

Understanding Consumer Challenges and Bank Strategies in the Adoption of E-Banking: A Psychosocial Perspective in the Covid-19 Era

Tisha Shah, Rashika Agarwal, Anika Bafna, Tanisha Surana, Prisha Sheth



Abstract: The COVID-19 pandemic fueled digital banking adoption in India. The relevance of traditional banking has diminished as consumers have chosen safer and more contactless options. This rapid shift exposed psychological barriers, including trust deficits, emotional disconnection, and perceived technological complexity. Despite banks investing in security upgrades and user education, gaps remain in aligning these efforts with evolving consumer sentiments. This study examines the dual challenge of functional efficiency and emotional trust in the adoption of e-banking. Guided by two key objectives — identifying consumer challenges and assessing psychological shifts both before and after the pandemic — the survey was conducted online with 210 respondents. Using descriptive statistics and paired-samples t-tests in SPSS, the study analysed 10 variables, including trust, convenience, emotional response, and perceived control. Findings reveal statistically significant changes in experience, convenience, confidence, social influence, emotional reactions, user control and future intent post-pandemic. However, emotional adaptation did not fully translate to satisfaction. Key issues include functional dissatisfaction, perceived control and trust. The study concludes that while banks have advanced in usability and security, emotional-functional dissonance still limits user loyalty and engagement. Banks must embed empathy, transparency and user empowerment into their digital strategies. Future research should adopt longitudinal designs and focus on vulnerable populations for a more comprehensive understanding.

Keywords: E-Banking; Pandemic, Challenges, Consumer Perception, Emotional, Psychological Factors

Nomenclature:

UPI: Unified Payments Interface

NPCI: National Payments Corporation of India

IMPS: Immediate Payment Service

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I. INTRODUCTION

Recent technological advancements, combined with the global COVID-19 pandemic, have significantly transformed the banking sector. India's real-time digital payment infrastructure, the Unified Payments Interface (UPI), serves as a prime example of this transformation, exhibiting rapid growth as noted by (Hiselius & Arnfalk, 2021) [5]. According to data from the National Payments Corporation of India (NPCI), UPI transactions increased from 1.25 billion in March 2020 to more than 7.3 billion by December 2022. Before the pandemic, QR codes and mobile payment applications such as PhonePe, Google Pay, and Paytm were seldom used by small businesses, local vendors, and individual consumers for routine transactions, as highlighted by (Marcu, 2021) [7]. The ease of access and convenience offered by e-banking are gradually replacing the traditional banking model, which was centred on physical branches.

Nevertheless, earlier studies have identified several significant obstacles to the widespread adoption of e-banking. These obstacles include the perceived complexity of digital banking technologies, cybersecurity concerns, and limited consumer awareness of available digital services, as discussed. (Chiarini, 2021) [3]. The COVID-19 pandemic marked a crucial turning point, prompting consumers to adopt digital platforms as safer and more contactless alternatives. The swift expansion of payment systems such as the Immediate Payment Service (IMPS) and UPI, documented by (Wu & Lin, 2018) [11], reflects this behavioural shift toward online and contactless transactions.

Despite the surge in digital adoption, concerns about fraud, privacy, and technological complexity continue to influence consumer behaviour. Older adults, in particular, face challenges related to effort expectancy —the degree to which they believe it is easy to use the technology. Many consumers are still reluctant to abandon face-to-face banking interactions due to fears of fraud or discomfort with digital interfaces, as reported by (VO et al., 2020) [9]. At the same time, the growing demand for digital services has placed considerable strain on banks' support systems, which must comply with rigorous operational and security standards. In response, financial institutions have introduced a range of measures to address customer concerns and encourage the use of e-banking. These measures include implementing enhanced security protocols, simplifying digital platforms, providing step-by-step guidance, and launching educational campaigns to support users.

However, a significant research gap remains. There



is a lack of integrated, post-pandemic investigations that explore how the evolving emotional and psychological experiences of e-banking users relate to the institutional strategies designed to address these challenges. There is a particular need for longitudinal studies that examine the long-term effects of the pandemic on consumer perceptions of digital banking. Emotional and psychological factors, such as comfort, fear, and trust, discussed by Bozkus Kahyaoglu & Caliyurt (2018) [2] and Gao et al. ([4], play a crucial role in shaping the acceptance and use of e-banking services. A more thorough understanding of these factors is essential for creating digital banking environments that are both inclusive and effective.

