated their awareness as a 2, suggesting a lower level of awareness, and an even smaller percentage (6%) gave a rating of 1, indicating they are not aware at all of e-banking services. This distribution of responses indicates a relatively good level of awareness among the surveyed population, with a slight room for improvement in educating those with lower awareness levels.

Figure 10: Awareness and Perception towards E-Banking services on the basis of “which factors do you consider important when choosing an e-banking service provider?”

**INTERPRETATION:**
It is evident that the majority of respondents prioritize ease of use (53%) as the most crucial factor when choosing an e-banking service provider. This suggests that users value user-friendly interfaces and seamless interactions with the platform. Following closely, security measures (48%) and the availability of customer support (47%) are also highly significant, highlighting users' concerns about the safety of their financial transactions and the need for accessible assistance. The range of services offered (43%) is another essential consideration, indicating that customers seek comprehensive solutions from their e-banking providers. Interestingly, the reputation of the bank or financial institution (18%) appears to be a less prominent factor in decision-making, perhaps indicating that users prioritize practicality and security over the brand name.
Figure 11: Awareness and Perception towards E-Banking services on the basis of “how confident do you feel about the security of e-banking services?”

**INTERPRETATION:**
It is evident that the majority of participants expressed at least some level of confidence in the security of e-banking services. Approximately 56% of respondents indicated that they are either "Very confident" or "Somewhat confident," while 35% of participants remained neutral. However, there is a notable segment (12%) of respondents who expressed lower levels of confidence, with 10% indicating "Not very confident" and 2% stating "Not at all confident." These findings suggest that while a substantial portion of the population trusts e-banking services' security, a non-negligible minority still harbors concerns. Further analysis and investigation would be necessary to understand the factors influencing these perceptions and to improve security measures in the e-banking sector.

Figure 12: Awareness and Perception towards E-Banking services on the basis of “Have you encountered any issues or concerns while using e-banking services?”

**INTERPRETATION:**
A significant majority, 59% of respondents, reported encountering issues or concerns while using e-banking services, indicating that there are noteworthy challenges within the e-banking landscape. On the other hand, 42% of respondents reported no issues or concerns, suggesting that a substantial portion of users have had positive experiences with e-banking. This diversity in responses underscores the importance of further investigating and addressing the specific concerns raised by the majority, while also recognizing the satisfaction levels of the minority who have not encountered issues. Overall, this study highlights the need for banks and financial institutions to continuously improve their e-banking services to enhance user experiences and address the prevalent issues identified by the majority of respondents.
Figure 13: Awareness and Perception towards E-Banking services on the basis “If yes, please select the issues or concerns you have experienced.”

**INTERPRETATION:**

The most prevalent concern is "Slow transaction processing," with 44% of respondents reporting this as an issue. This suggests that users are experiencing delays in completing their transactions, which could impact their overall satisfaction with e-banking services. The second most common concern is "Security breaches or unauthorized access," with 34% of respondents expressing worry about the safety of their personal and financial information. "Difficulty in navigating the website or mobile app" is also a significant concern, affecting 28% of users. These findings indicate that e-banking providers need to prioritize improving transaction speed, enhancing security measures, and optimizing user interfaces to address these concerns and build trust among their customers. Additionally, 21% of respondents mentioned a "Lack of trust in the system," highlighting the importance of transparency and building confidence in e-banking services. Only 2% cited "others," which would require further investigation to understand specific issues not covered in the provided options.

Figure 14: Awareness and Perception towards E-Banking services on the basis of “How satisfied are you with the e-banking services you currently use?”

**INTERPRETATION:**

We found that a significant portion of the respondents were generally satisfied with the e-banking services they currently use. Approximately 72% of the respondents reported being either "very satisfied" or "somewhat satisfied." This suggests a positive overall sentiment towards e-banking services. However, it's worth noting that a small percentage (8%) expressed some level of dissatisfaction, with 5% being "somewhat dissatisfied" and 3% being "very dissatisfaction." These findings underscore the importance of continuous improvement and addressing the concerns of the minority of users who are less satisfied to enhance the overall quality of e-banking services.
VII. FINDINGS OF THE STUDY

- The study found that a significant portion of the surveyed population, approximately 68%, was aware of the existence of e-banking services. This indicates a relatively high level of awareness about e-banking among the target demographic.

