

ORIGINAL ARTICLE

Open Access



Harnessing digital–relational synergies for sustainable SME performance: exploring the interplay between digital marketing and network capital in resource-constrained settings

Dedrix Stephenson Bindeeba^{1*} , Rennie Bakashaba¹ and Eddy Kurobuza Tukamushaba²

Abstract

This study examines how Digital Marketing (DM) and Network Capital (NC) jointly influence the economic and social performance of small and medium-sized enterprises (SMEs) in Uganda. Drawing on the Resource-Based View, the Technology–Organization–Environment framework, and Network Theory, an explanatory mixed-methods design was employed. In the quantitative phase, survey data from 272 SMEs were analyzed using Hayes' PROCESS macro (Model 1) with mean-centered predictors and bootstrapped standard errors. The results show that DM and NC independently enhance both economic and social performance; however, NC negatively moderates the DM–performance relationship, indicating a substitution rather than a complementary effect. Conditional effects reveal that DM significantly improves performance at low and moderate levels of NC but becomes nonsignificant at high NC levels. The qualitative phase, based on 15 interviews, explains this pattern through managerial attention constraints, trust substitution, and digital cost frictions. Together, the findings advance a contextual threshold perspective, showing that digital strategies are most effective where relational capital is limited, while dense networks dampen the marginal returns to digital investment in resource-constrained settings. Practically, the results suggest that SMEs should calibrate digital marketing investments to their relational context, prioritizing digital tools where network resources are weak and avoiding overinvestment where strong relational ties.

Keywords Digital Marketing, Network Capital, Economic Performance, Social Performance, SMEs

*Correspondence:

Dedrix Stephenson Bindeeba
dedrixbindeeba@gmail.com

¹Faculty of Business and Management Sciences, Mbarara University of Science and Technology, P.O. Box 24985, Kampala, Mbarara, Uganda

²College of Business, University of Doha for Science and Technology, Doha, Qatar

Introduction

Small and medium-sized enterprises (SMEs) are widely recognized as the backbone of national economies and as crucial drivers of employment, innovation, and inclusive growth (Raes, 2021). In Uganda, SMEs account for nearly 80 percent of the private sector and employ millions of citizens, contributing substantially to household income and economic diversification (Abanis et al., 2022; Francis & Anthony, 2022). However, their survival rates remain low, with over 60 percent of SMEs failing within five years due to persistent challenges such as limited financing, managerial capacity, infrastructure constraints, and exposure to volatile market conditions (Keneth & Niclous 2023). These constraints underscore the need to better understand how SMEs deploy strategic resources to build resilience and sustain performance in resource-constrained environments.

In this context, digital technologies, particularly Digital Marketing (DM), have become increasingly important for improving SME visibility, competitiveness, and market reach. DM encompasses the use of online platforms, data analytics, and digital communication tools to promote products, engage customers, and optimize marketing activities (Bakashaba & Bindeeba, 2025; Silva et al., 2022; Taiminen & Karjaluo 2015). Through social media and digital channels, SMEs can interact directly with customers, gather feedback, and access new markets at relatively low cost. Prior research consistently shows that digital engagement enhances brand visibility, customer loyalty, and operational efficiency, thereby supporting SME growth and sustainability (Anim et al., 2023; Bruce et al., 2023).

However, the performance benefits of digital marketing are unevenly realized across developing economies. In Uganda, structural and contextual limitations constrain adoption. Only about 55 percent of businesses have access to the Internet, 33 percent maintain a company website, and roughly half use online tools for transactions (National Planning Authority [NPA], 2017). These gaps are driven by limited digital literacy, high data costs, infrastructural deficiencies, and low managerial awareness, resulting in digital gains being concentrated among relatively better-resourced firms. This uneven adoption raises questions about whether digital strategies deliver uniform returns across SMEs operating under different relational and institutional conditions.

At the same time, SMEs in Uganda and many African economies depend heavily on Network Capital (NC) as a non-technological yet equally critical resource. NC refers to trust-based relationships among entrepreneurs, suppliers, customers, community leaders, and local institutions that facilitate collaboration, knowledge sharing, and mutual support (John 2024; Peter & Cathy 2015). In collectivist contexts where formal mechanisms such as

credit rating systems or contract enforcement are weak, relational trust often substitutes for institutional safeguards (Sendawula et al., 2021). SMEs rely on these networks to access credit, secure supplies, exchange market information, and attract customers through referrals and reputation (Katunku et al., 2024). As a result, relational embeddedness frequently functions as both a coordination mechanism and an informal marketing channel.

The coexistence of digital marketing and network capital raises a central theoretical question: how do technological and relational resources jointly influence SME performance? Conventional reasoning suggests complementarity, where DM extends reach and efficiency while NC enhances trust and cooperation. Emerging evidence, however, indicates that this relationship may be contingent on context. In settings characterized by dense local networks, relational trust can act as a substitute for digital engagement. When customer demand is already sustained through referrals, reputation, and community endorsement, additional digital marketing may generate limited incremental value (Cartwright et al., 2021; Nugroho et al., 2022). Conversely, in weaker network environments, digital tools become essential for overcoming relational distance and expanding market access.

This tension challenges the dominant assumption of universal complementarity between digital and relational assets. Much of the existing literature, largely grounded in developed economies, portrays DM and NC as mutually reinforcing. Such an assumption overlooks relationship-oriented contexts like Uganda, where high relational density may dampen rather than amplify digital returns. This gap points to an underexplored theoretical frontier: identifying when and why relational embeddedness constrains rather than complements digital adoption and performance outcomes.

Uganda provides a compelling empirical context for examining this issue. Its SME ecosystem reflects a hybrid environment where strong trust-based business practices coexist with a rapidly expanding digital infrastructure. While entrepreneurs increasingly recognize the growth potential of digital marketing, many continue to rely primarily on interpersonal trust and community referrals to sustain business operations. This duality creates strategic trade-offs in how SMEs allocate limited managerial attention and financial resources, particularly when deciding between maintaining relational ties and investing in digital capabilities. Understanding the point at which additional digital investment yields diminishing returns in network-rich environments remains an open empirical question.

To address this puzzle, this study integrates three complementary theoretical perspectives: the Resource-Based View (RBV), the Technology–Organization–Environment (TOE) framework, and Network Theory. From an

RBV perspective, both DM and NC represent valuable and difficult-to-imitate resources that can generate competitive advantage (Barney 1991). The TOE framework introduces a contextual lens, explaining how technological readiness, organizational capacity, and environmental conditions shape digital adoption, particularly in resource-limited settings (Prakasa & Fauzan 2024). Network Theory further emphasizes how the structure and strength of social ties influence access to resources, legitimacy, and adaptability (Hilmerston & Hilmerston 2021). Together, these perspectives enable a nuanced examination of how digital and relational resources interact under context-specific constraints.

Accordingly, this study positions Network Capital as a moderator in the relationship between Digital Marketing and SME performance. While DM is expected to enhance both economic and social outcomes, its effectiveness may vary depending on the density of relational networks. Firms with strong NC may experience diminishing digital returns because networks already perform key functions such as trust-building, customer acquisition, and information exchange. In contrast, firms with weaker or moderate NC may rely more heavily on DM to compensate for relational gaps. This logic introduces a contextual threshold perspective, suggesting that beyond a certain level of relational embeddedness, additional digital investment provides limited incremental benefit.

This study makes three contributions. First, it extends the RBV by demonstrating that technological and relational resources may function not only as complements but also as substitutes under specific contextual conditions. Second, it advances SME performance research by jointly examining economic and social outcomes, aligning with a multidimensional view of sustainability (Bendig et al., 2023; Nasir et al., 2017). Third, it bridges the digital marketing and social capital literatures by situating digital transformation within the lived realities of SMEs in developing economies, where hybrid systems of technology and trust coexist.

Guided by an explanatory sequential mixed-methods design, this study combines quantitative moderation analysis with qualitative interviews to contextualize statistical relationships and uncover underlying mechanisms. Rather than merely estimating effects, the study situates digital-relational dynamics within the broader socio-economic structures that shape how SMEs compete, collaborate, and sustain performance. Ultimately, this research contributes to ongoing debates on SME competitiveness and digital transformation in the Global South by demonstrating that sustainable performance depends not on the accumulation of digital tools alone, but on how digital strategies are balanced with deeply embedded relational resources.

Literature review

Theoretical review

This study draws from the Resource-Based View (RBV), the Technology-Organization-Environment (T-O-E) framework, and Network Theory to examine how DM and NC influence EP and SP. These theoretical lenses guide the development of hypotheses to explore these dynamics within Uganda's resource-constrained SME context.

Resource-Based View (RBV)

Initially proposed by Wernerfelt (1984) and later expanded by (Barney 1991), the RBV posits that a firm achieves sustainable competitive advantage through resources that are valuable, rare, inimitable, and non-substitutable (VRIN). These resources encompass tangible assets, like specialized machinery, and intangible assets, such as digital marketing expertise, brand equity, and relational networks (Madhani 2010; Uyanik 2023). RBV emphasizes resource heterogeneity and immobility as key drivers of competitive performance, explaining why certain firms consistently outperform their peers (Bakashaba & Bindeeba, 2025; Salazar & Armando 2017). Despite its strengths, RBV is criticized for its limited guidance on acquiring or developing VRIN resources and its static approach, which neglects the need for continuous adaptation in dynamic markets (Kraaijenbrink et al., 2010; Oduro 2024). While RBV highlights how SMEs can leverage digital systems and relational networks to enhance economic and social performance, it does not address the external pressures and dynamic environments SMEs face. These gaps are addressed by the T-O-E framework, which incorporates external factors into the analysis.

Technology-Organization-Environment (T-O-E) framework

Proposed by Tornatzky and Fleischer (1990), the T-O-E framework examines how technology adoption is influenced by technological, organizational, and environmental factors. Technological factors include usability, compatibility, and perceived usefulness, while organizational factors emphasize readiness, management support, and innovation culture. Environmental factors, such as regulatory policies, competitive pressures, and institutional support, provide critical external context (Prakasa & Fauzan 2024). In resource-constrained settings like Uganda, the T-O-E framework explains why SMEs with entrepreneurial and digital capabilities may struggle to adopt technology due to infrastructural deficiencies or limited external support (Nanath & Pillai 2021; Prakasa & Fauzan 2024). Although T-O-E effectively identifies the enablers and barriers to technology adoption, it overlooks the role of social ties in mobilizing resources and driving innovation. Network Theory addresses this

limitation by emphasizing the importance of trust-based networks in enhancing SME performance.

Network theory

Network Theory emphasizes the role of social ties in facilitating resource access, knowledge exchange, and innovation. Granovetter's (1973) distinction between strong and weak ties highlights how close relationships provide trust and reliability, while broader, weaker connections enable access to new information and opportunities. For SMEs, such networks are particularly important, as they support resilience and compensate for limited internal resources by enabling access to credit, market information, and customers (John 2024; Peter & Cathy 2015). However, while Network Theory effectively explains how relational ties enhance performance, it pays less attention to the organizational and technological capabilities required to fully leverage these networks. In the absence of enabling technologies or complementary organizational resources, even well-connected SMEs may struggle to translate relational embeddedness into sustained performance gains.

From an organizational theory perspective, relational embeddedness is also shaped by broader institutional environments that influence firm behavior and legitimacy. DiMaggio and Powell (1983) argue that organizations embedded in dense relational fields may converge toward similar practices due to coercive, normative, and mimetic pressures. In relationship-oriented SME contexts, such institutional forces can reinforce reliance on established networks and legitimized practices, potentially discouraging experimentation with alternative strategies such as digital marketing. This perspective extends Granovetter's (1973) embeddedness argument by showing that while strong ties facilitate trust and coordination, they may also constrain strategic flexibility when relational norms become institutionalized. Integrating Network Theory with the Resource-Based View and the Technology–Organization–Environment framework therefore provides a more comprehensive understanding of how relational, organizational, and technological factors jointly shape SME performance outcomes.

