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Digitally Enabled Collective Frugal Entrepreneurship: A Configurational Approach to Women Entrepreneurship and Inclusive Growth

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Abstract
The paper investigates the way women translate their frugal entrepreneurial capabilities into entrepreneurial orientation within a resource-constrained environment. It draws on the resource-based view and social network theory to empirically test a moderated mediation model. Data collected from 529 Pakistani women entrepreneurs is and analysed through structural equation modelling. The findings suggest a significant mediation effect of fintech self-efficacy between women's frugal innovation capabilities and their entrepreneurial orientation. The findings also suggest the moderating effect of social capital on the aforementioned mediated relationship. A high degree of pro-activeness, autonomy, and risk-taking behaviour was portrayed by women with greater confidence in digital financial tools. Furthermore, structural, relational, and cognitive social capital positively moderated the mediated relationship. By enhancing access to shared entrepreneurial norms, peer support, and knowledge exchange, social capital amplified the effect of fintech self-efficacy. The paper signifies the role of both psychological and relational enablers in fostering women's inclusion through digital entrepreneurship in a resource-constrained context. Emphasizing on the interactions between fintech and social dynamics for women's empowerment, the paper contributes to gender, digital entrepreneurship, and development literature. The paper also underscores platforms and policy-related implications.
Keywords: Fintech self-efficacy, frugal innovation, social capital, women empowerment.

1. Introduction:

Women's economic participation and empowerment are vital for sustainable development through inclusive growth. Yet, multiple challenges restrain women entrepreneurs in the context of developing countries. These challenges,

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to name a few, include: social fragmentation, gender norms, hierarchical power dynamics, and institutional voids etc. Restricting their access to resources, markets, and support systems, these challenges discourage women's entrepreneurial ambition and widen gender disparities. These challenges restrict their access to markets, resources, and support systems, discouraging entrepreneurial ambitions and widening gender disparities. This paper argues that frugal innovation-based collective entrepreneurship may offer a transformative pathway by enabling networked collaboration and shared resources, especially in a resource-constrained environment. Being drawn from the indigenous knowledge and local embeddedness, frugal innovations offer simple, affordable, and accessible solutions in the resource-constrained environment. Recent studies recognize women with frugal innovation capabilities as the key agents of change, particularly in health, education, agriculture, and crafts sectors in developing countries (Chaudhary, 2025; Vossenberg & Hai, 2023). When supported by digital platforms, women-led small businesses rooted in frugal innovation (hereafter frugal entrepreneurship) can become more resilient and sustainable. However, the persistent digital divide in developing countries limits women's access to digital tools and smart devices, impeding their integration into the digital economy. As a result, women with frugal innovation capabilities often face challenges in leveraging technology to disseminate and scale their innovations. This paper argues that a common fintech platform may facilitate women from socioeconomically constrained environments to develop the social capital to overcome the structural and gender barriers. A social capital that will enable them acquire the digital competence (fintech self-efficacy), to make their frugal entrepreneurship more adaptive, scalable, and sustainable.

Therefore, this paper aimed to,

i. To examine the mediation effect of fintech self-efficacy on the relationship between frugal innovation capabilities and the entrepreneurial orientation of women entrepreneurs in a sociocultural and institutionally constrained environment.
ii. To investigate the moderating role of social capital in the relationship between frugal innovation capabilities and entrepreneurial orientation.
iii. To determine whether social capital moderates the indirect effect of frugal innovation capabilities and entrepreneurial orientation via fintech self-efficacy.

