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DETERMINANTS OF CROWDFUNDING PARTICIPATION: THE INTERPLAY OF PERCEIVED USEFULNESS, TECHNOLOGY READINESS, AND FINANCIAL LITERACY

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Article Info

Abstract

This study investigates the determinants of crowdfunding in Pakistan through an integrated moderating and mediating model. In this study, trust in crowdfunding serves as a mediating variable, while financial literacy acts as a moderating variable. Data were collected from 314 respondents using a structured online questionnaire distributed to entrepreneurs, small business owners, and digital finance users. The data were analyzed using SPSS and Smart PLS, employing Partial Least Squares Structural Equation Modeling (PLS-SEM) for measurement and structural analysis. Results reveal that smart device usage readiness and digital financial services significantly influence crowdfunding adoption, while perceived usefulness and perceived ease of use were not significant predictors. Trust in crowdfunding mediated the relationships between smart device readiness, technology readiness, and digital financial services with adoption, whereas financial literacy moderated only the link between digital financial services and adoption. The findings highlight that infrastructural and trust factors outweigh traditional technology acceptance constructs in shaping crowdfunding behavior in developing contexts. The study contributes to the theoretical refinement of TAM and UTAUT in FinTech research and offers practical implications for policymakers and platform developers aiming to enhance digital trust, financial literacy, and inclusive crowdfunding ecosystems in Pakistan.

Keywords:

Crowdfunding Adoption, Financial Literacy, Technology Readiness, Digital Financial Services, Perceived Usefulness.

1. Introduction

Globally, crowdfunding has become a multibillion-dollar industry and its market was valued at approximately USD 117.53 billion in 2023 and is projected to grow to USD 2,801.29 billion by 2032, reflecting a compound annual growth rate (CAGR) of 42.3% between 2024 and 2032 (Geetha et al., 2016). This exponential growth has been driven by technological advancements, the proliferation of digital platforms, and the integration of artificial intelligence (AI) and machine learning into crowdfunding ecosystems (Yasar, 2021). Moreover, social media platforms such as Facebook, Twitter, Instagram, and LinkedIn have also played a critical role in promoting crowdfunding initiatives and mobilizing contributors worldwide (Atawna, 2023). Also, government initiatives and regulatory frameworks across regions, such as the U.S. Code of Federal Regulations (Article 17), have facilitated the growth and institutional legitimacy of crowdfunding markets, especially in North America and Europe.

For developing economies, including Pakistan, crowdfunding holds considerable promise. As traditional financing institutions often present barriers to early-stage entrepreneurs, web-based crowdfunding provides a pathway to bypass these limitations and mobilize capital efficiently (Guimarães et al., 2024). The rise of mobile technology, social media, and online payment systems allows emerging economies to "leapfrog" conventional financial systems and adopt more agile, technology-driven funding solutions (UDUKEKE & Usoro, 2024). In Pakistan, crowdfunding has gained traction across social, charitable, and entrepreneurial sectors. Platforms are increasingly being used to support humanitarian efforts, small business ventures, and community-driven projects (Jamil et al., 2023; Rizwan et al., 2024). However, several challenges persist, most notably, language barriers, limited trust in platforms, and inadequate digital infrastructure (Usman et al., 2024). Despite these constraints, Pakistan's growing technological readiness and entrepreneurial ecosystem position it favorably for future crowdfunding adoption (Khizar & Siddiqui, 2021).

Other technological and contextual factors also shape crowdfunding adoption. Smart device readiness and technological maturity reflect individuals' preparedness and comfort with digital tools and online payment systems, which directly affect engagement in crowdfunding campaigns (Okine et al., 2023). Additionally, digital financial services—including digital wallets, online banking, and blockchain systems—facilitate efficient, secure transactions, thereby enhancing trust and convenience for users (Behl et al., 2024). Trust itself remains a cornerstone of successful crowdfunding ecosystems, as contributors must feel confident in both the legitimacy of campaigns and the reliability of the platforms (Rahman et al., 2024).

Finally, financial literacy plays a moderating role by influencing individuals' ability to critically evaluate crowdfunding opportunities and make informed decisions. Higher financial literacy enhances participants' ability to assess risks, interpret project goals, and manage their contributions effectively (Liu et al., 2023). Consequently, understanding how these interrelated factors, technological, psychological, and contextual, shape crowdfunding adoption is crucial for promoting its successful integration into emerging economies such as Pakistan.

Crowdfunding has emerged as a transformative financial innovation worldwide, offering individuals, startups, and organizations an alternative method to raise funds without relying on traditional financial institutions (Metelka, 2014). However, in developing countries like Pakistan, its adoption remains limited

despite growing digitalization and smartphone penetration (Sultana & Qureshi, 2021). Structural, technological, and socio-economic barriers, such as low technology readiness, limited access to digital financial services, lack of awareness, and low levels of financial literacy, restrict the effective use of crowdfunding platforms (Jamil et al., 2023). Many potential users still perceive these platforms as complex, insecure, and unreliable due to low trust in online financial systems (Khizar & Siddiqui, 2021). Although Pakistan has made progress in digital finance and mobile banking, its integration with crowdfunding platforms remains weak, hindering smooth online financial transactions (Abor et al., 2022). These challenges indicate a pressing need to understand the underlying factors influencing crowdfunding adoption in Pakistan's socio-economic context.

Despite global evidence linking perceived usefulness, perceived ease of use, and technology readiness with crowdfunding participation (Djimesah et al., 2022), there is still limited empirical understanding of how these factors operate within Pakistan's digital ecosystem. Furthermore, trust and financial literacy appear to play crucial but underexplored roles in shaping users' willingness to adopt crowdfunding (Liang et al., 2023). Therefore, this study aims to investigate the determinants of crowdfunding in Pakistan by examining perceived usefulness, perceived ease of use, smart device readiness, technology readiness, and digital financial services availability. It also explores the mediating role of trust and the moderating role of financial literacy. By identifying how these factors interact to influence adoption behavior, the study seeks to provide theoretical insights and practical recommendations to promote the effective use of crowdfunding platforms and enhance digital financial inclusion in Pakistan.

This paper is categorized into five sections: Section two comprises of literature review, 3rd and 4th sections are related to methodology and Data Analysis, section five focuses on results discussions. Last section belongs to conclusion & limitations.

2. Literature Review

Recent research has emphasized crowdfunding's growing importance in emerging economies, particularly within the context of FinTech expansion. Studies show that the adoption of crowdfunding is influenced by factors such as financial literacy, trust in digital platforms, and access to smart devices (Aw et al., 2024). Scholars have identified that social media and network-based interactions play a crucial role in campaign success through the development of relational capital (Vismara, 2022).

