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### The Contribution of Digital Banking to Enhancing Financial Inclusion in India

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Abstract: Digital banking has emerged as a transformative force in India's financial ecosystem, playing a significant role in expanding access to formal financial services. With the rapid adoption of mobile banking, internet banking, and digital payment platforms, financial institutions are increasingly able to reach previously underserved and unbanked populations. This study examines the contribution of digital banking to enhancing financial inclusion in India by analyzing its impact on access, usage, and affordability of financial services. The research adopts a descriptive and analytical approach, drawing on both primary and secondary data to assess customer adoption, perceived benefits, and challenges associated with digital banking services. The findings indicate that digital banking significantly improves financial inclusion by reducing geographical barriers, lowering transaction costs, and enabling convenient access to banking services. However, issues such as digital literacy gaps, cybersecurity concerns, and infrastructural limitations continue to restrict inclusive growth. The study highlights the need for targeted policy interventions, customer awareness programs, and technological safeguards to maximize the inclusive potential of digital banking. Overall, the research contributes to a better understanding of how digital banking initiatives can support inclusive economic development in India.

Keywords: Digital Banking; Financial Inclusion; Digital Payments; Banking Technology; India.

### I. INTRODUCTION

Since access to formal financial services is crucial for lowering poverty, encouraging savings, and facilitating sustainable economic growth, financial inclusion has emerged as a key goal of economic development. Due to things like remote location, expensive transaction fees, and low financial literacy, a sizable portion of the Indian populace has historically avoided the formal banking system. Policymakers and financial institutions have made addressing these issues a top priority, especially given the speed at which technology is developing. By revolutionizing the delivery and accessibility of financial services, digital banking has become a potent facilitator of financial inclusion. Banks have been able to expand their services beyond traditional branch-based models thanks to the widespread use of mobile phones, internet connectivity, and digital payment platforms. Digital banking solutions, including mobile banking applications, internet banking, and unified payment systems, have significantly reduced barriers related to distance, cost, and time, making financial services more accessible to underserved populations.

Digital banking adoption in India has been further accelerated by government initiatives and regulatory support. An environment that supports inclusive growth has been established by initiatives to increase bank account ownership, encourage digital payments, and fortify financial infrastructure. However, despite substantial progress, challenges such as digital literacy gaps, cybersecurity concerns, and uneven technological infrastructure persist.

Against this backdrop, the present study examines the contribution of digital banking to enhancing financial inclusion in India. The study seeks to analyze how digital banking services influence access to and usage of financial products, while also identifying key constraints that affect their inclusive potential. By doing so, the research aims to provide insights for policymakers, financial institutions, and stakeholders working toward a more inclusive financial system.

### II. LITERATURE REVIEW

### A. Concept of Financial Inclusion

Financial inclusion refers to the availability, accessibility, and effective usage of formal financial services by all sections of society. Prior studies emphasize that inclusive financial systems enable households and small businesses to save securely, access credit, manage risk, and participate in economic activities. In developing economies such as India, financial inclusion is closely linked to poverty reduction, income stability, and social empowerment. Researchers have highlighted that exclusion often arises from structural barriers such as distance from bank branches, high transaction costs, and lack of financial awareness.



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### B. Evolution of Digital Banking in India

The Indian banking sector has undergone significant transformation with the adoption of digital technologies. Literature documents a shift from traditional branch-based banking to technology-driven service delivery models, including mobile banking, internet banking, and digital payment platforms. The expansion of mobile connectivity and affordable internet access has enabled banks to reach customers in both urban and rural areas. Studies note that regulatory support and public digital infrastructure have played a crucial role in accelerating digital banking adoption across the country.

### C. Digital Banking as a Tool for Financial Inclusion

Several studies highlight digital banking as a key instrument for promoting financial inclusion. Digital platforms reduce geographical and time-related constraints by allowing users to conduct transactions remotely. Researchers argue that digital banking enhances inclusion by lowering transaction costs, simplifying account access, and enabling faster delivery of financial services. Evidence suggests that digital payment systems and mobile banking applications have increased the frequency of formal financial transactions among previously underserved populations.

### D. Behavioral and Adoption Factors

The adoption of digital banking services is influenced by behavioral and socio-economic factors such as digital literacy, trust in technology, perceived ease of use, and security concerns. Literature indicates that individuals with higher awareness and technological confidence are more likely to adopt digital banking solutions. Conversely, low digital literacy and fear of fraud remain significant barriers, particularly among elderly and rural populations. Understanding these behavioral dimensions is essential for enhancing inclusive outcomes.