To address this gap, the present study employs a mixed-methods approach combining qualitative and quantitative research methods. The qualitative component examines the challenges consumers face when adopting digital banking and the solutions banks have implemented to address them. It also investigates how psychological elements such as emotions and cognitive perceptions influence users' willingness to engage with digital platforms, drawing on the work of. In parallel, the quantitative analysis uses paired-samples t-tests to determine whether there have been significant changes in consumer behaviour and attitudes before and after the COVID-19 outbreak.

This study highlights the importance of a comprehensive analysis that considers the perspectives of both consumers and financial institutions simultaneously. Such an approach is particularly crucial in the context of sustained digital dependence, eroding trust, and evolving consumer behaviour. As e-banking continues to develop, it is essential to adopt a consumer-focused strategy that integrates technological efficiency with emotional sensitivity. Beyond being secure and easily accessible, post-pandemic banking must also be responsive to the diverse concerns and needs of its customers, as emphasized by (Bhuiyan et al., 2023) [1]. Ultimately, building a more resilient and inclusive financial ecosystem for the future will depend on a comprehensive understanding of the psychosocial factors that shape e-banking adoption.

II. LITERATURE REVIEW

The COVID-19 pandemic significantly accelerated the adoption of e-banking, condensing what might have been years of gradual digital transformation into just a few months. Findings from Accenture's global survey of forty-eight thousand consumers illustrate a notable decline in trust. Only 29% of respondents reported trusting banks "a lot" with their long-term financial well-being, a sharp drop from 43% in 2018. Consumers characterized digital banking services as "functionally adequate but devoid of emotion," underscoring the risks of prioritizing operational efficiency over empathy.

Earlier research has typically identified perceived utility, perceived risk, and perceived ease of use as the primary factors influencing the adoption of e-banking, as shown by (Riyadh et al., 2009). However, more recent studies have highlighted the concept of emotional functional dissonance. This is a paradox in user experience that does not fit within conventional adoption frameworks. Users may indicate that they feel more emotionally comfortable with digital channels,

yet simultaneously report reductions in perceived control, convenience, support, and trust.

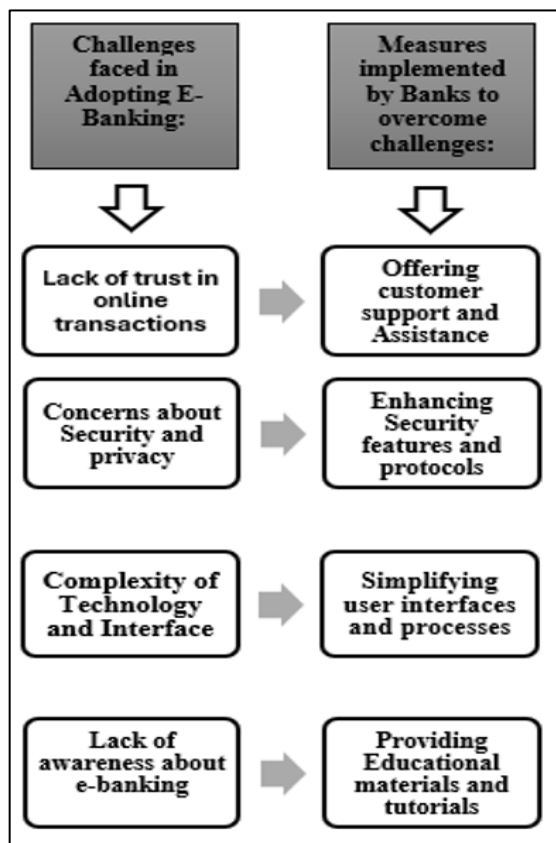
Research also demonstrates that institutional trust and perceptions of security have substantial impacts on intentions to use mobile banking. These relationships are complex, involving interactions between user demographics, perceived risk, and trust. Cybersecurity threats continue to pose significant challenges to the adoption of digital banking. In response to growing demand for e-banking, banks worldwide have invested heavily in multi-factor authentication systems, artificial intelligence-driven cybersecurity, and user-friendly digital interfaces. Indian banks such as HDFC, ICICI, and Axis have implemented chatbots, biometric authentication, and video or voice banking.

