

SCALING SOCIAL VALUE THROUGH CREATIVE TECHNOLOGIES: STRATEGIC CHALLENGES IN DIGITAL ENTREPRENEURSHIP

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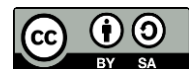
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Abstract

The rapid expansion of creative technologies has transformed digital entrepreneurship into a critical driver of social innovation and inclusive growth. Platform ecosystems, artificial intelligence, and data-driven infrastructures enable ventures to scale rapidly, yet strategic tensions emerge between technological acceleration and sustained social mission integrity. This study aims to develop and empirically validate a strategic framework explaining how digital entrepreneurs scale social value while navigating governance, stakeholder, and measurement challenges. A mixed-methods explanatory sequential design was employed, combining survey data from 214 digital social ventures with in-depth case studies of selected firms operating in technology-intensive sectors. Multiple regression and structural equation modeling were used to test relationships among technological capability, strategic agility, stakeholder integration, impact measurement sophistication, and scaling performance. Findings indicate that technological capability significantly predicts scaling performance ($\beta = 0.41$, $p < 0.001$), with strategic agility acting as a mediating variable. Hybrid ventures balancing innovation with governance and ecosystem collaboration achieved superior scaling outcomes. The study concludes that sustainable scaling of social value requires multidimensional capability alignment rather than technology-driven expansion alone. Integrative strategic management of creative technologies is essential for maintaining legitimacy, adaptability, and measurable social impact in digital entrepreneurship.

Keywords: Creative Technologies, Digital Entrepreneurship, Social Value Scaling, Strategic Agility



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INTRODUCTION

The rapid proliferation of digital platforms, artificial intelligence, blockchain, immersive media, and data-driven infrastructures has transformed the landscape of entrepreneurship. Creative technologies are no longer peripheral tools but central enablers of value creation, organizational scaling, and global market penetration (Aparicio et al., 2025; Hasan et al., 2025). Digital entrepreneurship increasingly operates within ecosystems characterized by network effects, platform governance, algorithmic visibility, and transnational user communities. Social value creation has consequently expanded beyond traditional nonprofit or hybrid models into digitally mediated entrepreneurial ventures capable of reaching large-scale beneficiaries with relatively low marginal costs (Wang & Wang, 2025).

Creative technologies, including augmented reality, generative AI, digital fabrication, and social media ecosystems, have redefined how entrepreneurs conceptualize innovation and stakeholder engagement. Digital ventures can mobilize communities, crowdsource knowledge, and co-create solutions that address social and environmental challenges (Suriyankietkaew et al., 2025; Torrent-Sellens, 2024). Scaling social value in this context implies not merely revenue growth but the amplification of measurable social impact across geographically dispersed and culturally diverse audiences. Strategic management within such environments requires balancing technological agility with ethical responsibility, inclusivity, and long-term sustainability (Liang et al., 2025; Sica et al., 2025).

Policy discourses on innovation and sustainable development increasingly emphasize digital entrepreneurship as a driver of inclusive growth and societal transformation. Governments and international institutions promote digital ecosystems to accelerate progress toward social development goals. Entrepreneurial actors respond by embedding social missions within technology-driven business models (Alajaty & Adomako, 2025; Yáñez-Valdés & Guerrero, 2024). The convergence of creative technologies and social entrepreneurship generates new opportunities while simultaneously producing strategic complexities related to governance, resource allocation, stakeholder alignment, and impact measurement. This evolving landscape forms the foundational context of the present study (Duong et al., 2024).

Digital entrepreneurs seeking to scale social value face strategic tensions between rapid technological expansion and sustained social mission integrity. Platform-based growth models often prioritize user acquisition metrics, investor expectations, and data monetization strategies that may conflict with inclusive or equitable impact objectives (Salem et al., 2025; Wilkerson & Pham, 2025). The challenge lies in aligning algorithmic scalability with authentic community engagement and measurable social outcomes. Tensions between profit imperatives and social accountability intensify as ventures expand across markets and regulatory regimes (Duong, Nguyen, et al., 2025).

