

A Review of Factors Influencing Youths' Perceptions and Adoption of E-Banking Services

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Abstract: *Electronic banking has transformed the delivery and consumption of financial services by enabling customers to access banking facilities through internet banking, mobile banking, electronic fund transfers, digital payments, and other technology-enabled channels. Youths represent an important segment of e-banking users because of their greater exposure to smartphones, internet technologies, digital communication, and technology-based services. However, technological familiarity alone does not guarantee adoption. Youths' perceptions of usefulness, ease of use, security, privacy, trust, perceived risk, convenience, social influence, compatibility, self-efficacy, service quality, cost, and facilitating conditions substantially influence their intention to adopt and continuously use e-banking services.*

Keywords: Internet Banking, Technology Adoption, Perceived Usefulness, Trust, Perceived Risk, Security, Technology Acceptance Model.

I. INTRODUCTION

The rapid development of information and communication technologies has significantly changed the structure of the banking industry. Traditional branch-based banking has increasingly been complemented by electronic channels such as internet banking, mobile banking, automated teller machines, electronic fund transfers and digital payment platforms. E-banking provides customers with opportunities to perform banking transactions without visiting a physical branch. Its advantages include speed, convenience, accessibility, flexibility and continuous availability.

Youth constitute an especially important group for studying e-banking adoption. Young consumers generally have greater exposure to smartphones, internet services and digital technologies and are therefore considered a potentially receptive market for technology-enabled financial services. However, adoption decisions among young users are not determined exclusively by technological familiarity. Their perceptions concerning usefulness, ease of use, trustworthiness, security, privacy, risk and convenience can strongly affect whether they decide to use electronic banking.

Koenig-Lewis (2010), in a study of young consumers, demonstrated that compatibility, perceived usefulness and perceived risk were significant factors in mobile banking adoption. Their model extended the Technology Acceptance Model with variables such as trust, credibility, risk and cost and explained a substantial proportion of variance in adoption intention.

The literature subsequently expanded from conventional internet banking to mobile banking and digitally mediated financial services. Research increasingly emphasized that adoption involves both positive perceptions, such as usefulness and convenience, and negative perceptions, particularly security concerns and perceived financial or privacy risks. Studies conducted in India also demonstrate the importance of trust, self-efficacy, social influence, perceived usefulness and perceived ease of use in explaining mobile banking adoption.

Therefore, understanding the determinants of youths' perceptions and adoption of e-banking is important for banks, policymakers and researchers. Banks need to understand what encourages young customers to adopt digital channels and what prevents them from using these services regularly.



II. OBJECTIVES OF THE REVIEW

The major objectives of this review are:

1. To examine the concept and development of e-banking adoption among youths.
2. To identify the major technological factors influencing youths' perceptions of e-banking.
3. To examine the influence of trust, security, privacy and perceived risk on adoption.
4. To review the role of convenience, compatibility, cost and service quality.
5. To examine the contribution of social influence and personal characteristics.
6. To synthesize empirical findings published during 2010–2022.
7. To identify important research gaps for future studies.

III. CONCEPTUAL UNDERSTANDING OF E-BANKING

E-banking refers broadly to the delivery of banking products and services through electronic and digital channels. It includes internet banking, mobile banking, electronic fund transfer, online account management, bill payment and other technology-supported financial transactions. Mobile banking represents one of the most rapidly developing forms of e-banking because smartphones allow customers to access banking services virtually anywhere.

E-banking adoption can be understood as the process through which an individual becomes aware of an electronic banking service, develops a favourable perception toward it, forms an intention to use it and eventually incorporates it into regular financial behaviour. Thus, adoption is not simply a technical decision; it involves cognitive, psychological, social and behavioural dimensions.

IV. THEORETICAL FOUNDATIONS

1. Technology Acceptance Model

The Technology Acceptance Model developed by Davis (1989) emphasizes two central constructs: perceived usefulness and perceived ease of use. Perceived usefulness represents the extent to which a person believes that using a technology will improve performance, whereas perceived ease of use reflects the extent to which the technology is perceived as effortless.

In the context of e-banking, youths are more likely to adopt a service when they believe that it saves time, facilitates transactions, improves access to financial information and makes banking more convenient. Similarly, a simple interface, understandable instructions and uncomplicated transaction process can improve perceived ease of use.