Expanding on these constructs reveals that functional confidence does not equate to emotional familiarity with e-banking. (Vuori et al., 2018) [10] noted that this subtle emotional functional dissonance, which has become more pronounced after the pandemic, is frequently overlooked by most adoption models. Many users may feel comfortable with routine digital interactions, yet still experience frustration due to usability challenges, perceived risks, or a lack of accessible human support.

A significant gap remains in existing literature. Research that focuses on consumers often isolates real experiences after adoption from deeper analyses of behavioral and emotional dimensions, as discussed by (Komulainen & Saraniemi, 2019) [6]. Conversely, studies that emphasize the perspective of banks tend to describe security enhancements and technological strategies, such as those detailed by (Vinh, 2021) [8], but rarely consider the implications for user sentiment and trust.

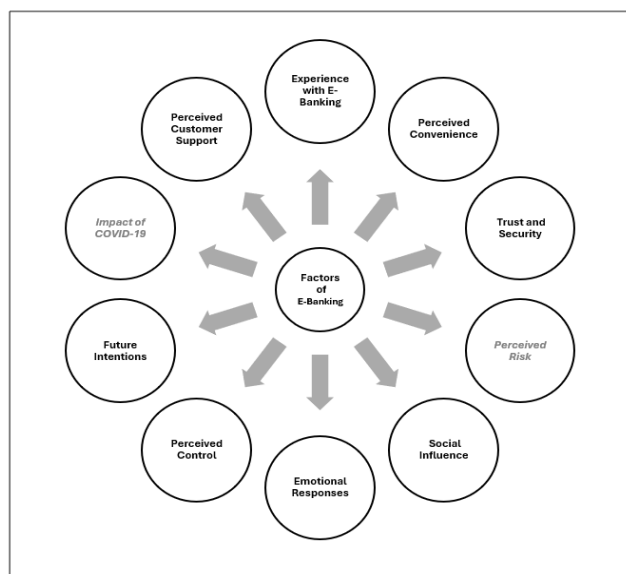
This context establishes the need for a comprehensive dual approach. There is limited exploration into the evolving emotional and psychological dynamics that influence long-term consumer engagement with digital banking in a post-pandemic environment. The present study addresses this by pursuing the following objectives:

- To examine how emotional adaptation can coexist with functional dissatisfaction in digital banking experiences.
- To investigate why emotional familiarity does not necessarily lead to loyalty or a heightened sense of security.
- To develop an integrated perspective that connects consumer experiences with banking strategies, assessing the extent to which institutional interventions align with or diverge from consumer sentiments, needs, and trust.
- To advance the field through longitudinal mixed methods research that captures both patterns of usage and changes in perceptions over time.



[Fig.1: Conceptual Model 1: Challenges and Measures Taken by the E-banking Sector]

This model illustrates the relationship between challenges faced by the e-banking sector and the corresponding measures taken to address them. It provides a structured framework for understanding how specific issues impact the industry and how specific actions are implemented to mitigate these challenges. Additionally, the model demonstrates the e-banking sector's strategic thinking and proactive approach to overcoming obstacles and improving its services. It serves as a visual representation of the challenges and solutions within the context of e-banking, aiding stakeholders in the sector to comprehend and make informed decisions.



[Fig.2: Conceptual Model 1: The Factors Affecting the E-Banking Sector]

Note: The Italic text in grey colour is not a factor, as proven later.

This conceptual model explains the significant determinants of e-banking adoption and how these challenges are addressed. It presents a systematic outline for understanding the sector, defining user experience, convenience, trust, social influence, emotion, perceived control, and future intentions. E-banking is shown to be forward-looking in addressing these factors through user-friendly interfaces, strong security measures, empathetic customer service, and flexible options for customers. The model helps stakeholders understand problems and potential remedies by visualising them, thereby enabling them to make informed decisions and implement strategic improvements in e-banking services.

III. RESEARCH OBJECTIVE

- To investigate the key challenges faced by consumers in adopting e-banking and analyze the measures implemented by banks to overcome these challenges.
- To explore the emotional and psychological factors influencing the consumer adoption of e-banking pre-/post-COVID.

IV. RESEARCH METHODOLOGY

This study examines the psychosocial challenges users face and the strategic steps banks have taken to implement electronic banking during and after the COVID-19 pandemic. The target population for the study consisted of users of or those exposed to online banking services. A descriptive cross-sectional design and analysis were employed to evaluate consumer trends and attitudes at a single point in time, thereby avoiding the manipulation of variables due to temporal changes.

