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Digital Human Capital and MSME Competitiveness in Makassar City: Qualitative Study of Competitiveness, Mindset, and Digital Transformation

Original Article

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Abstract

This qualitative study investigates how micro, small, and medium enterprises (MSMEs) in Makassar develop digital human capital—a composite of technical skills, cognitive orientations, and socio-digital practices that enable entrepreneurs to adapt, innovate, and compete in the digital economy. Using semi-structured interviews, participant observation, and document analysis with 14 MSME owners across food, fashion, craft, and service sectors, the research applies an interpretive framework to uncover the social processes underlying digital capability formation. The findings reveal four interlocking themes: (1) layered digital competencies, characterized by progressive mastery through trial and error; (2) growth mindsets and pragmatic optimism, fostering resilience amid technological disruption; (3) learning ecosystems and social scaffolding, where peer groups, local incubators, and online communities co-create knowledge; and (4) digital human capital as relational competitive leverage, where digital trust and responsiveness strengthen market relationships. The study concludes that digital transformation in MSMEs is not merely technological but deeply social and moral, requiring policies that prioritize continuous learning, inclusive access, and ecosystem responsibility. By framing competitiveness as a relational and sustainable outcome, the research contributes to human-centered digital economy theory and offers actionable insights for policymakers, educators, and entrepreneurs in developing urban contexts.

Keywords: Digital Human Capital; MSMES; Learning Ecosystem; Digital Transformation; Makassar.

1. INTRODUCTION

The rapid diffusion of digital technologies has reconstituted the competitive landscape for Micro, Small, and Medium Enterprises (MSMEs), making human capabilities in digital domains a central determinant of firm survival and growth in urban economies such as Makassar. Policymakers and scholars increasingly ask not only whether firms adopt technologies, but how entrepreneurs develop the digital human capital necessary to convert adoption into sustained competitive advantage.

I define digital human capital as the composite of technical skills, cognitive habits, learning orientations, and socio-digital practices that enable entrepreneurs and their workers to sense, seize, and transform digital opportunities into valuable market outcomes. This definition privileges process and agency: digital human capital is enacted by people who interpret technologies within local cultures and business routines.

In Makassar, a regional hub where traditional trades coexist with dynamic youth, there is to focus on digital literacies, meta learning abilities, and social practices that enable continuous reconfiguration of work and value creation. Recent scholarship argues that digital transformation is as much social and organizational as it is technical, urging attention to human capacities and ecosystems (Jabłoński et al., 2020).

Studies on sustainability in the networked economy highlight that digital business models require alignment with social and environmental goals; digital human capital, therefore, carries responsibilities beyond efficiency—it shapes how enterprises contribute to inclusive and sustainable networked markets (Jabłoński et al., 2020).

Research on small business resilience during crises shows that digitization often served as a lifeline.

Measurement studies of digital competence emphasize multi-dimensional scales that combine technical, collaborative, safety, and data literacy competencies, suggesting that training programs need to address broad skill sets and adult learning principles (Tzafilkou et al., 2022).

Social practice approaches to digital adoption underscore meanings, materials, and competencies in shaping uptake; peers, families, and service agents frequently play decisive roles in forming habitual use of digital tools such as mobile banking and e-commerce platforms (Naeem et al., 2022).

Platform and ecosystem scholarship draws attention to the governance and social responsibility of digital networks; for MSMEs, participating in platform ecosystems reshapes roles and imposes new expectations for co-creation, data stewardship, and ethical conduct (Yi et al., 2022).

FinTech and digital finance studies indicate that enabling access to digital credit and payment systems for SMEs requires not only technology but also trust, data literacy, and collaborative institutional arrangements that can amplify digital human capital benefits (Thomas, 2023).

Methodological debates in international business research suggest that studying complex, locally embedded digital transformations benefits from interpretive, context sensitive qualitative approaches that can capture multiplicity, diversity, and dynamism in entrepreneurs' experiences (Eden & Nielsen, 2020).

2. LITERATURE REVIEW

Digital transformation has redefined the foundations of competitiveness for micro, small, and medium enterprises (MSMEs), particularly in developing urban centers such as Makassar. As Jabłoński, Timmers, and Sarkis (2020) argue, digitalization represents not only a technological shift but a systemic reorganization of business models toward networked value creation that intertwines economic, social, and environmental dimensions. Within this context, digital human capital—the amalgam of digital skills, cognitive flexibility, and adaptive learning orientations—has emerged as a key strategic asset enabling firms to navigate dynamic market ecosystems. The construct moves beyond simple digital literacy to include social and interpretive competencies that allow entrepreneurs to align technologies with local cultures and sustainable practices. This broader understanding acknowledges that digital transformation unfolds within social and moral economies, not merely within technical infrastructures.