Creative technologies introduce additional layers of uncertainty in strategic planning. Rapid technological obsolescence, cybersecurity vulnerabilities, intellectual property risks, and platform dependency complicate long-term sustainability (P. N.-D. Nguyen & Nguyen, 2024). Digital ventures operating in socially oriented sectors must navigate fluctuating regulatory frameworks, data protection requirements, and evolving digital ethics standards. Strategic decision-making becomes multidimensional, requiring simultaneous attention to technological innovation, social legitimacy, and financial viability (Kotiranta et al., 2024).

Measurement of social value at scale remains conceptually and operationally contested. Traditional impact assessment tools often fail to capture digitally mediated externalities such as network amplification effects, behavioral change, or digital inclusion outcomes (Autio et al., 2024; Santos et al., 2023). Entrepreneurs struggle to design evaluation frameworks that reflect both quantitative growth and qualitative transformation. The absence of coherent strategic models integrating creative technology deployment with scalable social impact constitutes a central problem addressed in this research (Duong & Nguyen, 2024).

The primary objective of this study is to develop a strategic framework for scaling social value through creative technologies within digital entrepreneurship contexts. The research seeks to analyze how digital ventures integrate technological innovation with mission-driven objectives while maintaining operational sustainability. Emphasis is placed on identifying strategic capabilities that enable responsible growth in technology-intensive environments (Mahrinasari et al., 2024).

A secondary objective involves examining the interplay between platform governance, stakeholder ecosystems, and impact scalability. The study aims to explore how entrepreneurial actors leverage digital infrastructures to expand outreach without diluting social commitment. Investigation includes analysis of resource orchestration, partnership networks, and digital engagement strategies that contribute to scalable value creation (Buoni Pineda, 2024).

The research further intends to propose evaluative indicators capable of capturing both economic performance and digitally amplified social impact. Integration of strategic management theory with digital innovation studies provides a multidimensional analytical lens. Expected outcomes include theoretical refinement and practical guidance for entrepreneurs, policymakers, and ecosystem stakeholders engaged in socially oriented digital ventures (Swaramarinda et al., 2025).

Existing literature on digital entrepreneurship extensively examines platform strategies, innovation ecosystems, and venture scaling mechanisms. Studies frequently highlight network effects, venture capital dynamics, and digital market entry strategies (Swaramarinda et al., 2025). Social entrepreneurship scholarship, in contrast, concentrates on mission alignment, hybrid governance structures, and impact measurement. Intersectional integration of these streams remains limited.

Research on creative technologies often focuses on technical affordances, user experience design, or innovation diffusion patterns. Strategic challenges related to social value amplification within technology-driven enterprises receive comparatively less systematic analysis. Empirical investigations tend to isolate technological or social dimensions rather than exploring their interactive dynamics within scaling processes (Çela et al., 2024).

Theoretical frameworks addressing sustainable entrepreneurship provide valuable insights into balancing profit and purpose. Application of these frameworks to digitally mediated, platform-dependent, and algorithmically governed environments remains underdeveloped. Conceptual gaps persist regarding how digital infrastructures reshape impact measurement, stakeholder engagement, and resource mobilization at scale. This study addresses these deficiencies by synthesizing digital entrepreneurship theory with social value scaling paradigms.

The novelty of this research lies in its integrative strategic perspective linking creative technologies with scalable social value generation. The study advances a hybrid analytical model that bridges digital platform theory, social entrepreneurship scholarship, and strategic management frameworks. Emphasis on scaling mechanisms within algorithmically structured ecosystems differentiates this work from traditional social enterprise analyses.

Methodological innovation arises from combining ecosystem mapping, strategic capability analysis, and impact evaluation modeling within a unified conceptual structure. The proposed framework reconceptualizes scaling as a multidimensional process encompassing technological adaptability, stakeholder co-creation, ethical governance, and measurable social amplification. Integration of digital innovation theory with social impact metrics provides fresh insights into entrepreneurial strategy in the digital age (Maiolini et al., 2025).

