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DIGITAL BANKING AND SOCIAL DISPARITIES: AN EMPIRICAL STUDY FROM KOLHAPUR DISTRICT

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ABSTRACT

This research paper explores the impact of online banking on social discrimination in Kolhapur district, Maharashtra, focusing on caste, gender, age, and rural-urban divides. As India pushes toward a cashless economy and digital financial inclusion, it is critical to examine whether digital banking narrows or widens existing social inequalities in semi-urban and rural regions. The study employs a mixed-methods approach, combining quantitative data from 400 respondents across various social groups with qualitative insights from focus group discussions. Findings reveal that while nearly all respondents possess bank accounts—largely due to government schemes like the Pradhan Mantri Jan Dhan Yojana (PMJDY)—there is a significant disparity in the usage of online banking services. Only 40% of Scheduled Caste and Scheduled Tribe (SC/ST) respondents and 36% of women reported using mobile or internet banking, compared to 80% among general caste respondents. Digital literacy, smartphone ownership, and educational background emerged as key factors influencing digital banking adoption. Elderly and female respondents reported higher dependence on Customer Service Points (CSPs) and Aadhaar-enabled Payment Systems (AePS), often facing issues such as biometric failures, lack of grievance redressal, and language barriers. Regression analysis confirmed that caste, gender, and age negatively influence online banking adoption, while digital literacy and education have a positive and significant effect. Although some respondents acknowledged that digital banking reduces face-to-face caste-based discrimination at bank counters, others highlighted new forms of exclusion linked to technology and access. The study concludes that while online banking holds promise as a tool for financial and social inclusion, its benefits are unevenly distributed. Targeted interventions—such as digital literacy programs, vernacular app development, and infrastructure improvements—are essential to ensure equitable access. Without addressing these gaps, the digital divide may inadvertently reinforce the very social inequalities it aims to eliminate.

KEYWORDS: Digital Banking, Social Disparities

1. INTRODUCTION

Digital India, the Pradhan Mantri Jan Dhan Yojana (PMJDY), and the Unified Payments Interface (UPI)—is widely viewed as a transformative tool to promote financial inclusion. By enabling faster, cheaper, and more accessible financial services, digital platforms aim to bridge long-standing gaps in access to formal banking, particularly in rural and underserved areas. However, in a socially stratified society like India, the benefits of technological advancement do not reach all groups equally. Regions such as Kolhapur district in Maharashtra, characterized by a diverse socio-economic and demographic composition, present a compelling case to assess the ground realities of this transition. This study seeks to empirically examine whether the rise of online and mobile banking in Kolhapur contributes to the reduction of entrenched forms of social discrimination, or if it instead reinforces existing inequalities through new digital barriers. Specifically, the research investigates how factors such as caste-based hierarchies, gender norms, age-related digital divides, and the urban-rural infrastructure gap influence the uptake and effective use of digital banking services. While online platforms can potentially eliminate face-to-face biases historically encountered in physical bank branches, they also introduce new challenges—ranging from poor digital literacy and lack of trust to unequal access to smartphones and the internet. By integrating both quantitative data and qualitative insights from across social groups, this study aims to uncover the layered dynamics of inclusion and exclusion in Kolhapur's digital banking landscape. It raises critical questions: Who is being left behind in the digital transition? Are historically marginalized communities gaining empowerment, or facing newer forms of digital exclusion? And most importantly, what interventions are needed to ensure that digital financial inclusion translates into real social equity?

2. OBJECTIVES

1. To analyse the adoption of online banking across different social groups.
2. To examine whether digital access reduces caste or gender-based financial exclusion.
3. To identify barriers to digital banking.
4. To assess the role of digital literacy in social inclusion.

3. RESEARCH METHODOLOGY

This study adopts a mixed-methods research design, combining both quantitative and qualitative approaches to comprehensively examine the impact of online banking on social discrimination in Kolhapur district. The methodology is designed to capture both statistical trends and lived experiences across caste, gender, and geographical categories.

3.1 Study Area

The research was conducted in Kolhapur district, located in the western part of Maharashtra. Kolhapur is a socio-economically diverse region, encompassing urban, semi-urban, and rural settlements. To ensure representativeness, the study selected four talukas with distinct demographic and infrastructural

profiles:

1. Karveer (urban–semi urban mix)
2. Hatkanangale (industrial and semi-urban)
3. Shirol (rural-agricultural)
4. Ajara (hilly rural area)

These talukas were chosen to reflect variations in internet access, banking infrastructure, digital literacy, and social composition.