2. Review of Literature:

2.1. Women Entrepreneurship in the challenging context of developing countries:

Women's empowerment is essential for inclusive growth and community well-being (Almathami et al., 2022). While their socioeconomic contribution is widely acknowledged (Elneel & Almulhim, 2024), women entrepreneurs, particularly in Pakistan, face social fragmentation, gender norms, and institutional barriers (Kromidha et al., 2024; Soomro et al., 2024). In developing countries, women's entrepreneurial participation is hindered not

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only by the digital divide but also by sociocultural norms, gender bias, and structural barriers such as inadequate infrastructure and gender-insensitive policies. Weak social capital, fragmented ecosystems, and institutional voids degrade trust, limit collaboration, and hinder scalability of women-led enterprise (Chaudhry, 2025). Other limiting factors that reduce women's entrepreneurial engagement include: limited education, low mobility, and poor bargaining power (Lagrasta et al., 2024; Noor & Isa, 2020). Due to entrenched cultural restrictions, women's economic participation is discouraged even by their own families (Nasir et al., 2019; Zeb, 2018). Aforementioned challenges propagate gender disparities, and supress motivation leading to a significant decrease in women's economic participation in developing countries relative to the developed ones (Corrêa et al., 2024). Research highlights the need to address these social and structural barriers, and devise support mechanisms for enabling women in realizing their full cultural, political, and economic potential for sustainable development (Mohammad et al., 2025; Ahmad et al., 2025; Al-Nasrallah, 2023).

2.2. Women's frugal innovation capabilities and networks:

Fostering collaborations and opportunity recognition through informal and formal networks (Reich, 1987), collective entrepreneurship may offer a transformative conduit for women in a constrained sociocultural environment (Schuerkens, 2025; Hossain & Sarkar, 2021; Agarwal et al., 2020). Networked sharing and collaborative replication are especially vital for the socio-economic uplift of women entrepreneurs (Shahzad et al., 2025; Neumeyer et al., 2025; Mukherjee et al., 2024). Shared platforms integrating women-led small businesses can enhance resilience and address context-specific challenges (Kholidah et al., 2025) while bridging entrepreneurial competencies with market demands in digital contexts (Ahmed et al., 2025; Song et al., 2024). Yet, the digital divide and limited readiness in developing countries hinder equitable access (Muhammad et al., 2025; Sehrawat & Sharma, 2024), necessitating further research into inclusive digital entrepreneurship (Alom et al., 2025).

Frugal entrepreneurship has emerged as a transformative mechanism in socially fragmented and resource-poor settings (Papotto & Loots, 2026; Lagrasta et al., 2024). Women-led frugal ventures utilize local resources to offer cost-efficient, eco-friendly solutions that promote inclusion and resilience (Yousaf et al., 2024; Sengura et al., 2024; Vossenberg & Hai, 2023). Building a collective frugal entrepreneurship ecosystem via digital platforms may enhance entrepreneurial orientation in marginalized settings. Frugal innovation-based networks enable women to leverage local assets and low-cost digital tools to co-create value (Iqbal et al., 2025; Chaudhry, 2025). They develop progressively, as networks that promote affordability, adaptability, and peer mentoring, reducing individual risk and expanding opportunity through mobile and voice-enabled platforms (Lenz et al., 2025). Such networks may benefit in facilitating shared learning, trust, and relational capital as emphasized by social network and configurational perspective

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(Duong et al., 2025; Walker, 2015). Digital social platforms such as Facebook and WhatsApp may act a common hub for digital inclusion and knowledge exchange, enabling women entrepreneurs overcome fragmentation and specialize in their specific market area (Balcar et al., 2026; Shahid et al., 2024). The challenge is that women's collective entrepreneurship includes community enterprises, and informal collaborations have structurally complexity. Despite its potential impact, limited research investigates the intersection of frugal innovation networks with platform inclusivity and sustainable outcomes (Barbar, 2026).

Contemporary research calls for context-specific frameworks and models that foster the development of digital human capital and women-led entrepreneurial ecosystems.

This because in the developing countries' context, women's entrepreneurship represents a complex ecosystem of a multitude of interdependent forces (Balcar et al., 2026; Iqbal et al., 2025). Effective interventions should not only address broader challenges such weak infrastructure, power hierarchies, and market exclusion but also address individual level capacity (e.g., self-efficacy) (Barbar, 2026). Studies suggest that the entrepreneurial ecosystem in developing countries must simultaneously face two critical challenges: the absence social support and empowering environment, and limited access to finance and markets (Alom et al., 2025; Sehrawat & Sharma, 2024).

