



Impact of Digital Financial Literacy on Financial Well-Being: The Mediating Role of Digital Financial Inclusion

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ABSTRACT

This study examines the impact of digital financial literacy on financial well-being, with a particular focus on the mediating role of digital financial inclusion. Data were collected from 323 individuals using convenience sampling. The analysis was conducted using simple linear regression in SPSS, and mediation analysis was performed employing the PROCESS macro developed by Andrew F. Hayes. The findings reveal a partial mediating effect of digital financial inclusion on the relationship between digital financial literacy and financial well-being, indicating that although digital financial inclusion partially mediates the relationship, digital financial literacy also exerts a direct positive effect on financial well-being. Specifically, digital financial literacy significantly enhances digital financial inclusion ($\beta = 0.726$, $p < 0.001$), which in turn contributes to improved financial well-being. However, the generalizability of the findings may be limited to internet users in Pakistan, and the reliability and validity of the results may be affected by data quality constraints, potential response biases, and the reliance on self-reported measures collected through a web-based questionnaire. Despite these limitations, the study contributes to the growing body of literature in digital finance by providing valuable insights for financial institutions, investors, governments, policymakers, and educational institutions seeking to promote financial literacy, strengthen financial inclusion, and improve overall financial well-being.

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1. Introduction

The accelerating trend of digitalization has profoundly transformed consumer markets and industries worldwide. According to the GSMA (2022), approximately 64% of developing countries have access to smartphone-based financial services, reflecting the rapid expansion of mobile-enabled financial ecosystems. Global smartphone penetration has continued to rise significantly, facilitating the widespread adoption of digital payment systems and reshaping financial service delivery. These developments underscore the growing need to enhance financial behavior, promote digital financial inclusion, and strengthen digital financial literacy. The integration of mobile technologies and digital user interfaces presents substantial opportunities to connect micro, small, and medium-sized enterprises (MSMEs) to accessible, affordable, and reliable financial tools (Bansal, 2019).

In this evolving context, the concept of digital financial literacy (DFL) has emerged to describe the competencies, knowledge, confidence, and skills required to effectively use internet-based financial services and make informed day-to-day financial decisions. The expansion of information and communication technologies, the increasing integration of the internet into personal and professional life, and supportive governance frameworks have collectively contributed to the development of digital literacy as a multidimensional and dynamic construct (Donaldson & Alker, 2019). Digital financial literacy therefore represents the intersection of digital capability and financial knowledge, both of which are essential in an increasingly digitized economy.

At the global policy level, the Global Partnership for Financial Inclusion (GPFI) was established following the recognition of financial inclusion as a central pillar of the global development agenda during the G20 Seoul Summit. The GPFI serves as a primary international platform aimed at expanding access to and usage of high-quality formal financial services for underserved and marginalized populations. Its action plans emphasize sustainable financial inclusion as a pathway to economic empowerment and inclusive growth (GPFI, 2017).

Digital financial literacy is inherently multifaceted, encompassing traditional financial literacy, digital skills, and the ability to access and utilize digital financial services effectively. Achieving financial wellbeing in the contemporary environment requires not only financial knowledge but also the digital competencies necessary to manage finances through online platforms. As financial systems become increasingly digitized, financial literacy must be reconceptualized within an online context. Individuals must therefore possess both digital and conventional financial capabilities to exhibit positive financial behaviors and achieve improved financial outcomes (Lyons & Kass-Hanna, 2021).

Empirical evidence further illustrates the rapid growth of digital financial services in emerging economies. For instance, the Ghana Interbank Payment and Settlement Systems reported a substantial increase in digital payment transactions, with an 81% rise in payment volumes during the first quarter of 2020, largely driven by the growing adoption of mobile money. Data from the Bank of Ghana (BoG, 2020) indicate significant growth in transaction volumes and account usage over recent years, reflecting the expanding role of digital finance in promoting financial access.



Previous studies, particularly in India, have primarily focused on how digital financial services enhance affordable access to formal financial instruments for underserved populations. However, limited attention has been given to the determinants influencing the adoption and effective use of internet-based financial products and services (Bathula & Gupta, 2021). The theoretical linkage between financial literacy and financial wellbeing suggests that individuals with higher financial knowledge are more likely to adopt appropriate financial services, engage in sound financial practices, and ultimately achieve higher levels of financial wellbeing (Fan & Henager, 2022). Despite the growing body of literature on financial inclusion and financial literacy, comprehensive evaluations of their intersection within the digital context remain limited. Moreover, with the conclusion of the World Bank Universal Financial Access (UFA) 2020 initiative, it is timely to assess scholarly contributions and policy outcomes in this domain.