2. Innovation Diffusion Theory

Innovation Diffusion Theory emphasizes characteristics of an innovation, including relative advantage, compatibility, complexity, trialability and observability. Compatibility is particularly relevant to youth e-banking adoption because young users are likely to evaluate whether electronic banking fits their lifestyle, technological habits and financial needs. Koenig-Lewis et al. (2010) found compatibility to be an important predictor of mobile banking intention among young consumers. Compatibility also influenced perceptions of usefulness, ease of use and credibility.

3. Unified Theory of Acceptance and Use of Technology

UTAUT proposes that performance expectancy, effort expectancy, social influence and facilitating conditions influence behavioural intention and technology use. The framework is particularly useful for examining e-banking because users evaluate expected performance benefits, effort requirements, social expectations and availability of technological support.

4. Trust and Perceived Risk Perspective

Financial transactions involve sensitive personal and monetary information. Consequently, users must believe that the bank and technology platform are reliable and secure. Trust can reduce uncertainty, whereas perceived risk can discourage adoption. Research on mobile banking has demonstrated that risk perception is a salient determinant of technology acceptance and that trust and credibility can help reduce perceived risk.



V. MAJOR FACTORS INFLUENCING YOUTHS' PERCEPTIONS AND ADOPTION

1. Perceived Usefulness

Perceived usefulness is consistently identified as one of the most important determinants of e-banking adoption. Youths are more likely to adopt electronic banking when they perceive that it improves the efficiency of financial activities. Features such as instant fund transfer, online balance checking, bill payment, transaction history and 24-hour accessibility increase perceived usefulness.

Studies of mobile banking have repeatedly incorporated perceived usefulness into adoption models. In the Indian context, perceived usefulness and perceived ease of use have been found to positively influence adoption intention.

2. Perceived Ease of Use

Ease of use represents the extent to which users perceive e-banking as simple and understandable. Complicated registration procedures, difficult navigation, technical errors and confusing interfaces may discourage young users despite their familiarity with smartphones.

A user-friendly interface, simple authentication, clear instructions and rapid transaction processing can strengthen positive perceptions and encourage continued usage.

3. Trust

Trust is especially important in e-banking because users must disclose sensitive financial and personal information. Trust involves confidence that the bank will perform transactions accurately, protect information and resolve problems appropriately.

Research among young consumers has highlighted trust and credibility as important mechanisms for reducing perceived risk. Trust therefore operates both as an independent determinant of adoption and as a mechanism through which security perceptions influence behavioural intentions.

4. Security and Privacy

Security is one of the most important concerns surrounding electronic banking. Users may fear unauthorized access, identity theft, phishing, fraudulent transactions, password theft and misuse of personal information.

Research examining mobile banking adoption in Indian metropolitan and urban areas found that security concerns can restrict widespread adoption and investigated how security levels influence perceived risk and perceived control.

For young users, visible security features such as two-factor authentication, transaction alerts, biometric authentication and secure login procedures can increase confidence.

5. Perceived Risk

Perceived risk refers to uncertainty regarding possible negative consequences of using e-banking. It may involve financial, privacy, security, performance and psychological risks. A user may avoid e-banking if they believe that an incorrect transaction could result in monetary loss or that personal information could be compromised.

The literature indicates that perceived risk generally acts as an inhibitor of mobile banking adoption. The 2010 study by Koenig-Lewis et al. identified perceived risk as a significant predictor of young consumers' mobile banking adoption.

6. Convenience

Convenience is a major advantage of e-banking. Young consumers can perform transactions without travelling to a bank branch and can access services beyond traditional banking hours. Convenience is particularly relevant to students and young professionals who value speed and flexibility.

The literature also indicates that convenience can strengthen behavioural intentions by reducing the time and effort required to conduct financial transactions.

7. Compatibility

Compatibility refers to the degree to which e-banking fits an individual's lifestyle, habits, needs and existing technology usage. Youth who regularly use smartphones and online applications may find mobile banking more compatible with their daily activities.

Koenig-Lewis et al. (2010) identified compatibility as an important determinant of young consumers' adoption intentions and reported that it also influenced perceived ease of use, usefulness and credibility.



8. Social Influence

Social influence represents the effect of family members, friends, colleagues and social groups on an individual's technology adoption decision. Young consumers may be especially responsive to peer recommendations and social trends.