Justification for the study rests on the accelerating global reliance on digital infrastructures to address social and environmental challenges. Entrepreneurs operating within creative technology sectors increasingly assume roles as agents of societal transformation. Strategic misalignment or insufficient understanding of scaling dynamics may undermine intended impact (Abubakre & Mkansi, 2024; Silva et al., 2024). Rigorous theoretical

articulation and empirically grounded frameworks are therefore essential to guide responsible and sustainable digital entrepreneurship. The study aspires to contribute to scholarly discourse and practical implementation by offering a structured understanding of how creative technologies can be harnessed to expand social value without compromising mission integrity or strategic resilience (Lingfu et al., 2024).

RESEARCH METHOD

Research Design

This study adopted a mixed-methods explanatory sequential design to investigate how digital entrepreneurs scale social value through creative technologies and to identify the strategic challenges embedded in that process. The quantitative phase focused on examining relationships among technological capability, strategic orientation, platform governance, and social impact scalability. The qualitative phase was designed to deepen interpretation of statistical findings through case-based inquiry. A multi-level analytical framework was employed, integrating strategic management theory, digital entrepreneurship models, and social impact scaling constructs. The design enabled both generalizable insights and context-sensitive understanding of how creative technologies shape strategic decision-making in socially oriented digital ventures (Anwar et al., 2024; Pacher et al., 2025).

Research Target/Subject

The population of this study consisted of digital entrepreneurial ventures operating in creative technology sectors with explicit social value propositions. These ventures included platform-based startups, AI-enabled social enterprises, digital education platforms, health-tech initiatives, and community-driven innovation hubs across emerging and developed digital ecosystems. A purposive sampling strategy was used to select ventures that met three criteria: active deployment of creative technologies, measurable social impact objectives, and evidence of scaling efforts beyond local markets. The quantitative sample comprised 214 founders and senior managers from digitally mediated ventures across Asia, Europe, and North America. The qualitative subsample included 12 in-depth case studies selected based on variation in industry focus, scaling stage, and governance structure to ensure analytical diversity (Ali et al., 2025; Huang, 2025).

Research Procedure

Procedures were implemented in four stages. The first stage involved instrument development, pilot testing with 20 digital entrepreneurs, and subsequent refinement to ensure clarity and contextual relevance. The second stage consisted of online survey distribution through entrepreneurial networks, incubators, and digital innovation communities, followed by data screening for completeness and statistical assumptions. The third stage included in-depth virtual interviews with selected founders and executives, each lasting approximately 60–90 minutes, recorded and transcribed for thematic analysis. The fourth stage integrated quantitative and qualitative findings through joint display analysis, enabling comparison between statistical patterns and case-based insights. Ethical considerations were observed throughout the research process, including informed consent, confidentiality assurances, and secure data storage protocols (Holst & Bekmeier-Feuerhahn, 2024; Zang et al., 2024).

Instruments, and Data Collection Techniques

Research instruments combined structured survey tools, semi-structured interview protocols, and secondary data extraction templates. The survey instrument measured constructs such as technological capability, strategic agility, stakeholder integration, impact measurement practices, and scaling performance using validated Likert-scale items adapted from established

entrepreneurship and innovation studies. Construct validity was assessed through confirmatory factor analysis, and reliability coefficients exceeded the recommended threshold of 0.70 for all scales (Ahmad, 2025; Cho et al., 2025). The qualitative instrument consisted of an interview guide exploring strategic decision-making processes, technological deployment strategies, governance mechanisms, and perceived tensions between growth and mission integrity. Secondary data sources included venture reports, impact assessments, digital analytics dashboards, and public financial disclosures to triangulate findings and strengthen internal validity.