Information was gathered using a structured, unambiguous questionnaire, distributed online via Google Forms to ensure maximum convenience and reach the largest possible population. A probability sampling approach was employed to obtain a demographically diverse sample, yielding 210 valid responses. The tool comprised closed- and open-ended questions, with the key constructs measured on a five-point Likert scale, allowing quantifiable responses on consumer trust, emotional reaction, perceived convenience, security concerns, and digital behaviour in the post-pandemic setting.

The study employed a mixed-methods design, integrating qualitative findings and quantitative measures to provide a comprehensive methodology. Descriptive statistics were used to present major trends, and paired-samples t-tests, conducted in IBM SPSS, were used to examine statistically significant differences in consumer attitudes before and after the pandemic.

V. DATA ANALYSIS AND RESULTS

Table I: Demographic Variables

Variable	Frequency	Percentage
Total	210	100%
Gender		
Male	101	48%
Female	105	50%
Prefer not to say	4	2%
Age (Years)		
18-25	92	44%
26-35	20	9%
36-45	52	25%
46-55	34	16%
56+	12	6%
Education Level		
High school or below	36	17%
Bachelor's degree	124	59%
Master's degree or above	50	24%
Employment Status		
Employed full-time	62	29%
Employed part-time	32	15%
Unemployed	20	9%
Student	85	40%
Retired	9	4%

Note: Out of 210 respondents, 48% were male, 50% female, and 2% preferred not to say. Most participants were aged 18–25 (44%), while only 6% were aged 56 or older. Education-wise, 17% had completed high school, 59% held a bachelor's degree, and 24% had a master's or higher. In terms of occupation, 40% were students, followed by 29% who were full-time employed, 15% who were part-time employed, 9% who were unemployed, and 4% who were retired.

These are the results for Objective 1, which outline the key challenges consumers face in adopting e-banking and the measures implemented to overcome them.

Table II: Usage of E-Banking Services

	Frequency	Percent (%)
Yes	188	89.5
No	22	10.5
Total	210	100

Table 1.2 illustrates the distribution of respondents by their use of E-Banking services. The sample size (N) is 210. It shows that a significant majority — 89.5% of the total respondents — use E-Banking services, while 10.5% do not.

Table III: Challenges Faced in Adopting E-Banking - Lack of Trust in Online Transactions

	Frequency	Percent (%)
Strongly agree	25	11.9
Agree	60	28.6
Neutral	58	27.6
Disagree	55	26.6
Strongly disagree	12	5.7
Total	210	100

Table IV: Measures Implemented by Banks to Overcome Challenges-Offering Customer Support and Assistance

	Frequency	Percent (%)
Strongly agree	56	26.7
Agree	98	46.7
Neutral	40	19
Disagree	12	5.7
Strongly disagree	4	1.9
Total	210	100

Table 1.3 illustrates the level of confidence customers have in online transactions. Some of those who responded do not trust online transactions, with a substantial group (40.5%) strongly or generally concurring, a considerable number (32.3%) opposing, and the rest feeling uncertain (27.6%).

Table 1.4 presents the strategies banks use to address the challenges identified in Table 1.3. The approach of providing customer support proved crucial for banks, with a majority of respondents (73.4%) in favour. This indicates overwhelming acceptance of this practice among clients, as only a comparatively small proportion (7.6%) disagreed.

Table V: Challenge- Concerns About Security and Privacy

	Frequency	Percent (%)
Strongly agree	49	23.3
Agree	89	42.4
Neutral	37	17.6
Disagree	28	13.3
Strongly disagree	7	3.3
Total	210	100

Table VI: Measure- Enhancing Security Features and Protocols

	Frequency	Percent (%)
Strongly agree	40	19
Agree	114	54.3
Neutral	42	20
Disagree	10	4.8
Strongly disagree	4	1.9
Total	210	100

The apprehension of online bankers regarding security and privacy is illustrated in Table 1.5. This implies that 65.7% of respondents agree, indicating that the majority of customers feel insecure about their personal data and financial details during e-banking transactions, while a minority (16.6%) disagrees.

Table 1.6 highlights widespread agreement (73.3%) that banks should strengthen security to reduce customer-related risks, indicating strong stakeholder confidence in current risk management strategies. Minimal disagreement (6.7%) suggests these measures are primarily viewed as effective across respondents.