Finally, it is worthy of mention here that both knowledge generation and recognition of opportunities recognition are path-dependent, embedded in learning environment, past experiences, and organizational capacity (Qin, 2026; Breschi et al., 2014). Thus, there is diversity and heterogeneity in frugal innovation pathways making some ventures innovation and growth oriented while others pursue survival based on the diversity in their access to networks, knowledge level, and frugal strategies (Coronado et al., 2026; Rosca et al., 2017).

2.3. Fintech as a source of Social Capital:

Grounded in social network theory (Walker et al., 1997), individuals' social and economic outcomes depend on their network positions. As knowledge generation is cumulative (Breschi et al., 2014), integrating local knowledge from necessity- and growth-driven women's ventures via shared platforms fosters collaboration, specialization, and resource-efficient innovation. For women in constrained settings, entrepreneurship-based sharing and replication are vital for socioeconomic mobility (Balcar et al., 2026; Atarah et al., 2023). Social-Digital Platforms (SDPs) such as fintech applications empower frugal women entrepreneurs by enabling peer knowledge exchange, resilience, and broader market access (Alomar & Alatawi, 2025; Aloulou et al., 2024). These platforms facilitate bonding capital through trust-based savings groups, bridging capital via diverse networks, and cognitive capital through shared values like digital trust and financial autonomy (Esmaeilpour Moghadam & Karami, 2023; Liang et al., 2024; Coleman, 1988). Collectively, they strengthen digital self-efficacy, enabling women to translate frugal capabilities into entrepreneurial outcomes (Kömürcüoğlu & Kömürcüoğlu,

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2025). Leveraging Social-Digital Platforms (SDPs) in developing countries faces multiple structural and social barriers (Khoo et al., 2025; Nahid & Amir, 2024). These include poor internet access, limited digital literacy, gender divides, culturally insensitive platform and design, and financial exclusion (Alomar & Alatawi, 2025). These challenges particularly in informal economies, erode women's trust and reduce their engagement. Making them vulnerable to face exclusion due to language barriers, complex interfaces, and fears of harassment, factors that erode trust and reduce engagement (Kholidah et al., 2025). That is why Fintech Self-Efficacy (FSE), '*one's belief in their ability to use digital financial tools effectively*', emerges as a key psychological enabler in such contexts (Shiau et al., 2020).

2.4. The role Fintech Self-Efficacy (FSE):

Authors like Kömürcüoğlu and Kömürcüoğlu (2025) suggest that FSE may enable women overcome the digital literacy gap and develop confidence to effectively navigate fintech environments. FSE is shown to overcome gendered platform biases as it promotes adaptability and persistence (Yunita et al., 2026; Liang et al., 2024). Furthermore, FSE equips women the capacity and knowledge to protect their online identity and effectively manage risk to reduce digital distrust (Khoo et al., 2025). It strengthens the capacity to use digital tools, therefore, entrepreneurial motivation for growing and sustaining their business in an informal context without formal support (Yunita et al., 2026). Thus, FSE is not limited to merely a skillset but a vital psychological enabler of digital inclusion, and women's economic empowerment.

A significant amount of research has paid attention to women entrepreneurship in resource-constrained settings. However, limited research focuses on the way women translate their frugal entrepreneurial capabilities into entrepreneurial orientation through digital pathways (Ovais et al., 2025; Dhiman et al., 2025; Vossenberg and Hai, 2023). Despite a frequent demonstration of frugal innovation skills, women's progress in their entrepreneurial ventures is often challenged by structural constraints and digital exclusion. Contemporary research highlights the role of FSE as key psychological enabler especially, on the social digital platforms (Ovais et al., 2025; Kholidah et al., 2025). However, the mediating role of fintech self-efficacy in this context remains underexplored (Kömürcüoğlu & Kömürcüoğlu, 2025). Additionally, while social capital, in the forms of bonding, bridging, and cognitive ties, has been linked to digital engagement, its potential moderating role in the fintech self-efficacy pathway is not well understood. Social capital may strengthen or weaken the influence of fintech self-efficacy by shaping women's access to trust-based support, diverse networks, and shared entrepreneurial norms. This points to a clear research gap: examining how frugal entrepreneurial capabilities influence entrepreneurial orientation via fintech self-efficacy, and how this mediated relationship is moderated by social capital within digitally enabled ecosystems.