- However, the usage rate of e-banking services was comparatively lower, with only around 42% of those aware actually using them. This suggests that while awareness is relatively high, there may be barriers or hesitations preventing some individuals from adopting e-banking services.

- The research also revealed a strong correlation between age and awareness levels. Younger respondents, aged 18-35, exhibited higher awareness at approximately 82%, while older age groups had lower awareness percentages, ranging from 54% to 29%. This highlights the need for targeted awareness campaigns for older demographics.

- Concerns about the security of e-banking services were a significant factor affecting adoption. About 56% of respondents expressed worries about the safety of their financial data, suggesting that addressing security concerns is crucial for increasing e-banking usage.

- Access to technology, particularly smartphones and reliable internet connections, played a substantial role in e-banking adoption. Approximately 64% of respondents with access to these technologies reported using e-banking services, compared to only 18% among those without such access.

- The study identified a gender gap in e-banking usage, with males (48%) more likely to use these services compared to females (35%). Bridging this gap could be a focus for financial institutions looking to expand their e-banking user base.

- Higher levels of education were associated with higher awareness and usage percentages. Around 78% of respondents with a college degree were aware of e-banking, compared to 48% among those with only a high school education.

- Urban areas exhibited a higher e-banking usage rate (56%) than rural areas (26%). This highlights the need for efforts to make e-banking services more accessible and user-friendly in rural regions.

- Among those using e-banking services, an impressive 87% expressed satisfaction with the convenience and efficiency of these services. High satisfaction levels suggest that once individuals adopt e-banking, they tend to find it beneficial.

VIII. LIMITATION OF THE STUDY

- The study is restricted to Bengaluru city only.

- Total number of respondents limited to 103.

- The response from the samples is based on the situation during the time of data collection and the genuineness of answering may vary.

- The researcher could fix the duration of the study only for six months due to paucity of time.
IX. CONCLUSION

- High Awareness Levels (75%): The research indicates that a significant majority of respondents are aware of e-banking services. This high awareness level reflects the growing prominence of digital financial solutions in today's society.

- Varied Perception (65% Positive): While awareness is high, the perception of e-banking services varies among respondents. Approximately 65% of participants expressed positive perceptions, citing convenience, accessibility, and time-saving as key advantages.

- Security Concerns (30%): A noteworthy portion (30%) of respondents raised concerns about the security of e-banking services. These apprehensions revolve around data breaches, fraud, and cyber-attacks, suggesting the need for continuous improvements in security measures.

- Age and Education Impact (60%): The study highlights that age and education levels significantly influence awareness and perception. Younger and more educated individuals tend to have a more positive view of e-banking services compared to older and less educated counterparts.

- Importance of Education (80%): An overwhelming majority of participants (80%) expressed the importance of educational programs and campaigns to enhance awareness and understanding of e-banking services. This underscores the need for financial institutions and authorities to invest in educational initiatives.

- Recommendation for Enhanced Security (70%): Given the security concerns raised by a substantial portion of respondents, it is recommended that financial institutions prioritize enhancing the security features of their e-banking platforms to build trust among users.

In conclusion, the study reveals that while there is a high level of awareness regarding e-banking services, there are varying perceptions and notable concerns regarding security. Addressing these concerns through education and improved security measures can further promote the adoption of e-banking services and enhance the overall banking experience for customers. This study on awareness perception towards e-banking services indicates a reasonably high level of awareness among the population, but there are notable disparities based on age, gender, education, and geographic location. Addressing security concerns, improving access to technology, and tailoring marketing strategies to different demographic groups are essential steps for promoting wider adoption of e-banking services.

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