3.2 Sample Size and Sampling Technique

A total of 400 respondents were selected using stratified random sampling to ensure adequate representation of key social groups. The strata were defined based on caste and gender, with the following distribution:

1. 100 respondents from Scheduled Castes and Scheduled Tribes (SC/ST)
2. 100 respondents from Other Backward Classes (OBC)
3. 100 respondents from General Caste
4. 100 women respondents, drawn proportionately from across all caste and income groups

This structure allowed the study to analyze inter-group comparisons and intersectional dynamics (e.g., caste and gender combined).

3.3 Data Collection Methods

A structured questionnaire administered in Marathi and English, covering digital banking usage, digital literacy, financial behaviour, and experiences of social exclusion or empowerment.

4. Digital Banking and Social Disparities

Digital banking has revolutionized access to financial services in India by reducing reliance on traditional brick-and-mortar branches and enabling remote, real-time transactions through mobile phones and internet platforms. However, the transition from physical to digital finance has not been equally accessible to all sections of society. In socially diverse regions like Kolhapur, digital banking intersects with deep-rooted disparities based on caste, gender, education, income, and geographic location. While digital platforms have the potential to eliminate interpersonal biases—such as caste-based discrimination at bank counters or gendered behavior by staff—they also introduce new layers of exclusion. Lack of digital literacy, limited access to smartphones or internet connectivity, and mistrust in technology disproportionately affect marginalized communities. These disparities in access and capability often translate into unequal participation in digital finance, further entrenching social inequalities.

This section presents empirical findings from the field survey and focus group discussions to analyze

how digital banking is being adopted across different social groups in Kolhapur. It highlights both the progress made and the barriers that continue to shape financial behavior, trust, and inclusion in the digital era.

4.1 Online Banking Usage by Social Group

Table No. 4.1 Access to banking and digital services

Social Group	Access to Bank A/c	Use of Online Banking	Own Smartphone	Digital Literacy (Self-rated High)
SC/ST	98%	40%	55%	32%
OBC	100%	58%	71%	46%
General Caste	100%	80%	85%	69%
Women (All Castes)	95%	36%	50%	29%

Table 4.1 presents comparative data on access to banking and digital services among different social groups in Kolhapur district—specifically SC/ST, OBC, General Caste, and Women (across all castes). The data shows that while **bank account ownership is nearly universal** across all groups (above 95%), there is a **significant gap in the actual use of online banking services**. Only **40% of SC/ST respondents** and **36% of women** use mobile or internet banking, compared to **80% among General Caste** respondents. This suggests that formal access to banking does not automatically translate into digital participation. Additionally, disparities in **smartphone ownership** and **digital literacy** are evident. A majority of General Caste respondents (85%) own smartphones and report higher confidence in digital banking (69% rated themselves as digitally literate), while SC/ST and women lag behind in both respects. Overall, the table highlights that **social identity—particularly caste and gender—remains a key determinant** in digital banking usage, reflecting broader structural inequalities in education, income, and digital empowerment.

4.2 Gender and Age Disparities

The transition to digital banking has not affected all demographic groups uniformly. Gender and age are two critical dimensions that significantly influence access to and usage of online financial services in Kolhapur district.

Table No. 4.2 Gender and Age Disparities

Group	Mobile Banking Usage	Visited CSP/AePS Agent Last Month	Faced Transaction Failure
Male (18–45)	75%	20%	12%
Female (18–45)	38%	52%	29%
Elderly (60+)	21%	64%	40%

Empirical data from the field survey indicates that men aged 18–45 are the most active users of mobile banking, with 75% reporting regular use of digital banking apps. In contrast, only 38% of women in the same age group reported using such services. The gender gap is further reflected in reliance on intermediaries—52% of women reported using Customer Service Points (CSPs) or Aadhaar-enabled Payment Systems (AePS) agents, compared to only 20% of men. This suggests a higher level of dependency and lower digital confidence among women. The digital divide becomes even more pronounced with age. Among the elderly population (60+ years), only 21% reported using mobile banking services, and 64% said they relied on physical agents for basic transactions. Furthermore, 40% of elderly users reported having experienced transaction failures, often due to biometric mismatches, difficulty navigating apps, or lack of support. These disparities are not just technological—they reflect social norms, digital literacy gaps, and trust deficits. Women often lack independent access to mobile devices or are not given digital training. Elderly users, especially in rural areas, face both cognitive and technological barriers.