2.1 Perceived Usefulness and Crowdfunding

Perceived usefulness (PU) represents the degree to which an individual believes that using a technology enhances their job or task performance (Davis, 1989). Within the crowdfunding context, PU refers to how potential funders and campaign creators perceive crowdfunding platforms as beneficial, effective, and efficient in meeting their financial or investment objectives. According to the TAM, PU directly predicts behavioral intention toward technology usage (Venkatesh & Davis, 2000). In the context of crowdfunding, PU has been empirically validated as a key determinant of user engagement. Baah-Peprah and Shneor (2022) found that PU significantly predicted crowdfunding adoption among users in Norway, with individuals perceiving the platforms as innovative alternatives to traditional financing. Similarly, Razak et al. (2021) reported that entrepreneurs perceived usefulness of equity-based crowdfunding positively

affected their intention to use such platforms due to ease of fundraising and reduced dependency on banks. In Pakistan, Siddiqui and Ali (2022) noted that users' belief in crowdfunding as a productive and accessible mechanism to overcome financial barriers contributed to higher adoption intentions.

2.2 Perceived Ease of Use and Crowdfunding

Perceived ease of use (PEOU) is defined as the extent to which a person believes that using a technology will be free of effort (Davis, 1989). In crowdfunding, this refers to the simplicity of navigating the platform, creating campaigns, or investing in projects. PEOU reduces cognitive and operational barriers, influencing the intention to use crowdfunding both directly and indirectly through PU (Venkatesh et al., 2003). Empirical research supports this relationship. Baah-Peprah and Shneor (2022) found that when users perceive crowdfunding interfaces as intuitive and user-friendly, their perceived usefulness and trust also increase. Likewise, Ismaila (2023) discovered that platform usability and mobile-friendly design significantly enhanced adoption intentions in African developing economies. For emerging markets like Pakistan, where varying levels of digital literacy exist, ease of use becomes a vital factor that encourages participation and mitigates fear of technological complexity.

2.3 Smart Device Usage Readiness and Crowdfunding

Smart device usage readiness (SDUR) refers to an individual's preparedness and ability to effectively use mobile and digital devices for online interactions (Parasuraman & Colby, 2015). In an era dominated by smartphones, the accessibility and ease of mobile platforms strongly influence online behaviors, including crowdfunding adoption. Crowdfunding has increasingly integrated mobile applications to provide convenience, quick access, and enhanced user experiences. According to Green et al. (2022), individuals with higher smart device readiness demonstrate more positive attitudes toward digital financial services. Similarly, Okine et al. (2024) found that smartphone proficiency and mobile literacy substantially predict crowdfunding participation across Sub-Saharan Africa. In Pakistan, the increasing penetration of smartphones, surpassing 80% of mobile connections (Pakistan Telecommunication Authority, 2024), has facilitated new modes of financial participation. Smart device readiness enhances the sense of convenience and empowerment in interacting with crowdfunding platforms.

2.4 Technology Readiness and Crowdfunding

Technology readiness (TR) reflects an individual's general propensity to embrace and use new technologies, driven by personality traits such as optimism, innovativeness, discomfort, and insecurity (Parasuraman, 2000). TR combines enabling factors (optimism and innovativeness) and inhibiting factors (discomfort and insecurity). In the FinTech domain, individuals with higher TR tend to show stronger intentions to adopt digital services, including crowdfunding (Venkatesh et al., 2012). Halim (2024) reported that TR significantly influences digital banking and crowdfunding behaviors in Indonesia, with optimistic users showing higher adoption levels. Similarly, Okine et al. (2024) demonstrated that TR positively affects users' confidence and willingness to invest in digital financial technologies in Ghana. In Pakistan, growing exposure to e-commerce and digital payment services has increased public familiarity and readiness toward innovative financial platforms.

2.5 Digital Financial Services and Crowdfunding

Digital financial services (DFS) encompass a range of financial solutions, such as mobile banking, online transfers, and e-wallets, delivered through digital channels (World Bank, 2022). The efficiency, accessibility, and trustworthiness of these services play a vital role in the adoption of crowdfunding platforms. Effective DFS facilitates secure transactions, reduces operational delays, and improves users' overall crowdfunding experience. Halim (2024) observed that the availability of digital payment options significantly influences users' adoption of crowdfunding platforms. Similarly, Razak et al. (2021) emphasized that the integration of reliable digital payment gateways strengthens users' trust in financial transactions. In Pakistan, platforms such as Easypaisa and JazzCash have expanded financial inclusion, particularly for populations without traditional bank accounts (State Bank of Pakistan, 2024). These services not only simplify fund transfers but also establish a sense of institutional credibility and efficiency.

2.6 Trust in Crowdfunding as a Mediating Variable

Trust is defined as the belief in the reliability, integrity, and competence of a system or service provider (Gefen et al., 2003). In crowdfunding, trust is critical due to the lack of physical contact and the high risk of opportunistic behavior. Trust mediates the influence of technological and perceptual factors on user intentions by reducing perceived risk and enhancing confidence (Laaouina et al., 2024). Gefen et al. (2003) emphasized that trust acts as a bridge between user perceptions and behavioral intentions in e-commerce environments. In crowdfunding, Siddiqui and Siddiqui (2021) found that trust in the platform's transparency, payment security, and project legitimacy significantly predicted users' investment decisions. Furthermore, Razak et al. (2021) confirmed that trust mediates the effects of perceived usefulness and ease of use on intention to adopt crowdfunding platforms.

2.7 Financial Literacy as a Moderating Variable

Financial literacy (FL) refers to an individual's knowledge and ability to understand financial concepts and make informed decisions regarding resource management (OECD, 2022). In the crowdfunding context, financially literate users are better positioned to evaluate investment opportunities, assess risks, and make rational decisions. FL moderates the relationship between perceptions (e.g., usefulness, ease of use, and trust) and adoption by enhancing users' interpretive and evaluative capabilities. Bernardino and Santos (2021) revealed that financial literacy significantly influences entrepreneurs' adoption of crowdfunding by shaping their perceptions of risk and return. Similarly, Siddiqui and Siddiqui (2021) reported that financial literacy moderated the relationship between technological perception and crowdfunding adoption among Pakistani users. Individuals with higher financial literacy tend to exhibit more confidence in using crowdfunding platforms and managing online investments responsibly.

3. Methodology

This study adopted a quantitative research design grounded in the positivist paradigm, which assumes that reality is objective and can be measured through empirical observation and statistical analysis (Healy & Perry, 2000). The quantitative method enabled the collection of structured, numerical data through a self-administered questionnaire, ensuring consistency and reliability (Lim, 2024). This approach allowed the

researcher to test theoretically derived hypotheses regarding factors such as perceived usefulness, technology readiness, trust, and financial literacy influencing crowdfunding adoption. Following the recommendations of Bryman (2006) and Atkinson et al. (1994), Structural Equation Modeling (SEM) was employed to examine the relationships among variables with precision and accuracy.

