

Entrepreneurial Resiliency Among Indigenous Women Entrepreneurs in Papua Pegunungan: The Role of Digital Literacy and Dynamic Capability

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Abstract

This study investigates the entrepreneurial resiliency of indigenous women entrepreneurs in Papua Pegunungan, examining how digital literacy and dynamic capability jointly shape their capacity to adapt within a structurally constrained, geographically isolated environment. Resilience is treated not as a fixed trait but as a socio-technical process that unfolds through engagement with digital tools and context-specific innovation. The study tests whether dynamic capability channels the influence of digital literacy on entrepreneurial resiliency, drawing on survey data from 181 respondents analyzed through partial least squares structural equation modeling (PLS-SEM). Contrary to a simple full-mediation account, the results show that digital literacy exerts a strong, statistically significant direct effect on entrepreneurial resiliency ($\beta = 0.697$) that considerably outweighs the indirect route running through dynamic capability ($\beta = 0.126$), signaling partial rather than full mediation. Digital tools therefore contribute to resiliency both on their own and by strengthening the capacity to sense, seize, and reconfigure resources, although the direct pathway dominates. These findings position entrepreneurial resiliency among indigenous women in Papua Pegunungan as a context-driven construct shaped by informal learning, ecological awareness, and adaptive routines, and they challenge deficit-based narratives by foregrounding the strategic agency of marginalized entrepreneurs. The findings point to a need for localized digital-training and capability-building programs that remain attentive to cultural and ecological realities.

Keywords: dani ethnic community; ecological embeddedness; informal learning; marginalized entrepreneurship; partial least squares structural equation modeling; socio-technical adaptation

INTRODUCTION

Entrepreneurship, understood beyond a narrow economic-exchange lens, functions as a multidimensional practice woven from cultural continuity, adaptability, and resilience. Instead of being a fixed trait, resilience unfolds as an ongoing process of becoming, forged through adaptation, resourcefulness, and the capacity to improvise under pressure (Shepherd et al., 2016; Taneja et al., 2024; Williams & Shepherd, 2016). Such a reframing matters most in indigenous settings, where entrepreneurial activity cannot be separated from the surrounding social fabric, ecological cycles, and communal governance arrangements (Braune & Dana, 2022; Dana, 2015; Henry et al., 2018; Ogundana et al., 2021; Ratten & Dana, 2017). Among indigenous women, entrepreneurship extends well beyond market participation; it stands as a lived claim to agency and survival, pursued across terrain shaped by exclusion, uneven digital access, and institutional indifference (Morris et al., 2024; Roomi & Harrison, 2010). Mainstream scholarship, however, still sidelines these practices, favoring urban, market-integrated models that flatten the epistemic depth of indigenous entrepreneurial life (Henry et al., 2015, 2018; Jennings & Brush, 2013).

Within this landscape, digital literacy stands out as a capability that reshapes entrepreneurial trajectories altogether. Its reach goes past technical know-how to encompass the deliberate use of digital tools to reach markets, build networks, and convert knowledge into economic value (Almeida, 2024; Chatterjee et al., 2022). In places with thin digital coverage

such as Papua Pegunungan, digital literacy operates as a stand-in for missing infrastructure and formal channels of knowledge, letting indigenous women work around geographic isolation and institutional neglect (Park et al., 2021; Singh et al., 2023). For Dani women, digital literacy doubles as a means of getting by and a bridge for recasting traditional knowledge in contemporary entrepreneurial terms (Dy et al., 2018; Marlow & McAdam, 2015). Digital literacy therefore serves a dual purpose here, at once practical and knowledge-generating, arming entrepreneurs to adapt, keep innovating, and plug into wider economic networks (Ng, 2012; Vuorikari et al., 2016).