Table VII: Challenge - Complexity of Technology and Interface

	Frequency	Percent (%)
Strongly agree	20	9.5
Agree	55	26.2
Neutral	64	30.5
Disagree	53	25.2
Strongly disagree	18	8.6
Total	210	100

Table VIII: Measure - Simplifying User Interfaces and Processes

	Frequency	Percent (%)
Strongly agree	49	21.4
Agree	103	49
Neutral	45	21.4
Disagree	10	4.8
Strongly disagree	3	1.4
Total	210	100

Table 1.7 presents a review of the complexity of technology and interfaces based on respondents' views. Most respondents (35.7%) recognised the intricacy of technology and interfaces, while 30.5% remained neutral, suggesting indifferent attitudes or differing user experiences. A smaller portion (33.8%) disagreed, indicating that complexity remains a significant concern.

Table IX: Challenge - Lack of Awareness About E-Banking Features

	Frequency	Percent (%)
Strongly agree	26	12.4
Agree	66	31.4
Neutral	57	27.1
Disagree	53	25.2
Strongly disagree	8	3.8
Total	210	100

Banks adopted multiple strategies to streamline interfaces, as shown in Table 1.8. A substantial majority (70.4%) agreed that banks have taken steps to simplify user interfaces and processes. However, 21.4% chose to remain neutral, possibly

reflecting limited exposure to these improvements. Only 6.2% disagreed, indicating overall satisfaction with banks' efforts to streamline their operations.

Table-X: Measure - Providing Educational Materials and Tutorials

	Frequency	Percent (%)
Strongly agree	27	12.9
Agree	90	42.9
Neutral	61	29
Disagree	26	12.4
Strongly disagree	6	2.9
Total	210	100

Table 1.9 below highlights the general lack of awareness among users about e-banking features. Some of them, accounting for 43.8%, recognise this shortfall in their understanding. Moreover, 27.1% maintain a neutral stance, suggesting they may require more information or clarification. Those who do not share this view comprise a relatively minor number, while 29% disagree.

As seen in Table 1.10, 55.8% of respondents supported using educational tools to address knowledge gaps, while 29% remained neutral, suggesting the existing content may lack clarity or engagement. Only 15.3% expressed scepticism, indicating an overall openness toward such interventions, despite possible areas for improvement.

These are the results for Objective 2, which examines the emotional and psychological factors influencing consumer adoption of e-banking before and after the COVID-19 pandemic.

Table-XI: Paired Variables Statistics

Variables		Mean	N	Std. Deviation	Std. Error Mean
1. Experience with E-Banking:	Before COVID-19	2.276	210	1.266	0.087
	After COVID-19	3.8	210	1.233	0.085
2. Perceived Convenience:	Before COVID-19	3.143	210	1.334	0.092
	After COVID-19	3.814	210	1.182	0.082
3. Trust and Security:	Before COVID-19	2.667	210	1.134	0.078
	After COVID-19	3.462	210	1.145	0.079
4. Perceived Risk:	Before COVID-19	3.252	210	1.221	0.084
	After COVID-19	3.095	210	1.218	0.084
5. Social Influence:	Before COVID-19	2.586	210	1.176	0.081
	After COVID-19	3.5	210	1.195	0.082
6. Emotional Responses:	Before COVID-19	2.924	210	1.281	0.088
	After COVID-19	2.505	210	1.215	0.084
7. Perceived Control:	Before COVID-19	2.805	210	1.105	0.076
	After COVID-19	3.526	210	1.054	0.073
8. Future Intentions:	Before COVID-19	2.805	210	1.270	0.088
	After COVID-19	3.686	210	1.180	0.081
9. Impact of COVID-19:	Before COVID-19	3.4	210	1.234	0.085
	After COVID-19	3.505	210	1.276	0.088
10. Perceived Customer Support:	Before COVID-19	2.881	210	1.067	0.074

Table 2.1 illustrates the shift in e-banking adoption driven by emotional and psychological reasons following the COVID-19 pandemic. Strong drivers of adoption, such as experience (2.276 to 3.800), convenience (3.143 to 3.814), trust and security (2.667 to 3.462), social influence (2.586 to 3.500), perceived control (2.805 to 3.526), and future intentions (2.805 to 3.686), all demonstrated significant improvement, meaning higher user confidence and

acceptability. Perceived customer support increased from 2.881 to 3.571. Emotional reactions reduced from 2.924 to 2.505, reflecting uncertainty. The perceived risk marginally decreased (from 3.252 to 3.095), while the effect of COVID-19 remained relatively stable (from 3.4 to 3.505).