The target population consisted of entrepreneurs, small business owners, and digital finance users familiar with crowdfunding platforms. Approximately 500 potential respondents were targeted, out of which 314 valid responses were retained for analysis. Using the sample size determination formula:

$$n = \frac{N}{1 + N(e)^2}$$

n = Sample size

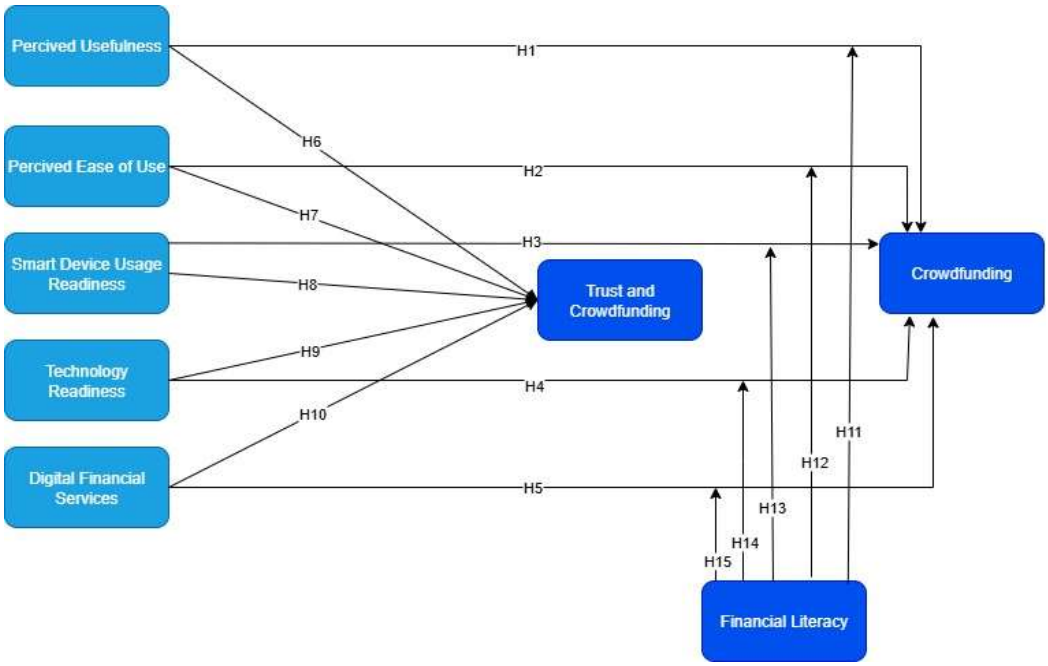
N = Population size

e = Sampling error

Guided by Cohen (1992) and Kotrlik and Higgins (2001), the sample size exceeded the minimum statistical requirement of 108 participants for three independent variables, ensuring reliability and generalizability of the results.

The proposed model in this research combines both mediating and moderating variables, integrating multiple layers of influence on crowdfunding. Trust in crowdfunding acts as a mediator, influencing how perceived usefulness, ease of use, technology readiness, smart devices readiness, and digital financial services translate into actual usage. Simultaneously, financial literacy acts as a moderator, strengthening or weakening these relationships based on users' financial knowledge and understanding.

Figure 2.1: Conceptual Framework



The study ensured instrument reliability and validity through multiple stages. A pilot study was first conducted with 80 academics from Bahauddin Zakariya University, Multan, to refine the questionnaire items and ensure clarity and readability. Cronbach's alpha reliability coefficients exceeded the recommended threshold of 0.70, with an overall alpha of 0.846, confirming strong internal consistency across constructs. Content validity was verified by a panel of seven subject experts, while construct validity was assessed using Average Variance Extracted (AVE), Composite Reliability (CR), and the Fornell–Larcker criterion. The measurement instrument covered eight latent variables: perceived usefulness, perceived ease of use, smart device readiness, technology readiness, digital financial services, trust, financial literacy, and crowdfunding usage. Data were collected through structured online questionnaires distributed via email and WhatsApp, ensuring accessibility and adherence to ethical research standards, including voluntary participation and confidentiality (Sekaran & Bougie, 2003).

Data analysis was performed using SPSS (Version 30) for preliminary descriptive and inferential statistics and SmartPLS for advanced structural modeling. The Partial Least Squares Structural Equation Modeling (PLS-SEM) approach was chosen due to its suitability for complex models and predictive analysis (Khan et al., 2021). To test mediation and moderation effects, bootstrapping techniques were employed, as recommended by Hayes and Scharkow (2013), providing more accurate and robust estimations than traditional parametric methods. The mediation of trust and moderation of financial literacy in the relationship between the independent and dependent variables were examined to understand their influence on crowdfunding adoption. This rigorous methodological design ensured objectivity, replicability, and theoretical consistency, aligning the study with the positivist paradigm's emphasis on empirical validation and measurable outcomes.

4. Data Analysis

Out of 350 questionnaires distributed, a total of 314 legitimate responses were retained for analysis after data cleaning. Table 1 shows the demographic properties of the respondents.

Table 1: Demographics of the Respondents (N = 314)

Variable	Category	Frequency	%
Age	18–25	112	35.66
	26–35	58	18.47
	36–45	11	3.50
	46 and above	8	1.27
Gender	Male.	277	88.21
	Female.	37	11.78
Education	High School.	8	2.54
	Bachelor's	162	51.59
	Master's	131	41.71
	PhD	13	4.14
Employment	Student	126	40.12
	Employed	108	34.39
	Self-employed	58	18.47
	Unemployed	22	7.00

4.1 Factor Loadings and Convergent Validity

Factor loadings from SmartPLS are shown in Table 2. Most items loaded above the 0.6 threshold, demonstrating acceptable indicator reliability.

Table 2: Factor Loadings of Measurement Items.