2.5. Conceptual Framework:

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Keeping in view the discussion from the contemporary research above, this paper has formulated it conceptual framework (Figure 1 below), with the following hypotheses:

H1. Frugal innovation capability has a significant effect on women's entrepreneurial orientation.

H2. Fintech self-efficacy positively mediates the relationship between frugal innovation capabilities and women's entrepreneurial orientation.

H3. Social capital moderates the relationship between frugal innovation capabilities and women's entrepreneurial orientation mediated by fintech self-efficacy.

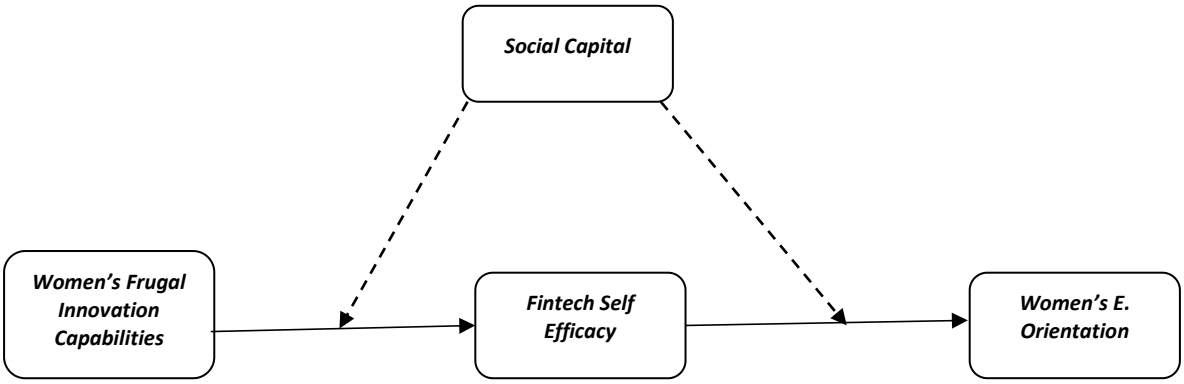

Figure 1: Conceptual Framework

3. Methodology:

3.1. Sampling:

This study focused on skilled women working in Pakistan's textile industry and female entrepreneurs utilizing either fintech platforms or traditional business networks. Participants such as skilled laborers, fintech adopters, SME owners, and informal entrepreneurs were selected using a stratified random sampling technique. Data collection started in Faisalabad and was later extended to Islamabad, Lahore, and Karachi, respectively. The snowball sampling technique was used to achieve an adequate sample size for Structural Equation Modelling (SEM).

Sample selection criteria included knowledge of Fintech, frugal innovation, entrepreneurship, as well as established enthusiasm for the use of digital technologies in their entrepreneurial ventures. For snowball sampling, the researchers ethically engaged (through informed consent) with respondents through their peers, social media contacts, women's entrepreneurial networks, and the official databases. The approach enabled in collecting ethical, relevant, and context-specific data. Data collection involved careful considerations for reaching the non-urban population. This is the reason that the majority of the sample comprised of women from small (family-run) entrepreneurships with annual revenues ranging from PKR 10 million to PKR 25 million.

Data collection through physical and online channels continued for more than 2 months. A total of 662 questionnaires (physical and online) were distributed, yielding 551 responses. Non-response bias was tested using Armstrong and

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Overton's (1977) method, and a non-significant t-test for any difference between early and late responders concluded no non-response bias. Out of 551, 22 questionnaires were discarded based on incompleteness, lack of clarity, and other reasons, leaving the researchers with 529 valid responses. The KMO and Bartlet test with a KMO value of 0.802 established the adequacy of the sample.

With a parameter-to-observation ratio exceeding 1:10, the sample was suitable for structural equation modeling (Hair et al., 2011).