RESULTS AND DISCUSSION

Descriptive statistical analysis was conducted on responses from 214 digital entrepreneurs representing ventures across education technology (28%), health technology (21%), creative media platforms (19%), sustainability-focused marketplaces (17%), and civic-tech initiatives (15%). The average firm age was 4.8 years, with 63% operating on platform-based models and 57% reporting international user bases. Mean scores indicated relatively high technological capability ($M = 4.12$, $SD = 0.58$) and strategic agility ($M = 4.05$, $SD = 0.61$), while social impact measurement sophistication showed moderate variation ($M = 3.67$, $SD = 0.74$). Scaling performance, measured through combined indicators of user growth, geographic expansion, and impact reach, demonstrated a mean score of 3.89 ($SD = 0.69$).

Table 1. Descriptive Statistics of Key Variables in Digital Social Ventures

Variable	Mean	SD	Min	Max
Technological Capability	4.12	0.58	2.8	5.0
Strategic Agility	4.05	0.61	2.6	5.0
Stakeholder Integration	3.92	0.66	2.4	5.0
Impact Measurement Sophistication	3.67	0.74	2.1	5.0
Scaling Performance	3.89	0.69	2.3	5.0

Secondary data extracted from venture reports indicated that 71% of firms relied on data analytics dashboards to monitor user engagement, while 46% incorporated AI-based recommendation systems to personalize services. Approximately 38% reported formalized social impact frameworks aligned with international sustainability standards. Ventures demonstrating higher technological capability also reported greater cross-border user acquisition rates. Variability in impact measurement approaches suggests heterogeneity in institutional maturity and governance structure.

Explanatory analysis indicates that high technological capability is associated with enhanced scalability due to automation efficiencies and platform network effects. Ventures leveraging AI-driven personalization reported stronger user retention rates, contributing to sustainable expansion. Strategic agility emerged as a critical facilitator, enabling firms to adapt business models in response to regulatory shifts and evolving user expectations. Lower mean scores in impact measurement sophistication suggest that scaling speed may outpace the development of rigorous evaluation systems (Kessler et al., 2025).

Patterns observed in stakeholder integration reveal that ventures with structured partnership networks achieved more stable scaling trajectories. Engagement with community organizations, policy actors, and ecosystem intermediaries appears to reinforce social legitimacy. Moderate dispersion in measurement practices indicates a strategic tension between rapid digital growth and systematic impact documentation. Evidence supports the proposition that scaling social value requires balanced development across technological and governance dimensions.

Additional descriptive analysis categorized ventures into three scaling typologies: technology-driven scalers (34%), mission-driven stabilizers (29%), and hybrid integrators (37%). Technology-driven scalers exhibited high growth metrics but moderate impact documentation. Mission-driven stabilizers demonstrated strong community engagement but slower platform expansion. Hybrid integrators maintained balanced profiles across growth and impact indicators.

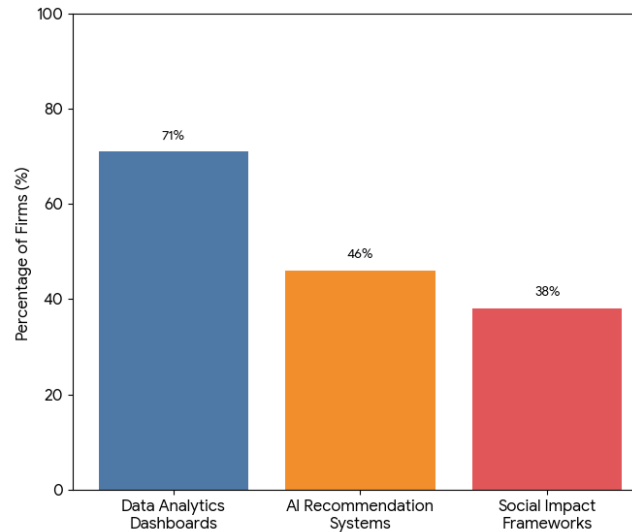


Figure 1. Adoption of Digital Tools and Impact Frameworks

Distributional comparison across typologies shows that hybrid integrators achieved the highest composite scaling performance ($M = 4.18$, $SD = 0.52$). Technology-driven scalers recorded strong technological capability ($M = 4.36$, $SD = 0.49$) but lower stakeholder integration ($M = 3.61$, $SD = 0.71$). Mission-driven stabilizers achieved higher stakeholder integration scores ($M = 4.21$, $SD = 0.54$) yet moderate technological capability. Variance across groups highlights strategic differentiation in scaling approaches.