Construct.	Items	Loading.
Crowdfunding (CF)	CF3	0.794
	CF4	0.728
	CF5	0.812
	CF6	0.804
Digital Financial Services (DFS)	DFS2	0.729
	DFS3	0.789
	DFS4	0.855
	DFS5	0.746
Financial Literacy (FL)	FL1	0.814
	FL2	0.851
	FL3	0.747
	FL4	0.765
	FL5	0.795
	FL6	0.639
Perceived Ease of Use (PEOU) .	PEOU1	0.658
	PEOU2	0.668
	PEOU3	0.670
	PEOU4	0.709
	PEOU5	0.643
	PEOU6	0.687
Perceived Usefulness (PU)	PU1	0.816
	PU2	0.758
	PU4	0.788
Smart Device Usage Readiness (SDUR)	SDUR1	0.608
	SDUR2	0.697
	SDUR3	0.744
	SDUR4	0.632
	SDUR5	0.673
	SDUR6	0.735
Trust in Crowdfunding (TCF)	TCF1	0.672
	TCF5	0.871
	TCF6	0.803
Technology Readiness (TR)	TR4	0.828
	TR5	0.798
	TR6	0.703

Note: CF= Crowdfunding, DFS= Digital financial services, FL= Financial literacy,

SDUR= Smart device usage readiness, TCF= Trust in crowdfunding, TR=Technology readiness

4.2 Reliability and AVE

According to the guidelines of Anderson and Gerbing (1988), we assessed the measurement model to confirm the reliability and convergent credibility of the constructs before moving on to the structural model. Based on the proposals of Hair and Alamer (2022) and Ramayah et al. (2018), we evaluated three main factors: outer loadings, Composite Reliability (CR), and Average Variance Extracted (AVE).

Outer loadings show how strong the connection within the respective latent constructs and the observable indicators. Following the suggested threshold, loadings should be ≥ 0.60 to ensure acceptable item reliability. Composite Reliability (CR) data should exceed 0.70, confirming internal consistency reliability, while AVE values must be more than 0.50, building convergent credibility. The outcomes, summarized in Table 4, imply that all constructs met the minimum CR critical of 0.70, confirming internal consistency. Similarly, AVE values for most constructs exceeded 0.50, verifying convergent credibility. Although the AVE values for Perceived Ease of Use (PEOU) and Smart Device Usage Readiness (SDUR) were slightly below the threshold, both constructs were retained due to their strong theoretical importance and adequate CR values.

Table 3: Reliability and Convergent Validity.

Construct	Cronbach's α	CR (rho_a)	CR (rho_c)	AVE
Crowdfunding	0.792	0.794	0.865	0.616
Digital Financial Services	0.786	0.793	0.862	0.611
Financial Literacy	0.863	0.882	0.897	0.595
Perceived Ease of Use	0.762	0.764	0.832	0.453
Perceived Usefulness	0.694	0.697	0.830	0.620
Smart Device Usage Readiness	0.771	0.779	0.839	0.467
Trust in Crowdfunding	0.689	0.721	0.828	0.618
Technology Readiness	0.682	0.709	0.821	0.606

Note. CR = Composite Reliability: AVE = Average Variance Extracted; thresholds: Cronbach's α > 0.70, CR > 0.70, AVE > 0.50.

4.3 Discriminant Validity

Table 4 displays the outcomes of discriminant validity testing using the HTMT specifications. HTMT data beneath the strict limit of 0.85 indicate that the constructs are empirically distinguishable, while values between 0.85 and 0.90 are acceptable under more lenient criteria. The results show that most constructs satisfy the discriminant validity requirement. However, higher correlations were observed between FL–

CF (1.022) and TCF–CF (1.148), suggesting conceptual overlap. Despite these elevated values, the constructs were retained due to their theoretical importance and consistency with prior research.

Table 4: Heterotrait-Monotrait Ratio. (HTMT) – Matrix of Constructs

Construct	CF	DFS	FL	PEOU	PU	SDUR	TCF	TR
CF	–							
DFS	0.776	–						
FL	1.022	0.676	–					
PEOU	0.569	0.663	0.515	–				
PU	0.490	0.708	0.482	0.428	–			
SDUR	0.743	0.663	0.599	0.877	0.486	–		
TCF	1.148	0.822	0.836	0.507	0.529	0.679	–	
TR	0.652	0.643	0.633	0.309	0.604	0.553	0.734	–

Note. CF = Crowdfunding; DFS = Digital financial services; FL=Financial literacy; SDUR = Smart device usage readiness; TCF = Trust in crowdfunding; TR = Technology readiness. Threshold: HTMT values < 0.85 indicate discriminant validity (Henseler et al., 2015).

Table 5 summarizes the Fornell-Larcker specification results, another widely employed approach to evaluate discriminant validity. The square root of AVE (diagonal data, shown in bold) should be larger than the correlations among constructs (off-diagonal values). The findings confirm that every construct exchanges more variance with its own signs than with other constructs, thus meeting the Fornell-Larcker specifications for discriminant credibility.

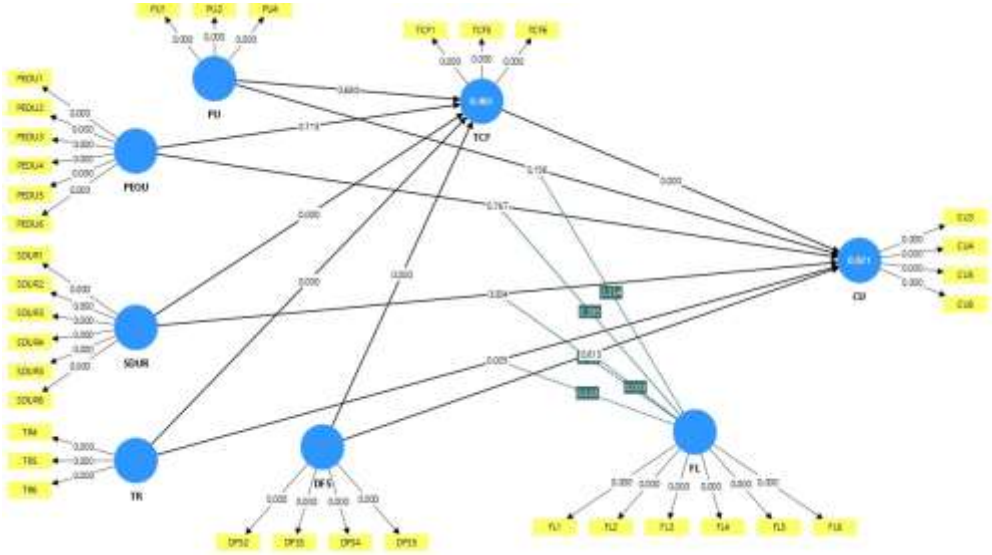
Table 5: Fornell-Larcker Criterion

Construct	CF	DFS	FL	PEOU	PU	SDUR	TCF	TR
CF	0.785							
DFS	0.617	0.781						
FL	0.865	0.568	0.771					
PEOU	0.465	0.528	0.436	0.673				
PU	0.366	0.522	0.374	0.317	0.788			
SDUR	0.581	0.524	0.495	0.684	0.365	0.683		
TCF	0.865	0.602	0.644	0.395	0.360	0.517	0.786	
TR	0.506	0.497	0.500	0.256	0.425	0.429	0.518	0.778

Note: CF= Crowdfunding, DFS= Digital financial services, FL= Financial literacy, SDUR= Smart device usage readiness, TCF= Trust in crowdfunding, TR=Technology readiness

Additionally, Fig. 1 gives a graphical depiction of the PLS-SEM measurement model, extracted using the Smart PLS algorithm. This figure illustrates the standardized outer loadings of the indicators on their respective constructs, confirming the adequacy of the assessment model.