UTAUT-based research suggests that social influence can contribute to behavioural intention. Indian mobile banking research has similarly identified subjective norms and social factors as relevant predictors of adoption intention.

9. Self-Efficacy and Personal Innovativeness

Self-efficacy refers to confidence in one's ability to perform technology-related tasks. A young person who feels confident using digital applications is more likely to experiment with e-banking.

Personal innovativeness also contributes to technology adoption because individuals who enjoy experimenting with new technologies are generally more willing to try new digital financial services.

10. Cost and Financial Considerations

Cost may include internet charges, transaction fees, service charges and other financial expenses. Although digital banking can reduce transaction costs, perceived financial cost may still influence adoption decisions.

Youth, particularly students and early-career users, may be sensitive to transaction charges and data costs. Transparent pricing and low-cost services can therefore strengthen adoption.

11. Service Quality

Service quality includes system reliability, transaction accuracy, responsiveness, availability and customer support. Frequent technical failures, delayed transactions or inadequate complaint resolution can create negative perceptions.

A reliable e-banking platform can strengthen satisfaction and trust, thereby supporting continued use.

12. Awareness and Digital Literacy

Awareness determines whether users understand available e-banking services and their benefits. Digital literacy influences users' ability to navigate applications, understand security procedures and resolve basic technical problems.

Higher levels of digital literacy can reduce anxiety and increase perceived ease of use. Conversely, inadequate knowledge may increase perceived risk and discourage adoption.

VI. REVIEW OF SELECTED STUDIES

Author(s) & Year	Context/Sample	Major Factors Examined	Major Findings
Koenig-Lewis et al. (2010)	263 young consumers in Germany	Compatibility, usefulness, ease of use, trust, credibility, risk, cost	Compatibility, usefulness and risk significantly influenced mobile banking adoption; trust and credibility helped reduce perceived risk.
Zhou (2011)	Mobile banking users	Information quality, system quality, service quality, perceived value	Quality-related characteristics and perceived value contributed to mobile banking adoption and use.
Luo et al. (2010)	Mobile banking users	Trust, risk, technology characteristics	Multi-dimensional risk was an important determinant of initial acceptance; trust-related factors helped explain technology acceptance.
Baptista and Oliveira (2015)	Mobile banking users	Performance expectancy, effort expectancy, social influence	UTAUT-related factors were useful for explaining mobile banking intention and usage.
Gupta et al. (2017)	Indian metropolitan and urban consumers	Security, perceived risk, perceived control	Security concerns were important barriers to mobile banking adoption in India.



Oliveira et al. (2016)	Mobile payment/banking context	Compatibility, innovativeness, trust and usefulness	Individual and technological factors contributed to adoption intention.
Shaikh and Karjaluoto (2015)	Mobile banking literature	Trust, risk, usefulness, ease of use and social influence	Review evidence showed that adoption is influenced by technological, individual and contextual factors.
Aboelmaged and Gebba (2013)	Mobile banking users	TAM and UTAUT variables	Perceived usefulness, ease of use and behavioural factors were important in explaining mobile banking adoption.
Mer and Virdi (2021/2022)	Millennials in India	Effort expectancy, trust, social influence, performance expectancy, perceived risk	Effort expectancy, trust, social influence, performance expectancy and perceived risk influenced millennials' behavioural intention toward e-banking.
Sandhu et al. (2022)	363 university students	Convenience, risk, trust	Convenience and perceived risk significantly influenced intention; trust played a mediating role.
Sundararaj (2022)	Indian mobile banking users/non-users	Performance expectancy, effort expectancy, social influence, facilitating conditions, trust, risk	Trust and perceived risk were major challenges; young, educated users were prominent among mobile banking users.

VII. SYNTHESIS OF THE LITERATURE

The reviewed literature demonstrates that youths' e-banking adoption is multidimensional. No single variable is sufficient to explain adoption behaviour. Instead, adoption results from the interaction of technological benefits, perceived effort, psychological confidence, social influence and contextual conditions.