Inferential statistical analysis employed multiple regression modeling to examine predictors of scaling performance. Results indicate that technological capability ($\beta = 0.41$, $p < 0.001$), strategic agility ($\beta = 0.29$, $p < 0.01$), and stakeholder integration ($\beta = 0.24$, $p < 0.01$) significantly predict scaling outcomes. Impact measurement sophistication showed a smaller but positive effect ($\beta = 0.17$, $p < 0.05$). The overall model explained 58% of variance in scaling performance ($R^2 = 0.58$).

Structural equation modeling further confirmed the mediating role of strategic agility between technological capability and scaling performance (indirect effect = 0.12, $p < 0.01$). Model fit indices met recommended thresholds ($CFI = 0.93$, $RMSEA = 0.05$). Results suggest that technological resources alone are insufficient without adaptive strategic processes. Empirical evidence underscores the interactive influence of technological and managerial capabilities.

Correlation analysis revealed a strong positive relationship between technological capability and strategic agility ($r = 0.68$, $p < 0.001$). Stakeholder integration correlated moderately with impact measurement sophistication ($r = 0.53$, $p < 0.01$). Scaling performance demonstrated the highest correlation with technological capability ($r = 0.71$, $p < 0.001$). Inter-variable relationships indicate systemic interdependence within digital entrepreneurial ecosystems.

Relational mapping of ecosystem partnerships showed that ventures embedded in multi-actor networks achieved higher scaling performance compared to isolated firms. Network density scores correlated positively with stakeholder integration measures. Findings reinforce

the proposition that scaling social value in digital contexts is relational rather than purely technological. Structural connectivity enhances diffusion of innovation and trust.

Case study analysis of a digital health platform operating across Southeast Asia illustrates practical dynamics of scaling through creative technologies. The venture utilized AI-based diagnostics and mobile applications to expand access to primary healthcare services. User base increased by 240% over three years, while reported community health indicators improved by measurable margins. Strategic partnerships with local clinics and government agencies facilitated cross-border deployment.

A second case involving a creative media platform for youth civic engagement demonstrated alternative scaling patterns. Platform growth relied on user-generated content algorithms and gamified participation tools. Rapid user acquisition was accompanied by challenges in moderating misinformation and maintaining mission alignment. Impact evaluation relied primarily on engagement analytics rather than structured outcome assessment.

Explanation of case findings indicates that ventures integrating technological innovation with structured stakeholder engagement achieve more sustainable scaling trajectories. Health platform success was linked to ecosystem partnerships and regulatory alignment. Media platform challenges reflect governance complexity in open digital environments. Evidence highlights the importance of institutional embedding in scaling processes.

Variations between cases demonstrate that creative technologies amplify reach but simultaneously intensify governance demands. Algorithmic growth mechanisms can accelerate impact diffusion while generating reputational and ethical risks. Balanced investment in monitoring systems mitigates unintended consequences. Data suggest that strategic foresight is essential in managing rapid expansion (Fedajev et al., 2024; Wójcik & Czernek-Marszałek, 2024).

Short interpretation of results indicates that scaling social value through creative technologies depends on synergistic interaction among technological capability, strategic agility, stakeholder integration, and governance maturity. Empirical findings support the conceptualization of scaling as a multidimensional process rather than a linear growth trajectory. Balanced strategic configurations yield superior outcomes compared to unilateral technological emphasis.

Overall evidence confirms that digital entrepreneurship offers substantial potential for amplifying social impact when supported by adaptive management and relational ecosystems. Statistical and case-based findings converge in demonstrating that technology functions as an enabler rather than a standalone driver of social value. Sustainable scaling emerges from the integration of innovation, accountability, and collaborative governance.