Hypotheses development

Digital marketing and economic performance

Digital Marketing refers to the strategic use of online tools such as social media platforms, websites, and email marketing to promote products, engage clients, and collect timely customer feedback (Daud et al., 2022; Wang 2020). Among SMEs, DM is valued for its affordability and adaptability, enabling small firms to compete effectively through interactive campaigns, e-commerce engagement, and personalized customer outreach (Eze et al., 2023; Purba et al., 2021). Within the Resource-Based

View (RBV), DM represents an intangible strategic capability that provides value through enhanced market visibility and data-driven decision-making. Its unique combination of analytics, content creation, and customer interaction is difficult to imitate, granting firms a sustainable competitive edge (Barney 1991). Complementing this, the T-O-E framework emphasizes that the successful adoption of DM depends on technological readiness, managerial commitment, and competitive pressures within the external environment (Eze et al., 2023). In resource-limited contexts such as Uganda, DM offers cost-effective access to new markets and improved sales performance, even where traditional marketing channels are constrained (Bindeeba et al., 2025a; Katunku et al., 2024; Mushi 2024). Accordingly, DM is expected to exert a clear, positive, and significant effect on SME performance.

H1: Digital Marketing positively and significantly impacts the Economic Performance of SMEs.

Digital marketing and social performance

Beyond revenue generation, DM plays a key role in shaping how firms are perceived socially and ethically by stakeholders. Social media platforms allow SMEs to highlight corporate social responsibility (CSR) initiatives, share community engagement stories, and communicate transparently with customers, thereby enhancing trust and legitimacy (Nugroho et al., 2022; Purba et al., 2021). Empirical studies show that SMEs using DM to showcase staff training, donations, or environmental projects often strengthen community ties and improve public image (Anim et al., 2023; Bindeeba et al., 2025b; Fang et al., 2022). Network Theory suggests that by facilitating interaction and information flow, DM fosters stronger relational bonds and builds trust within communities (Tundui & Tundui 2013). In resource-constrained environments, where consumer trust and reputation are critical to survival, DM provides SMEs with low-cost yet powerful means to reinforce relational capital (John 2024). Furthermore, the T-O-E framework highlights that cultural and institutional support enhances SMEs' capacity to use DM for social engagement and accountability (Eze et al., 2023). Therefore, DM is expected to have a direct and positive effect on SMEs' social outcomes.

H2: Digital Marketing positively and significantly impacts the Social Performance of SMEs.

Network capital and economic performance

Network Capital refers to the trust-based relationships that SMEs build with suppliers, customers, community groups, and trade associations. These connections act

as social resources that facilitate information exchange, referrals, and mutual support in business operations (Harmawan Saputra & Adiati Pratomo 2023; Tundui & Tundui 2013). In contexts where access to formal finance and infrastructure is limited, NC serves as a substitute for traditional capital, enabling firms to secure credit, share inputs, and access collective market opportunities (Bouhaleb 2024; Dwumah et al., 2024). From a RBV perspective, NC is an intangible capability that enhances competitiveness through trust, reputation, and resource exchange attributes that are valuable, rare, and difficult to imitate (Scuotto et al., 2017). The T-O-E framework adds that conducive institutional and cultural contexts foster collaboration and reduce coordination costs (Nguyen et al., 2022). Network Theory similarly highlights that strong and weak ties expand firms' market reach and innovation potential (Granovetter 1973). Accordingly, the study posits that SMEs with stronger network capital demonstrate higher economic performance.

H3: Network Capital positively and significantly impacts the Economic Performance of SMEs.

Network capital and social performance

Network Capital not only supports financial goals but also enhances SMEs' social contributions by fostering inclusion, goodwill, and stakeholder engagement. Firms embedded in networks often collaborate to sponsor local events, fund community projects, or support social initiatives, thereby strengthening cohesion and legitimacy (Rakshit et al., 2023). From a Network Theory perspective, such alliances build reciprocal trust and shared responsibility, promoting fair labor practices, employee well-being, and community partnerships (Tundui & Tundui 2013). In Uganda's collectivist context, where social reciprocity is deeply embedded in business culture, SMEs with strong NC often gain reputational capital by engaging in socially responsive actions that reinforce loyalty and trust (John 2024). Within the RBV, these relational assets are valuable, rare, and inimitable, enhancing organizational legitimacy and long-term survival. The T-O-E framework further highlights how supportive institutional settings, such as NGO collaborations or government incentives, strengthen SMEs' social engagement (Eze et al., 2023; Khalid et al., 2024). Thus, the study predicts a positive directional relationship between NC and social outcomes.

H4: Network Capital positively and significantly impacts the Social Performance of SMEs.

Moderating role of network capital in the DM–economic performance relationship

The influence of DM on EP may vary depending on the level of NC that SMEs possess. On one hand, NC can complement DM by amplifying online promotions through trust-based referrals and endorsements from community partners, thereby increasing conversion rates and reinforcing DM's effectiveness (Cartwright et al., 2021; Ahmad et al., 2024; Peter & Cathy, 2015). This logic, grounded in RBV and Network Theory, suggests that the joint deployment of DM and NC yields synergistic value that is difficult for competitors to imitate. On the other hand, NC may also substitute for DM, especially in contexts where relational ties already provide reliable customer acquisition, reputation building, and sales channels (Eze et al., 2023). In such cases, DM's marginal contribution to EP diminishes, as strong networks can overshadow or even crowd out digital efforts. Building on the T-O-E framework, institutional and cultural norms in Uganda may encourage SMEs to rely heavily on personal networks, potentially reducing the incremental payoff of digital initiatives. Therefore, two competing hypotheses are proposed:

H5a (Complementarity): At higher levels of Network Capital, the positive effect of Digital Marketing on Economic Performance is strengthened.

H5b (Substitution): At higher levels of Network Capital, the positive effect of Digital Marketing on Economic Performance is weakened.

Moderating role of network capital in the DM–social performance relationship

Digital Marketing can enhance SP by allowing SMEs to communicate community engagement, ethical practices, and CSR activities. When endorsed and shared within trusted networks, these digital messages may achieve broader reach and greater credibility, thereby reinforcing social legitimacy (Karami & Tang 2019; Tariq et al., 2024). From the RBV perspective, the joint use of DM and NC creates a rare and inimitable bundle of relational and digital resources that can foster durable stakeholder trust. However, Network Theory also suggests that when NC is already strong, many social benefits such as reputation, reciprocity, and goodwill are achieved through offline ties. In such cases, DM's incremental impact may be reduced, as stakeholders prioritize direct relational trust over mediated online communication (Peter & Cathy 2015). Within the T-O-E framework, institutional recognition and cultural reliance on interpersonal ties could further temper the need for digital reinforcement. Therefore, we advance competing hypotheses to reflect both possible dynamics:

- *H6a (Complementarity)*: At higher levels of Network Capital, the positive effect of Digital Marketing on Social Performance is strengthened.
- *H6b (Substitution)*: At higher levels of Network Capital, the positive effect of Digital Marketing on Social Performance is weakened.

Therefore, the study posits that Digital Marketing and Network Capital independently enhance SMEs' Economic and Social Performance, while NC moderates these relationships, potentially either amplifying (complementarity) or weakening (substitution) their impact. The proposed research model, illustrated in Fig. 1, integrates these constructs and hypotheses to guide empirical analysis.

Methodology

This study adopted an explanatory sequential mixed-methods design, integrating quantitative and qualitative approaches to investigate how DM and NC interactively influence EP and SP among SMEs in Uganda. The design followed Creswell and Plano Clark's (2018) framework, where quantitative analysis identifies statistical relationships and qualitative inquiry provides contextual explanations of the underlying mechanisms. This approach was particularly appropriate because the relationship between digitalization and relational capital in developing economies is not only empirical but also socially embedded.

Study context

This study is situated within Uganda's SME sector, where firms operate in an institutional environment characterized by evolving regulatory frameworks, limited formal enforcement mechanisms, and a strong reliance on informal relational governance. Although policy efforts have been made to support SME development, formal market-supporting institutions such as contract enforcement, credit information systems, and regulatory oversight remain uneven in their reach and effectiveness. The SMEs included in this study were drawn primarily from urban and peri-urban areas, where digital infrastructure and mobile connectivity are expanding but remain uneven across sectors and locations. In this context, business interactions frequently depend on trust-based relationships, referrals, and reputation rather than formal contracts or standardized institutional guarantees, making network capital a central mechanism for facilitating access to resources, coordinating transactions, and establishing organizational legitimacy within local markets.

Study 1: quantitative phase

Research design and sample

This study adopted an explanatory sequential mixed-methods design (Creswell, 2014). The first phase consisted of a cross-sectional survey to examine the relationships between digital marketing (DM), network capital (NC), and SME performance. The quantitative results were subsequently followed by a qualitative phase to further explain and contextualize the observed relationships.. The target population comprised formally

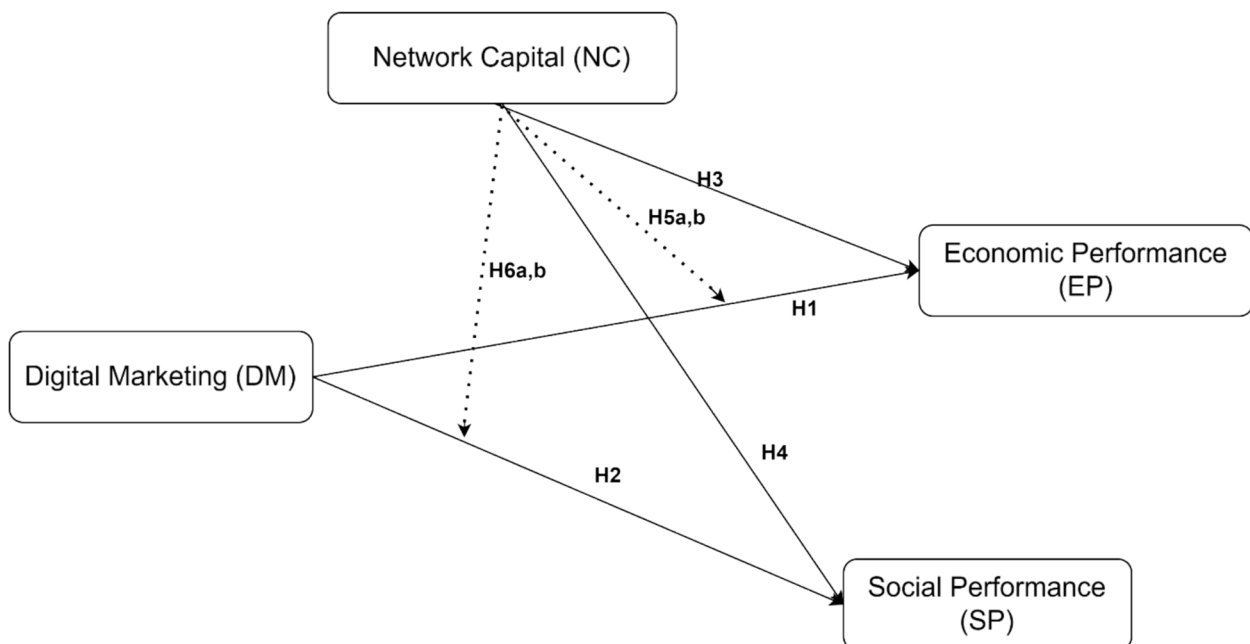


Fig. 1 Research model: Note: dashed lines represent moderating effects of network capital

registered SMEs listed in the Uganda Revenue Authority (URA) and Uganda Investment Authority (UIA) databases. Data were collected in Kampala and Wakiso districts, which were selected because they host the largest concentration of SMEs and represent a diverse mix of manufacturing, service, and trade enterprises operating under varying levels of digital engagement.

Due to practical constraints related to SME turnover, incomplete registry information, and firm mobility, the study employed a non-probabilistic sampling approach. Initial firms were identified from the URA and UIA databases, after which a referral-based extension was used to reach active SMEs operating within related value chains. This approach facilitated access to operational firms but does not constitute random sampling. The operational status of all participating SMEs was verified through Google Maps location checks and follow-up phone calls prior to survey administration. Using this approach, 272 valid responses were obtained, representing an effective response rate of 88.9 percent. A power analysis using G*Power 3.1 confirmed that this sample size was adequate for moderated regression analysis ($\alpha=0.05$, power=0.80, $f^2=0.05$) (Faul et al., 2009). SMEs were included if they had verifiable contact details, employed at least two full-time staff, and were actively engaged in at least one digital marketing activity, such as social media promotion, online advertising, or analytics-based customer engagement.

Data collection procedure

To ensure data accuracy and inclusiveness, a multi-mode data collection approach was adopted. An online survey designed in Google Forms was first distributed to firms with valid email addresses, yielding 45 responses. To reach firms with limited internet access or digital familiarity, face-to-face and drop-and-pick methods were used for the remaining respondents. This combination enhanced participation across diverse SME categories and mitigated coverage bias. Respondents were primarily firm owners, managers, or marketing officers responsible for digital operations or stakeholder engagement. Participation was voluntary, and respondents were briefed on the study's purpose, confidentiality measures, and their right to withdraw. The final valid sample of 272 SMEs provided robust data for quantitative analysis and met acceptable response thresholds for organizational research in emerging economies (Baruch & Holtom 2008).