4.3 Impact on Perceived Social Discrimination

Table No. 4.3 Impact on Perceived Social Discrimination

Group	Strongly Agree	Somewhat Agree	Neutral	Disagree
SC/ST	28%	32%	20%	20%
OBC	41%	36%	15%	8%
Gen Caste	65%	25%	8%	2%
Women	26%	38%	21%	15%

According to the survey data, perceptions about digital banking reducing social discrimination vary significantly across social groups. Among General Caste respondents, 65% strongly agreed that online banking has reduced discrimination, largely due to the removal of face-to-face interactions and increased autonomy in managing finances. In contrast, only 28% of SC/ST respondents and 26% of

women strongly agreed with this statement, while a substantial proportion remained neutral or disagreed altogether. The lower levels of agreement among marginalized groups suggest that while digital platforms may reduce overt, interpersonal caste or gender bias (such as discriminatory treatment at bank counters), they have not fully addressed deeper systemic inequalities. Many respondents from SC/ST and women groups cited digital illiteracy, fear of fraud, agent dependency, and lack of grievance redressal as new forms of exclusion that have replaced earlier barriers. Focus Group Discussions further revealed that while anonymity in digital banking is appreciated, the lack of personalized support and trust in digital interfaces often deters marginalized users from full participation. Some even reported being charged extra or misled by CSPs and agents, reinforcing feelings of social disadvantage.

4.4 Barriers to Digital Banking

Despite increasing access to formal bank accounts in Kolhapur district, the effective and equitable use of digital banking services remains constrained by several interrelated barriers. The survey findings identify a range of obstacles—both infrastructural and socio-cultural—that hinder adoption and confidence in digital financial tools, particularly among marginalized groups.

Table No. 4.4 Barriers to Digital Banking

Barrier	% of Total Respondents
Lack of smartphone	44%
Poor internet connectivity	36%
Lack of trust/fear of fraud	29%
Difficulty in using apps	52%
Language barrier	22%
Lack of awareness/training	61%

The most frequently reported barrier was **lack of awareness or training**, cited by **61%** of respondents. Many users, especially from rural SC/ST communities and elderly groups, expressed that they were unfamiliar with how to use mobile banking apps or perform online transactions safely. Another major barrier was **difficulty in using mobile applications** (52%), often due to unfamiliar interfaces, language limitations (many apps not available in Marathi), or low literacy levels. This was especially true among women and older users. **Lack of smartphone ownership** (reported by 44%) remains a practical hurdle, particularly in households with shared devices or where male members control digital access. Even where smartphones are available, **poor internet connectivity** (36%) in remote and hilly areas like Ajara further restricts consistent access to digital services. A significant number of users also reported a **lack of trust or fear of digital fraud** (29%). Concerns over transaction failures, money

deduction errors, and biometric mismatches—particularly in Aadhaar-enabled Payment Systems (AePS)—were prevalent among low-income and elderly respondents. Moreover, **22%** reported facing **language barriers**, highlighting the need for localized content and vernacular banking apps.

These findings reveal that the shift to digital banking, while promising in intent, is still exclusionary in practice unless accompanied by **infrastructure development, digital literacy, and institutional accountability**