Dynamic capability adds to this picture by foregrounding the capacity to spot opportunities, mobilize resources, and rearrange routines to keep an advantage over time (Teece, 2016, 2018; Zahra et al., 2014). Far from an abstract managerial notion, this capability is lived out through improvisation, dependence on informal ties, and the folding of local knowledge into adaptive strategy (Eisenhardt & Martin, 2000; Helfat & Peteraf, 2009). Indigenous women entrepreneurs regularly embody this pattern, drawing on communal governance and ecological know-how to keep ventures running through volatile conditions (Davis et al., 2016). Their resilience thus builds forward rather than merely responds, reflecting an anticipatory stance toward complexity and uncertainty (Korber & McNaughton, 2018; Lengnick-Hall et al., 2011). This is consistent with the wider evidence that entrepreneurial resilience grows stronger when

dynamic capability is rooted in socio-cultural context rather than layered on as an external framework (Shepherd et al., 2016; Suddaby et al., 2015).

Despite these insights, the literature remains fragmented. Indigenous communities are too often treated as contextual variables rather than epistemic agents (Henry et al., 2018; Ratten & Dana, 2017). The entrepreneurial practices of Dani women, shaped by ecological rhythms, communal governance, and emergent digital engagement, challenge dominant paradigms by demonstrating that resilience is not derivative of Western models but a distinct logic of adaptation and transformation (Anderson & Galinsky, 2006; Colbourne et al., 2024). In Indonesia, this urgency is particularly pronounced in Papua Pegunungan, where indigenous women entrepreneurs face the dual challenge of sustaining livelihoods in marginalized economies while negotiating the pressures of modernization and digitalization. Prior studies underscore the role of adversity quotient in shaping their entrepreneurial success (Gunawan et al., 2024), yet the mechanisms through which digital literacy and dynamic capabilities interact to strengthen resilience remain insufficiently theorized.

This fragmentation reflects a deeper conceptual contradiction that current scholarship has yet to resolve. Quantitative models of digital entrepreneurship, largely developed in urban and market-integrated settings, treat digital access as a near-linear input into resilience, yet these same models have rarely been tested in geographically isolated,

infrastructurally constrained settings where digital access is partial, uneven, and embedded in communal rather than individual routines. It therefore remains unclear whether such models travel to contexts like Papua Pegunungan, or whether the pathway from digital inputs to resilience operates differently once isolation, informal governance, and ecological constraint are taken into account. No prior study has empirically tested this pathway among indigenous women entrepreneurs in this specific highland setting, leaving a gap between the assumptions embedded in existing quantitative frameworks and the lived, adaptive character of indigenous entrepreneurial practice.

This study addresses that gap by situating its inquiry within the dynamic capabilities' framework (Figueiredo & Zahra, 2025; Teece, 2018; Zahra et al., 2014), extended by recent scholarship on knowledge-based dynamic capabilities for digital transformation (Mele et al., 2024) and the mediating role of digital networking in sustainable entrepreneurship (Nur & Muafi, 2025). At the same time, resilience scholarship has expanded to include psychological (Dana, 2015; Hartmann et al., 2022; Henry et al., 2018), organizational, and socio-cultural dimensions (Kitole & Genda, 2024; Savira et al., 2025). Integrating these perspectives allows for a more holistic understanding of how indigenous women entrepreneurs in Papua Pegunungan build resilience in the face of adversity. Empirically, the study responds to calls for more context-sensitive research in developing countries (Hartono et al., 2024; Nakpodia et al., 2024), highlighting how digital literacy

functions as both a direct driver of resilience and a catalyst for dynamic capabilities.

By examining these interrelationships through variance-based structural equation modeling, the study seeks to generate empirical clarity while honoring contextual specificity. Its contribution is twofold: theoretically, it advances a multi-dimensional framework that integrates digital empowerment, capability theory, and resilience scholarship; practically, it informs curriculum design, policy formulation, and capacity-building initiatives aligned with national priorities for inclusive innovation and regional equity (Colbourne et al., 2024; Dana, 2015; Peredo & Chrisman, 2006).