Table-XII: Paired Variables Test

	Paired Differences							Significance
	Mean	Std. Deviation	Std. Error Mean	99% Confidence Interval of the Difference		t	df	Two-Sided p
				Lower	Upper			
1. Experience with E-Banking:	-1.514	1.51	0.104	-1.72	-1.309	-14.534	209	<0.001
2. Perceived Convenience:	-0.671	1.411	0.097	-0.863	-0.479	-6.894	209	<0.001
3. Trust and Security:	-0.795	1.287	0.089	-0.97	-0.62	-8.954	209	<0.001
4. Perceived Risk:	0.157	1.397	0.096	-0.033	0.347	1.63	209	0.105
5. Social Influence:	-0.914	1.367	0.094	-1.1	-0.728	-9.693	209	<0.001
6. Emotional Responses:	0.419	1.492	0.103	0.216	0.622	4.071	209	<0.001
7. Perceived Control:	-0.724	1.287	0.089	-0.899	-0.549	-8.152	209	<0.001
8. Future Intentions:	-0.881	1.477	0.102	-1.082	-0.68	-8.643	209	<0.001
9. Impact of COVID-19:	-0.105	1.708	0.118	-0.337	0.128	-0.889	209	0.375
10. Perceived Customer Support:	-0.69	1.074	0.074	-0.837	-0.544	-9.32	209	<0.001

Table 2.2 presents the paired-samples t-test statistics to assess significant differences in emotional and psychological factors before and after the COVID-19 pandemic. Analysis demonstrated substantial improvement in most aspects, such as experience with e-banking ($p < 0.001$), perceived convenience ($p < 0.001$), trust and security ($p < 0.001$), social influence ($p < 0.001$), perceived control ($p < 0.001$), future intentions ($p < 0.001$), and customer support ($p < 0.001$), all with negative mean differences, which show higher scores in the post-pandemic scenario. In addition, the emotional response showed a statistically significant positive mean difference (0.419; $p < 0.001$), indicating a reduction in emotional resistance.

However, perceived risk ($p = 0.105$) and the influence of COVID-19 ($p = 0.375$) were not statistically significant, indicating no significant differences in user perceptions of these factors. Overall, these findings suggest that most psychological facilitators of e-banking adoption were significantly reinforced following the COVID-19 outbreak.

VI. FINDINGS AND IMPLICATIONS

A. Objective 1:

Before COVID-19, there was a generalised consumer fear, implying that user confidence varies due to a trust deficit regarding the security and privacy risks associated with online banking, particularly phishing, data breaches, and transaction fraud. This implies that the perceived vulnerabilities are widespread. However, the pandemic led to widespread acceptance of online banking among customers. There has hence been a strong endorsement of enhancing security measures and existing risk management strategies, such as two-factor authentication, encryption, and fraud alerts. Additionally, banks have effectively minimised this deficit through 24/7*365 customer service availability, which is primarily considered adequate.

The findings indicate that, while a significant portion of users still perceive e-banking technology and interfaces as complex, there is a broad acknowledgement of banks' efforts to simplify them. Neutral responses suggest varying exposure or indifference, highlighting the need for more inclusive design strategies. Additionally, a notable lack of familiarity with e-banking features points to a knowledge gap, even as strong resistance to instructional support remains minimal. The moderate success of current educational initiatives suggests that, while banks are taking appropriate steps,

further refinement of content accessibility and clarity is essential to ensure users can confidently navigate digital banking platforms.

The findings underscore a widespread lack of awareness of e-banking features, with many users acknowledging knowledge gaps and others remaining neutral—suggesting uncertainty or limited exposure. While educational tools are broadly supported as a corrective measure, neutral and sceptical responses highlight the need for more explicit, more engaging content. Additionally, the persistent perception of complexity in technology and interface design suggests that usability challenges persist. Widespread support for banks' simplification efforts reflects user appreciation but also signals a continuing demand for intuitive, user-centred digital platforms to ensure effective adoption and interaction in a post-pandemic banking landscape.