Although digital financial literacy enhances access to economic opportunities and facilitates participation in the modern financial system, substantial segments of the population remain excluded or experience slower integration into digital financial ecosystems. Limited digital financial literacy constitutes a significant barrier to the adoption of digital financial services and, consequently, to achieving financial inclusion and independence. Considering these dynamics, digital financial literacy emerges as a fundamental prerequisite for meaningful financial inclusion within the contemporary digital financial landscape (Azeez & Akhtar, 2021).

1.1 The Shift to Digital Financial Services

The transition from traditional financial services—such as physical banking systems and automated teller machines—to digital financial services (DFS) has accelerated rapidly across many developing regions, particularly in Sub-Saharan Africa and South Asia (Kass-Hanna et al., 2022; Murshed et al., 2023). This transformation has been largely driven by the widespread adoption of mobile phones, with recent estimates suggesting that approximately 67% of the global population has access to a mobile device. Access to DFS is increasingly regarded as essential for improving livelihoods in the digital era, as it enhances individuals' capacity to achieve financial security and build financial resilience (Lyons & Kass-Hanna, 2021).

Despite these advancements, financial inclusion in Pakistan remains relatively low. According to the Ministry of Finance (2018), only 10.3% of adult Pakistanis hold an account with a formal financial institution, a figure significantly lower than the average for lower-middle-income countries (41.4%) and South Asia (33%). Although 36% of adults report saving money, only 4% do so through formal financial institutions, and 56% do not utilize either formal or informal financial services. Similarly, merely 3% of adults borrow from formal institutions, compared to approximately one-third who rely on informal sources. These statistics underscore substantial gaps in access to and usage of formal financial services.

The concept of financial wellbeing extends beyond objective financial indicators to incorporate individuals' subjective perceptions of their financial circumstances. While income and wealth are important predictors of wellbeing, they do not fully explain variations in overall life satisfaction (Biswas-Diener & Will, 2002). To address this limitation, the Consumer Financial Protection Bureau



(CFPB) conceptualized financial wellbeing as an individual's perceived ability to effectively manage financial obligations, absorb financial shocks, and pursue future financial goals (Consumer Financial Protection Bureau, 2017). Empirical evidence suggests that subjective financial wellbeing may have greater predictive power for life satisfaction than objective financial measures (Adriani, 2018).

Against this backdrop, the present study aims to examine how digital financial literacy enhances individuals' financial wellbeing, while investigating the mediating role of digital financial inclusion. The study focuses on users of digital financial services in Pakistan and further offers directions for future research, including potential exploration of digital financial engagement within the gig economy, investor perspectives within financial institutions, and individual banking behaviors related to digital financial inclusion. The paper is structured into seven sections: the second section presents the literature review; the third outlines the data and methodology; the fourth and fifth sections discuss the analysis and results; the sixth provides conclusions and discussion; and the final section highlights implications and limitations.

2. Literature Review

2.1 Theoretical Background:

One of the earliest and most influential theoretical frameworks explaining the adoption of information technology is the Technology Acceptance Model (TAM), developed by Fred Davis (1989). TAM has been widely applied across diverse information technology contexts to explain users' acceptance behaviors. The central premise of the model is that individuals make rational decisions regarding technology use based primarily on two key determinants: perceived usefulness and perceived ease of use. These factors significantly influence users' attitudes toward technology adoption and their intention to use new systems. Related theoretical perspectives include the Theory of Planned Behavior (TPB) and the Theory of Reasoned Action (TRA), advanced by Icek Ajzen and Martin Fishbein, which provide broader explanations of human behavior by emphasizing attitudes, subjective norms, and perceived behavioral control across various contexts.

Both TAM and the Unified Theory of Acceptance and Use of Technology (UTAUT) have been extensively employed to examine technology adoption in diverse international settings. These theoretical models offer valuable insights into how acceptance factors influence user satisfaction and financial decision-making in digital environments. Collectively, they have contributed to a deeper understanding of user behavior and the determinants of technology acceptance. However, further research is required to comprehensively capture user engagement in digital payment systems, particularly within emerging economies. In the context of the present study, an extension of TAM is considered more appropriate than UTAUT, as it allows for the integration of constructs that more directly reflect digital financial literacy and financial wellbeing, while incorporating digital financial inclusion as a mediating mechanism. The conceptual flexibility of TAM therefore provides a more suitable framework for examining the interrelationships among these variables than the broader, more generalized constructs within the original model.