Figure 1: Graphical illustration of the PLS-SEM. (Measurement) Model, Algorithm



4.4 Structural Model Assessment

In the second stage of the analysis, researchers examined the structural model to examine the proposed connection between constructs. Observing the advice of Becker et al. (2023), they assessed the model using approach coefficients, standard errors, t-values, and p-values. These were obtained through a bootstrapping resampling procedure with 10,000 subsamples.

First, they estimate the model's explanatory power employing R^2 and adjusted R^2 values. Table 6 shows that the model explains 92.1% of the variance in crowdfunding adoption (CF), which is very high and indicates strong predictive power. The model also accounts for 46.1% of the variance in trust (TCF), suggesting a moderate but significant explanatory capacity. Overall, this data confirms that the model effectively captures the dynamics of crowdfunding adoption in Pakistan.

Table 6: R^2 and Adjusted R^2 Values.

Construct	R^2	Adjusted R^2
CF	0.921	0.918
TCF	0.461	0.452

Note: CF = Crowdfunding, TCF = Trust in crowdfunding.

4.4.1 Direct Effects

Table 7 indicates that Smart Device Usage Readiness (H3) and Digital Financial Services (H5) significantly influence crowdfunding adoption, confirming their role as strong enablers of technology-

driven financial behaviours. Technology Readiness (H4) shows only weak significance, suggesting a partial effect. Conversely, PU (H1) and PeoU (H2) did not show significant effects, implying that traditional TAM constructs may be less relevant in the Pakistani crowdfunding context compared to infrastructural and technological readiness factors.

Table 7: Direct Effects

Hypothesis	Path	β	T-values	p-values	Result
H1	PU → CF	–0.040	1.201	0.230	Not Supported
H2	PEOU → CF	–0.022	0.591	0.554	Not Supported
H3	SDUR→ CF	0.212	5.107	0.000	Supported
H4	TR → CF	0.064	1.944	0.052	Weak Support
H5	DFS → CF	0.216	5.816	0.000	Supported

Note: CF= Crowdfunding, DFS= Digital financial services, FL= Financial literacy, SDUR= Smart device usage readiness, TCF= Trust in crowdfunding, TR=Technology readiness

4.4.2 Moderating Effects of Financial Literacy

Table 8 demonstrates that financial literacy only moderated the connection between Digital Financial Services and Crowdfunding (H10). This means individuals who are more financial literate are better prepared to utilize DFS for participating in crowdfunding. The lack of moderation in other relationships (H6–H9) indicates that financial literacy enhances crowdfunding primarily through financial infrastructure, not through ease of use, usefulness, or readiness factors.

Table 8: Moderation Effects of FL

Hypothesis	Path	β	T-values	p-values	Result
H6	FL × PU → CF	–0.022	0.927	0.354	Not Supported
H7	FL × PEOU → CF	–0.039	1.048	0.295	Not Supported
H8	FL × SDUR → CF	–0.052	1.496	0.135	Not Supported
H9	FL × TR → CF	0.017	0.626	0.532	Not Supported
H10	FL × DFS → CF	0.096	2.964	0.003	Supported

Note: CF= Crowdfunding, DFS= Digital financial services, FL= Financial literacy, SDUR= Smart device usage readiness, TCF= Trust in crowdfunding, TR=Technology readiness

4.4.3 Mediating Effects of Trust

The mediating role of trust in crowdfunding platforms (TCF) was tested using the bootstrapping method of Preacher and Hayes (2008). Mediation was confirmed where confidence intervals excluded zero.

Table 9 reveals that trust plays an essential mediating role in three key relationships: Smart Device Usage Readiness (H13), Technology Readiness (H14), and Digital Financial Services (H15). These findings

suggest that even if individuals have access to devices, are technologically ready, and use digital services, their participation in crowdfunding ultimately depends on their trust in the platform. The mediating effects for PU (H11) and PEoU (H12) were not significant, further confirming that trust is more strongly tied to infrastructural and readiness variables than to perception-based TAM constructs.

Table 9: Mediating Effects of Trust in Crowdfunding

Hypothesis	Path	β	T-values	p-values	Result
H11	PU → TCF → CF	–0.021	0.413	0.680	Not Supported
H12	PEOU → TCF → CF	–0.023	0.366	0.715	Not Supported
H13	SDUR → TCF → CF	0.237	3.509	0.000	Supported
H14	TR → TCF → CF	0.241	4.400	0.000	Supported
H15	DFS → TCF → CF	0.381	6.552	0.000	Supported

Note: CF= Crowdfunding, DFS= Digital financial services, FL= Financial literacy, SDUR= Smart device usage readiness, TCF= Trust in crowdfunding, TR=Technology readiness

5. Results Discussion

The results revealed that digital financial services (DFS) (H5: $\beta = 0.216$, $t = 5.816$, $p < .001$) and smart device usage readiness (SDUR) (H3: $\beta = 0.212$, $t = 5.107$, $p < .001$) significantly influenced crowdfunding adoption. These findings confirm that accessible digital finance and widespread smartphone usage are critical drivers of crowdfunding participation, consistent with prior research emphasizing digital accessibility, FinTech enablement, and mobile-based financial inclusion as essential determinants of adoption (Lee & Kim, 2013; Sari et al., 2024). In Pakistan, where mobile wallets such as Jazz Cash and Easy Paisa are prevalent, these platforms act as key enablers of crowdfunding adoption, reflecting the infrastructural support highlighted by Xu et al. (2025) and Amjad et al. (2025), who noted that robust digital ecosystems significantly contribute to crowdfunding performance and user participation.

By contrast, perceived usefulness (PU) (H1: $\beta = –0.040$, $t = 1.201$, $p = .230$) and perceived ease of use (PEOU) (H2: $\beta = –0.022$, $t = 0.591$, $p = .554$) did not significantly predict crowdfunding adoption. These results diverge from the Technology Acceptance Model (TAM) (Davis, 1989), which traditionally identifies PU and PEOU as fundamental predictors of technology acceptance. In the Pakistani context, however, users may already assume crowdfunding platforms to be both useful and user-friendly; therefore, other factors such as trust, financial infrastructure, and regulatory assurance exert stronger influence. This is consistent with findings by Montero-Benavides et al. (2025) and Chen (2025), who reported that in emerging markets, perceptions of credibility and platform security outweigh ease-of-use factors in shaping participation.