Findings indicate that technological capability, strategic agility, stakeholder integration, and impact measurement sophistication jointly predict the capacity of digital ventures to scale social value. Regression and structural equation modeling confirm that technological resources exert the strongest direct influence on scaling performance, while strategic agility mediates the relationship between technological capability and growth outcomes. Hybrid integrator ventures achieved the highest composite scaling scores, suggesting that balanced configurations outperform unilateral strategies. Case evidence further demonstrates that ventures embedding technological innovation within relational ecosystems sustain more stable expansion trajectories.

Quantitative results reveal that scaling is not merely a function of platform growth metrics but reflects multidimensional alignment between innovation and governance structures. Ventures prioritizing rapid technological expansion without parallel development of stakeholder integration experienced greater volatility in performance indicators. Statistical correlations underscore systemic interdependence among variables, particularly between technological capability and strategic agility. Empirical patterns consistently show that digital

scalability requires coordinated organizational capabilities rather than isolated technological investment.

Case-based findings reinforce the quantitative results by illustrating how ecosystem partnerships and regulatory alignment contribute to sustainable growth. Digital health platforms integrating AI diagnostics with public sector collaboration achieved measurable improvements in community outcomes. Creative media platforms relying heavily on algorithmic amplification faced governance and moderation challenges that affected mission coherence. Empirical triangulation strengthens the validity of the integrated scaling framework proposed in this study (Games et al., 2025; Yáñez-Valdés et al., 2023).

Overall evidence supports a multidimensional conception of scaling social value through creative technologies. Digital entrepreneurship emerges as a strategic balancing act between innovation speed and institutional embedding. Data converge in demonstrating that sustainable scaling is relational, adaptive, and governance-sensitive. Findings collectively validate the theoretical premise that technological capability must be embedded within strategic and social infrastructures to generate durable impact.

Existing literature on digital entrepreneurship emphasizes network effects and platform dynamics as primary growth drivers. Current findings extend this perspective by demonstrating that network expansion alone does not guarantee sustained social value amplification. Prior studies often prioritize venture capital acquisition and user growth metrics, whereas present evidence foregrounds the mediating role of strategic agility and stakeholder integration. Empirical outcomes suggest that socially oriented digital ventures operate under more complex performance logics than purely commercial startups.

Social entrepreneurship scholarship traditionally highlights mission integrity and community engagement as core determinants of impact. Results of this study align with such perspectives while introducing technological capability as a critical scaling enabler. Divergence appears in the relative emphasis placed on digital infrastructure, which earlier research treats as supportive rather than central. Integration of platform governance and creative technology into impact scaling models marks a conceptual advancement beyond existing frameworks.

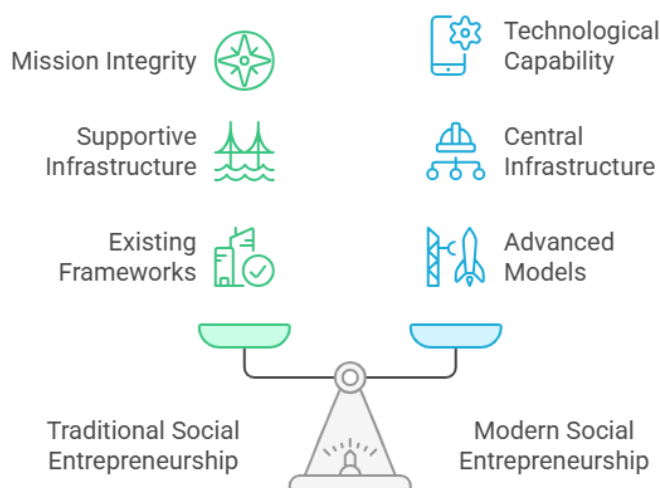


Figure 2. Balancing Tradition and Technology in Social Entrepreneurship

Research on sustainable entrepreneurship identifies tension between economic and social objectives. Present findings corroborate that tension yet reveal that digital environments intensify governance complexity through algorithmic mediation and data-driven personalization. Comparative analysis shows that ventures lacking structured impact measurement systems face difficulties maintaining legitimacy during rapid growth. Evidence therefore expands sustainability discourse into digitally mediated contexts.