2.2 Review of Empirical Literature: Development of Hypotheses

2.2.1 Digital Financial literacy and financial wellbeing

Internet-based financial literacy plays a critical role in shaping the direction of future research on financial literacy and serves as an important change agent in promoting informed financial behaviors. While extensive research has examined financial literacy and its effects on financial inclusion, emerging studies increasingly emphasize the significance of online or digital financial literacy (Goyal & Kumar, 2021). Digital literacy enhances the financial learning experiences of online users by improving their ability to access, interpret, and utilize digital financial information effectively (OECD, 2018). Understanding how digital financial literacy interacts with socioeconomic and demographic factors is therefore a key research focus. Prior studies have identified several characteristics that strongly influence financial literacy levels. For example, evidence suggests that women generally exhibit lower financial literacy than men (Lusardi & Mitchell, 2014; OECD, 2013), while middle-aged adults often demonstrate higher financial literacy than both younger and older cohorts (Choudhary & Jain, 2023).

Indian studies have shown that financial wellbeing, financial behavior, and financial knowledge positively impact financial literacy (Prakash et al., 2022), and responsible financial decision-making contributes to enhanced financial wellbeing (Parvathy & Kumar, 2022). In community-based groups, women's financial literacy is significantly associated with their financial wellbeing. A recent study in South Korea using online survey data found a positive correlation between digital financial literacy and financial wellbeing, which was attributed to the ability to make informed financial decisions and avoid online fraud (Choung et al., 2023). The study also highlighted that the relationship between financial wellbeing and protective financial behaviors was significant across gender, education, and income levels. Based on these findings, the following hypothesis is proposed to examine the relationship between digital financial literacy and financial wellbeing:

H₁: There is a significant relationship between digital financial literacy (DFL) and financial wellbeing (FW).

2.2.2 Digital Financial Inclusion & Digital Financial literacy

The concept of financial inclusion is well-established, yet it continues to evolve through innovations in financial technology. Many fintech companies are promoting financial inclusion by developing innovative products and business models that expand access to financial services (Patwardhan, 2018). In the context of China, Shen et al. (2020) examined the factors contributing to greater financial inclusion and found that the availability and use of diverse digital financial products, combined with higher levels of financial literacy and widespread Internet adoption, have substantially increased financial inclusion.

Similarly, Bathula and Gupta (2021) explored both the broad and specific dimensions of digital financial inclusion, including access to financial and digital services via the Internet, and the role of digital financial literacy. Their findings indicate that the use and accessibility of online payment services are positively associated with educational attainment and workforce participation. Building on these theoretical and empirical insights, the following hypothesis is proposed:

H₂: Digital financial literacy (DFL) has a significant impact on digital financial inclusion (DFI).



2.2.3 Digital Financial Inclusion and Financial Well-being

Davis (1989) proposed that technology-oriented companies should design products that are intuitive and easy to use to encourage adoption. In the domain of technology adoption, user satisfaction is strongly influenced by the perceived ease of use of a system. Mobile payment solutions, for example, enhance both perceived usefulness and ease of use, thereby facilitating greater adoption (Kim et al., 2010). Furthermore, consumers who perceive technology as a service tend to value solutions that are convenient and simple to operate (Robertson et al., 2016). Research by Senyo and Osabutey (2020) also indicates that the adoption of mobile money and other digital payment systems is influenced by hedonic incentives, defined as the pleasure, interest, and enjoyment derived from using the technology. Based on these findings, the following hypothesis is proposed:

H₃: Digital financial inclusion (DFI) has a significant impact on financial wellbeing (FW).

