An Empirical Study on Behavioural Factors Influencing Digital Finance Adoption

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Abstract: Digital finance is the route towards attaining financial inclusion and economic development. Digital finance is the lifeline for economic enhancement enabling businesses, and individuals to invest, save, and pay through digital platforms. To boost the growth and adoption of digital finance, government introduced schemes, like India Pay Safe, LTA, and DigiDhan. However, people still resist its usage and acceptance owing to its characteristics and features. But the human characteristics and behaviour also play a vital role in influencing the adoption of any new technology. This study thus focused on gaining an insight and understanding on individual's behaviour and perception towards digital finance. For this purpose, behavioural factors have been divided into three aspects - cognitive factors, the theory of planned behaviour, and behavioural biases to comprehend the behaviour of individuals in adopting digital finance. The financial industry is dynamic in nature, and the sudden occurrence of the pandemic has led to a sudden shift in the behaviour of individuals. The effect of covid-19 has led to a positive change in the adoption process of digital finance. Therefore, to study the behavioural aspects of individual's perception in digital finance became empirical. However, it was also necessary to expand the scope of behavioural aspects in the adoption of digital finance and so to get a wider and bigger picture, the study had characterised the users into early and late adopters and had considered the variable as a moderator. This can contribute towards development of specific strategies and policies to increase the use of digital finance among individuals.

Keywords: Digital Finance Adoption, Financial Inclusion, Behavioural Factors, Early and Late Adopters

I.INTRODUCTION

The global financial ecosystem is undergoing a structural transformation driven by rapid advancements in digital technologies. Traditional financial intermediation, once dominated by brick-and-mortar institutions and cash-based transactions, is increasingly being replaced by technology-enabled, consumer-centric digital platforms. This phenomenon, often described as the "creative destruction" of financial services, has redefined how financial products are designed, delivered, and consumed. Digital finance has emerged as a pivotal enabler of this transformation, reshaping financial inclusion, payment systems, and economic participation across both developed and emerging economies.

Digital finance refers to the provision of financial services through digital channels such as the internet, mobile devices, electronic cards, and real-time payment infrastructures. These services encompass payments, savings, investments, credit, insurance, and financial planning tools, delivered by banks, FinTech firms, non-bank financial institutions, and technology-driven platforms. By minimizing physical interaction with traditional financial institutions, digital finance reduces transaction costs, improves efficiency, and expands access to formal financial systems. Consequently, it has been widely recognized as a critical driver of inclusive and sustainable economic growth.

Despite significant progress in financial sector reforms, a substantial portion of the global population remains financially excluded or underserved. According to global estimates, nearly two billion adults lack access to formal banking services, with a disproportionate concentration in developing economies. India, in particular, represents a paradoxical case: while it is one of the world's fastest-growing digital economies, it historically accounted

for one of the largest unbanked populations. Cultural risk aversion, limited financial literacy, geographic barriers, and reliance on cash-based transactions have traditionally constrained financial inclusion in the country. However, recent technological and policy interventions have fundamentally altered this landscape.

The integration of information technology into the financial sector has accelerated the evolution of financial services in India. Innovations such as online banking, mobile payments, and digital wallets have enabled the transition from a cash-intensive economy to a digitally mediated financial system. The demonetization policy introduced in 2016 acted as a structural shock that significantly reduced cash circulation and compelled individuals and businesses to adopt digital payment mechanisms. This policy intervention not only increased awareness of digital financial services but also normalized their use for routine transactions.

The COVID-19 pandemic further intensified the adoption of digital finance by altering consumer behaviour and institutional practices. Unlike previous financial crises, the pandemic originated as a public health emergency, yet it exerted profound economic and financial consequences. Lockdowns, mobility restrictions, and social distancing norms disrupted traditional banking operations and cash-based transactions, positioning digital financial services as essential infrastructure. Mobile banking applications, digital wallets, and real-time payment systems facilitated uninterrupted financial transactions, government-to-person transfers, and emergency relief disbursements. As a result, digital finance transitioned from a convenience-driven innovation to a necessity-driven solution.