METHOD

This study adopted a quantitative, explanatory survey design, chosen because the research question of whether and how digital literacy shapes entrepreneurial resiliency through dynamic capability required testing statistical relationships among latent constructs rather than describing them qualitatively. The study was conducted in Papua Pegunungan, Indonesia, between June and September 2025. The research site was Wamena and surrounding highland districts, which represent the socio-economic center of the Dani ethnic group. Participants were indigenous women entrepreneurs, aged 17 to 61, who had been running a micro or small enterprise continuously for two years or more. A purposive sampling technique was applied to ensure that respondents met the criteria of being both indigenous and actively engaged

in entrepreneurial activity. A total of 181 respondents participated, a sample size considered sufficient for analysis using Partial Least Squares – Structural Equation Modeling (PLS-SEM), which was selected because it accommodates small-to-medium samples, non-normal data distributions, and the complex, exploratory mediation model under investigation (Chin, 2010; Hair et al., 2019).

The survey instrument took the form of a structured questionnaire covering three constructs: digital literacy, dynamic capability, and entrepreneurial resilience, each rated on a seven-point scale from strongly disagree (1) to strongly agree (7). For this study, digital literacy denotes an entrepreneur's capacity to locate, judge, and put digital information to use for business ends, with items adapted from (van Laar et al., 2020) and (Ng, 2012). Dynamic capability denotes the capacity to notice opportunities, mobilize resources, and rework routines to stay competitive, with items adapted from (Teece, 2018). Entrepreneurial resilience denotes an entrepreneur's capacity to adjust, stay resourceful, and innovate when facing setbacks, with items adapted from Kirmayer et al. (2011), Lengnick-Hall et al. (2011), and Taneja et al. (2024). Before fieldwork, the instrument was rendered into Bahasa Indonesia and checked by subject-matter reviewers and a pilot round of respondents to confirm it read clearly and fit the local cultural setting.

Data collection was conducted through face-to-face surveys, facilitated by trained local enumerators who were familiar with the Dani language and cultural

context. Ethical clearance was obtained from the relevant institutional review board, and informed consent was secured from all participants, ensuring confidentiality and voluntary participation. Data analysis employed PLS-SEM using SmartPLS software. The analysis followed two stages: first, evaluation of the measurement model through reliability (Cronbach's alpha, composite reliability), convergent validity (average variance extracted), and discriminant validity; and second, evaluation of the structural model through path coefficients, R^2 values, and predictive relevance (Q^2). Significance of the hypothesized paths was established using a bootstrap procedure drawing 5,000 resamples (Hair et al., 2019).

RESULT AND DISCUSSION

Respondent Profile

As summarized in Table 1, the 181 indigenous women entrepreneurs surveyed in Papua Pegunungan ranged in age from 17 to 61 years, with most clustered between 26 and 45 years.

Table 1. Respondent profile

Profile	Freq	Percent
Age Range		
17-25 years	32	17.7
26-35 years	58	32.0
36-45 years	49	27.1
46-55 years	29	16.0
56-61 years	13	7.2
Marital Status		
Single	41	22.7
Married	112	61.9
Widowed/ Divorced	28	15.5
Education		

Primary School	47	26.0
Junior High School	54	29.8
Senior High School	56	30.9
Diploma/Bachelor	24	13.3
Type of Business		
Agribusiness (farming)	61	33.7
Livestock farming	37	20.4
Creative industry	48	26.5
Kiosk/retail shop	35	19.3
Digital Platforms Used		
Social media	129	71.3
Website	14	7.7
Video Sharing	10	5.5
Never used	62	34.3

This intergenerational spread shows entrepreneurship as a continuous practice of survival and adaptation, where younger women experiment with new opportunities while older women sustain livelihoods through cultural authority (Lengnick-Hall et al., 2011; Peredo & Chrisman, 2006).