5. DISCUSSION

This study reaffirms that the mere availability of digital banking infrastructure does not automatically translate into meaningful financial inclusion, especially in socially stratified regions like Kolhapur. While the government's financial inclusion initiatives—such as the Pradhan Mantri Jan Dhan Yojana (PMJDY)—have successfully expanded access to basic bank accounts across caste and income groups, the effective and independent use of online banking services remains unevenly distributed. The findings suggest that educated, urban, and upper-caste males are the primary beneficiaries of digital banking, owing to their higher levels of digital literacy, individual smartphone ownership, and greater exposure to financial technologies. In contrast, individuals from Scheduled Castes/Scheduled Tribes (SC/ST), women, elderly populations, and rural residents are less likely to engage in digital banking due to structural and socio-cultural barriers. One of the key insights from the regression analysis is that digital literacy and education are the strongest predictors of online banking usage. This highlights the critical role of capacity-building and awareness campaigns. Without the foundational skills to understand and trust digital platforms, many marginalized users either avoid digital banking altogether or rely heavily on intermediaries, such as CSPs or AePS agents. This dependency not only diminishes the autonomy and empowerment potential of digital tools but also reintroduces risks of exploitation, misinformation, or informal discrimination, particularly when grievance redressal systems are weak or inaccessible. Furthermore, while digital platforms have reduced face-to-face biases—such as caste-based discrimination at bank counters—they have inadvertently introduced new forms of digital exclusion. These include language barriers, technical complexity, and fear of financial fraud, all of which disproportionately affect vulnerable populations. The discussion highlights a fundamental paradox: digital banking is a powerful enabler of inclusion, but only when designed and deployed with equity in mind. Technology alone cannot overcome social inequalities; it must be complemented by inclusive policy design, localized training, human support networks, and culturally sensitive outreach strategies. In summary, digital banking in Kolhapur reflects both progress and persistent disparity. If left unaddressed, the digital divide risks reinforcing existing social hierarchies rather than dismantling them.

6. RECOMMENDATIONS

In light of the findings from this study, the following targeted interventions are recommended to bridge the digital divide and enhance equitable access to digital banking in Kolhapur district:

6.1 Localised Digital Literacy Campaigns

Implement community-based digital literacy drives across both rural and urban talukas, leveraging colleges, Self-Help Groups (SHGs), and Common Service Centres (CSCs). These campaigns should be hands-on, vernacular, and tailored to the needs of women, elderly, and marginalized castes. Special focus should be placed on common mobile banking tasks—such as UPI, AePS, and checking balances—to boost confidence in independent usage.

6.2 Strengthening Grievance Redressal Mechanisms

A major deterrent for low-income and digitally inexperienced users is lack of resolution when transactions fail. It is essential to establish local help desks or mobile grievance units, possibly at CSCs, that can assist users with complaint registration, follow-up, and documentation. Training banking agents and SHG leaders as digital ombudspersons can also be a scalable model.

6.3 Language and Accessibility-Friendly App Development

Banks and fintech companies should be encouraged to develop and promote mobile applications in Marathi, with voice-enabled features, visual icons, and simplified navigation. These features will be crucial for users with low literacy or visual impairments and can significantly improve adoption among rural and elderly populations.

6.4 Infrastructure Support in Remote Areas

There is a pressing need to expand and stabilize mobile and internet connectivity, especially in remote talukas like Ajara, Chandgad, and Gaganbawda. Collaboration with telecom service providers under schemes like BharatNet should be prioritized to ensure basic digital infrastructure reaches the last mile.

6.5 Women-Led Community Digital Champions

To promote inclusive participation, women from local communities should be identified, trained, and empowered as “Digital Sakhis” or digital champions. These women can serve as peer educators and trustworthy guides for others—especially fellow women, the elderly, and first-time users—thereby ensuring a bottom-up and gender-sensitive approach to digital empowerment.

7. CONCLUSION

This study set out to explore whether the growth of digital banking in Kolhapur district has led to a reduction in social discrimination or if it has inadvertently reinforced existing inequalities. While digital banking holds great promise as a tool for inclusive growth—by offering convenience, reduced face-to-face bias, and direct access to financial services—its real-world impact remains deeply uneven and limited.

The research reveals that mere access to a bank account, as facilitated by national schemes like the Pradhan Mantri Jan Dhan Yojana (PMJDY), is not synonymous with financial inclusion. Usage patterns show that online banking continues to be disproportionately adopted by urban, upper-caste, educated males. Conversely, Scheduled Castes and Tribes (SC/STs), women, elderly individuals, and rural residents face persistent barriers—ranging from low digital literacy and poor internet access to deep-rooted mistrust of digital systems.

These findings indicate that social identity—particularly caste and gender—still shapes how and whether people engage with digital financial tools. Even when discriminatory practices at physical bank branches are avoided, the digital divide introduces a new form of exclusion. Factors such as interface complexity, language limitations, and fear of fraud further marginalize already disadvantaged groups.

Therefore, the promise of digital banking in reducing social discrimination will only be realized if efforts move beyond infrastructure deployment. True inclusion demands a holistic approach: one that combines empowerment through education, user-centric technology design, local-language support, and community-driven outreach strategies. Addressing structural inequalities through policy interventions, grassroots training, and accessible digital ecosystems is key.

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