Measurement of constructs

The study employed a structured questionnaire to measure four main constructs DM, NC, EP, and SP using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Measurement items were adapted

from validated sources and refined to fit the SME context. DM was assessed through indicators such as digital advertising, social media engagement, analytics-driven marketing, and personalization (Harrigan et al., 2021; Kumar & Gupta 2022). NC captured trust-based relationships, participation in business networks, and relational exchange (Batjargal 2003; Hilmersson & Hilmersson 2021). EP included profitability, customer retention, market share, and revenue growth (Djalil et al., 2021), while SP measured ethical practices, inclusivity, community engagement, and stakeholder satisfaction (Chowdhury et al., 2022). The questionnaire was pre-tested with 20 SME managers to ensure clarity and contextual appropriateness.

Quantitative data analysis

Quantitative data were cleaned and analyzed using SPSS Version 27 and Hayes' PROCESS Macro (Model 1) for moderation analysis (Hayes 2018). Descriptive statistics were used to summarize firm and respondent characteristics. Scale reliability was assessed using Cronbach's alpha, with all constructs exceeding the recommended threshold of 0.70, indicating satisfactory internal consistency (Nunnally & Bernstein 1994). Construct validity was evaluated using Composite Reliability (CR) and Average Variance Extracted (AVE), both of which met established cutoff values (Hair et al., 2019). Discriminant validity was assessed using the Fornell–Larcker criterion. To assess the risk of common method bias, Harman's single-factor test was conducted, and the first factor accounted for 36.8 percent of the total variance, below the 50 percent threshold, suggesting that common method bias was unlikely to pose a serious concern (Podsakoff et al., 2003).

Prior to estimating the moderation models, all predictor variables were mean-centered to reduce potential multicollinearity. Variance Inflation Factors (VIFs) were examined and remained below the conservative threshold of 5, indicating no multicollinearity concerns. Moderation effects were estimated using ordinary least squares regression within the PROCESS framework, and statistical inference was based on bias-corrected bootstrapped confidence intervals generated from 5,000 resamples. This quantitative analysis was designed to test whether Network Capital conditions the relationship between Digital Marketing and SME performance outcomes and to inform the subsequent qualitative phase of the study.

Study 2: qualitative phase

Purpose and design

The qualitative phase was designed to explain the mechanisms underlying the negative moderation effect observed in the quantitative analysis. Specifically, it sought to understand why, in some firms, high levels of

network capital diluted rather than enhanced the benefits of digital marketing. Following the principles of explanatory sequential design (Fetters et al., 2013), this phase was structured to test rival explanations such as managerial overload, relational inertia, or trust substitution, each potentially accounting for the substitution effect.

Sampling and recruitment

Fifteen SME managers and owners were purposively selected from among survey respondents who had indicated willingness to participate in follow-up interviews. This sample was chosen to capture maximum variation sector, and digital maturity, thereby ensuring a diversity of perspectives. Participants were drawn from manufacturing, services, and trade and distribution sectors. Recruitment continued until thematic saturation was achieved at the 13th interview, after which two additional interviews were conducted to confirm consistency in the emerging themes (Guest et al., 2020).

Data collection

Semi-structured interviews were used to generate rich narrative data about digital marketing strategies, relational practices, and performance outcomes. The interview guide explored three central themes: how SMEs integrate digital tools into marketing operations, how interpersonal networks influence decision-making, and how firms manage the tension between maintaining relationships and pursuing digital efficiency. Each interview lasted between 45 and 60 min and was conducted either face-to-face or through virtual platforms, depending on the participant's preference. All interviews were conducted in English or Luganda, audio-recorded with consent, and later transcribed verbatim.

Coding and analysis

Qualitative data were analyzed thematically using Braun and Clarke's (2019) six-phase framework, which involved familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming them, and compiling the report. A preliminary codebook was developed deductively from the quantitative findings, particularly focusing on the observed substitution effect between DM and NC. This codebook was refined inductively as new insights emerged from the interviews. Codes such as "managerial overload," "trust substitution," and "relational dominance" evolved into broader themes explaining the mechanisms through which NC shapes the effectiveness of DM. To ensure reliability, two independent coders analyzed all transcripts, and discrepancies were resolved through discussion until consensus was achieved. Inter-coder reliability was confirmed using Cohen's kappa ($\kappa = 0.83$), indicating strong agreement (McHugh 2012). Analytical rigor was further

strengthened through reflexive memoing, peer debriefing, and cross-validation of themes with quantitative findings.

Integration of findings

Integration of findings was achieved through a joint display approach that systematically linked quantitative patterns to qualitative insights (Fetters et al., 2013). This procedure allowed for an integrated interpretation of how digital and relational factors interact within SMEs. The qualitative data were used to elaborate and contextualize statistical relationships identified in the quantitative phase, providing a deeper understanding of underlying mechanisms. Patterns emerging from both phases were compared and synthesized to identify areas of convergence, divergence, and expansion, ensuring that qualitative themes clarified the dynamics behind observed statistical associations. This integrative process strengthened the explanatory power of the mixed-methods design and ensured that interpretations of how Digital Marketing and Network Capital relate to firm performance were grounded in both numerical evidence and contextual realities.

Ethical considerations

This study did not require formal ethical approval as it involved minimal risk and non-invasive data collection through voluntary surveys and interviews with SME owners and managers. However, the research adhered to ethical principles of voluntary participation, informed consent, and confidentiality. Before participation, respondents were informed of the study's purpose, assured of anonymity, and told they could withdraw at any time without consequence. No personally identifiable information was collected, and all data were securely stored and used solely for research purposes. All methods were carried out in accordance with relevant guidelines and regulations for ethical conduct of research involving human participants.

Results

Study 1: quantitative analysis

Background characteristics of the sample

The sample consisted of 272 respondents, with 55.5% males and 44.5% females, representing a balanced gender distribution. Most business owners were between 35 and 54 years old, reflecting a group in their peak productive years, while educational attainment was predominantly tertiary (69.5%) or vocational/technical (27.2%), signifying a well-educated sample. The industries were diverse, with a majority in the service sector (45.2%), followed by trading (35.7%), manufacturing (15.8%), and agriculture (3.3%). Most businesses were located in urban areas (94.9%), where access to digital tools and infrastructure

Table 1 Background characteristics of the respondents

Variable	Category	Frequency	Percent	Valid Percent
Gender	Male	151	55.5	55.5
	Female	121	44.5	44.5
Age of Business Owner	Under 25	3	1.1	1.1
	25–34	30	11.0	11.0
	35–44	94	34.6	34.6
	45–54	109	40.1	40.1
	55 and above	36	13.2	13.2
Highest Education Attained	Primary	2	0.7	0.7
	Secondary	7	2.6	2.6
	Tertiary	189	69.5	69.5
	Vocational/Technical	74	27.2	27.2
Industry	Service	123	45.2	45.2
	Trading	97	35.7	35.7
	Manufacturing	43	15.8	15.8
	Agriculture	9	3.3	3.3
Primary Location	Rural	14	5.1	5.1
	Urban	258	94.9	94.9
Primary Market	International	35	12.9	12.9
	Local	18	6.6	6.6
	National	152	55.9	55.9
Scale of Business Venture	Regional	67	24.6	24.6
	Small	220	80.9	80.9
	Medium	52	19.1	19.1

is typically higher, and the primary markets served were national (55.9%), regional (24.6%), and international (12.9%). Refer to Table 1. The predominance of urban-based businesses, coupled with high levels of education, positions the sample as particularly suitable for examining digital orientation issues. These factors ensure the respondents are likely to adopt and leverage digital tools, making the sample ideal for investigating the relationship between digital strategies and SME performance.

Measurement model assessment

Correlation analysis The correlation matrix highlights the relationships between gender, business size, industry type, Social performance, digital marketing, economic performance, and network capital. Gender shows minimal and statistically insignificant correlations with most variables, except for a small negative relationship with busi-

Table 3 Total variance explained and common method bias assessment

Component	Initial Eigenvalues	% of Variance	Cumulative %
1	5.878	34.577	34.577
2	1.914	11.261	45.838
3	1.320	7.765	53.603
4	1.165	6.851	60.454
5	0.957	5.632	66.086
6	0.773	4.548	70.634
7	0.691	4.065	74.699
8	0.641	3.769	78.468
9	0.627	3.691	82.159
10	0.523	3.077	85.236
11	0.469	2.757	87.993
12	0.446	2.621	90.614
13	0.425	2.501	93.115
14	0.359	2.111	95.226
15	0.335	1.969	97.194
16	0.281	1.652	98.846
17	0.196	1.154	100.000

ness size ($r = -0.153$, $p = 0.012$). This suggests that male ownership is slightly more prevalent in larger businesses within the sample (Refer to Table 2). Business size is positively correlated with industry type ($r = 0.280$, $p < 0.001$) and digital marketing ($r = 0.280$, $p < 0.001$), indicating that larger businesses tend to operate across specific industries and adopt digital marketing strategies more effectively. However, its relationships with SP, EP, and NC are weak and not statistically significant. Digital marketing is strongly correlated with SP ($r = 0.408$, $p < 0.001$) and moderately with EP ($r = 0.355$, $p < 0.001$), emphasizing its role in enhancing both societal and economic outcomes. Network capital exhibits strong positive relationships with SP ($r = 0.516$, $p < 0.001$) and EP ($r = 0.567$, $p < 0.001$), suggesting its critical role in performance improvement. These findings underline the importance of digital marketing and network capital in SME performance dynamics.

Dimensionality and common method bias Principal Component Analysis (PCA) was conducted to evaluate the dimensionality of the constructs. As seen in Table 3, the first four components had eigenvalues greater than 1, explaining 60.454% of the variance. The cumulative variance explained by these four components was 60.454%,

Table 2 Correlation matrix of constructs and demographic variables

Variable	Gender	Business Size	Industry Type	SP	DM	EP	NC
Gender	1						
Business Size	-0.153* (0.012)	1					
Industry Type	-0.084 (0.168)	0.280** (< 0.001)	1				
SP	0.042 (0.487)	0.075 (0.217)	0.021 (0.729)	1			
DM	-0.069 (0.260)	0.280** (< 0.001)	0.004 (0.942)	0.408** (< 0.001)	1		
EP	0.011 (0.854)	0.173** (0.004)	0.103 (0.091)	0.642** (< 0.001)	0.355** (< 0.001)	1	
NC	0.059 (0.331)	0.055 (0.369)	0.166** (0.006)	0.516** (< 0.001)	0.209** (0.001)	0.567** (< 0.001)	1

Table 4 Reliability, convergent validity, and discriminant validity assessment of constructs

Variable	ITEM	Item Narrative	Factor Loading	Cronbach's Alpha (α)	CR	AVE
Social Performance	SP1	Our business positively impacts the local community through job creation or similar initiatives	0.857	0.711	0.817	0.536
	SP2	We provide safe working conditions and programs to enhance employee well-being	0.849			
	SP3	Our staff and customer satisfaction ratings have improved over time	0.569			
	SP4	Our company fosters inclusivity and diversity in the workplace	0.604			
Digital Marketing	DM1	We use analytics tools to track and optimize marketing performance	0.799	0.743	0.804	0.513
	DM2	Our business uses digital advertising to attract new customers	0.797			
	DM3	Our company uses personalized marketing (e.g., tailored emails, and targeted ads) to improve customer engagement	0.715			
	DM4	Social media platforms are used to market products and engage with customers	0.517			
Network Capital	NC1	Our company and stakeholders often align on vision and behavior	0.786	0.709	0.824	0.541
	NC2	Our company actively participates in stakeholder networks or associations	0.810			
	NC3	Our company maintains strong, ongoing, and mutually beneficial relationships with its stakeholders	0.665			
	NC4	There is mutual trust between our company and its stakeholders	0.668			
Economic Performance	EP1	Profitability improvements through digital	0.821	0.708	0.879	0.593
	EP2	Customer retention through digital tools	0.791			
	EP3	Faster growth in market share	0.765			
	EP4	Increasing profitability	0.764			
	EP5	Increased revenue	0.705			

indicating adequate construct validity. The remaining components contributed little to the variance, confirming that four components were sufficient. Additionally, no single component accounted for more than 50% of the variance, suggesting that Common Method Bias (CMB) is not a significant issue in this study (Podsakoff et al., 2003). These findings support the reliability and validity of the constructs used.