As Table 1 shows, most respondents were married, balancing caregiving and business roles, while others were single or widowed. This dual responsibility reflects what Morris et al. (2024), describe as the "double burden" of women entrepreneurs, yet it also affirms entrepreneurship as a pathway to resilience and autonomy (Roomi & Harrison, 2010).

Table 1 further indicates that education levels were modest, with primary and secondary schooling most common. Despite structural limits in access, women engaged actively in enterprise, relying on experiential knowledge and community-based learning (Dana, 2015; Ratten & Dana, 2017).

Per the business-sector breakdown in Table 1, their businesses were con-centrated in agribusiness and livestock farming, alongside creative industries such as noken weaving and small kiosks. These sectors illustrate both ecological embeddedness and cultural continuity, while also signaling adaptive integration into local trade (Savira et al., 2025).

The digital-engagement rows of Table 1 show an uneven pattern. Social media especially WhatsApp, Facebook, and Instagram were the most widely used tool, yet more than one-third of respondents had never used any digital platform. This pattern highlights both the enabling role of accessible technologies and the persistence of digital exclusion in

remote regions (Nur & Muafi, 2025; Singh et al., 2023).

In sum, the profile portrays indigenous women's entrepreneurship as intergenerational, culturally grounded, and increasingly mediated by digital tools, though unevenly distributed. It is a lived expression of resilience, adaptation, and continuity in the face of structural constraints.

Data Analysis

Measurement Model

As illustrated in Figure 1 below, the measurement model was validated through indicator reliability, convergent validity, and discriminant validity assessments.

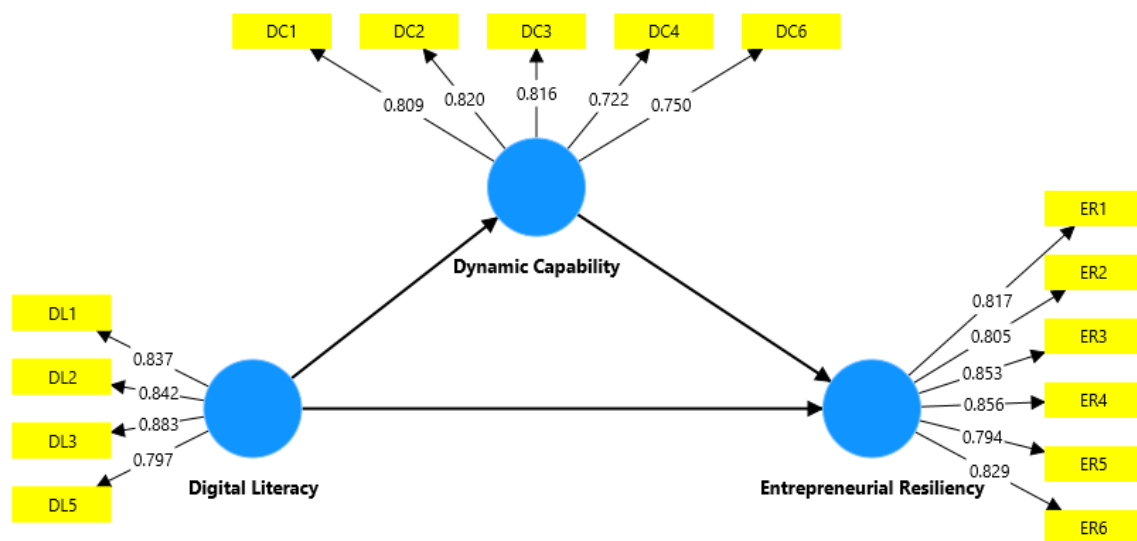


Figure 1. Measurement model

The refined structural model, following the removal of statistically weak indicators, reveals a coherent and empirically sound configuration linking Digital Literacy, Dynamic Capability, and Entrepreneurial Resiliency together. Each construct is now represented by indicators with

standardized loadings exceeding the conventional threshold of 0.70, affirming their reliability and convergent validity (Hair et al., 2019). This refinement is not merely statistical—it is epistemic. It ensures that the constructs are not abstracted from context but are grounded in the lived

realities of indigenous women entrepreneurs in Papua Pegunungan.