2.2.4 Mediating role of Digital Financial Inclusion in the relationship between Digital Financial literacy and financial wellbeing

This study examines the mediating role of digital financial inclusion (DFI) in the relationship between digital financial literacy (DFL) and financial wellbeing (FW), a pathway that has received limited empirical attention in the existing literature. Prior research indicates that DFL is a critical enabler of individuals' ability to effectively engage with digital financial services (DFS), which in turn can lead to improved economic outcomes and wellbeing (Ayuning Gumilar et al., 2024). Several systematic reviews have emphasized that DFL not only enhances access to digital financial products but also facilitates increased financial inclusion and, ultimately, financial wellbeing by empowering users to navigate, adopt, and benefit from digital financial ecosystems (Ayuning Gumilar et al., 2024; recent literature consensus). Moreover, empirical findings suggest that digital financial inclusion acts as an outcome of higher digital financial literacy and further amplifies contextual benefits such as economic participation and resilience (Peter et al., 2025a). In related domains, studies have shown that literacy can mediate the effect of technological adoption on inclusion and welfare outcomes, highlighting the importance of intermediary mechanisms in the digital financial context (e.g., digital literacy mediating technology adoption and financial inclusion). Based on these theoretical and empirical insights, we hypothesize the following:

H₄: Digital financial inclusion (DFI) plays a mediating role in the relationship between digital financial literacy (DFL) and financial wellbeing (FW).

3. Methodology

3.1 Research design & Survey procedure

The present study employs a cross-sectional research design, as data were collected over a single period, from January 2024 to May 2024. The sample consists of respondents from diverse age groups and includes both male and female participants, reflecting documented gender differences in digital and financial literacy (Morgan et al., 2019; OECD, 2018). Data were collected using a structured survey administered via Google Forms to individuals who utilize digital financial services (DFS). A non-probability convenience sampling technique was employed to select participants. Primary data were used



for analysis, with a final sample of 323 respondents drawn from an initial pool of 626 adults in Pakistan who were users of DFS. Following data verification and cleaning, only complete responses were included in the study for subsequent analysis.

Table 1. Summary statistics (N=323)

	Frequency	Percentage
Female	132	40.9
Male	191	59.1
Intermediate	33	10.2
Bachelors	152	47.1
Masters	90	27.9
Others	48	14.9
18 to 24 years of age	126	39.0
25 to 40 years of age	160	49.5
41 to 56 years of age	37	11.5
Annual income PKR (up to 100,000)	116	35.9
Annual income PKR (up to 100,000 – 400,000)	72	22.3
Annual income PKR (up to 400,000 -600,000)	34	10.5
Annual income PKR (more than 600,000)	101	31.3
Belong to rural area	89	27.6
Belong to urban areas	234	72.4

3.2. Survey instrument

The study was conducted to examine, identify, quantify, and validate the factors influencing digital financial literacy (DFL) among users of digital financial services (DFS). Primary data were collected from adult DFS users in Pakistan to facilitate correlational analysis. The target population comprised individuals actively using digital financial services within the country. The investigation was conducted in a natural, non-intrusive environment without any interference from the researchers, classifying it as uncontrived field research.

A structured questionnaire divided into two sections was employed for data collection. Section 1 captured respondents' demographic information, including gender, age, education, income, and place of residence. Section 2 assessed respondents' digital financial literacy (DFL), financial wellbeing (FW), and digital financial inclusion (DFI). This section consisted of 24 statements measured on a 5-point Likert scale, where 1 represented "strongly disagree," 2 "disagree," 3 "neutral," 4 "agree," and 5 "strongly agree." The measurement tools used in the study are summarized in Table 2.



Table 2. Variable Measurement

Variable	Source	Measurement Items
Digital Financial Literacy (DFL)	Ravikumar, et al., 2022	<ol style="list-style-type: none"> 1. I have the ability to use my digital device (phone or laptop) to perform online searches. 2. I purchase things online. 3. I use internet banking. 4. I use mobile banking. 5. Every month, I create a budget for my own finances. 6. I usually don't worry too much about the future and just try to live for today. 7. Instead of saving money, I would rather spend it. 8. I am aware of digital payment options like credit card, debit card, Easypaisa, etc. 9. I am familiar with online financial stock trading. 10. I know about digital lending/loan methods (e.g., Barwaqt App). 11. I understand that every time I perform a digital financial transaction, I run the risk of exposure to threats such as scams and phishing. 12. My OTP is never shared with anybody. 13. I never give out my PIN, password, or username to anyone.
Financial Wellbeing (FW)	Dzogbenuku, et al., 2022	<ol style="list-style-type: none"> 1. I feel good when using digital payment services. 2. Digital payment services have helped improve my financial status. 3. Digital payment services have been beneficial. 4. Digital payments have helped me obtain remittances from relatives/children. 5. Digital transaction/payment alerts bring me excitement. 6. Digital payment access has low cost and I am not bothered if a small commission is charged.
Digital Financial Inclusion (DFI)	S & Balaji, 2022	<ol style="list-style-type: none"> 1. I can access all my accounts through mobile banking. 2. Online payment services are the cheapest way to access accounts. 3. I can access my accounts anytime and anywhere. 4. Balance checks are made easy. 5. Mobile banking users tend to be from high-income groups.