Reliability, validity, and discriminant validity To ensure the robustness of the model, we evaluated the reliability and validity of the constructs: Social Performance, DM, NC, and EP. Table 4 presents the results of this assessment, following established guidelines (Sarstedt et al., 2021). Cronbach's alpha (α) values range from 0.708 to 0.743, demonstrating acceptable internal consistency across all constructs (Cronbach., 1951). Composite Reliability (CR) values, ranging from 0.804 to 0.879, exceed the recommended threshold of 0.7, further confirming construct reliability (Fornell & Larcker 1981). Convergent validity was assessed using the Average Variance Extracted (AVE), with all constructs exceeding the threshold of 0.5, as recommended by (Hair et al., 2014). Factor loadings are generally strong, with most exceeding 0.7. However, certain items, such as SP3 (0.569) and DM1 (0.517), exhibit slightly weaker loadings. Despite these lower loadings, the items remain valuable in capturing the unique dimensions of their respective constructs (Hair et al., 2014).

Table 5 Fornell-Larcker criterion for discriminant validity

Variable	SP	DM	EP	NC
SP	0.806	0.408	0.642	0.516
DM	0.408	0.837	0.355	0.209
EP	0.642	0.355	0.825	0.567
NC	0.516	0.209	0.567	0.812

Table 5 evaluates discriminant validity using the Fornell-Larcker criterion. The diagonal elements, representing the square root of AVE, are greater than the inter-construct correlations, confirming the distinctiveness of each construct (Fornell & Larcker 1981). For instance, the square root of AVE for SP (0.806), DM (0.837), EP (0.825), and NC (0.812) exceeds their respective correlations with other constructs. Meaningful relationships between constructs are observed, such as SP and EP (0.642) and NC and EP (0.567), aligning with theoretical expectations (Baron & Kenny 1986). Conversely, weaker correlations, such as DM and NC (0.209), suggest less pronounced interactions between these constructs. Collectively, the findings from Tables 4 and 5 confirm the constructs' reliability, convergent validity, and discriminant validity, supporting the integrity of the measurement model for further analysis.

Collinearity diagnostics To ensure the robustness and reliability of the regression analysis, we assessed the collinearity statistics for the independent variables, DM and NC, about the dependent variables, Economic Perfor-

mance and Social Performance. Table 6 presents the collinearity results, following the guidelines of (Hair et al., 2014). The tolerance values, ranging from 0.956 to 0.957, exceed the recommended minimum threshold of 0.1, while the Variance Inflation Factor (VIF) values, between 1.045 and 1.046, fall well below the critical value of 10. Collinearity diagnostics are crucial for ensuring that independent variables are not excessively correlated, which could undermine the stability and interpretability of the regression model (Hair et al., 2014). As shown in Table 6, the results confirm the absence of multicollinearity issues, thereby validating the integrity of the model. This ensures that the relationships between the variables can be interpreted with confidence, providing a stable foundation for the subsequent analysis.

Normality diagnostics Normality of regression residuals was assessed using Normal P–P plots and histograms of standardized residuals for SP and EP. The detailed diagnostic figures are reported in Appendix A (Figs. 2, 3, 4). Visual inspection of the Normal P–P plots indicates that residuals for both outcome variables closely follow the diagonal reference line, suggesting approximate normality. The corresponding histograms of standardized residuals display bell-shaped distributions centered around zero with dispersion consistent with standardized residuals. Together, these diagnostics indicate that the normality assumption for the regression models is reasonably satisfied, supporting the reliability of the moderation analysis.

Table 6 Collinearity diagnostics

Variable	Dependent Variable	Tolerance	VIF
DM	EP	0.956	1.046
NC	EP	0.956	1.046
DM	SP	0.957	1.045
NC	SP	0.957	1.045

Hypotheses testing

Direct effects The study first tested the main effects of DM and NC on EP and SP using PROCESS (Model 1). As shown in Table 7, both predictors are positively associated with both outcomes. DM significantly improves EP ($B = 1.6449$, $SE = 0.2852$, $t = 5.7681$, $p < .001$, 95% CI [1.0834, 2.2064]) and SP ($B = 1.5142$, $SE = 0.2407$, $t = 6.2903$, $p < .001$, 95% CI [1.0403, 1.9882]). NC also exhibits significant positive effects on EP ($B = 1.6970$, $SE = 0.2043$, $t = 8.3077$, $p < .001$, 95% CI [1.2948, 2.0992]) and SP ($B = 1.4116$, $SE = 0.1723$, $t = 8.1904$, $p < .001$, 95% CI [1.0723, 1.7509]). These findings support H1–H4 and indicate that SMEs leveraging digital channels and rich stakeholder ties report higher economic and social performance.

Moderation analysis As presented in Table 8, the interaction between DM and NC was significant and negative for both Economic Performance (EP), $B = -0.081$, $SE = 0.016$, $t(271) = -5.17$, $p < .001$, 95% CI [-0.112, -0.050], and Social Performance (SP), $B = -0.073$, $SE = 0.013$, $t(271) = -5.53$, $p < .001$, 95% CI [-0.099, -0.047]. These results

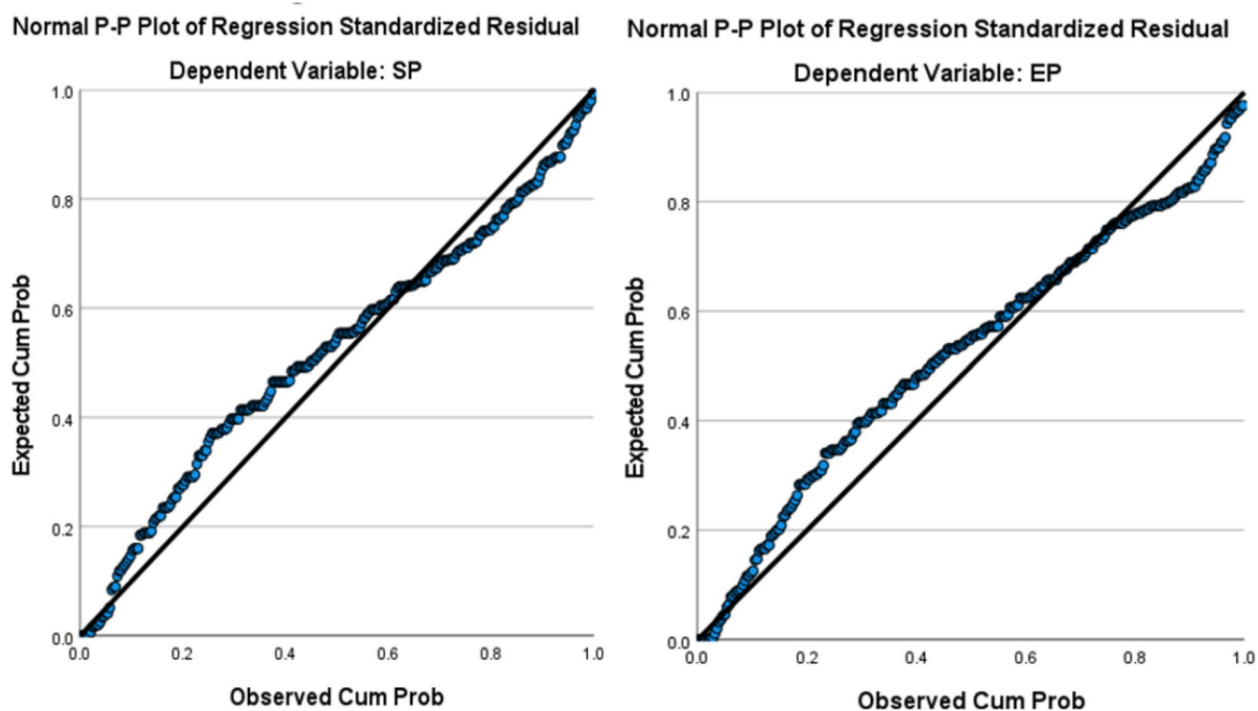


Fig. 2 Normal P–P plots of regression standardized residuals for Social Performance (SP) and Economic Performance (EP)

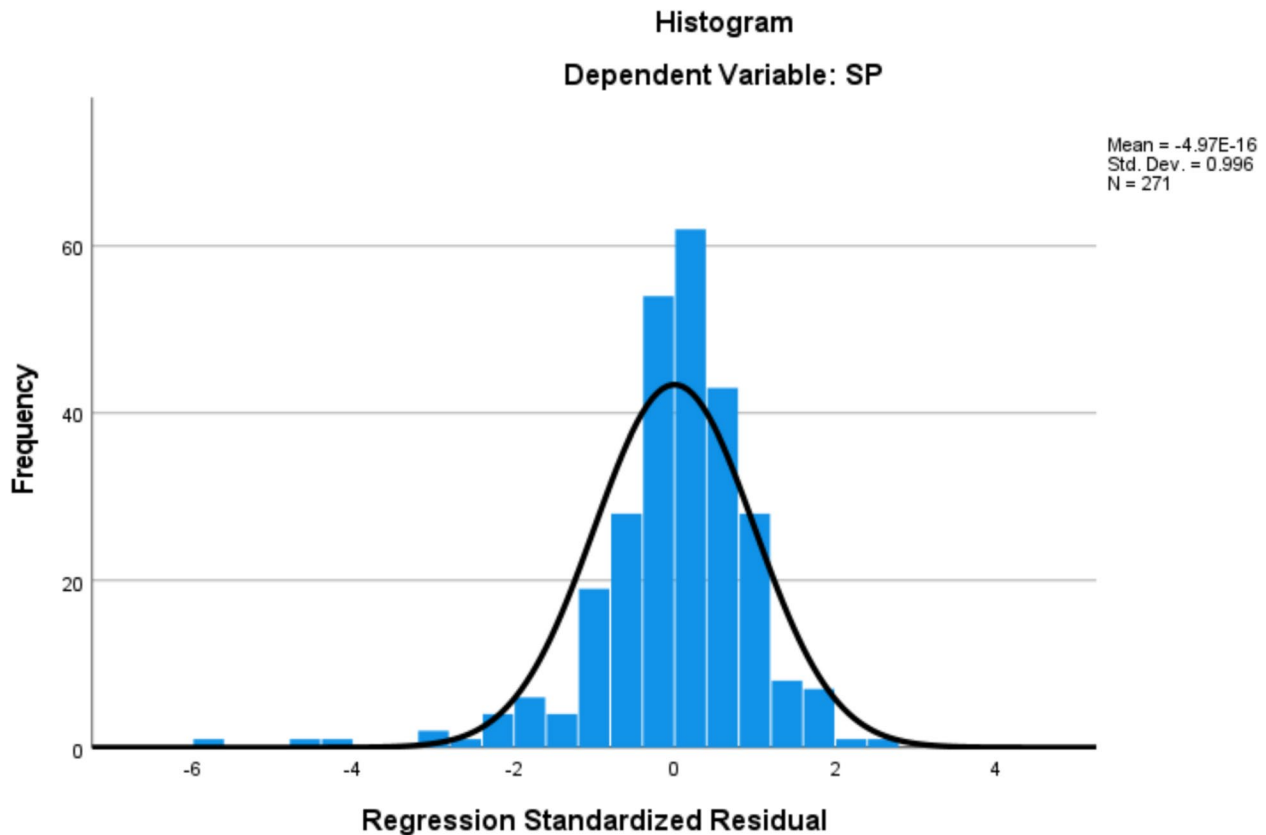


Fig. 3 Histogram of regression standardized residuals for Social Performance (SP)

indicate a substitution rather than a complementarity effect: although DM enhances both EP and SP, its incremental benefits decline as NC increases. These results support H5b and H6b and do not support H5a or H6a.

Conditional effects shown in Table 9 and illustrated in Fig. 5 (SP) and Fig. 6 (EP) further support this substitution pattern. For EP, the effect of DM was significant at low NC ($B = 0.265$, $SE = 0.038$, $t = 6.96$, $p < .001$) and mean NC ($B = 0.103$, $SE = 0.038$, $t = 2.72$, $p = .007$), but nonsignificant at high NC ($B = 0.021$, $SE = 0.046$, $t = 0.46$, $p = .64$). A similar trend was observed for SP, where DM was significant at low NC ($B = 0.268$, $SE = 0.032$, $t = 8.37$, $p < .001$) and mean NC ($B = 0.122$, $SE = 0.032$, $t = 3.83$, $p < .001$), but nonsignificant at high NC ($B = 0.049$, $SE = 0.039$, $t = 1.24$, $p = .22$). As the slopes in the figures flatten at high NC, the findings demonstrate that SMEs with richer relational resources derive diminishing returns from DM, underscoring the moderating role of networks in shaping digital–performance linkages. The results further supporting H5b and H6b and contradicting H5a and H6a.