B. Objective 2:

The evolving consumer relationship with e-banking post-pandemic reflects an intricate transformation in digital behaviour. Emotional adaptation coexists with a decline in functional confidence. Users appear to be more emotionally comfortable using online banking, as evidenced by improved emotional responses. However, this comfort is not reflected in their perceptions of trust, control, or convenience. In fact, the declining sense of convenience, trust, security, and customer support suggests that users are not finding the digital experience as seamless or reassuring as they had hoped. This highlights that digital familiarity is not a guarantee of satisfaction. Perceived customer support has emerged as a critical friction point. Gaps in service quality can quickly erode user loyalty in environments that lack human touchpoints.

Perceived control has also weakened. Users may feel increasingly dependent on digital systems without feeling empowered within them. Social influence, a traditionally motivating factor in technology adoption, has also declined. This highlights a potential shift from community-led decisions to those driven by individual needs. Although perceived risk remained stable, the lack of positive movement suggests that users continue to harbour underlying concerns about safety and privacy. The unchanged perception of the pandemic's impact hints that consumer behaviour has evolved beyond reactive adjustments to a more

permanent digital mindset. Most critically, the decline in future intentions highlights the need for loyalty-building efforts through meaningful engagement, consistent performance, and educational support.

Banks need to advance beyond fundamental digital capability if they are to restore trust, enable users, and provide emotionally attuned, user-centric experiences. Prioritising transparency, support, and personalised interaction will enable long-term usage.

VII. FUTURE RESEARCH AGENDA

This study presents a novel psychosocial perspective on the adoption of e-banking during and after the COVID-19 pandemic, integrating consumer challenges and institutional strategies in a unique way. By employing a mixed methods approach that combines statistical analyses with qualitative insights, the study draws attention to emotional functional dissonance. This dimension is often overlooked in traditional adoption frameworks. The findings indicate that although user comfort, trust, and perceived control improved significantly after the pandemic, this emotional adaptation frequently coexisted with dissatisfaction with usability, customer support, and perceptions of security. This research makes a significant contribution by demonstrating that emotional familiarity with digital platforms does not always translate into satisfaction, loyalty, or continued engagement, particularly in environments where personal interactions are limited. Nevertheless, some limitations must be recognized. The reliance on self-reported data introduces the possibility of response bias, and using online surveys may have excluded individuals with limited access to digital platforms. Furthermore, this study did not explore differences across various geographic areas, income levels, and types of banking institutions, including public banks, private banks, and fintech companies. It also did not consider broader macroeconomic factors such as the frequency of cybercrime incidents or changes in regulatory policies that could influence consumer trust and adoption. The cross-sectional design limits the ability to understand how perceptions develop or change over time.

Future research should adopt designs that follow participants over time and include multiple regions to capture better the evolving nature of consumer behaviour and psychological readiness for digital banking. Special attention should be given to vulnerable groups, such as older adults and individuals with limited experience in digital technologies, to determine whether current institutional initiatives adequately meet their needs. It would also be valuable to investigate how emotional intelligence, transparent practices, and personalized engagement shape long-term trust and loyalty in digital financial services.

From a broader societal perspective, such research is essential for developing inclusive, user-focused financial systems that do more than facilitate Transactions. As banking increasingly moves away from physical branches, ensuring psychological safety, emotional satisfaction, and fair access will be crucial for closing the digital divide and fostering lasting trust in digital ecosystems.

VIII. LIMITATIONS

The ability to generalize these findings depends on how well the study sample reflects the diversity of different consumer groups. This could lead to gaps in understanding consumer behavior across income brackets, regions, and levels of digital literacy. The use of self-reported information can also introduce bias, since participants may overstate or understate their attitudes and experiences with e-banking. Important external influences, such as cybercrime patterns, developments in fintech regulation, and general economic conditions, were not examined in detail, even though they have substantial effects on trust and adoption rates. The study did not explore differences in service quality among public banks, private institutions, and fintech operators. Furthermore, the sampling approach carries the risk of sampling error and may underrepresent specific demographic segments. Because the data was collected through online surveys, the accuracy of individual responses could not be verified, which may also introduce bias.