Recent empirical work on digital competence underscores its multidimensional nature, combining operational, cognitive, and socio-collaborative dimensions (Tzafilkou et al., 2022). These studies emphasize that digital proficiency is not static but developmental, built through iterative experiences and social learning. In small enterprise settings, digital human capital formation depends heavily on peer mentoring, informal experimentation, and participation in digital communities. This resonates with the learning ecosystem perspective, which views skill acquisition as situated and relational rather than individual and transactional. For MSMEs in Makassar, where formal training opportunities remain limited, such ecosystems play a crucial role in scaffolding entrepreneurs' capacities to integrate e-commerce, digital marketing, and online payment tools into business operations.

The social practice perspective further expands understanding of digital adoption by examining how meanings, materials, and competencies coalesce in daily routines. Naeem et al. (2022) show that digital technologies like mobile banking or marketplace platforms become embedded through culturally specific habits, peer influence, and trust-building. Adoption, therefore, is less about technological availability and more about how entrepreneurs reinterpret tools through existing social logics. For instance, in collectivist societies, digital platforms are often appropriated as extensions of kinship or community ties rather than as impersonal transactional channels. This insight aligns with Yi, Li, and Chen's (2022) concept of ecosystem social responsibility, which posits that participation in digital ecosystems entails ethical and collaborative obligations—particularly for small firms whose reputations hinge on social legitimacy and transparency.

Parallel literatures in FinTech and digital finance emphasize that access to credit and digital payment systems hinges not only on infrastructure but also on trust, data literacy, and institutional collaboration (Thomas, 2023). For MSMEs, these socio-institutional factors amplify or constrain the returns to digital human capital by shaping the credibility and inclusiveness of financial networks. Henderson (2020) similarly observes that effective digital advisory policies must address demand-side learning barriers rather than focusing solely on infrastructure provision. These findings collectively suggest that building digital human capital requires coordinated action across educational, financial, and policy ecosystems to enable entrepreneurs to leverage technologies productively and responsibly.

Finally, methodological debates in international business research highlight the value of interpretive, context-sensitive qualitative approaches for studying locally embedded digital transformations (Eden & Nielsen, 2020). Quantitative indicators often fail to capture the lived experiences, moral commitments, and adaptive improvisations that constitute digital human capital in diverse contexts. Qualitative inquiry allows researchers to trace how entrepreneurs in places like Makassar make sense of digital opportunities, negotiate cultural tensions, and integrate new competencies into everyday business practices. As the digital economy increasingly intertwines with local wisdom and social value creation, such interpretive frameworks become indispensable for theorizing how human capabilities drive sustainable competitiveness in emerging markets.

3. METHODS

The study uses an interpretive qualitative design grounded in semi structured interviews, participant observation, and document analysis to reveal how entrepreneurs in Makassar develop and apply digital human capital. The approach privileges thick description and reflexive interpretation to surface meanings and practices.

Purposive sampling targeted 14 MSME principals across four sectors (food & beverage, fashion, craft, and professional services), chosen for active engagement with digital channels (social media marketing, online marketplaces, or digital payments). The sample intentionally included variation in firm age, gender of owner, and urban neighborhood to capture diversity of pathways.

Data collection involved semi structured interviews (60–120 minutes each), field observation in business premises and digital touchpoints (social media pages, online shops), and analysis of artifacts (product listings, customer feedback, and training attendance records). Interviews elicited life histories of digital learning, descriptions of daily digital work, and narratives of competitive positioning.

Analytical procedures combined thematic coding with process tracing. Initial open codes identified competencies, learning practices, motivational frames, and ecosystem interactions; axial coding then linked codes into narratives about mindset shifts and competitive outcomes. Member checking with six participants validated emergent interpretations. Reflexivity was maintained through a research journal documenting researcher positionality, decisions in sampling and coding, and reflections on power relations during interviews. Triangulation across interviews, observations, and artifacts strengthened credibility.