Study 2: qualitative analysis

Building on the quantitative findings, the qualitative phase sought to explain the behavioral and strategic mechanisms underlying the negative moderation effect of Network Capital on the Digital Marketing–Performance

relationship. Data were analyzed thematically following Braun and Clarke's (2019) six-phase framework.

Participant profile

Participants represented a broad spectrum of sectors (Table 10), including manufacturing, services, trade, hospitality, healthcare, tourism, logistics, and creative industries. The sample was dominated by small enterprises ($n = 14$), with one medium-sized firm, reflecting the structure of Uganda's SME sector. Years in operation ranged from three to over fifteen. NC levels varied, with most firms reporting high NC ($n = 8$), followed by moderate ($n = 6$) and one firm indicating a low NC level. This diversity ensured a balanced representation across firm sizes, sectors, and relational strengths, providing a robust foundation for exploring the digital–relational dynamics.

Thematic findings

Analysis of the fifteen interviews revealed a complex, context-dependent relationship between DM and NC. The interaction between these two resources was not purely complementary but influenced by managerial priorities, relational norms, and contextual constraints. These findings clarify the mechanisms underlying the negative moderation effect identified in the quantitative phase and reveal the conditions under which digital and

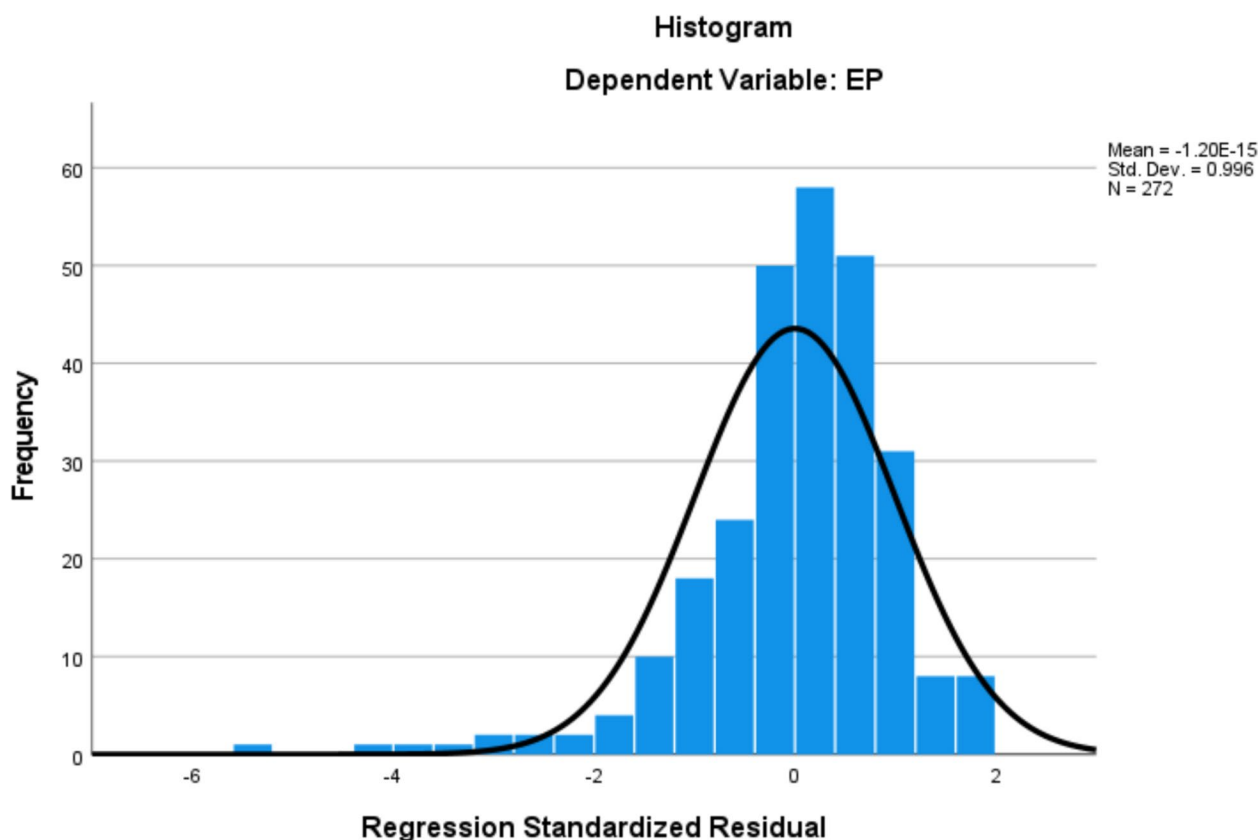


Fig. 4 Histogram of regression standardized residuals for Economic Performance (EP)

Table 7 Direct effects of digital marketing and network capital on social and economic performance

Path	B (Unstandardized)	SE	t-value	p-value	95% CI (Lower)	95% CI (Upper)	Supported?
H1: DM → EP	1.6449	0.2852	5.7681	<.001	1.0834	2.2064	Yes
H2: DM → SP	1.5142	0.2407	6.2903	<.001	1.0403	1.9882	Yes
H3: NC → EP	1.6970	0.2043	8.3077	<.001	1.2948	2.0992	Yes
H4: NC → SP	1.4116	0.1723	8.1904	<.001	1.0723	1.7509	Yes

Model summary: $R^2 = 0.482$, $F(2, 269) = 65.23$, $p < .001$ for EP model; $R^2 = 0.461$, $F(2, 269) = 61.47$, $p < .001$ for SP model

Table 8 Interaction of digital marketing and network capital on performance (Moderation Tests)

Path	B (Unstd.)	SE	t	p	95% CI (Lower)	95% CI (Upper)	Hypothesis	Supported?
DM × NC → EP	-0.0812	0.0157	-5.1705	<.001	-0.1121	-0.0503	H5b (Substitution) over H5a (Complementarity)	Yes (H5b)
DM × NC → SP	-0.0733	0.0133	-5.5280	<.001	-0.0994	-0.0472	H6b (Substitution) over H6a (Complementarity)	Yes (H6b)

Table 9 Conditional effects of digital marketing at levels of network capital

NC Level	Outcome	B	SE	t(271)	p	95% CI LL	95% CI UL
Low (-1 SD, 17)	EP	0.265	0.038	6.96	<.001	0.190	0.340
	SP	0.268	0.032	8.37	<.001	0.205	0.332
Mean (19)	EP	0.103	0.038	2.72	.007	0.028	0.177
	SP	0.122	0.032	3.83	<.001	0.059	0.185
High (+1 SD, 20)	EP	0.021	0.046	0.46	.644	-0.070	0.113
	SP	0.049	0.039	1.24	.215	-0.028	0.126

Conditional effects estimated at -1 SD (low), mean, and +1 SD (high) of Network Capital

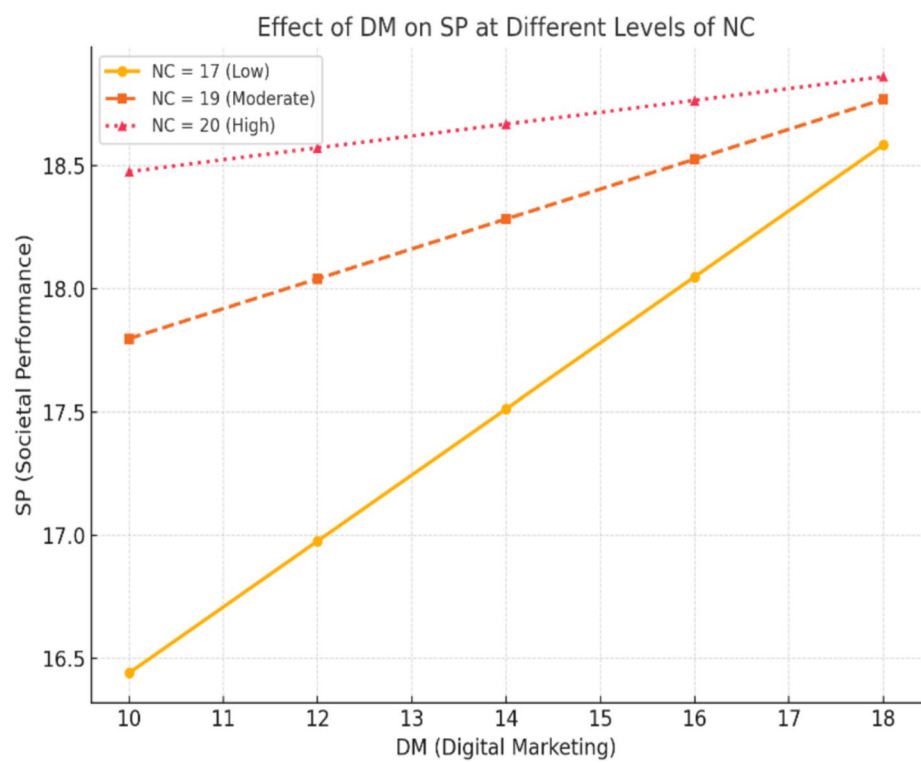


Fig. 5 Effect of digital marketing on social performance at different levels of network capital

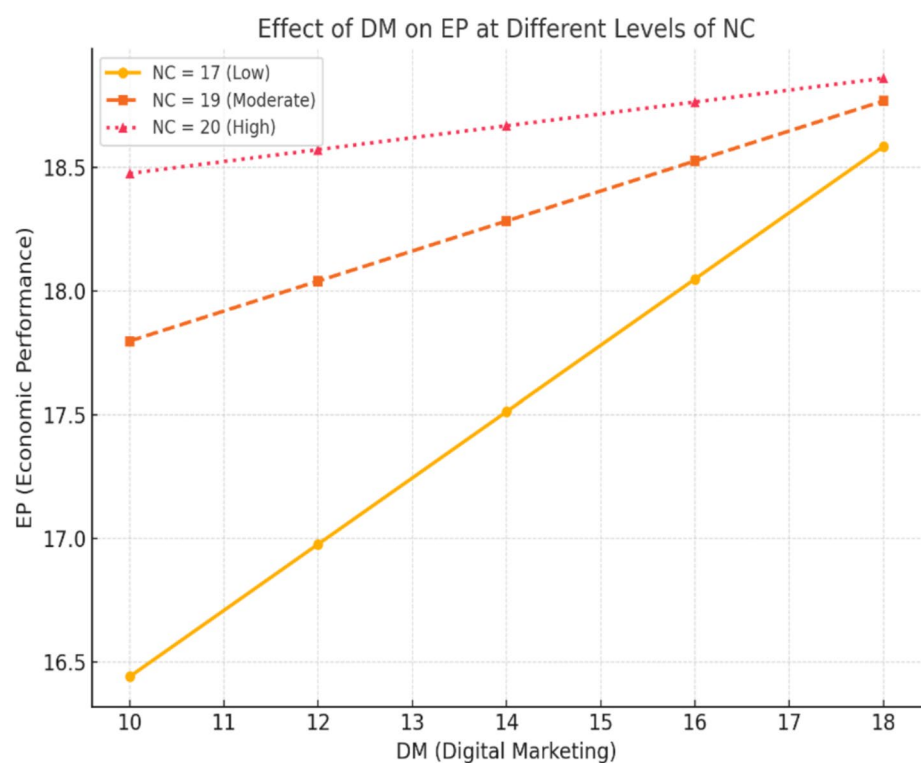


Fig. 6 Effect of digital marketing on economic performance at different levels of network capital

Table 10 Profile of qualitative study participants

Parti- cipant ID	Industry Sector	Firm Size	Primary Market	NC Level	Years in Op- era- tion
R1	Fashion retail	Small	National	Moderate	3
R2	Healthcare services (hospital)	Medium	National	High	9
R3	General retail (fashion)	Small	Local/ National	High	4
R4	Tourism & hospitality (tours)	Small	Interna- tional/ National	High	8
R5	Transport & logistics	Small	Interna- tional/ National	Moderate	12
R6	Hospitality (hotel)	Small	Local/ National	High	6
R7	Bakery & food	Small	Local	Moderate	4
R8	Hardware & retail	Small	Local	High	13
R9	Whole- sale trade (bedding)	Small	National	High	5
R10	Beauty & salon	Small	Local	Moderate	7
R11	Accommo- dation (guest house/ Airbnb)	Small	Local	High	3
R12	Fashion/ap- parel (gown making)	Small	Local/ National	Moderate	8
R13	Automotive sales (car bond)	Small	National	High	10
R14	Furniture workshop/ showroom	Small	Local	High	15
R15	Events and wedding planning	Small	Local/ National	Moderate	5

Firm size classifications follow Uganda's SME definition (< 50 employees = small; 50–100 = medium)

relational resources can coexist synergistically. The integration of quantitative and qualitative insights is summarized in Table 11.