Technology readiness (TR) exhibited only weak support (H4: $\beta = 0.064$, $t = 1.944$, $p = .052$). This suggests that while individuals may be technologically adept, readiness alone does not ensure adoption unless accompanied by trust in the financial infrastructure and assurance of data protection. This finding partially supports the Technology Readiness Index (TRI) model by Parasuraman and Colby (2015) but emphasizes

the contextual dependence of TR on trust mechanisms and digital financial literacy. Similar conclusions were drawn by Tahir et al. (2025) and Kassim et al. (2025), who emphasized that in Islamic and emerging digital economies, technology readiness becomes effective only when integrated with governance, regulatory confidence, and digital trust frameworks. Hence, in Pakistan, enhancing technology readiness should coincide with efforts to build platform credibility and consumer protection to foster sustainable crowdfunding adoption.

The moderating role of financial literacy (FL) was examined through hypotheses H6–H10. The results revealed that only H10 (FL × DFS → CF) was statistically significant ($\beta = 0.096$, $t = 2.964$, $p = .003$). This finding indicates that financial literacy enhances individuals' capacity to effectively utilize digital financial services (DFS) for engaging in crowdfunding activities. In other words, individuals with higher levels of financial literacy are better equipped to navigate digital financial environments, assess opportunities, manage risk, and make informed crowdfunding decisions. This result supports the argument of Lusardi and Mitchell (2014) and Chen et al. (2019) that financial literacy strengthens users' decision-making ability and promotes confidence in adopting innovative financial technologies. It is also consistent with more recent studies by Tahir et al. (2025) and Waqar et al. (2025), who found that financial literacy acts as a critical enabler in FinTech ecosystems, enhancing individuals' ability to use digital financial tools effectively for entrepreneurial and investment purposes. Conversely, the absence of significant moderation effects for PU (H6), PEOU (H7), SDUR (H8), and TR (H9) suggests that financial literacy does not meaningfully influence how users perceive usefulness, usability, or technological readiness toward crowdfunding platforms. Its moderating impact appears domain-specific, primarily reinforcing users' capacity to interact with financial infrastructure rather than shaping cognitive or attitudinal perceptions of technology. This outcome implies that while financial literacy strengthens one's ability to evaluate and employ digital financial systems effectively, it does not significantly modify perceptions of platform design or operational simplicity.

Trust (TCF) emerged as a key mediating factor in this study, reinforcing its importance as a psychological and behavioral bridge between technological capability and adoption intention. The analysis revealed that trust significantly mediated the relationships between smart device usage readiness (SDUR) (H13: $\beta = 0.237$, $t = 3.509$, $p < .001$), technology readiness (TR) (H14: $\beta = 0.241$, $t = 4.400$, $p < .001$), and digital financial services (DFS) (H15: $\beta = 0.381$, $t = 6.552$, $p < .001$) with crowdfunding adoption. These results affirm that trust plays a pivotal role in transforming technological readiness and access into actual behavioral engagement. This finding aligns with the arguments of Gefen et al. (2003), McKnight et al. (2011), and Kim et al. (2021), who emphasized that trust is a critical antecedent of technology acceptance and online financial participation. In emerging economies such as Pakistan, where digital financial ecosystems are still developing, users' trust in platform credibility, transaction security, and institutional transparency becomes an essential prerequisite for participation. Even when individuals possess the technological competence and access necessary to use crowdfunding platforms, their decision to engage remains contingent on the level of trust they place in those systems.

Conversely, perceived usefulness (PU) (H11: $\beta = –0.021$, $p = .680$) and perceived ease of use (PEOU) (H12: $\beta = –0.023$, $p = .715$) were not significantly mediated by trust. This finding suggests that the traditional Technology Acceptance Model (TAM) constructs play a relatively limited role in explaining

crowdfunding adoption within financial technology contexts. Although users may view crowdfunding platforms as inherently functional and easy to use, their actual engagement decisions are shaped more by the trustworthiness and security of these systems. This outcome is consistent with prior research emphasizing that in FinTech and crowdfunding environments, trust and institutional confidence outweigh conventional perceptions of usefulness or ease (Chiu & Chao et al., 2020).

Overall, the mediation results underscore that in Pakistan's evolving digital finance landscape, trust and infrastructural credibility, rather than perceived technological attributes, are the primary drivers of crowdfunding adoption. This conclusion aligns with recent studies by Amjad et al. (2025), Montero-Benavides et al. (2025), and Lin and Liu (2025), who identified trust, governance, and transparent digital systems as critical determinants of sustained crowdfunding success and user commitment.

6. Conclusion & Limitations

This work aimed to explore the variables that influence crowdfunding adoption in Pakistan by combining ideas from TAM, UTAUT, financial literacy, and digital trust. The data showed that digital financial services and readiness with smart devices are the main enablers of adoption. However, PU and PEoU, which are key TAM variables, turned out to be insignificant. These findings suggest that in a place like Pakistan, where users expect technology to be helpful and easy, adoption relies more on infrastructure access and building trust.

The study also emphasized the important role of trust in crowdfunding platforms. Trust influenced the impact of smart device readiness, technology readiness, and DFS on adoption. This confirms that even if users have the skills and access to digital tools, they are less likely to engage in crowdfunding unless the platforms are seen as credible, secure, and transparent. At the same time, financial literacy served as a conditional enabler. It only moderated the relationship between DFS and adoption, highlighting that literacy primarily helps individuals navigate financial services rather than shape their views on usefulness or readiness.

The findings contribute to both theory and practice by pointing out the most important factors driving crowdfunding adoption in developing countries. For researchers, this study enhances models by including trust and literacy along with technological readiness. For practitioners and policymakers, the results stress the need to improve digital financial infrastructure, establish trust-building measures, and promote financial literacy programs. Ultimately, this research demonstrates that fostering trust, accessibility, and user capability is central to accelerating crowdfunding in Pakistan's emerging FinTech landscape.

This work has four notable restrictions. First, its cross-sectional design limits the causal inferences, meaning the relationships observed may evolve; a longitudinal approach would give deeper insights. Second, the sample composition was skewed toward younger and male respondents, limiting the generalizability of conclusions to other demographic groups such as women, rural users, and older populations. Third, the reliance on self-reported data raises the risk of social desirability bias, as respondents may have overstated their adoption intentions. Finally, the study was conducted solely in Pakistan's cultural and regulatory environment, which may differ substantially from other emerging markets, reducing the external validity of the findings.