As Figure 1 shows, the indicators retained for Digital Literacy (DL1 through DL5) show standardized loading values spanning 0.797 up to 0.883. These values suggest that digital literacy in this context is primarily operational and communicative. The removed indicators, such as DL6 (advanced content creation) and DL2 (critical evaluation of online information), failed to reach significance, reflecting a pragmatic digital engagement rather than a cognitively evaluative or creative one. This aligns with Ng (2012), and van Laar et al. (2020), who distinguish between foundational digital skills and higher-order digital literacies. In Papua Pegunungan, digital literacy is enacted through accessible platforms WhatsApp, Facebook, and mobile messaging used for promotion, coordination, and informal learning. The absence of advanced digital production and evaluative skills is not a deficiency but a reflection of infrastructural constraints and localized digital cultures, where digital inclusion pragmatically supports entrepreneurial performance in resource-limited settings (Fairuzi et al., 2025).

As Figure 1 also shows, the construct of Dynamic Capability is now represented by five indicators (DC1, DC2, DC3, DC4, and DC6), with loadings ranging from 0.722 to 0.820. These values affirm that adaptive routines sensing, seizing, and reconfiguring are present and measurable, albeit enacted through informal and experiential means. The removal of DC5, which measured formal documentation and codification of business knowledge,

reflects the lived reality that knowledge in this entrepreneurial setting is passed down by word of mouth, held tacitly, and worked out collectively on the fly. Eisenhardt & Martin (2000), argue that dynamic capabilities in volatile environments often take simple, non-codified forms. In this context, capability is not a managerial abstraction but a lived rhythm of adaptation, shaped by ecological awareness and social embeddedness.

Finally, Figure 1 indicates that Entrepreneurial Resiliency, measured through ER1 to ER6, shows loadings between 0.794 and 0.856, indicating a well-defined and internally consistent construct. These indicators capture emotional endurance, strategic improvisation, and the capacity to recover from adversity. The strength of these loadings suggests that resiliency is not merely psychological but structural emerging from the interplay between digital access and adaptive capacity. Shepherd et al. (2016), emphasize that resilience is often enacted through compassion organizing and local venturing, especially in post-disaster or resource-constrained settings. In Papua Pegunungan, resilience is not an individual trait but a collective process, sustained through digital connectivity and adaptive entrepreneurship.

As Figure 2 depicts, the structural paths among the constructs further reinforce this narrative. Digital Literacy exerts both direct and indirect influence on Entrepreneurial Resiliency, with Dynamic Capability serving as a complementary, partial mediator rather than the sole channel of influence. The strength and

significance of these paths confirm that digital empowerment is a primary mechanism through which indigenous women build resilience. Nakpodia et al. (2023), argue that in developing economies, resilience is inseparable from digital access and adaptive routines. The model thus affirms that digital literacy is not peripheral—it is central to the architecture of entrepreneurial survival.

In sum, the measurement results reported in Figure 1 are not only statistically valid but conceptually dignified. They restore visibility to indigenous entrepreneurial knowledge, challenge metropolitan assumptions about capability and resilience, and affirm that digital literacy when grounded in context is a vessel of agency.

Structural Model

Figure 2 presents the structural model, giving a sound footing for interpreting how Digital Literacy, Dynamic Capability, and Entrepreneurial Resiliency connect to one another. Significance for each path was checked through a 5,000-resample bootstrap, lending confidence to the estimates and their stability across resamples (Hair et al., 2019). As detailed below, Digital Literacy shapes Entrepreneurial Resiliency along two routes at once, directly and via Dynamic Capability, though the weight falls unevenly toward the direct route.