3.3 Data Analysis

The mediation analysis in this study was conducted following the model proposed by Baron and Kenny (1986). Reliability of the measurement instruments was assessed using SPSS. Additionally, skewness and kurtosis statistics were examined to ensure that the data met the assumptions of normality. SPSS was also employed for the remaining analyses, including linear regression and Pearson correlation. Linear regression was used to determine the influence of one variable on another and to test for potential mediation effects, while Pearson correlation was applied to evaluate the direction and strength of the relationships among variables. Hypothesis testing focused on examining the interrelationships among digital financial literacy (DFL), digital financial inclusion (DFI), and financial wellbeing (FW).



Furthermore, the PROCESS macro developed by Andrew F. Hayes was utilized to test whether DFI mediates the relationship between DFL and FW. This approach allowed for a robust evaluation of both direct and indirect effects within the proposed model.

4. Results and Discussion

4.1 Regression Analysis

Descriptive statistics, including mean (M), standard deviation (SD), minimum and maximum values, skewness, and kurtosis, were computed for all study variables (Table 3). Correlation analysis and simple linear regression were used to examine the relationships among digital financial literacy (DFL), digital financial inclusion (DFI), and financial well-being (FW) to test the study hypotheses.

Table 3. Descriptive Statistics of Study Variables

Variable	Min	Max	Mean	SD	Skewness	Kurtosis
Digital Financial Literacy	1.00	5.00	3.667	0.565	-0.872	2.924
Digital Financial Inclusion	1.00	5.00	3.568	0.707	-0.682	1.786
Financial Wellbeing	1.00	5.00	3.708	0.641	-1.110	3.042

Pearson correlation analysis was performed to examine the strength and direction of relationships among variables (Table 4). No correlation exceeded 0.90, indicating the absence of multicollinearity.

Table 4. Pearson Correlation Coefficients

Variable	DFL	DFI	FW
Digital Financial Literacy	1		
Digital Financial Inclusion	0.581**	1	
Financial Wellbeing	0.544**	0.624**	1

Note. **p < 0.01 (2-tailed).**

The correlation between digital financial literacy and financial well-being ($r = 0.544$, $p < 0.01$) indicates a moderate positive relationship. Reliability analyses using Cronbach's alpha confirmed that all measurement scales were internally consistent ($\alpha > 0.70$), indicating that the instruments were reliable for collecting data (Nunnally, 1978).



4.2 Hypothesis Testing Using Regression

Step 1: Effect of DFL on FW

Linear regression analysis revealed that digital financial literacy significantly predicted financial wellbeing ($R^2 = 0.296$, $\beta = 0.616$, $p < 0.001$). The F-statistic ($F = 134.851$, $p < 0.001$) confirmed the overall model significance. These results support Hypothesis 1, indicating that higher levels of digital financial literacy are associated with increased financial wellbeing.

Step 2: Effect of DFL on DFI

Regression analysis showed that digital financial literacy significantly predicted digital financial inclusion ($R^2 = 0.337$, $\beta = 0.726$, $p < 0.001$). The model was statistically significant ($F = 163.33$, $p < 0.001$). These findings support Hypothesis 2, confirming that digital financial literacy positively influences digital financial inclusion.

Step 3: Effect of DFI on FW

The impact of digital financial inclusion on financial wellbeing was examined using regression analysis. The unstandardized coefficient for DFI was $B = 0.565$ ($t = 14.291$, $p < 0.001$), with a significant intercept ($B = 1.692$, $p < 0.001$). The standardized beta ($\beta = 0.624$) indicates a moderate-to-strong positive relationship. The model's F-statistic ($F = 204.233$, $p < 0.001$) demonstrated overall significance. These results support Hypothesis 3, showing that digital financial inclusion significantly predicts financial wellbeing.