3.2. Measurement Instruments:

Drawing on established constructs from prior literature, this study designed a composite questionnaire incorporating women's frugal innovation capability, fintech self-efficacy, social capital, and women's entrepreneurial orientation. Women's Frugal Innovation Capabilities (FIC) were measured using a 12-item scale comprising four dimensions adapted from Bhatti et al. (2021) and Pisoni et al. (2023). These dimensions included: resource constraints awareness, adaptive problem solving, affordability and simplicity orientation, and local embeddedness and contextual knowledge, each measured using three items. The Fintech Self-Efficacy (FSE) scale was adapted (Avdukić & Smolo, 2024; Islam & Khan, 2024; Haddad & Hornuf, 2019) to capture individuals' confidence in their digital abilities, including navigating mobile banking applications, conducting secure online transactions, and adopting evolving fintech technologies such as Islamic fintech, decentralized finance (DeFi), and blockchain-based systems. Unlike general entrepreneurial self-efficacy (ESE) measures, which might include statements like "I am confident in handling difficult situations", the fintech-specific scale focused on context-relevant challenges, such as "I am confident in protecting my fintech transactions from fraud and phishing." The scale comprised of four dimensions: problem-solving (3 items), engagement (4 items), fintech competence (5 items), and financial literacy (6 items). Social Capital (SC) was measured using a validated three-dimensional model with three items each for structural (Lee et al., 2011; Inkpen & Tsang, 2005), relational (Inkpen & Tsang, 2005), and cognitive capital (Lee et al., 2011), rated on a 5-point Likert scale. Women's Entrepreneurial Orientation (WEO) was assessed through three dimensions: autonomy (3 items), proactiveness (5 items), and risk-taking (5 items) as adapted from Clark et al. (2025) and Khan et al. (2023).

3.3. Contextualizing and triangulating the instrument:

An expert panel thoroughly evaluated and reviewed the composite questionnaire, considering the fact that the included scales, although proven valid and reliable, were developed in a different sociocultural context. The panel included two academicians, 3 experienced women entrepreneurs, and 2 professionals from financial institutions (1 from a bank and 1 from takaful). Each construct and its underlying dimensions were thoroughly reviewed for their relevance to the target market and social and cultural context to ensure nomological and content validity. The panel review was followed by a pilot test analyzing data from 100 respondents. The outcomes of the pilot test were to further refine items from the dimensions of the respective scale through

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iterative interactions with the members of the expert panel. The approach is consistent with previous scholarly research (Ortega-Quevedo et al., 2024; Le et al., 2024; Holler et al., 2023; Elangovan & Sundaravel, 2021). The final composite questionnaire had 57 items, with five initial questions capturing demographic information, education level, marital status, entrepreneurial experience, and sources of capital.

4. Results and Discussion:

The analysis of data occurred in two phases: First, the reliability and validity of the measurement model was performed through Confirmatory Factor Analysis (CFA). Second, structural/Path analysis was performed to test the hypothesized relationship through SPSS AMOS 21. Descriptive statistics for 52 items (excluding demographics) showed high mean scores (>4), limited dispersion (SD: 1.03–1.54), and acceptable skewness and kurtosis values (2 and 9), indicating normality and consistent responses (Kline, 2015).

4.1.Reliability and Validity:

Each of the four measurement scales underwent reliability testing. After removing four low-performing items: item 2 from fintech competence, item 3 and 5 from financial literacy dimensions of FSE, and item 3 from the risk-taking dimension of entrepreneurial orientation, Cronbach's alpha values for all scales exceeded the 0.70 threshold, with final values at or above 0.72 (Nunnally & Bernstein, 1994). The revised 48-item composite scale demonstrated strong internal consistency. Composite reliability was also assessed, yielding a value of 0.79 (Hair et al., 1998), confirming scale reliability (Table 1 below).