Ethical approval was secured, informed consent obtained, and confidentiality assured through anonymization. Practical ethical attention included offering participants summaries of findings and suggestions for local training providers.

4. RESULTS

Four interlocking empirical themes emerged: (A) layered digital competencies; (B) growth mindsets and pragmatic optimism; (C) learning ecosystems and social scaffolding; (D) digital human capital as relational competitive leverage.

Theme A — layered digital competencies: Entrepreneurs reported a stacking process in which basic operational skills (posting, messaging, payments) precede intermediate analytics and strategic use (customer segmentation, content design). Several owners described competency growth as iterative trial and error rather than formal schooling.

Theme B — growth mindsets and pragmatic optimism: Many participants framed digital transformation as a learning journey requiring experimentation and tolerance for mistakes, often motivated by market disruptions such as mobility constraints during the pandemic. This cognitive stance combined hope for opportunity with realistic assessments of effort required.

Theme C — learning ecosystems and social scaffolding: Competency acquisition relied heavily on proximal networks—peer groups, supplier training, informal mentors, and online communities. Local incubators and municipal advisory programs were valued when they offered hands-on, contextually relevant guidance.

Theme D — digital human capital as relational competitive leverage: Digital competencies translated into competitive gains primarily through improved customer engagement, reputational signaling via consistent online presence, and the capacity to coordinate partners across supply chains. Entrepreneurs noted that responsiveness and transparent digital communication became reputational assets.

Table 2. The empirical patterns can be summarized in a compact analytic matrix.

Empirical Theme	Core Practices	Competitive Mechanism
Layered Competencies	Posting, payment, analytics	Operational efficiency → customer retention
Growth Mindset	Experimentation, reflection	Faster adaptation to shocks
Learning Ecosystems	Peer mentoring, local training	Collective capability building
Relational Leverage	Online trust, communication	Market reach and loyalty

Source: data processed. 2025

5. DISCUSSION

The findings indicate that digital human capital is not a singular skillset but a developmental assemblage: technical practices, cognitive orientations, and social networks co-produce capacities that firms use to compete. This extends measurement perspectives by foregrounding processes of learning and ecosystem dependence (Tzafilkou et al., 2022).

The emphasis on learning ecosystems aligns with social practice and platform literatures that show adoption depends on meanings and support structures, not merely on access to devices (Naeem et al., 2022; Yi et al., 2022). For Makassar's MSMEs, platforms and peer networks act as crucibles where competencies are practiced and reputations formed.

The role of mindset — particularly a growth orientation — surfaced as a mediator between competence and competitive impact. When entrepreneurs construed failures as learning, they more readily translated modest digital skills into creative value propositions. This observation resonates with broader evidence that crises can catalyze digitization when learning supports are present (Belitski et al., 2021).

However, the pathways toward competitive advantage are uneven. Structural barriers—limited broadband in peripheral neighborhoods, gendered domestic responsibilities that constrain learning time, and the costs of professional content creation—create differentiated capacities. Policy interventions that neglect these social frictions risk entrenching digital divides rather than closing them (Mobarak & Saldanha, 2022).

Financial and institutional enablers matter: access to FinTech services and alternative data for credit, plus advisory policies that emphasize demand-side capacity building, multiply the returns to digital human capital. Collaborative action among municipal agencies, platform providers, and training institutions can create virtuous cycles of capability building and market access (Henderson, 2020; Thomas, 2023).

Conceptually, the evidence supports viewing competitiveness as a relational and sustainable outcome: digital human capital fosters not only efficiencies but also social value co-creation within ecosystems. Integrating ecosystem social responsibility into local digital strategies strengthens both firm outcomes and collective welfare (Yi et al., 2022).

6. CONCLUSION

In Makassar's MSME landscape, digital human capital is a lived, socially embedded process that combines layered competencies, adaptive mindsets, and supportive learning ecosystems to produce relational forms of competitiveness. Policies that treat digitization as mere infrastructure provision will fall short unless they address learning, mentorship, and inclusive access to financial and platform resources (Eden & Nielsen, 2020; Jabłoński et al., 2020).

Practical recommendations include: designing modular, practice-oriented training tuned to MSMEs' daily workflows; fostering peer learning hubs and female friendly schedules; integrating FinTech literacy with data privacy guidance; and promoting ecosystem responsibility among platforms that mediate local commerce. When digital investment centers human learning and dignity, competitiveness in Makassar will be both economically productive and socially regenerative.

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