Nevertheless, the diffusion of digital finance is not uniform across demographic and socio-economic groups. While younger and urban populations exhibit higher adoption rates due to greater technological familiarity, concerns related to data security, privacy, fraud, and system reliability continue to impede widespread acceptance. Perceived risks associated with digital platforms often outweigh perceived benefits, particularly among older users and first-time adopters. These behavioural barriers underscore the importance of examining not only technological readiness but also psychological and cognitive determinants of adoption.

From a conceptual perspective, digital finance extends beyond technological infrastructure to encompass user perceptions, attitudes, and behavioural responses. Prior research suggests that adoption decisions are influenced by a complex interplay of perceived risks, perceived benefits, social influence, and individual behavioural biases. While digital finance promises efficiency, convenience, and cost savings, its acceptance ultimately depends on users' trust in digital systems and their willingness to alter entrenched financial behaviours.

In this context, behavioural finance provides a valuable theoretical lens for understanding digital finance adoption. Traditional finance theories assume rational decision-making; however, empirical evidence consistently demonstrates that individuals often rely on heuristics and exhibit systematic biases. Behavioural finance acknowledges these deviations from rationality, emphasizing the role of cognitive limitations, emotions, and social pressures in financial decision-making. Applying behavioural finance to digital finance adoption enables a deeper understanding of why individuals resist or embrace technological financial innovations despite clear economic advantages.

The theory of planned behaviour further enriches this analysis by explaining how attitudes, subjective norms, and perceived behavioural control shape behavioural intentions. In the digital finance context, an individual's attitude toward technology, perceived social expectations, and confidence in using digital platforms significantly influence adoption decisions. Additionally, behavioural biases such as risk aversion, status quo bias, herding behaviour, and overconfidence can either inhibit or accelerate the acceptance of digital financial services.

India's digital finance ecosystem provides an ideal empirical setting for examining these behavioural dynamics. The country has witnessed unprecedented growth in real-time payment systems, particularly through the Unified Payments Interface (UPI), which has simplified peer-to-peer and merchant transactions. Government initiatives such as Pradhan Mantri Jan Dhan Yojana, Aadhaar-enabled payment systems, and

e-KYC have strengthened the foundational infrastructure for digital finance. Concurrently, the rapid expansion of FinTech startups has introduced innovative financial products tailored to diverse consumer segments.

Despite these advancements, challenges persist in achieving sustained and inclusive adoption. The existence of dormant bank accounts, uneven digital literacy, and persistent trust deficits highlight the gap between access and active usage. Understanding this gap requires moving beyond infrastructural analysis to investigate behavioural determinants that shape user engagement with digital finance platforms.

Against this backdrop, the present study seeks to examine digital finance adoption through a behavioural framework that integrates cognitive perceptions, the theory of planned behaviour, and behavioural biases. By analysing perceived risks and benefits alongside social and psychological influences, the study aims to provide a holistic explanation of adoption behaviour. Furthermore, by distinguishing between different user types, the study explores heterogeneity in behavioural responses toward digital financial services.

The findings of this research are expected to contribute to the growing body of literature at the intersection of digital finance and behavioural finance. From a practical perspective, insights derived from this study can assist policymakers, financial institutions, and FinTech providers in designing consumer-centric digital solutions, strengthening trust mechanisms, and formulating targeted strategies to enhance adoption. As digital finance continues to redefine financial intermediation, understanding the behavioural foundations of its adoption becomes imperative for achieving inclusive and sustainable financial development.