Table 1 CFA, reliability, and validity

Frugal Innovation Capabilities			**Women's Fintech Self-efficacy**			**Women Entrep. Orientation**		
Items	***S. Loadings***	***P-val***	***Items***	***S. Loadings***	***P-val***	***Items***	***S. Loadings***	***P-val***
Resource Awareness Cons.			***Financial Literacy***			***Risk Taking***		
RCA1	0.82	***	FLit1	0.86	***	RT1	0.78	***
RCA2	0.79	***	FLit2	0.84	***	RT 2	0.42	deleted
RCA3	0.80	***	FLit3	0.47	deleted	RT 3	0.83	***
AVE		***0.65***	FLit4	0.78	***	RT 4	0.81	***
Chronbach's Alpha		***0.74***	FLit5	0.37	deleted	RT 5	0.66	***
Adaptive Problem Solving			FLit6	0.82	***	***AVE***		***0.60***
APS1	0.76	***	***AVE***		***0.68***	***Chronbach's Alpha***		***0.71***
APS2	0.89	***	***Chronbach's Alpha***		***0.82***	***Pro-activeness***		
APS3	0.75	***	***Fintech Competence***			Pro1	0.72	***
AVE		***0.64***	Fin.C1	0.85	***	Pro2	0.84	***
Chronbach's Alpha		***0.72***	Fin.C2	0.34	deleted	Pro3	0.72	***

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Afford. & Simp. Orientation			Fin.C3	0.67	***	Pro4	0.82	***
ASO1	0.80	***	Fin.C4	0.89	***	Pro5	0.78	***
ASO2	0.82	***	Fin.C5	0.77	***	***AVE***		***0.60***
ASO3	0.87	***	***AVE***		***0.64***	***Chronbach's Alpha***		***0.88***
AVE		***0.69***	***Chronbach's Alpha***		***0.70***	***Autonomy***		
Chronbach's Alpha		***0.84***	***Engagement***			Auto1	0.86	***
Local Emb. & Know. Const.			Engage1	0.76	***	Auto2	0.82	***
LEKC1	0.85	***	Engage 2	0.89	***	Auto3	0.80	***
LEKC2	0.87	***	Engage 3	0.92	***	***AVE***		0.68
LEKC3	0.75	***	Engage 4	0.65	***	***Chronbach's Alpha***		0.85
AVE		***0.68***	***AVE***		***0.66***	**Social Capital**		
Chronbach's Alpha		***0.89***	***Chronbach's Alpha***		***0.80***	***Structural Capital***		
			Problem Solving			SCap1	0.86	***
			PS1	0.84	***	SCap2	0.81	***
			PS2	0.83	***	SCap3	0.82	***
			PS3	0.82	***	***AVE***		***0.69***
			AVE		***0.69***	***Chronbach's Alpha***		***0.78***
			Chronbach's Alpha		***0.71***	***Relational Capital***		
						RCap1	0.78	***
						RCap2	0.79	***
						RCap3	0.81	***
						AVE		***0.63***
						Chronbach's Alpha		***0.86***
						Cognitive Capital		
						CCap1	0.88	***
						CCap2	0.84	***
						CCap3	0.8	***
						AVE		***0.71***
						Chronbach's Alpha		***0.8***

Convergent validity was ensured through satisfactory item loadings (Figure 2 below for the FSE scale), composite reliability, and average variance extracted, as shown in Table 1 above.