As Figure 2 reports, Digital Literacy exerts a substantial and highly significant influence on Dynamic Capability ($\beta = 0.661$, $p = 0.000$), a first-stage effect considerably larger than typically reported in

comparable studies. Entrepreneurs who can competently access, coordinate, and communicate through digital channels appear far better positioned to sense opportunities, seize resources, and reconfigure practices in response to environmental shifts (Teece, 2016, 2018). In a setting like Papua Pegunungan, largely without formal managerial infrastructure, adaptation instead draws on shared community know-how and close familiarity with the local environment (Eisenhardt & Martin, 2000).

The link running onward from Dynamic Capability to Entrepreneurial Resiliency, by comparison, sits at a more modest 0.190 ($p = 0.000$)—still statistically meaningful, but a lighter contribution than the effect noted above. This tracks with Shepherd et al. (2016), whose work suggest resilience firms up when adaptive routines are anchored in the surrounding social and cultural context. Here, Dynamic Capability operates less as the primary engine of resilience and more as a secondary conduit, carrying part of the effect of digital inputs into resilient outcomes by way of local improvisation and learning-by-doing.

Most notable of all is the effect running straight from Digital Literacy to Entrepreneurial Resiliency without passing through Dynamic Capability: a large, highly significant coefficient of 0.697 ($p = 0.000$). Taken together with the indirect effect carried through Dynamic Capability ($0.661 \times 0.190 = 0.126$, $p = 0.002$), the total effect of Digital Literacy on resiliency is approximately 0.823, of which the direct component accounts for roughly 85 percent. Because both the direct and

indirect effects are positive and statistically significant, the pattern corresponds to partial (specifically, complementary) mediation rather than the full mediation that a purely indirect pathway would imply. In practical terms, digital literacy contributes to resiliency chiefly on its own terms—through the confidence, market reach, and information access it affords directly—while its translation into dynamic capability adds a further, smaller increment of resilience-building through routines of noticing opportunities, capturing resources, and rearranging them as conditions shift.

Table 2 reports the corresponding explained-variance statistics. Digital Literacy accounts for an R^2 of 0.437 in Dynamic Capability, a moderate share that leaves room for other contextual influences—such as communal learning and ecological embeddedness—on how capability develops. Entrepreneurial Resiliency, by contrast, records a substantially higher R^2 of 0.698, meaning that Digital Literacy and Dynamic Capability jointly explain nearly seventy percent of its variance. This gap between a moderate first-stage R^2 and a strong second-stage R^2 is itself consistent with a model in which resiliency is driven predominantly by a direct pathway rather than one routed narrowly through capability formation, and both figures exceed conventional thresholds for social-science modeling (Hair et al., 2019).

Table 2 also reports predictive relevance, gauged via Stone–Geisser's

Q^2 using the blindfolding procedure. Dynamic Capability records a Q^2 of 0.243, comfortably above the 0.15 threshold for medium predictive relevance, while Entrepreneurial Resiliency reaches 0.447, approaching the threshold for strong predictive relevance and, again, mirroring the outsized role of the direct pathway in explaining this construct (Chin, 2010; Henseler et al., 2014, 2016). Together these figures indicate a model that does more than fit the observed data: it also holds up out-of-sample, meaning it can reasonably anticipate outcomes for cases beyond the surveyed group. That forward-looking strength matters in an indigenous setting like this one, since it gives program designers a basis for interventions that are grounded in evidence yet still responsive to local culture.

Collinearity diagnostics were conducted using Variance Inflation Factor (VIF) values. All VIF scores fall below the critical threshold of 5, indicating acceptable levels of multicollinearity (Hair et al., 2019). The highest VIF values are observed in ER1 (4.895), ER2 (4.277), and ER3 (3.646), suggesting moderate collinearity among indicators of Entrepreneurial Resiliency. However, these values remain within tolerable bounds and do not threaten the stability of path estimates. VIF values for Digital Literacy indicators (DL1–DL5) range from 1.755 to 3.061, and for Dynamic Capability indicators (DC1–DC6) from 1.927 to 3.800, further confirming that predictor constructs are distinct and non-redundant.