References

Abor, J. Y., Quartey, P., Ahmad, A. H., & Opoku-Afari, M. (2022). FinTech and the future of banks and financial services in Africa. In *The economics of banking and finance in Africa: developments in Africa's financial systems* (pp. 135-180). Cham: Springer International Publishing.

Amjad, F., Rao, Y., Rahman, A. U., Baig, S. A., Usman, M., & Younas, M. W. (2025). Innovative Strategies for SMEs' Sustainability: Crowdfunding, Industry 4.0, and Sustainable Business Models Using SEM-ANN Approach. *Journal of the Knowledge Economy*, 1-32.

Atawna, T. H. A. E. R. (2023). Crowdfunding and Sustainable Development: a good match?.

Atkinson, P., Hammersley, M., Denzin, N. K., & Lincoln, Y. S. (1994). Handbook of qualitative research. *Handbook of qualitative research*, 248-261.

Aw, E. C.-X., Thomas, S., Patel, R., Bhatt, V., & Cham, T.-H. (2024). Click to contribute: Understanding donation behaviour and well-being in donation-based crowdfunding mobile apps. *International Journal of Bank Marketing.* Advance online publication.

Baah-Peprah, P., & Shneor, R. (2022). A trust-based crowdfunding campaign marketing framework: Theoretical underpinnings and big-data analytics practice. *International Journal of Big Data Management, 2*(1), 1–24.

Behl, A., Sampat, B., Pereira, V., Jayawardena, N. S., & Laker, B. (2024). Investigating the role of data-driven innovation and information quality on the adoption of blockchain technology on crowdfunding platforms. *Annals of Operations Research*, *333*(2), 1103-1132.

Bernardino, S., & Santos, J. F. (2021). Lending crowdfunding and regional development: An empirical study. In D. Assadi (Ed.), *Multidisciplinary approaches to crowdfunding platforms* (pp. 55–83). IGI Global.

Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative research*, *6*(1), 97-113.

Cavana, R., Delahaye, B., & Sekeran, U. (2001). *Applied business research: Qualitative and quantitative methods*. John Wiley & Sons.

Chao, C.-W., Reid, M., Lai, P.-H., & Reimers, V. (2020). Strategic recommendations for new product adoption in the Chinese market. *Journal of Strategic Marketing, 28*(2), 176–188.

Chen, D. (2025). Why do we invest online? An empirical study of online crowdfunding in China. *Nankai Business Review International*, *16*(1), 42-57.

Chen, Y., Dai, R., Yao, J., & Li, Y. (2019). Donate time or money? The determinants of donation intention in online crowdfunding. *Sustainability, 11*(16), 4269.

Cohen, J. (1992). Things I have learned (so far). Annual Convention of the American Psychological Association, 98th, Aug, 1990, Boston, MA, US; Presented at the aforementioned conference.,

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

Djimesah, I. E., Zhao, H., Okine, A. N. D., Li, Y., Duah, E., & Mireku, K. K. (2022). Analyzing the technology of acceptance model of Ghanaian crowdfunding stakeholders. *Technological Forecasting and Social Change*, *175*, 121323.

Djimesah, I. E., Zhao, H., Okine, A. N. D., Li, Y., Duah, E., & Mireku, K. K. (2022). Analyzing the technology acceptance model of Ghanaian crowdfunding stakeholders. *Technological Forecasting and Social Change, 175*, 121323.

Geetha, S., Saradha, S., & Jenifer, A. Challenges and prospects of women entrepreneurs towards progress of economic growth in Indian context. *Indian Council of social science research new Delhi*, *87*, 430.

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly, 27*(1), 51–90.

Green, E., Sukumar, A., Jafari-Sadeghi, V., Pandya, K., & Khavarinezhad, S. (2022). Analysis of factors impeding access to finance in internet-enabled crowdfunding: A systematic literature review. *International Journal of Technology Transfer and Commercialisation, 19*(2), 249–269.

Greenberg, J., & Mollick, E. (2017). Activist choice homophily and the crowdfunding of female founders. *Administrative Science Quarterly, 62*(2), 341–374.

Guimarães, A. D., Maehle, N., & Bonet, L. (2024). The relational forms of cultural-creative crowdfunding: A typology of practices through mapping platforms in Europe and Latin America. *Poetics, 105*, 101913.

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial management & data systems*, *117*(3), 442-458.

Halim, M. A. (2024). Does crowdfunding contribute to digital financial inclusion? *Research in Globalization, 6*, 100238.

Hayes, A. F., & Preacher, K. J. (2013). Conditional process modeling: Using structural equation modeling to examine contingent causal processes.

Hayes, A. F., & Scharkow, M. (2013). The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis: does method really matter? *Psychological science*, *24*(10), 1918-1927.

Healy, M., & Perry, C. (2000). Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. *Qualitative market research: An international journal*, *3*(3), 118-126.

Islam, M. T., & Khan, M. T. A. (2021). Factors influencing the adoption of crowdfunding in Bangladesh: A study of start-up entrepreneurs. *Information Development*, *37*(1), 72-89.

Ismaila, B. (2023). The state of crowdfunding in Africa and its potential impact: A literature review. *International Journal of Research in Business and Social Science (2147-4478), 12*(5), 258–268.

Jamil, S., Shah, F., Khan, S., & Imran, I. (2023). The influence of potential outcome on entrepreneurs' decisions to participate in crowdfunding in Pakistan (Karachi). *International Journal of Social Science & Entrepreneurship, 3*(1), 1–24.

Kapoor, N., & GS, R. (2025). Unlocking the secrets of success: factors driving reward-based crowdfunding success in India. *Journal of Entrepreneurship in Emerging Economies*.

Kassim[1], S. F. M., Rahman, M. A., Ramli, S. N. M. Z., & Shafii, Z. (2025). Fuzzy Agent-Based Modeling of Islamic Crowdfunding Platforms: Governance, Technology, Regulation, Trust, Digital Literacy, and Economic Stability in Advancing Financial Inclusion. *International Journal Of Academic Research In Accounting, Finance & Management Sciences, 15* (03), 381-399.

Khan, S., Umer, R., Umer, S., & Naqvi, S. (2021). Antecedents of trust in using social media for e-government services: An empirical study in Pakistan. *Technology in Society, 64*, 101400.

Khizar, N., & Siddiqui, D. A. (2021). Factors influencing the adoption of crowdfunding in Pakistan: The mediatory role of perceived risk, benefits, and trust. *SSRN*.

Kotrlik, J., & Higgins, C. (2001). Organizational research: Determining appropriate sample size in survey research appropriate sample size in survey research. *Information technology, learning, and performance journal*, *19*(1), 43.