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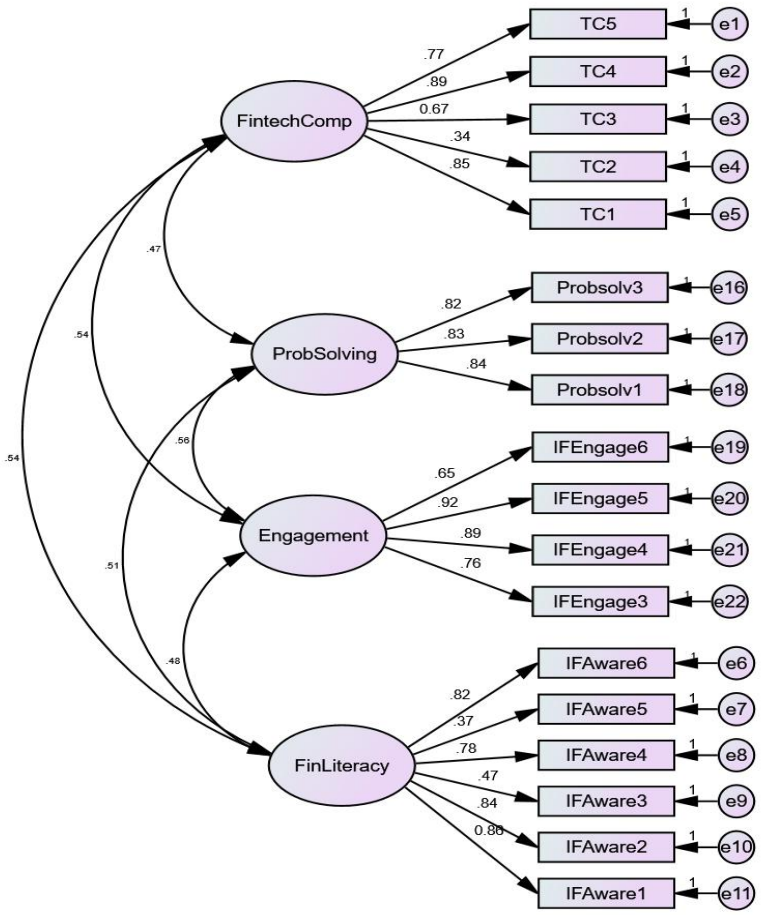

Figure 2 CFA FSE

To assess overall model validity and fit, the study applied Hu and Bentler's (1999) recommended criteria, using both absolute and incremental fit indices. These included RMR, RMSEA, GFI, and CFI, along with the chi-square statistic. The measurement model showed a good fit with the data as evident from the values in Table 2 below.

Table 2 Model Fit Indices

Index Name	Cut off	Finding	Interpretation
χ2 - Chi-Square		820.40 (p= 0.00)	Unfit
χ2/df	> 2 and < 5	770.05/187	Fit
RMR	Closer to 1	0.941	Fit
GFI	Closer to 1	0.940	Fit
NFI	≥ 0.90	0.940	Fit
CFI	≥ 0.90	0.96	Fit

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RMSEA	≤ 0.08	0.050	Fit

Furthermore, the value of the Heterotrait-Monotrait (HTMT) ratio was found to be less than 0.85, establishing discriminant validity. The findings confirm that the constructs included in our composite questionnaire showed internal consistency and distinctiveness within the model for moderated mediation.

4.2. Structural Path Analysis:

The structural model analysis was performed through SEM with bootstrapping method (5000 resample). The findings confirmed the hypotheses about the mediation effect of fintech self-efficacy in the relationship between women's frugal innovation capabilities and their entrepreneurial orientation. Furthermore, the findings also confirmed the hypothesis that social capital amplifies aforementioned mediation mechanism. Figure 3 below provides a comprehensive view of the structural model analysis.

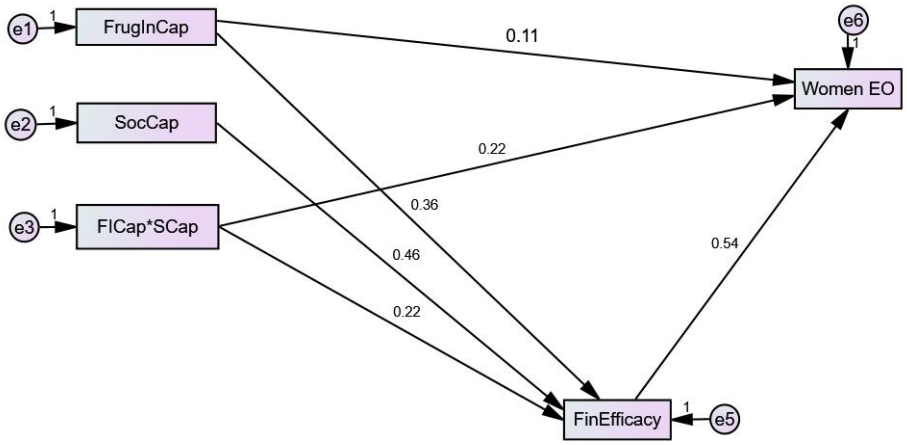

Figure 3 Structural/moderated mediation Model

Table 3 below shows the output statistics for the structural model. It is clear that women's frugal innovation capability (β = 0.27) has a significantly positive effect on women's entrepreneurial orientation. The mediation effect of fintech self-efficacy s also significant at a β value of 0.19 significant at a p-value of 0.001. Furthermore, in the mediation model the direct effect of frugal innovation capabilities (significant though) decreasing to a β value of 0.11, implying partial mediation and acceptance of the second hypothesis.