Table 1: Overall Direction of Major Factors

Factor	Expected Influence on Youths' Perception	Expected Influence on Adoption
Perceived usefulness	Positive	Positive
Perceived ease of use	Positive	Positive
Trust	Positive	Positive
Security	Positive when perceived as strong	Positive
Privacy protection	Positive	Positive
Perceived risk	Negative	Negative
Convenience	Positive	Positive
Compatibility	Positive	Positive
Social influence	Positive	Positive
Self-efficacy	Positive	Positive
Personal innovativeness	Positive	Positive
Service quality	Positive	Positive
Cost	Negative when perceived as high	Negative
Digital literacy	Positive	Positive
Awareness	Positive	Positive
Facilitating conditions	Positive	Positive



The evidence particularly emphasizes the importance of the relationship between trust and perceived risk. When users perceive an e-banking platform as secure and trustworthy, their concerns about financial loss and privacy may decrease. Conversely, concerns regarding fraud, unauthorized transactions and privacy breaches can prevent adoption even when the service is perceived as useful.

The youth-focused literature also suggests that compatibility is important. Young consumers are generally accustomed to mobile and internet-based services, and therefore e-banking is more likely to be accepted when it integrates smoothly into their existing digital lifestyles. Koenig-Lewis et al. (2010) provide particularly strong evidence for this relationship among young consumers.

Indian studies further demonstrate the relevance of social, technological and psychological factors. A 2020 Indian framework based on TAM found that perceived usefulness, perceived ease of use, subjective norms, personal innovativeness, trust and self-efficacy positively influenced mobile banking adoption intention.

The 2022 literature continues to emphasize the importance of trust and perceived risk. Research among university students found that convenience and perceived risk significantly affected mobile banking intention, with trust mediating these relationships.

VIII. RESEARCH GAP

Although substantial research has been conducted on e-banking and mobile banking adoption, several gaps remain.

First, many studies investigate general consumers rather than focusing specifically on youths. Youths possess distinctive technological habits, social networks and financial experiences, which justify separate investigation.

Second, studies frequently examine individual factors such as usefulness, trust or risk rather than developing integrated models incorporating technological, psychological, social and demographic variables simultaneously.

Third, much of the existing literature concentrates on behavioural intention rather than actual continued usage. Intention to use does not necessarily translate into regular usage.

Fourth, security and privacy concerns are often examined as isolated variables. There is scope to investigate how security perceptions influence trust and, subsequently, adoption.

Fifth, demographic characteristics such as age, gender, education, occupation, income and digital experience may moderate relationships among adoption factors. These relationships require further investigation in specific local contexts.

Finally, the rapidly changing digital banking environment means that findings from earlier studies should be periodically reassessed. Research focusing on youths in specific cities and regions can provide more contextually relevant evidence.

IX. IMPLICATIONS FOR BANKS

Banks should focus on developing simple, reliable and secure digital banking platforms. User interfaces should be designed according to the needs and technological capabilities of young customers. Security information should be communicated clearly rather than assuming that users understand technical security mechanisms.

Banks should also provide digital literacy and awareness programmes. Demonstrations, tutorials and customer support can reduce uncertainty among inexperienced users. Since trust is a major component of e-banking adoption, banks should provide rapid fraud reporting, transparent transaction notifications and effective complaint-resolution mechanisms.

Social influence can also be incorporated into marketing strategies through peer recommendations, educational campaigns and youth-oriented digital communication. Finally, competitive transaction charges and reliable service quality can strengthen the perceived value of e-banking.

X. CONCLUSION

The review establishes that youths' perceptions and adoption of e-banking services are shaped by a complex combination of technological, psychological, social and contextual factors. Perceived usefulness, perceived ease of use, convenience and compatibility generally encourage adoption because they demonstrate the practical value of electronic banking. Trust,



security and privacy are equally important because e-banking involves sensitive personal and financial information. Perceived risk, on the other hand, can significantly discourage adoption.

The literature from 2010 to 2022 indicates that technology acceptance theories such as TAM, IDT and UTAUT provide useful foundations for explaining e-banking behaviour, but their explanatory capacity can be strengthened by incorporating trust, risk, security, self-efficacy, personal innovativeness and service quality. Evidence involving young consumers specifically highlights compatibility, usefulness, risk, trust and credibility, while Indian studies emphasize usefulness, ease of use, trust, social influence, security and self-efficacy.

Successful expansion of e-banking among youths requires more than technological availability. Banks must create services that are useful, easy to use, secure, trustworthy, convenient, affordable and compatible with young consumers' digital lifestyles. Future empirical studies should therefore develop integrated models that examine both positive drivers and negative barriers to adoption and distinguish between behavioural intention and actual continued use.

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