Studies examining innovation ecosystems highlight collaboration as essential for knowledge diffusion. Current results confirm that ecosystem density positively correlates with scaling performance in digital social ventures. Distinct contribution lies in demonstrating how stakeholder integration enhances not only innovation diffusion but also social legitimacy. Empirical integration of technological and relational variables differentiates this research from narrower innovation-focused analyses (Ramírez-Montoya et al., 2025; Shonubi, 2025).

Findings signal that digital entrepreneurship for social value operates within hybrid logics combining platform economics, mission-driven governance, and adaptive strategy. Scaling emerges as a multidimensional capability reflecting technological sophistication and relational embeddedness. Empirical differentiation among scaling typologies indicates that strategic balance is a marker of organizational maturity. Data reveal that ventures capable of harmonizing innovation with governance achieve superior outcomes.

Patterns observed in the results indicate that digital infrastructure acts as an amplifier rather than a substitute for institutional trust. Ventures embedded in collaborative ecosystems demonstrate greater resilience to regulatory fluctuations and reputational risks. Empirical relationships between stakeholder integration and impact measurement sophistication suggest co-evolution of technological and governance capacities. Scaling success therefore becomes an indicator of organizational alignment rather than mere expansion.

Quantitative mediation effects reflect the dynamic nature of digital markets, where strategic agility enables firms to translate technological capability into performance outcomes. Findings illustrate that adaptability is not peripheral but central to digital scaling processes. Ventures unable to recalibrate strategies in response to platform algorithm changes or policy shifts experience diminished performance. Empirical data thus point toward agility as a structural necessity.

Results also suggest that social value amplification depends on legitimacy across multiple stakeholder groups. Community trust, regulatory compliance, and ecosystem partnerships function as stabilizing mechanisms during expansion. Scaling without governance alignment risks mission dilution and reputational vulnerability. Empirical patterns highlight legitimacy as a strategic asset in digital social ventures.

Implications extend to entrepreneurial practice, public policy, and academic theory. Entrepreneurs should prioritize integrated capability development that balances innovation speed with stakeholder governance. Strategic investment in impact measurement systems enhances credibility and long-term sustainability. Evidence indicates that scaling strategies must incorporate ethical and relational considerations alongside technological expansion.

Policy frameworks supporting digital entrepreneurship should facilitate ecosystem collaboration rather than focusing exclusively on technological infrastructure. Incubation programs may integrate governance training and impact evaluation competencies. Funding agencies can encourage hybrid models that combine innovation metrics with measurable social outcomes. Empirical findings advocate for multi-stakeholder approaches in digital ecosystem development.

Academic theory benefits from reconceptualizing scaling as an interactive system of capabilities rather than a unidimensional growth trajectory. Integration of digital entrepreneurship and social value scholarship generates a more comprehensive explanatory model. Empirical support for mediation effects enriches strategic management literature by demonstrating dynamic capability interplay. Findings contribute to interdisciplinary dialogue across innovation studies and sustainability research.

Strategic implications also underscore the necessity of embedding digital ventures within institutional and regulatory contexts. Ventures operating transnationally require adaptive governance mechanisms. Balanced integration of technological and relational resources enhances resilience. Empirical insights provide actionable guidance for sustainable scaling (Mirhabibi et al., 2025; T. T. T. Nguyen et al., 2025).

Observed results can be explained by the structural properties of digital platforms. Network effects magnify growth potential but simultaneously increase exposure to algorithmic volatility and governance challenges. Ventures equipped with agile decision-making processes are better positioned to navigate such volatility. Technological capability thus translates into performance only when coupled with adaptive management.

Social value scaling requires trust-based relationships that cannot be automated entirely through digital systems. Stakeholder integration strengthens legitimacy and mitigates reputational risks. Ventures investing in governance frameworks align technological growth with social mission continuity. Empirical correlations reflect this relational dependency.