Theme 1: managerial attention as a scarce resource A dominant theme across interviews was the competition for managerial time and cognitive attention. Owners with rich relational networks described spending much of their time in community engagements, supplier meetings, and client consultations, leaving little capacity for managing digital marketing tasks. R13 (Automotive) illustrated how online promotions often triggered in-person visits that

Table 11 Integrated quantitative and qualitative findings

Quantita- tive Pattern	Explanatory Theme	Mechanism	Illustrative Data Extract
<i>Substitution Effect:</i> The positive impact of DM on performance weakens as NC increases	1. Manage- rial Attention as a Scarce Resource	High NC requires intensive face-to-face engagement, diverting managerial focus from digital marketing optimization	"Every time they see us online, they call and come to the bond; they never make decisions online. So, our staff's time is spent showing cars, not managing online leads." (R13, Automotive)
	2. Trust as a Functional Substitute for Digital Outreach	Established trust networks secure repeat business, reducing the perceived need for digital acquisition efforts	"Some clients we have never seen... they just call and trust us with their orders. Why would I spend heavily on Facebook ads when my phone rings from people who already know my name?" (R9, Wholesale)
	3. High Costs and Platform Frictions	When NC guarantees steady business, the costs and risks of digital platforms yield limited incremental returns	"It's very expensive... we pay a lot of money for ads. And then our Facebook page was blocked for a week. When you have steady customers, these digital problems feel like an extra burden." (R7, Bakery)
	4. The Stra- tegic Middle Ground	At moderate NC levels, DM extends reach while networks provide credibility, making both channels mutually reinforcing	"Online engagement leads to offline relationship-building... We get inquiries from our website, but they only become loyal clients after we meet. Both are necessary for growth." (R2, Healthcare)
<i>Contextual Foundation:</i> Underpins the entire DM–NC relationship	5. The Prima- cy of Ethical Signaling	In a high-trust context, ethical and transparent digital communication is critical to sustaining credibility but offers diminishing returns once offline legitimacy is established	"We encountered issues with misleading advertising claims early on. To address this, we now ensure transparency in product descriptions... Honesty is key for trust building." (R1, Fashion)

demanded significant follow-up effort, while R8 (Hardware) noted that "most customers prefer to call or visit," reducing the need to maintain a digital presence. The digital channel was therefore not abandoned but routinely sidelined by the immediacy of relational obligations.

Table 12 Joint display integrating quantitative moderation results and qualitative explanations

Quantitative Finding	Qualitative Theme	Explanatory Mechanism	Illustrative Evidence (Interview Extracts)
Negative interaction between Digital Marketing and Network Capital on Economic and Social Performance ($DM \times NC < 0$; $p < .001$)	Managerial attention as a scarce resource	High levels of Network Capital require intensive face-to-face engagement, diverting managerial time and cognitive resources away from digital marketing planning, monitoring, and optimization	"Every time they see us online, they call and come physically. Most of our time is spent attending to people, not managing online leads." (R13, Automotive)
Diminishing marginal effect of Digital Marketing at high Network Capital (conditional effects non-significant at +1 SD NC)	Trust as a functional substitute for digital outreach	Established trust-based networks secure repeat business and referrals, reducing the perceived need for digital customer acquisition or persuasion	"People already trust us. Orders come through calls and referrals. Spending more on Facebook ads does not add much." (R9, Wholesale)
Digital Marketing strongest at low-to-moderate Network Capital (significant conditional effects at -1 SD and mean NC)	Strategic middle ground (conditional complementarity)	Digital channels expand reach and visibility, while emerging networks provide credibility and conversion, creating synergy when neither resource dominates	"Online engagement brings inquiries, but trust is built when we meet. Both are necessary for growth." (R2, Healthcare)
Flattening slopes of DM–performance relationship at high NC	Relational dominance and inertia	Dense networks reinforce reliance on established relational practices and legitimated routines, reducing experimentation with digital strategies	"Our customers prefer calling or visiting. Online systems feel unnecessary for how our business works." (R8, Hardware)
Lower perceived returns to digital investment in high-NC firms	Digital cost and platform frictions	Advertising costs, platform instability, and technical risks discourage digital engagement when relational channels already guarantee steady demand	"Online ads are expensive, and sometimes pages get blocked. With steady customers, digital feels like an extra burden." (R7, Bakery)
Positive main effects of Digital Marketing on Social Performance	Ethical signaling and transparency	Digital platforms support visibility of ethical practices and CSR, but add limited incremental legitimacy once offline trust is firmly established	"We learned to be fully honest online because trust is everything. But once people know you, it does not change much." (R1, Fashion)

Theme 2: trust as a functional substitute for digital outreach For many SMEs, trust embedded in personal and professional networks served as the primary marketing engine. Participants described how referrals, reputation, and long-term relationships consistently generated reliable demand, reducing the urgency to invest heavily in DM. R2 (Healthcare) observed that "personal relationships and trust shape business interactions," while R4 (Tourism) emphasized that "clients have to trust you to deliver a good experience." In these settings, relational trust effectively replaced the need for digital persuasion, reinforcing the substitution pattern observed quantitatively.

Theme 3: high costs and platform frictions Participants frequently described DM as resource-intensive, particularly for firms already benefiting from strong network ties. R7 (Bakery) highlighted the high cost of social media advertising and the vulnerability to platform disruptions, noting that "our page was blocked for a week." Similarly, R8 (Hardware) and R6 (Hotel) viewed digital advertising as a burden rather than a necessity when steady customer flow was already secured through relationships. The perceived low marginal returns on digital investment discouraged sustained engagement.

Theme 4: the strategic middle ground of complementarity Firms with moderate levels of NC appeared to achieve the best balance between digital and relational

marketing. Here, digital channels were used to build awareness and attract initial inquiries, while offline networks transformed these leads into enduring relationships. R2 (Healthcare) described how "online engagement leads to offline relationship-building," while R4 (Tourism) and R6 (Hotel) both acknowledged that "digital and personal networks depend on each other." In this middle zone, DM and NC functioned as complementary assets rather than substitutes.

Theme 5: the primacy of ethical signaling Underlying all interactions was the importance of ethical communication in sustaining trust across both digital and relational domains. Several firms had experienced reputational challenges stemming from misleading advertising or online scams. As R1 (Fashion) explained, they shifted to full transparency in online content after realizing that "honesty is key for trust building." R4 (Tourism) reported verifying their business pages to protect against impersonation, while R9 (Wholesale) emphasized maintaining honesty in product descriptions to align digital marketing with offline credibility.

Table 12 provides a joint display that integrates the quantitative moderation findings from the PROCESS analysis with qualitative interview evidence, illustrating how Network Capital conditions the effects of Digital Marketing on SME performance.

Discussion and conclusions

This study examined how Digital Marketing and Network Capital jointly influence the economic and social performance of small and SMEs in Uganda. Using a mixed-method design, it combined survey-based quantitative analysis with qualitative interviews to capture both measurable patterns and contextual mechanisms. The results show that while both DM and NC positively affect SME performance, their interaction produces a substitution rather than a reinforcing effect. Specifically, the positive influence of DM on performance weakens as NC increases, indicating that strong relational networks can reduce the marginal benefits of digital strategies. The qualitative findings illuminate this relationship, revealing how managerial attention constraints, trust substitution, and digital cost barriers contribute to this effect, especially among SMEs embedded in dense social and business networks.

Quantitative analysis confirmed that DM significantly enhances both economic and social performance, affirming its role as a strategic resource in dynamic markets. Ugandan SMEs use digital tools such as Facebook, Instagram, and WhatsApp to reach wider audiences, strengthen customer relationships, and improve operational agility. These results mirror studies from other developing contexts, including Indonesia and Brazil, where digital adoption has improved responsiveness and customer engagement (Nafis Fuad et al., 2024; Silva et al., 2022). However, the Ugandan context introduces distinctive constraints, including limited technical expertise, unreliable internet access, and high advertising costs, which moderate how fully firms can capitalize on digital opportunities. Even so, DM remains transformative for small firms seeking new markets or serving dispersed customer bases, providing both economic and social value through improved visibility, communication, and trust-building.

Network Capital also emerged as a critical determinant of performance. The findings reinforce prior work by Scuotto et al. (2017) and Obiero et al. (2018), which show that relational ties enable resource sharing, collaboration, and innovation. Ugandan SMEs rely heavily on personal networks, local trust, and informal referrals to secure business, reflecting the strong relational embeddedness of African entrepreneurship. These social connections provide resilience and continuity in volatile markets but also introduce potential rigidity. When NC becomes too dominant, it may discourage firms from fully exploring digital marketing opportunities, as relationships alone seem sufficient to sustain business growth. This tendency creates a paradox where the very networks that support SME survival also limit technological advancement.

The moderation results substantiate this paradox. The negative interaction between DM and NC indicates

that their joint influence is not purely complementary. Instead, the benefits of DM diminish at higher levels of NC, suggesting a contextual threshold where digital efforts lose traction within highly relational settings. From a RBV perspective, this represents diminishing returns from overlapping capabilities once a firm's networks already perform key marketing and coordination functions, digital tools add limited incremental value. In such cases, NC acts as a functional substitute for DM, providing reputation, reach, and client loyalty through relational trust rather than digital visibility. This finding expands the RBV by showing that complementarities between intangible assets depend on contextual balance, not just resource accumulation. Consistent with a contextual threshold perspective, with the analysis indicating that the marginal effect of DM on performance becomes nonsignificant at approximately high levels of NC (+1 SD), marking an empirical saturation point where relational embeddedness dampens digital returns. This unifies RBV (diminishing marginal value of overlapping intangibles), Network Theory (overembeddedness), and TOE (contextual readiness) into a single theoretical move.

Qualitative insights help explain the mechanisms behind this substitution. First, managerial attention trade-offs emerged as a key constraint. SME owners in high-NC environments reported dedicating most of their time to personal meetings, supplier coordination, and local obligations, leaving little capacity to manage or evaluate online campaigns. An automotive dealer (R13) explained that customers who see their Facebook posts often visit physically, turning digital engagement into in-person negotiations that consume time and attention. Similarly, a hardware retailer (R8) noted that clients prefer to "call or come in person," making it difficult to maintain consistent digital communication. These accounts illustrate how managerial focus a scarce organizational resource mediates the link between NC and DM effectiveness.

Second, trust substitution was a pervasive mechanism. For many SMEs, deeply rooted community relationships ensure a steady flow of business, reducing reliance on digital visibility. A healthcare provider (R2) observed that "personal relationships and trust shape business interactions," while a tour operator (R4) explained that most customers come through word-of-mouth referrals rather than online ads. In such cases, relational credibility performs the same trust-building and customer acquisition roles that digital platforms typically provide, explaining why DM's returns flatten in high-NC contexts. This aligns with Network Theory's notion of overembeddedness, where excessive reliance on existing ties can limit openness to new information or technologies.

Third, digital cost and platform frictions further reduce DM's attractiveness for high-NC firms. Participants mentioned high ad expenses, inconsistent connectivity, and technical disruptions such as blocked or hacked pages. A bakery owner (R7) described online advertising as "very expensive," especially when networks already guarantee stable demand. These constraints reflect challenges typical of developing contexts, consistent with the TOE framework (Nguyen & Adomako 2022), which posits that infrastructural and organizational readiness shape technology outcomes.

Despite the substitution effect, the study also identified a strategic "middle zone" where DM and NC complement each other. SMEs with moderate network capital leveraged digital platforms for outreach while using personal connections to build credibility and convert leads. A healthcare manager (R2) explained that "online engagement leads to offline relationship-building," showing how digital and relational efforts can work sequentially. Similarly, tourism and hospitality firms described using online tools to showcase services while relying on networks for delivery partnerships and customer trust. This pattern suggests that synergy occurs when digital initiatives are supported but not overshadowed by relational capital.