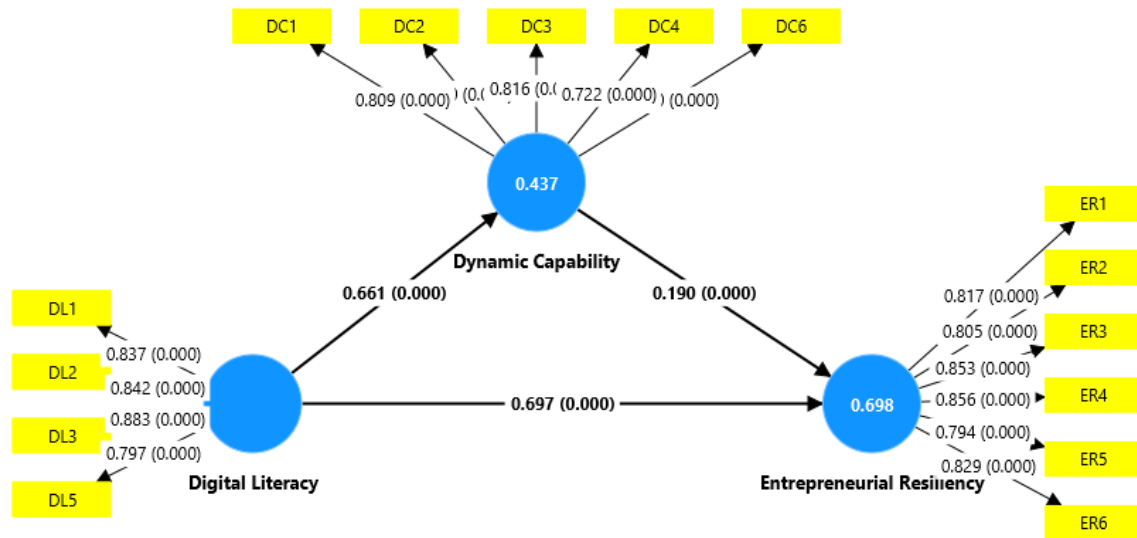


Figure 2. Structural model

Discussion

The path estimates reported in Figure 2 become more meaningful when situated within the specific context of Papua Pegunungan, where indigenous women entrepreneurs navigate geographic isolation, infra-structural limitations, and socio-cultural complexity. As Table 1 already indicated, digital tools such as WhatsApp and Facebook are not peripheral conveniences but lifelines—used for communication, promotion, coordination, and informal learning. These platforms become extensions of agency, enabling women to bypass physical constraints and engage in economic activity. This contextual reality helps explain why digital literacy carries such a large direct effect on entrepreneurial resiliency in this setting, rather than depending mainly on the slower buildup of formal dynamic capability. As Ng (2012) and van Laar et al. (2020), argue, digital skills are not merely technical proficiencies but adaptive resources for navigating uncertainty and complexity.

The significance of context is further evident in the way dynamic capability is enacted. In metropolitan economies, dynamic capability often manifests as formalized routines of sensing, seizing, and reconfiguring (Teece, 2018). However, in Papua Pegunungan, these processes are grounded in improvisation, communal knowledge, and ecological embeddedness. Eisenhardt & Martin (2000), remind us that dynamic capabilities are not uniform but context-dependent, and in resource-constrained environments they often take simpler, experiential forms. The relatively modest contribution of dynamic capability to resiliency in this study reflects this epistemic specificity: women entrepreneurs rely more on immediate digital empowerment than on abstract managerial systems, yet their adaptive practices remain vital in reinforcing resilience (Shepherd et al., 2016; Williams & Shepherd, 2016).