Variations across scaling typologies arise from differential resource allocation strategies. Technology-driven scalers emphasize rapid expansion but often underinvest in institutional embedding. Mission-driven stabilizers prioritize community engagement yet experience slower diffusion. Hybrid integrators balance these priorities, producing superior composite outcomes.

Digital environments amplify both opportunity and complexity. Algorithmic personalization accelerates reach while increasing ethical and regulatory exposure. Strategic agility functions as a buffer against environmental turbulence. Empirical findings thus align with dynamic capability theory (Duong, Ta, et al., 2025; Solaz et al., 2025).

Future research should examine longitudinal scaling trajectories to assess sustainability over extended periods. Cross-regional comparisons may reveal contextual variations in digital ecosystem maturity. Expanded datasets incorporating emerging economies would enhance generalizability. Multi-method designs can further refine theoretical integration.

Entrepreneurial education programs may incorporate digital governance and ecosystem management modules. Capacity-building initiatives can emphasize integrated strategy formation. Practical toolkits derived from this study's framework may assist early-stage ventures. Institutional collaboration remains essential.

Policy research may explore regulatory sandboxes supporting socially oriented digital experimentation. Comparative policy analysis could illuminate enabling environments for balanced scaling. International partnerships can foster shared standards for digital impact measurement. Continued empirical inquiry will strengthen evidence-based policy formulation.

Scholarly engagement with creative technologies and social value scaling should remain interdisciplinary. Integration of data science, strategic management, and social innovation perspectives enriches analysis. Iterative refinement of scaling frameworks will support sustainable digital transformation. Ongoing dialogue between researchers and practitioners is imperative for advancing responsible digital entrepreneurship.

CONCLUSION

The most significant finding of this study lies in demonstrating that scaling social value through creative technologies is a multidimensional strategic process shaped by the interaction of technological capability, strategic agility, stakeholder integration, and impact measurement sophistication. Empirical results confirm that technological capability exerts the strongest direct influence on scaling performance, yet its effect is substantially mediated by strategic agility and relational governance mechanisms. Ventures categorized as hybrid integrators, which balance rapid digital innovation with structured stakeholder engagement and accountability systems, consistently outperform those relying solely on technological expansion or mission-driven orientation. The study reveals that sustainable social value amplification in digital entrepreneurship depends not on technological acceleration alone but on coherent alignment between innovation, governance, and ecosystem collaboration.

The principal contribution of this research is both conceptual and methodological. Conceptually, the study advances an integrated strategic framework that bridges digital entrepreneurship theory, social value scaling models, and dynamic capability perspectives

within a unified analytical structure. Methodologically, the combination of regression modeling, structural equation modeling, ecosystem mapping, and comparative case analysis provides a robust, multi-layered examination of scaling processes in digitally mediated environments. The identification of scaling typologies and the empirical validation of mediating effects enrich existing scholarship by moving beyond linear growth assumptions toward a systemic and capability-based understanding of digital social entrepreneurship. This dual contribution offers theoretical refinement and practical guidance for entrepreneurs, policymakers, and innovation ecosystems seeking to leverage creative technologies for measurable social impact.

Limitations of this study include the cross-sectional design, which constrains causal inference over time, and the reliance on self-reported survey data that may introduce perceptual bias. Sample representation, while geographically diverse, remains concentrated in ventures with access to established digital infrastructures, potentially limiting applicability to resource-constrained contexts. Measurement of social value relied partly on composite indicators that may not fully capture long-term societal transformation. Future research should employ longitudinal designs to examine scaling trajectories across different institutional environments, incorporate objective performance and impact data, and explore sector-specific variations in digital governance and ecosystem maturity. Expanded comparative studies across emerging and developed markets would further strengthen the generalizability and policy relevance of the proposed strategic framework.

DECLARATION OF AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work, the author(s) used Chat GPT solely to assist with text translation. After using these tools/services, the author(s) reviewed and edited the content as needed and take full responsibility for the content of the publication.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; Investigation.

Author 3: Data curation; Investigation.

Author 4: Formal analysis; Methodology; Writing - original draft.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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