An additional cross-cutting theme concerned ethical signaling. In Uganda's trust-based business culture, transparency and honesty in digital communication are essential for maintaining credibility. Several SMEs described learning to align online behavior with offline ethics. A fashion retailer (R1) reflected on shifting from "misleading claims" to accurate descriptions, while a tour operator (R4) noted adopting verification systems to prevent scams. Ethical digital conduct thus functions as a bridge between DM and NC, reinforcing relational legitimacy while sustaining social performance.

Overall, the discussion reveals that the relationship between DM and NC among Ugandan SMEs is not linear but contingent on context and managerial capacity. Firms with moderate NC achieve the highest digital returns, while those with very strong relational ties face diminishing benefits due to attention constraints, relational inertia, and cost aversion. These findings refine existing theory by introducing a contextual threshold perspective, where the performance impact of DM depends on the balance between technological engagement and relational embeddedness. This contribution integrates insights from RBV, Network Theory, and the TOE framework, offering a more nuanced understanding of digital-relational dynamics in resource-limited environments.

In conclusion, the study demonstrates that digital marketing is a powerful but context-sensitive driver of SME performance. Its success depends not only on technological readiness but also on the nature and density of relational ties that define business ecosystems in emerging

markets. While digital adoption can extend market reach and foster inclusivity, network capital remains vital for sustaining trust and collaboration. The challenge for SMEs lies in finding equilibrium adopting digital tools without eroding the relational foundations that anchor their operations. The mixed-method evidence underscores that sustainable growth emerges not from choosing between digital or relational strategies, but from managing their coexistence within Uganda's evolving entrepreneurial landscape.

Implications

Practical implications

SMEs in contexts like Uganda must strategically integrate digital marketing with trust-based relational networks to remain competitive. Because local business environments often rely on personal recommendations, community involvement, and long-standing customer relationships, digital strategies should support, not replace, these relational strengths. For instance, small retailers can use WhatsApp Business for order management, promotional updates, and inquiries, while preserving face-to-face interactions that build loyalty. Similarly, Facebook or Instagram ads can boost brand visibility without undermining existing word-of-mouth referrals.

Crucially, SMEs need to develop digital skills that reflect their business realities. Rather than attending generic workshops, owners should seek training programs tailored to their operational needs. These sessions could cover basic social media optimization, analytics interpretation, and data-driven decision-making, ensuring that digital tools enhance local business norms. Hands-on training that addresses common fears such as losing personal connections enables older owners and long-time customers to adapt gradually, preserving trust. Building on their existing network capital, SMEs can then deploy digital marketing to expand their market reach or streamline processes.

Hybrid engagement models can reduce the risks of alienating established customers. While some segments may welcome automated online interactions, many patrons in relationship-driven economies still prefer personal contact. By balancing digital convenience with interpersonal warmth, SMEs can maintain deep-rooted ties while exploring new market segments online. For example, a hardware store owner might embed videos of product demonstrations on social media, yet continue offering in-person consultations and allowing credit-based purchases for loyal, long-time customers.

Furthermore, SMEs should consider how cultural norms influence customer preferences. In high-trust settings, businesses must be cautious when introducing new digital features that may be perceived as impersonal or distant. Rather than imposing strictly online transactions,

they should present digital solutions as complementary options. This approach not only preserves relational harmony but also paves the way for a smoother transition if, over time, customers become more comfortable with digital engagement.

Finally, SMEs operating in remote or low-infrastructure areas can leverage network capital to fill technological gaps. Local guides, community-led distribution systems, and shared knowledge hubs can be integrated with basic digital platforms where feasible. By doing so, businesses maintain continuity during connectivity disruptions and uphold the community trust that underpins their success.

Overall, effective digital marketing for SMEs in developing economies hinges on respecting and harnessing existing trust networks. Digital tools can streamline processes, improve visibility, and drive sales, but they must be carefully woven into the social fabric that sustains these enterprises. By adopting a hybrid model, nurturing digital skills, and acknowledging cultural dynamics, SMEs can achieve sustainable growth without sacrificing the relational foundations on which they depend. SMEs that combine relational connections with targeted digital efforts will be better poised to adapt, innovate, and flourish in rapidly evolving markets.

Theoretical implications

Resource-Based View contends that firms gain a competitive edge through unique resources and capabilities. However, SMEs in high-trust environments demonstrate that accumulating resources such as digital marketing capabilities does not automatically guarantee better performance. Instead, digital tools derive their effectiveness from alignment with network capital, where trust, reputation, and communal ties are already robust. We propose the Contextual Threshold Model to refine RBV: beyond a certain point, intensifying digital investments in high-network contexts yields diminishing returns. For instance, a hardware store owner in a small town may gain little from lavish online ads if long-standing relationships suffice for customer retention. In contrast, SMEs lacking strong relational ties must rely more heavily on digital strategies to cultivate credibility and attract clients.

Additionally, the T-O-E framework traditionally focuses on technological readiness, organizational capacity, and environmental pressures. Our findings highlight that cultural and relational readiness should also be considered. In many developing regions, trust-based networks can either enable or hinder technology adoption. For instance, a tourism operator in remote Uganda leverages community guides rather than GPS mapping due to limited internet access and ingrained local trust. This suggests that T-O-E should integrate intangible factors like cultural norms, relationship-based trust, and

localized knowledge systems when examining digital marketing adoption. By incorporating these dynamics, policymakers and practitioners can better anticipate resistance and tailor solutions that resonate with community values.

Network Theory underscores the significance of stakeholder relationships in shaping business outcomes. Our study reveals how digital adoption can create tensions, as some stakeholders embrace convenience while others mistrust online tools. For example, older customers may reject e-payment systems, while younger consumers demand seamless mobile transactions. Managing this Digital-Relational Tension requires SMEs to segment their strategies and maintain both digital and interpersonal channels. Incorporating our Contextual Threshold Model into Network Theory enriches our understanding of how external networks and internal strategic choices interact, particularly in environments where personal ties remain paramount.

Taken together, these theoretical implications highlight that digital marketing does not exist in isolation but is fundamentally intertwined with relational capital. SMEs cannot simply import technological solutions without accounting for the nuanced social and cultural elements of their markets. By recalibrating RBV, extending T-O-E, and contextualizing Network Theory, researchers and practitioners can gain a more holistic view of digital transformation in high-trust economies. Ultimately, theoretical models must move beyond linear assumptions about resource accumulation or technology adoption, emphasizing instead the delicate balance between digital innovation and the relational foundations that sustain SMEs in developing contexts. Future research should explore how these frameworks apply across diverse cultural contexts and technology levels, further helping refine theoretical perspectives on how SMEs navigate the complex interplay between digital innovation and deeply rooted trust-based networks in the dynamic global marketplace.

Limitations and future research

This study has several limitations that should be considered when interpreting the findings. First, the sample was not drawn using random or probabilistic techniques, which limits the generalizability of the results beyond the sampled SMEs. Second, the cross-sectional design restricts causal inference, as relationships were observed at a single point in time. While the mixed-methods design enhances explanatory depth, future research could strengthen external validity by employing longitudinal designs and probabilistic sampling across broader geographic contexts. Additionally, this study predominantly focuses on urban SMEs with better access to digital infrastructure and expertise. Expanding the scope to include

rural and semi-urban SMEs, where infrastructural challenges are more pronounced, could provide a more comprehensive understanding of how these factors interact under varying conditions.

Furthermore, while the measures used in this study were rigorously tested, some items (e.g., SP3 and DM4) exhibited relatively low factor loadings, which may signal limited representation of their underlying constructs. These items were retained to preserve theoretical and content validity; however, future research could refine or replace such items to improve measurement precision and strengthen construct reliability. Mixed methods approaches, such as interviews or observational studies, could also uncover nuanced dynamics that surveys may overlook. For instance, qualitative insights could explore how SMEs navigate tensions between adopting digital tools and maintaining relational networks. Future studies might further examine mediators like big data analytics, organizational culture, or strategic alignment to understand why high levels of network capital sometimes diminish the incremental benefits of digital marketing. Testing moderated mediation models could enrich theoretical frameworks and offer practical strategies for optimizing SME performance.

Appendix

Diagnostic and robustness checks

Abbreviations

AVE	Average Variance Extracted
CMB	Common Method Bias
CR	Composite Reliability
CSR	Corporate Social Responsibility
DM	Digital Marketing
EP	Economic Performance
NC	Network Capital
RBV	Resource-Based View
SMEs	Small and Medium-sized Enterprises
SP	Social Performance
TOE/T-O-E	Technology–Organization–Environment Framework
VIF	Variance Inflation Factor
VRIN	Valuable, Rare, Inimitable, Non-substitutable

Acknowledgements

Not applicable.

Authors' contributions

DSB conceptualized the study, collected and analyzed the data, and led the drafting of the manuscript. EKT contributed to the development of the theoretical framework and provided critical revisions to the manuscript. RB contributed to the research design, data interpretation, and review of the final manuscript. All authors read and approved the final version of the manuscript.

Funding

This research did not receive any specific funding from public, commercial, or not-for-profit organizations.

Data availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Declarations

Competing interests

The authors declare no competing interests.

Received: 8 September 2025 / Accepted: 24 January 2026

Published online: 13 February 2026

References

- Abanis, T., Eliab Mpora, B., Sunday, A., & Eton, M. (2022). Capital structure, investment decision and financial performance of SMEs in Uganda. *International Journal of Scientific Research and Management*, 10(07), 3679–3688. <https://doi.org/10.18535/ijssrm/v10i7.em03>
- Ahmad, M., Wu, Q., & Ahmed, S. (2024). Does CSR digitalization improve the sustainable competitive performance of SMEs? Evidence from an emerging economy. *Sustainability Accounting, Management and Policy Journal*, 15(1), 119–147. <https://doi.org/10.1108/SAMPJ-03-2023-0169>
- Anim, P. A., Arthur, E., & Amoako, G. K. (2023). Entrepreneurial orientation, social media and SME performance: An emerging economy perspective. *Asia-Pacific Journal of Business Administration*. <https://doi.org/10.1108/APJBA-12-2022-0514>
- Bakashaba, R., & Bindeeba, D. S. (2025). A meta-analytic review of entrepreneurial orientation and firm performance: The mediating roles of strategic and dynamic capabilities and the moderating effects of contextual factors. *SEISENSE Journal of Management*, 8(1), 132–161. <https://doi.org/10.33215/vsfpxpv34>
- Bakashaba, R., & Bindeeba, D. S. (2025). Beyond market penetration: Leveraging brand capital for competitive advantage in digitally driven SMEs in resource-constrained settings. *Future Business Journal*, 11, 240. <https://doi.org/10.1186/s43093-025-00663-y>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research. Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 61(8), 1139–1160. <https://doi.org/10.1177/0018726708094863>
- Batjargal, B. (2003). Social capital and entrepreneurial performance in Russia: A longitudinal study. *Organization Studies*, 24(4), 535–556. <https://doi.org/10.1177/0170840603024004002>
- Bendig, D., Schulz, C., Theis, L., & Raff, S. (2023). Digital orientation and environmental performance in times of technological change. *Technological Forecasting and Social Change*, 188, 122272. <https://doi.org/10.1016/j.techfore.2022.122272>
- Bindeeba, D. S., Bakashaba, R., Tukamushaba, E. K., & Atuhaire, S. (2025a). From green HRM to sustainable business performance: A two-stage meta-analytic SEM of the mediating role of green innovation. *Cogent Business & Management*, 12(1), 2536678. <https://doi.org/10.1080/23311975.2025.2536678>
- Bindeeba, D. S., Tukamushaba, E. K., & Bakashaba, R. (2025b). Digital transformation and its multidimensional impact on sustainable business performance: Evidence from a meta-analytic review. *Future Business Journal*, 11, 90. <https://doi.org/10.1186/s43093-025-00511-z>
- Bouhaleb, A. (2024). From adaptive capability to entrepreneurial orientation: The mediating role of network capabilities in the context of SMEs. Findings from SEM and fsQCA. *Journal of Management & Organization*, 30(1), 78–96. <https://doi.org/10.1017/jmo.2023.8>
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597.
- Bruce, E., Shurong, Z., Ying, D., Yaqi, M., Amoah, J., & Egala, S. B. (2023). The effect of digital marketing adoption on SMEs sustainable growth: Empirical evidence from Ghana. *Sustainability*, 15(6), 4760. <https://doi.org/10.3390/su15064760>
- Cartwright, S., Davies, I., & Archer-Brown, C. (2021). Managing relationships on social media in business-to-business organisations. *Journal of Business Research*, 125, 120–134. <https://doi.org/10.1016/j.jbusres.2020.11.028>
- Chowdhury, M. S. A., Alam, Z., & Arif, M. I. (2022). Corporate social responsibility and SMEs' sustainable performance: Evidence from an emerging economy. *Journal of Cleaner Production*, 334, 130270. <https://doi.org/10.1016/j.jclepro.2021.130270>

- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: SAGE Publications. (Replace with the edition you used if different.)
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/10.1007/BF02310555>
- Daud, I., Nurjannah, D., Mohyi, A., Ambarwati, T., Cahyono, Y., Haryoko, A. D. E., Handoko, A. L., Putra, R. S., Wijoyo, H., Ari-Yanto, A., & Jihadi, M. (2022). The effect of digital marketing, digital finance and digital payment on finance performance of Indonesian SMEs. *International Journal of Data and Network Science*, 6(1), 37–44. <https://doi.org/10.5267/IJDNS.2021.10.006>
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160. <https://doi.org/10.2307/2095101>
- Djalic, N., Nikolic, M., Bakator, M., & Erceg, Z. (2021). Modeling the influence of information systems on sustainable business performance and competitiveness. *Sustainability*, 13(17), 9619. <https://doi.org/10.3390/su13179619>
- Dwumah, P., Amaniampong, E. M., Animwah Kissiedu, J., & Adu Boahen, E. (2024). Association between entrepreneurial orientation and the performance of small and medium enterprises in Ghana: The role of network ties. *Cogent Business & Management*, 11(1), 2302192. <https://doi.org/10.1080/23311975.2024.2302192>
- Eze, S. C., Chinedu-Eze, V. C., Awa, H. O., & Diarah, S. I. (2023). Critical Issues Facing SMEs' Actors in the Adoption of Emerging Digital Marketing Technology (EDMT). *SAGE Open*, 13(4), 21582440231214850. <https://doi.org/10.1177/21582440231214847>
- Fang, G. G., Qalati, S. A., Ostic, D., Shah, S. M. M., & Mirani, M. A. (2022). Effects of entrepreneurial orientation, social media, and innovation capabilities on SME performance in emerging countries: A mediated-moderated model. *Technology Analysis and Strategic Management*, 34(11), 1326–1338. <https://doi.org/10.1080/09537325.2021.1957816>
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2009). Statistical power analyses using Gpower 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. <https://doi.org/10.3758/BRM.41.4.1149>
- Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs: Principles and practices. *Health Services Research*, 48(6pt2), 2134–2156. <https://doi.org/10.1111/1475-6773.12117>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. In *Source: Journal of Marketing Research*, 18(1), 39–50.
- Francis, M., & Anthony, O. (2022). *Journal of Economics, Finance and Accounting Studies Credit and Sustainability of SMEs in Uganda: A Case of SMEs in Nakawa Division Kampala*. <https://doi.org/10.32996/jefas>
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380. <https://doi.org/10.1086/225469>
- Guest, G., Namey, E. E., & Mitchell, M. L. (2020). *Collecting qualitative data: A field manual for applied research* (2nd ed.). Thousand Oaks, CA: SAGE Publications. <https://doi.org/10.4135/9781506374680>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. In *European Business Review*, 26(2), 106–121. Emerald Group Publishing Ltd. <https://doi.org/10.1108/EBR-10-2013-0128>
- Harmawan Saputra, M., & Adiati Pratomo, L. (2023). Optimization of relational capital and the strength of SMEs network collaboration to improve its performance: Evidence from Indonesia. *Maret*, 16(1), 111–126. <https://doi.org/10.25105/jmp.v16i1.16527>
- Harrigan, P., Daly, T. M., Coussement, K., Lee, J. A., Soutar, G. N., & Evers, U. (2021). Identifying influencers on social media. *International Journal of Information Management*, 56, 102246. <https://doi.org/10.1016/j.ijinfomgt.2020.102246>
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.
- Hilmersson, F. P., & Hilmersson, M. (2021). Networking to accelerate the pace of SME innovations. *Journal of Innovation & Knowledge*, 6(1), 43–49. <https://doi.org/10.1016/j.jik.2020.10.001>
- John, E. (2024). Show me your networks and I'll tell you your future: Entrepreneurial networks and SME performance. *Cogent Business & Management*, 11(1), 2363433. <https://doi.org/10.1080/23311975.2024.2363433>
- Karami, M., & Tang, J. (2019). Entrepreneurial orientation and SME international performance: The mediating role of networking capability and experiential learning. *International Small Business Journal: Researching Entrepreneurship*, 37(2), 105–124. <https://doi.org/10.1177/0266242618807275>
- Katunko, L. F., Sallah, B. N., Dogo Auta, H., & Ishaya, P. B. (2024). Digital marketing and brand experience on SMEs performances in Jos South LGA of Plateau State. *Journal of Digital Business and Marketing (JDBM)*, 1(2), 49–67. <https://doi.org/10.35912/jdbm.v1i2.2181>
- Keneth, M., & Niclous, K. (2023). Survival of Uganda's small and medium businesses in a cox model. *African Journal of Business Management*, 17(5), 98–105. <https://doi.org/10.5897/ajbm2023.9452>
- Khalid, K., Ahmad, S. Z., & Beheri, M. (2024). The impact of social ties on balanced vs combined innovation: The role of dynamic capabilities and innovation climate in knowledge-intensive business services firms. *International Journal of Innovation Science*. <https://doi.org/10.1108/IJIS-11-2023-0249>
- Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The Resource-based view: A review and assessment of its critiques. In *Journal of Management*, 36(1), 349–372. SAGE Publications Inc. <https://doi.org/10.1177/0149206309350775>
- Kumar, V., & Gupta, S. (2022). Managing customers through digital marketing: A framework and research agenda. *Journal of Business Research*, 139, 1365–1381.
- Madhani, P. M. (2010). *The Resource-Based View (RBV): Issues and Perspectives*. <https://www.researchgate.net/publication/45072517>
- McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica*, 22(3), 276–282. <https://doi.org/10.11613/BM.2012.031>
- Mushi, H. M. (2024). Digital marketing strategies and SMEs performance in Tanzania: Insights, impact, and implications. *Cogent Business & Management*, 11(1), 2415533. <https://doi.org/10.1080/23311975.2024.2415533>
- Nafis Fuad, M., Nath, A., Al-Noman Siddique, M., & Ara Chowdhury, S. (2024). Impact of Digital Marketing on Small and Medium Enterprises (Smes) in Bangladesh. *Corporate Sustainable Management Journal*, 2(2), 59–68. <https://doi.org/10.26480/csmj.02.2024.59.68>
- Nanath, K., & Pillai, R. R. (2021). Individual and organizational factors affecting the implementation of green IT: A case study of an Indian business school. *The Electronic Journal of Information Systems in Developing Countries*, 87(3), e12163. <https://doi.org/10.1002/isd2.12163>
- Nasir, WMNbinWM., Al Mamun, A., & Breen, J. (2017). Strategic orientation and performance of SMEs in Malaysia. *SAGE Open*. <https://doi.org/10.1177/2158244017712768>
- National Planning Authority (NPA). (2017). *Uganda Green Growth Development Strategy (2017–2030)*. Kampala, Uganda: Government of Uganda. Retrieved from <https://www.npa.go.ug>
- Nguyen, N. P., & Adomako, S. (2022). International orientation and environmental performance in Vietnamese exporting small- and medium-sized enterprises. *Business Strategy and the Environment*, 31(5), 2424–2436. <https://doi.org/10.1002/bse.3035>
- Nguyen, T. H., Le, X. C., & Vu, T. H. L. (2022). An extended technology-organization-environment (TOE) framework for online retailing utilization in digital transformation: Empirical evidence from Vietnam. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(4), 200. <https://doi.org/10.3390/joitmc8040200>
- Nugroho, B. S., Salsiyah, S. M., Purnamasari, E., Afandi, A., & Ramadhani, R. A. (2022). The influence of integrated digital marketing, supply chain management, and business performance on the sustainability of MSMEs. *International Journal of Economics, Business and Innovation Research*, 3(1), 17–30
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Obiero, S. A., Muriithi, E., Njeru, & Muriithi, &. (2018). 1 MBA Candidate. In *Print*. <http://www.strategicjournals.com> (Vol. 5, Issue 3). Online. <http://www.strategicjournals.com>,
- Oduro, S., Emerald Publishing. (2024). Eco-innovation and SMEs' sustainable performance: A meta-analysis. *European Journal of Innovation Management*, 27(9), 248–279. <https://doi.org/10.1108/EJIM-11-2023-0961>
- Peter, T., & Cathy, I. M. (2015). Networking for SMEs in Uganda: A conceptual paper. *African Journal of Business Management*, 9(2), 43–49. <https://doi.org/10.5897/ajbm2014.7534>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Prakasa, Y., & Fauzan, N. (2024). Understanding the Technological-Organizational-Environmental Concepts on SMEs' Performance in Emerging Market. *KnE Social Sciences*. <https://doi.org/10.18502/kss.v9i11.15756>
- Purba, M. I., Simanjutak, D. C. Y., Malau, Y. N., Sholihat, W., & Ahmadi, E. A. (2021). The effect of digital marketing and e-commerce on financial performance and business sustainability of MSMEs during COVID-19 pandemic in Indonesia.

- International Journal of Data and Network Science*, 5(3), 275–282. <https://doi.org/10.5267/j.ijdns.2021.6.006>
- Raes, S. (2021). Understanding SME heterogeneity: Towards policy relevant typologies for SMEs and entrepreneurship: An OECD strategy for SMEs and entrepreneurship. OECD SME and Entrepreneurship Papers, No. 28. Paris: OECD Publishing. <https://doi.org/10.1787/c7074049-en>
- Rakshit, S., Jeyaraj, A., Paul, T., & Mondal, S. (2023). Social networking technologies in SMEs: A bibliometric analysis. *Journal of Computer Information Systems*. <https://doi.org/10.1080/08874417.2023.2273811>
- Salazar, L., & Armando, L. (2017). *The Resource-Based View and the Concept of Value The Role of Emergence in Value Creation*. <https://www.redalyc.org/articulo.oa?id=571864085002>
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial Least Squares Structural Equation Modeling. In *Handbook of Market Research* (pp. 1–47). Springer International Publishing. https://doi.org/10.1007/978-3-319-05542-8_15-2
- Scuotto, V., Del Giudice, M., & Carayannis, E. G. (2017). The effect of social networking sites and absorptive capacity on SMEs' innovation performance. *Journal of Technology Transfer*, 42(2), 409–424. <https://doi.org/10.1007/s10961-016-9517-0>
- Sendawula, K., Turyakira, P., Ikiror, C. M., & Bagire, V. (2021). Regulatory compliance and environmental sustainability practices of manufacturing entrepreneurial ventures in Uganda. *Asia Pacific Journal of Innovation and Entrepreneurship*, 15(1), 62–74. <https://doi.org/10.1108/apjie-08-2020-0122>
- Silva, R. P., Mamede, H., & Santos, A. (2022). The Role of Digital Marketing in Increasing SMEs' Competitiveness. *ICSBT International Conference on Smart Business Technologies*, 2022-July, 93–100. <https://doi.org/10.5220/0011118000003280>
- Taiminen, H. M., & Karjaluo, H. (2015). The usage of digital marketing channels in SMEs. *Journal of Small Business and Enterprise Development*, 22(4), 633–651. <https://doi.org/10.1108/JSBED-05-2013-0073>
- Tariq, A., Sumbal, M. S. U. K., Dabić, M., Raziq, M. M., & Torkkeli, M. (2024). Interlinking networking capabilities, knowledge worker productivity, and digital innovation: A critical nexus for sustainable performance in small and medium enterprises. *Journal of Knowledge Management*, 28(11), 179–198. <https://doi.org/10.1108/JKM-09-2023-0788>
- Tornatzky, L. G., & Fleischer, M. (1990). *The processes of technological innovation*. Lexington, MA: Lexington Books
- Tundui, C. S., & Tundui, H. (2013). An Empirical Analysis of Social Capital and Enterprise Performance in Tanzania: The Case of Women Owned Businesses. *International Journal of Developing Societies*, 2(1). <https://doi.org/10.11634/216817831302285>
- Uyanik, M. (2023). *Journal of Business and Management Studies Resource-Based View in Marketing Literature*. <https://doi.org/10.32996/jbms>
- Wang, F. (2020). Digital marketing capabilities in international firms: A relational perspective. *International Marketing Review*, 37(3), 559–577. <https://doi.org/10.1108/IMR-04-2018-0128>
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180. <https://doi.org/10.1002/smj.4250050207>

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.