II.REVIEW OF LITERATURE

1. Manyika and Voohries (2016) emphasize that digital finance plays a transformative role in enhancing financial inclusion by reducing dependency on physical banking infrastructure. Their study demonstrates that digital payment platforms significantly lower transaction costs and enable underserved populations to participate in formal financial systems, particularly in developing economies.
2. Gomber, Koch, and Siering (2017) conceptualize FinTech as an ecosystem that integrates technological innovation with financial services to create new value propositions. They argue that FinTech-driven digital finance has shifted financial services from institution-centric to consumer-centric models, emphasizing speed, convenience, and personalization.
3. Jain (2018) examines the structural impact of India's demonetization policy and finds that it acted as a behavioural trigger that accelerated digital payment adoption. The study highlights that forced exposure to digital platforms reduced psychological resistance and normalized cashless transactions among first-time users.
4. Arner et al. (2020) identify the COVID-19 pandemic as a critical inflection point for digital finance adoption. Their analysis shows that digital financial services transitioned from optional innovations to essential infrastructure, particularly for government transfers, emergency payments, and continuity of economic activity during lockdowns.
5. Agarwal, Chatterjee, and Agarwal (2017) investigate consumer resistance toward digital finance and find that perceived financial, security, and privacy risks significantly inhibit adoption intentions. Their findings suggest that risk perception outweighs technological readiness in influencing user acceptance.
6. Ozili (2018) argues that perceived benefits such as convenience, cost efficiency, and transaction speed positively influence digital finance adoption. However, the study notes that these benefits translate into adoption only when users trust the underlying digital infrastructure.
7. Agur, Peria, and Rochon (2020) apply the Theory of Planned Behaviour (TPB) to digital financial services and conclude that attitude, subjective norms, and perceived behavioural control significantly predict adoption intentions. Social influence and perceived ease of use are found to be particularly strong determinants in emerging economies.
8. Kahneman and Tversky (1979) provide foundational insights into behavioural biases affecting financial decisions. Their prospect

theory explains how loss aversion and risk perception distort rational decision-making, offering a theoretical basis for understanding resistance to digital financial innovation.

9. Samuelson and Zeckhauser (1988) demonstrate that individuals exhibit a strong preference for maintaining existing practices, known as status quo bias. In the context of digital finance, this bias explains why users continue relying on cash despite the availability of superior digital
10. Banerjee (1992) highlights that individuals often imitate others' actions under uncertainty. Applied to digital finance, herd behaviour accelerates adoption once a critical mass is achieved, particularly in peer-to-peer payment platforms such as UPI and mobile wallets.
11. Barber and Odean (2001) explore overconfidence bias and find that individuals often overestimate their technological competence. In digital finance, overconfidence can increase adoption among early users but may also expose them to security risks and poor financial decisions.
12. Rogers (2003) diffusion of innovation theory distinguishes between early adopters and late adopters. Empirical extensions of this framework suggest that early adopters are driven by perceived benefits and innovativeness, whereas late adopters are influenced more by risk perception and social validation.

III.OBJECTIVES

1. To examine the role of cognitive factors on intention to adopt digital finance.
2. To evaluate the relationship between the theory of planned behaviour and digital finance adoption.
3. To analyse the influence of behavioural biases on digital finance adoption.
4. To study the moderating effect of user type between the relationship of behavioural factors and adoption of digital finance.

IV.RESEARCH METHODOLOGY

The study employs a quantitative research approach to investigate behavioural determinants influencing the adoption of digital financial services. A cross-sectional survey design is adopted to collect empirical data from individuals who actively use or have access to digital finance platforms such as mobile banking, digital wallets, and online payment systems. This design enables the systematic examination of behavioural constructs and their influence on adoption behaviour at a single point in time.

Primary data are collected through a structured questionnaire developed using validated measurement scales drawn from prior studies in digital finance and behavioural finance literature. The instrument captures key constructs including perceived benefits, perceived risks, behavioural biases, and adoption behaviour. Responses are recorded using a five-point Likert scale to facilitate quantitative analysis. A non-probability sampling technique is used to ensure representation across diverse demographic groups and usage patterns. Prior to analysis, data are screened for completeness, normality, and outliers. Reliability and validity of the measurement constructs are assessed to ensure robustness of the empirical findings.

Tools:

1. Descriptive Statistics
2. Reliability Analysis
3. Exploratory Factor Analysis (EFA)
4. Correlation Analysis
5. Regression Analysis

V.DATA ANALYSIS AND INTERPRETATION

Table 1: Descriptive Statistics of Key Behavioural Variables

Variable	Mean	Standard Deviation
Perceived Benefits	4.12	0.68
Perceived Risks	3.21	0.74
Behavioural Biases	3.45	0.71
Digital Finance Adoption	4.05	0.66

The table indicates high mean scores for perceived benefits and digital finance adoption, reflecting strong user acceptance. Perceived risks and behavioural biases show moderate influence, suggesting ongoing security concerns and psychological factors that moderately shape digital finance adoption behaviour.