Step 4: Mediation Analysis

Mediation analysis was conducted using Andrew F. Hayes' PROCESS macro (Model 4) for SPSS. Results revealed a significant total effect of DFL on FW ($B = 0.6161$, $p < 0.001$). After including DFI as a mediator, the direct effect of DFL on FW remained significant but reduced ($B = 0.3107$, $p < 0.001$), while the indirect effect via DFI was also significant ($B = 0.3054$, 95% CI [0.2085, 0.4059]). These results indicate partial mediation, suggesting that digital financial inclusion explains part of the relationship between digital financial literacy and financial wellbeing, although DFL also has a direct effect on FW.

Table 5. Mediation Analysis Summary

Effect	B	SE	t	p	LLCI	ULCI
Total effect (DFL → FW)	0.6161	0.0531	11.613	0.000	0.5117	0.7205
Direct effect (DFL → FW)	0.3107	0.0583	5.331	0.000	0.1960	0.4253
Indirect effect (DFL → DFI → FW)	0.3054	0.0505	—	—	0.2085	0.4059

Note. Partial mediation.

4. Discussion

This study examined the relationship between digital financial literacy (DFL) and financial wellbeing (FW) among Pakistani users of digital financial services, considering the mediating role of digital financial inclusion (DFI). The results revealed that DFL is positively and significantly associated



with FW. This relationship reflects respondents' financial knowledge and their ability to protect themselves from digital scams. Additionally, the study found that the self-protection capability of users contributes positively to financial wellbeing, and this relationship remained consistent across gender, age, literacy levels, and income groups.

These findings align with previous research demonstrating a positive association between digital financial literacy and financial wellbeing (Choung et al., 2023). Other studies have also emphasized that financial literacy is a key driver of financial wellbeing (Kumar et al., 2023; Philippas & Avdoulas, 2020). Moreover, several demographic and socio-economic factors, such as gender, age, income, occupation, family size, educational attainment, and social groupings, have been shown to influence users' digital financial literacy (Azeez & Akhtar, 2021).

Importantly, this study highlights the mediating role of digital financial inclusion in the relationship between DFL and FW. Previous research has shown a positive link between digital financial literacy and financial wellbeing (Senou et al., 2019) and between digital financial inclusion and financial wellbeing (Farooq et al., 2021). However, the mediating function of DFI in this relationship has received limited attention. The current analysis demonstrates that while DFL directly affects FW, it also indirectly influences FW through increased DFI, indicating a partial mediation effect. These findings suggest that initiatives aimed at improving financial wellbeing should not only promote digital financial literacy but also ensure the accessibility and usability of digital financial services.

The study further emphasizes the importance of user-friendly and widely accessible digital financial services. Policies that guarantee equitable access, combined with educational initiatives and simplified digital financial tools, can enhance financial inclusion and wellbeing. Users' self-efficacy and confidence in using digital financial services are strengthened when they possess sufficient knowledge and skills, ultimately leading to improved financial outcomes.

5. Implications, Limitations and Future Research

Based on the findings, several recommendations can be made for policymakers, financial institutions, and investors. Banks and fintech companies can leverage these insights to design and promote user-friendly digital financial products and applications. Future research could explore additional mediating or moderating variables that influence the relationships among digital financial literacy, digital financial inclusion, and financial wellbeing, providing a deeper understanding of the underlying mechanisms.

To improve external validity, similar studies could be conducted across different regions and cultural contexts within Pakistan or in other countries. Educational and training programs, such as seminars, workshops, or online courses on e-business transactions, online banking, and digital financial products, can equip individuals and investors with the knowledge and skills necessary to navigate the digital financial landscape effectively.

Policymakers are also encouraged to create and maintain a regulatory environment that promotes digital financial inclusion by reducing transaction costs, providing affordable internet connectivity, and enabling financial institutions to offer inclusive, low-cost financial services. Consumer protection and data privacy measures are essential to build trust in digital financial services, reduce transaction risks, and encourage wider adoption.



Despite its contributions, this study has limitations. First, the cross-sectional design precludes causal inferences; the observed relationships may be influenced by unexamined factors. Second, the generalizability of findings may be limited to Pakistan's population of internet users. Variations in market systems, legal frameworks, and cultural contexts could affect the applicability of results elsewhere. Third, operationalizing and measuring constructs such as financial wellbeing, DFI, and DFL relies on self-reported data, which may introduce bias. Finally, the web-based survey format may have affected participants' interpretations and responses. Future studies should incorporate longitudinal designs, diverse populations, and robust measurement approaches to address these limitations.

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