This contextual grounding also clarifies why certain measurement indicators in Figure 1, such as evaluative digital skills and formal

documentation routines, proved statistically insignificant and were removed during model refinement. Their exclusion does not weaken the constructs but instead reveals the epistemic reality of indigenous entrepreneurship: resilience and capability are enacted through operational digital practices and communal strategies rather than through codified, evaluative, or managerial routines. Hair et al. (2017, 2020), emphasize that retaining only reliable indicators strengthens construct validity, and in this case, the refinement highlights the contextual truth that indigenous women's entrepreneurship is pragmatic, relational, and embedded in local realities.

The integration of context also aligns with broader scholarship on resilience in marginalized economies. Fairuzi et al. (2025), demonstrate that financial literacy and digital inclusion are critical in building resilient entrepreneurship, especially where formal support systems are absent. Their findings affirm that digital access is not a luxury but a structural necessity. Similarly, Nakpodia et al. (2024), argue that resilience in developing economies is inseparable from digital access and adaptive capacity, reinforcing the mediated structure of the model. Sari et al. (2024), further show that digital financial literacy enhances financial behavior and long-term resilience among women entrepreneurs, underscoring the role of digital tools in shaping future-oriented decision-making (Mochklas & Soelistya, 2024; Rahman et al., 2024). Shatila et al. (2025), extend this argument by demonstrating that digital literacy and accessibility, when combined with

human capital and agility, foster innovation and strengthen entrepreneurial resilience in dynamic ecosystems.

Taken together, these insights affirm that the findings from Papua Pegunungan are not anomalies but contributions to a broader understanding of how resilience is enacted in structurally marginalized contexts. As Figure 2 shows, Digital Literacy shapes Entrepreneurial Resiliency chiefly through a strong direct path, complemented by a smaller indirect contribution through Dynamic Capability, so resilience here is best read as a socio-technical outcome that is anchored in direct digital engagement and only secondarily amplified by the slower accumulation of adaptive routines, communal improvisation, and pragmatic digital engagement.

In sum, the significance of context lies in showing that indigenous women's entrepreneurship in Papua Pegunungan is not peripheral but central to theorizing resilience. Their practices reveal resilience as a lived, relational, and adaptive processone that challenges dominant paradigms equating resilience with urban, formalized, and managerial models (Henry et al., 2015; Jennings & Brush, 2013). By situating Digital Literacy and Dynamic Capability within this context, the findings restore dignity to indigenous entrepreneurial knowledge and offer a conceptual blueprint for inclusive, context-sensitive models of entrepreneurial development.

CONCLUSION

This study makes clear that entrepreneurial resiliency among indigenous women in Papua Pegunungan is anchored primarily in direct digital engagement, with dynamic capability contributing a smaller, complementary effect rather than acting as the sole channel of influence. Beyond the specific coefficients, the broader contribution is conceptual: the findings reposition indigenous women entrepreneurs as strategic agents whose resilience is neither a deficit to be corrected nor an accident of circumstance, but an achievement built from informal learning, ecological awareness, and pragmatic digital use. In doing so, the study extends dynamic-capability and resilience theorizing beyond the urban, market-integrated settings in which these frameworks were originally developed, showing that they travel, in modified form, to geographically isolated and infrastructurally constrained contexts.

The implications are both theoretical and practical. Conceptually, the findings challenge dominant paradigms by restoring dignity to indigenous entrepreneurial knowledge and positioning digital literacy as a relational, adaptive force rather than a mere enabler of other capabilities. Practically, because digital literacy carries the dominant share of influence on resiliency, programs and policies should prioritize expanding basic and operational digital access for indigenous women entrepreneurs as a first-order intervention, treating capability-building training as a valuable but secondary complement rather than a prerequisite. Institutions

must move beyond generic digital-inclusion frameworks and invest in localized, curriculum design, funding schemes, and institutional support that treat indigenous entrepreneurial knowledge as a legitimate starting point, calibrated to the ecological and cultural realities of highland Papua rather than transplanted from urban policy templates.

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