IX. CONCLUSION

The study reveals that, although banks have made significant progress in addressing fundamental concerns, such as enhancing security protocols and simplifying user interfaces to mitigate technological obstacles, some challenges persist. Educational initiatives have helped bridge gaps in basic awareness; yet, many consumers still have a limited understanding of the features offered by e-banking. While emotional comfort with digital banking has increased since the onset of COVID-19, concerns about trust, perceived risks, and the quality of customer support persist. The improvements in convenience and perceived control are evident, but emotional dissonance and weak engagement with services continue to undermine user confidence. These findings highlight that institutional measures have partially closed functional gaps; however, psychological and emotional concerns, particularly those related to trust and support, call for more intentional, transparent, and human-centred design approaches.

DECLARATION STATEMENT

After aggregating input from all authors, I must verify the accuracy of the following information as the article's author.

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- **Funding Support:** This article has not been funded by any organizations or agencies. This independence ensures that the research is conducted with objectivity and without any external influence.
- **Ethical Approval and Consent to Participate:** The content of this article does not necessitate ethical approval or consent to participate with supporting documentation.
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- **Author's Contributions:** The



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AUTHOR'S PROFILE



Tisha Shah is a finance undergraduate passionate about applying analytical frameworks to understand and address complex financial challenges. Her research spans arbitrage strategies, sentiment-driven equity movements, market inefficiencies, and ethical issues in global finance, combining data-driven analysis with practical insights.

She excels in intellectually rigorous environments, applying her problem-solving skills to evaluate risks and inform informed decision-making. Beyond academics, Tisha pursues creative interests such as dance and travel, which broaden her perspective and foster innovative thinking. She aims to contribute actionable insights that advance understanding and promote efficient, effective, and responsible financial practices.



Rashika Agarwal is pursuing a B.Sc. in Finance from NMIMS Mumbai, with a strong academic foundation and a keen interest in financial markets, strategy, and innovation. She brings an analytical, research-driven mindset, leveraging data-backed insights to solve complex problems and support informed decision-making. Her academic and professional experiences have strengthened her adaptability, collaboration, and communication skills, enabling her to perform effectively in dynamic environments. Beyond academics, she actively pursues interests such as dance, photography, and travel, which

nurture creativity and broaden her perspective. A passion for continuous learning, intellectual curiosity, and a relentless pursuit of excellence in all endeavours drives her.



Anika Bafna is a dedicated finance student pursuing a B.Sc. in Finance at NMIMS and preparing for the CFA Level II exam. She has established a strong academic foundation, with a particular interest in investment strategies, corporate restructuring, and alternative investments. She has undertaken projects in statistical arbitrage in Indian equities, hedge-fund returns analysis, digital banking, and company valuations, demonstrating both analytical rigour and practical application. Curious and detail-oriented, Anika excels in challenges that require research, problem-solving, and strategic thinking. Beyond academics, she enjoys reading and exploring, which broaden her outlook and inspire creative ideas. With long-term aspirations in investment management and strategic finance, she aims to make a meaningful contribution to the financial industry.



Tanisha Surana is pursuing a B.Sc. in Finance from NMIMS, Mumbai, while also advancing her professional journey in actuarial science. She has successfully cleared two actuarial papers and is currently preparing for CM1, reflecting her commitment to building a strong quantitative and analytical foundation. With a keen interest in actuarial applications, risk management, and financial decision-making, she seeks to integrate data-driven insights with practical frameworks to address complex economic challenges. Her academic pursuits have equipped her with strong analytical, problem-solving, and communication skills, enabling her to make thoughtful contributions to dynamic environments. Beyond academics, Tanisha finds expression through dance, travel, and art, which broaden her outlook and nurture creativity. She aspires to build a meaningful career in actuarial science, contributing to innovative, responsible, and practical financial practices.



Prisha Sheth is a dedicated finance student currently pursuing a Bachelor of Science in Finance at NMIMS University, Mumbai. A consistently high-achieving academic, she distinguished herself as a top-performing A-Level student and has continued her academic excellence at the university level. Prisha is also a CFA Level II candidate, demonstrating her commitment to deepening her expertise in financial analysis and investment management. Her research interests lie at the intersection of financial markets and consumer behaviour, with a specific focus on derivatives markets, global and international finance, market demand analysis, consumer perceptions, emerging market trends, and the dynamics of mergers and acquisitions. A rigorous analytical approach and a strong foundation in both theoretical and empirical methodologies characterize her academic work. From an early interest in stock markets to formal education in finance, Prisha's intellectual journey reflects an evident and sustained passion for the complexities of financial systems. Her goal is to make meaningful contributions to the evolving landscape of global finance through thoughtful research and practical insights.

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