### E. Role of Government and Policy Initiatives

Research highlights the importance of government-led initiatives in strengthening the link between digital banking and financial inclusion in India. Policy-driven programs aimed at expanding bank account ownership, promoting digital payments, and developing digital infrastructure have contributed to wider financial access. Studies emphasize that coordinated efforts between government agencies, banks, and fintech firms are critical for sustaining inclusive growth.

### F. Challenges and Research Gaps

Despite notable progress, existing literature identifies several challenges that limit the full potential of digital banking for financial inclusion. These include uneven digital infrastructure, cybersecurity risks, and limited user awareness. Additionally, many studies focus on access rather than sustained usage of digital financial services. This indicates a need for further empirical research that examines usage behavior, service quality, and long-term inclusion outcomes in the Indian context.

### III. METHODS AND MATERIAL

### A. Research Design

The study adopts a descriptive and analytical research design to examine the contribution of digital banking to financial inclusion in India. This design is suitable for understanding both the extent of digital banking usage and its influence on access to formal financial services. The research focuses on user perceptions, adoption behavior, and service outcomes rather than purely financial performance indicators.

### B. Population and Sample Selection

The target population consists of bank customers using digital banking services in urban and semi-urban regions of India. A convenience and purposive sampling technique is employed to select respondents who actively use digital banking platforms such as mobile banking, internet banking, and digital payment systems. This ensures the relevance and reliability of responses.

### C. Sources of Data

1) Primary Data: Primary data is collected through a structured questionnaire designed to capture information on access to digital banking services, frequency of usage, ease of use, perceived benefits, and challenges. Responses are measured using a fivepoint Likert scale to facilitate quantitative analysis.



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- 2) Secondary Data: Secondary data is sourced from academic journals, banking reports, government publications, and policy documents related to digital banking and financial inclusion in India. These sources support the conceptual framework and contextual understanding of the study.
- D. Variables of the Study
- 1) Independent Variables: Digital banking services (mobile banking, internet banking, digital payments)
- 2) Dependent Variable: Financial inclusion (access, usage, affordability)
- 3) Control Variables: Age, education level, income, and location of respondents

### E. Data Collection Procedure

The questionnaire is administered through online platforms and direct survey methods to ensure wider participation. Respondents are informed about the academic purpose of the study, and confidentiality of responses is maintained throughout the research process.

### F. Tools and Techniques of Analysis

Data analysis is carried out using descriptive statistics such as percentages, mean, and standard deviation to summarize respondent characteristics. Inferential techniques, including correlation and regression analysis, are used to examine the relationship between digital banking adoption and financial inclusion.

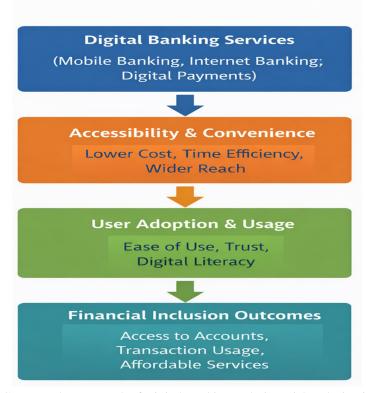


Fig: Conceptual Framework of Digital Banking and Financial Inclusion in India

### IV. CONCLUSION

### A. Summary of Key Findings

The study examined the role of digital banking in promoting financial inclusion in India. The findings indicate that digital banking has significantly expanded access to formal financial services by reducing dependency on physical bank branches. Services such as mobile banking, internet banking, and digital payment platforms have improved convenience, affordability, and reach, particularly for individuals in semi-urban and underserved areas.



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### B. Impact of Digital Banking on Financial Inclusion

Digital banking has contributed positively to key dimensions of financial inclusion, including account accessibility, transaction usage, and service affordability. The availability of digital platforms has enabled users to conduct financial transactions efficiently, thereby increasing participation in the formal financial system. The study highlights that digital banking serves as an effective mechanism for overcoming geographical and time-related barriers traditionally associated with conventional banking.

### C. Challenges and Limitations

Despite the progress achieved, the study identifies several challenges that limit the inclusive potential of digital banking. Digital literacy gaps, concerns related to cybersecurity, and unequal access to digital infrastructure remain significant barriers, particularly among rural and elderly populations. These challenges suggest that technological expansion alone is insufficient to achieve complete financial inclusion.

### D. Policy and Practical Implications

The findings underscore the need for coordinated efforts among policymakers, banks, and financial institutions to strengthen digital literacy, enhance cybersecurity measures, and improve digital infrastructure. Targeted awareness programs and user-friendly digital solutions can further increase adoption and sustained usage of digital banking services.

### E. Contribution and Scope for Future Research

This study contributes to the existing literature by providing empirical insights into the role of digital banking in enhancing financial inclusion in India. Future research may explore region-specific impacts, longitudinal trends, or the role of emerging financial technologies in deepening inclusive growth.

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