Laaouina, S., El Aoufi, S., & Benali, M. (2024). How does age moderate the determinants of crowdfunding adoption by SMEs? Evidences from Morocco. *Journal of Risk and Financial Management, 17*(1), 18.

Li, J., Zhou, Y., Hu, J., & Guo, F. (2024). Local bias versus home bias: Evidence from debt-based crowdfunding. *Applied Economics, 56*(23), 2705–2719.

Li, Y., Liu, F., Lim, E. T., Tan, C.-W., & Liu, Y. (2024). Infectious confidence: Unraveling the effects of confidence contagion on overfunding in equity crowdfunding. *MIS Quarterly, 48*(3).

Liang, X., Hu, X., Li, E. Y., & Meng, H. (2023). Untangling the influence of perceived sustainability orientation on value-co-creation behavior in crowdfunding process: Investigating a mediation model. *Internet Research, 33*(4), 1544–1572.

Lim, W. M. (2024). What is qualitative research? An overview and guidelines. *Australasian Marketing Journal*, 14413582241264619.

Lin, S., & Liu, H. (2025). Review on the Influencing Factors of Crowdfunding Performance. *Open Journal of Business and Management*, *13*(3), 1914-1939.

Liu, Z., Ben, S., & Zhang, R. (2023). Factors affecting crowdfunding success. *Journal of Computer Information Systems, 63*(2), 241–256.

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *American Economic Journal: Journal of Economic Literature, 52*(1), 5–44.

Metelka, A. (2014). *Crowdfunding: Startups' alternative funding source beyond banks, business angels and venture capitalists* [Presentation].

Montero-Benavides, P., Albort-Morant, G., Palacín-Sánchez, M. J., & Oliver-Alfonso, M. D. (2025). The use of crowdfunding among music students: Analysis of key drivers and barriers. *Tec Empresarial*, *19*(3), 51-75.

Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice, 41*(6), 1029–1055.

Okine, A. N. D., et al. (2023). Analyzing crowdfunding adoption from a technology acceptance perspective. *Technological Forecasting and Social Change, 192*, 122582.

Okine, A. N. D., Li, Y., Djimesah, I. E., Zhao, H., Duah, E., Kissi Mireku, K., Adjei Budu, K. W., & Adjei, D. B. (2024). Measuring crowdfunding success for small and medium-sized enterprises sustainable development: Insight from the social networking theory. *Business Strategy & Development, 7*(2), e387.

Parasuraman, A. (2000). Technology readiness index (TRI): A multiple-item scale to measure readiness to embrace new technologies. *Journal of Service Research, 2*(4), 307–320.

Parasuraman, A., & Colby, C. L. (2015). An updated and streamlined technology readiness index: TRI 2.0. *Journal of Service Research, 18*(1), 59–74. https://doi.org/10.1177/1094670514539730

Pelizzon, L., Riedel, M., & Tasca, P. (2016). Classification of crowdfunding in the financial system. In *Banking Beyond Banks and Money* (pp. 5–16). Springer.

Preacher, K. J., & Hayes, A. F. (2008). Contemporary approaches to assessing mediation in communication research.

Rahman, H. A., Karunakaran, A., & Cameron, L. D. (2024). Taming platform power: Taking accountability into account in the management of platforms. *Academy of Management Annals, 18*(1), 251–294.

Razak, D. A., Othman, A. H. A., Zulmi, S. R., Ismail, I., & Sidiki, S. (2021). Determinant factors of equity-based crowdfunding in Malaysia. *Labuan Bulletin of International Business and Finance (LBIBF), 19*(1), 33–48.

Rizvi, S. K. A., Naqvi, B., & Tanveer, F. (2018). Is Pakistan ready to embrace FinTech innovation? *The Lahore Journal of Economics*, *23*(SE), 151–168.

Rizwan, A., et al. (2024). Prospects for institutionalization of crowdfunding: A developing country perspective. *Journal of Entrepreneurship and Public Policy*.

Sari, D. P., Akasumbawa, M. D. D., & Rukmana, L. (2024). Intention to pay Infaq and alms through crowdfunding platform. *Jurnal Ekonomi Syariah Teori dan Terapan, 11*(1).

Sekaran, U., & Bougie, R. (2003). Research methods for business.

Sharma, A., Vij, S., & Kumar, A. (2025). Crowdfunding: exploring the factors that could motivate people to raise fund or make investment through crowdfunding platforms in emerging countries. *Vision*, *29*(1), 21-34.

Siddiqui, A. A., & Ali, S. H. S. (2022). Conceptual framework of determinants of blockchain technology acceptance in banking industry. *AIP Conference Proceedings*, *2469*, 030015.

Siddiqui, T. A., & Siddiqui, K. I. (2021). Financial inclusion and telecommunication in India: A study on spillover effect. In *Trade, Investment and Economic Growth: Issues for India and Emerging Economies* (pp. 341–362). Routledge.

Sultana, S., & Qureshi, F. (2021). Crowdfunding in DETEs: A literature review. In *Entrepreneurial Finance, Innovation and Development* (pp. 25–49). Routledge.

Tahir, M. Y., Shahid, M. S., Naheed, K., & Jamal, M. N. (2025). Adoption Of Reward-Based Crowdfunding In The Digital Era: Examining The Roles Of User Perceptions, Technology Readiness, Trust, And Financial Literacy. *Kashf Journal of Multidisciplinary Research*, *2*(07), 1-16.

Udukeke, F. O., & Usoro, E. B. (n.d.). *Entrepreneurship and innovation* [Unpublished manuscript].

Usman, S. M., et al. (2024). Financing decisions and the role of CSR in donation-based crowdfunding: Evidence from Pakistan and Indonesia. *Business & Information Systems Engineering, 66*(1), 3–18.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science*, *46*(2), 186-204.

Venkatesh, V., et al. (2012). Consumer acceptance and use of information technology.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, *27*(3), 425–478.

Vismara, S. (2022). Expanding corporate finance perspectives to equity crowdfunding. *The Journal of Technology Transfer*, *47*(6), 1629–1639.

Waqar, M., Masood, K., & Idrees, F. (2025). Digital Financial Literacy And Fintech Access Driving Sustainable SMEs Performance Through Green Innovation And Entrepreneurial Agility. *Gomal University Journal of Research*, *41*(2), 115-128.

Xu, D., Hong, H., Deng, L., & Zhang, X. (2025). Crowdfunding Success Factors: A Meta-Analytic Investigation. *Information Systems Research*, 0 (0).

Yasar, B. (2021). The new investment landscape: Equity crowdfunding. *Central Bank Review, 21*(1), 1–16.