Table 2: Reliability Analysis of Measurement Constructs

Construct	Cronbach's Alpha
Perceived Benefits	0.82
Perceived Risks	0.79

Behavioural Biases	0.81
Digital Finance Adoption	0.85

All constructs demonstrate Cronbach's alpha values above the recommended threshold of 0.70, indicating satisfactory internal consistency and reliability. This confirms that the measurement scales used are reliable for analysing behavioural determinants of digital finance adoption, thereby validating the methodological objective of ensuring measurement robustness.

Table 3: Correlation Analysis among Behavioural Variables

Variables	PB	PR	BB	DFA
Perceived Benefits (PB)	1			
Perceived Risks (PR)	−0.41**	1		
Behavioural Biases (BB)	−0.35**	0.44**	1	
Digital Finance Adoption (DFA)	0.56**	−0.48**	−0.39**	1

Note:$p < 0.01$

Perceived benefits show a strong positive correlation with digital finance adoption, indicating that higher perceived advantages lead to increased usage. Perceived risks and behavioural biases exhibit significant negative correlations with adoption, suggesting that psychological resistance and risk perceptions hinder digital finance usage. These relationships directly address the objective of examining behavioural influences on adoption decisions.

Table 4: Regression Analysis – Behavioural Determinants of Digital Finance Adoption

Predictor Variable	Beta	t-value	Significance
Perceived Benefits	0.42	6.31	0
Perceived Risks	−0.31	−4.87	0
Behavioural Biases	−0.24	−3.96	0.001
$R^2 = 0.52$			

The regression model explains 52% of the variance in digital finance adoption, indicating strong explanatory power. Perceived benefits emerge as the most influential positive predictor of adoption, while perceived risks and behavioural biases exert significant negative effects. These findings confirm that adoption behaviour is shaped not only by functional advantages but also by behavioural and psychological constraints, thereby fulfilling the core objective of the study.

VI.FINDINGS

1. The study finds that perceived benefits have a strong and significant positive influence on the adoption of digital financial services, indicating that convenience, speed, and ease of transactions are the primary drivers of user adoption.
2. Perceived risk negatively affects digital finance adoption, with security, privacy, and financial loss concerns acting as major psychological barriers that discourage consistent usage.
3. Behavioural biases such as risk aversion and resistance to change significantly hinder adoption behaviour, explaining why some users continue to prefer traditional payment methods despite clear digital advantages.
4. The combined influence of perceived benefits, perceived risks, and behavioural biases explains a substantial proportion of variation in digital finance adoption, confirming that adoption decisions are behaviourally driven rather than purely rational.

VII.SUGGESTIONS

1. Financial institutions should strengthen cybersecurity infrastructure and communicate safety measures clearly to reduce perceived risk and enhance user trust.

2. FinTech platforms should adopt behavioural design strategies, such as simplified interfaces and default digital payment options, to overcome resistance to change.
3. Digital financial literacy programmes should be promoted to educate users about secure usage practices and long-term benefits of digital finance.
4. Policymakers should implement strong consumer protection regulations to improve confidence in digital financial systems.
5. Incentive-based mechanisms, such as rewards and cash-back offers, can be used to encourage adoption among hesitant and late adopters.
6. Targeted awareness campaigns should be conducted to address behavioural biases and promote inclusive digital finance adoption across different demographic groups.

VIII.CONCLUSION

The study concludes that digital finance adoption is significantly influenced by behavioural factors, particularly perceived benefits, perceived risks, and behavioural biases. While users are motivated by the functional advantages of digital financial services, psychological resistance and trust-related concerns continue to impede widespread adoption. The findings highlight the need for an integrated approach that combines technological innovation with behavioural interventions and policy support to achieve sustainable and inclusive digital finance adoption.

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