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Table 3 Moderated mediation analysis

H1. Direct effect	Beta	P-value	95% bootstrap Cl	Interpret.
FIC ⟶ WEO	0.27	0.004	0.10, 0.41	Accepted
H2. Mediation effect				
FIC ⟶ WEO (direct effect)	0.11	0.032	0.02, 0.24	Accepted
FIC ⟶ FSE ⟶ WEO (Indirect/mediation effect)	0.19	0.001	0.09, 0.31	Accepted
H3. Moderated Mediation				
FSE × SC ⟶ WEO (moderation effect)	0.22	0.003	0.08, 0.35	Accepted
FIC ⟶ FSE ⟶ WEO × SC	0.14	--	0.05, 0.25	Accepted

Regarding the third hypothesis which suggest a moderated mediation effect, Table 3 also indicate a significant interaction between fintech self-efficacy and social capital for women entrepreneurial orientation ($\beta = 0.22$, $p = 0.003$). Further the index of moderated mediation was also significant at a β value of 0.14 (CI [0.05, 0.25]), indicating that the indirect effect is positively amplified by the higher levels of social capital, leading to the acceptance of the third hypothesis. The output in Table 3 establishes the fact that fintech self-efficacy is more effective in translating frugal innovation capability into women's entrepreneurial orientation.

5. Conclusion:

This study investigated the way through which fitech self-efficacy translates women's frugal innovation capabilities into their entrepreneurial orientation. Furthermore, it also establishes the fact that social capital is instrumental in fostering aforementioned mediated relationship. The findings suggest that women's frugal innovation capabilities positively affect their entrepreneurial orientation both directly and indirectly through fintech self-efficacy as a psychological enabler. Thus, women fluent in fintech platforms' navigation may be more successful in translating problem solving abilities and resourcefulness into entrepreneurial behavior. This implies that women with fintech self-efficacy may be more proactive, autonomous, and better risk takers. More importantly, the strength of the psychological enabler is enhanced by social capital. Thus, women with fintech self-efficacy and strong cognitive, bonding, and bridging ties may portray a relative strength in transforming their frugal innovation based resourcefulness into entrepreneurial value. The findings are consistent with the theoretical argument frugal innovation capability alone may not be sufficient for women entrepreneurs in the resource-constrained environment. They may need confidence with digital financial tools deeply embedded in their supportive social networks. Therefore, facing the infrastructural and social constraints of the informal economies, women with frugal innovations capabilities can use fintech self-efficacy as bridge to achieve their entrepreneurial ambitions with the catalytic effect of social capital.

The paper contributes to the scholarly literature on gender, innovation, and financial technology by empirically validating a socially embedded digital

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entrepreneurship model for women operating their ventures in a resource constrained context.

Overall, the research identifies the need for policy focus on psychological, social, and technological aspects women's entrepreneurship within a resource constrained context. The model stress for stretching the horizon of the digital platforms, and policy beyond financial access and infrastructure. Women must be provided with mentoring and training to build fintech self-efficacy with a simultaneous focus on strengthening their social capital through community support systems, peer networks, and religiously aligned platforms to enable them effectively transform their frugal innovation capabilities for positive entrepreneurial outcomes and inclusive growth.

Future research should focus on the fintech self-efficacy and social capital as longitudinal processes, evolving dynamically, with the platform use, and market and network exposure. A comparative account on the urban and rural context, and the use of Islamic and conventional financial systems may ensure contextual richness. Finally, experimental and mixed method research design should focus on contributing context specific constructs related to the variable used in the empirical model to realistically address the behavioral mechanisms, and the usability issues of fitech platforms.

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