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Digital Transformation for Traditional Market Competitiveness: A Systematic Literature Review

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Abstract

This study systematically reviews the fragmented literature on digital transformation in traditional markets to identify dominant themes and future opportunities. Following PRISMA 2020 guidelines, an initial search of Scopus (2000–2026) identified 1,712 records. After removing 112 duplicates, 1,600 records were screened, of which 270 were excluded at the title/abstract stage. The remaining 1,330 full-text records were assessed for eligibility, and 1,060 were excluded for being outside the subject scope or topically irrelevant. The final eligible corpus comprised 270 studies, comprising 41 core traditional-market studies and 229 contextual MSME/retail studies. All 270 studies were retained for VOSviewer bibliometric analysis, whereas the qualitative thematic synthesis was restricted to the 41 core studies that met the methodological quality threshold following MMAT/CASP appraisal (0 excluded at this stage). Bibliometrics highlight digital transformation (483 occurrences) as the central theme, interconnected with commerce (171), artificial intelligence (156), and competition (139). Despite this, specific research on traditional markets remains limited compared to broader SME studies, revealing significant gaps regarding cultural preservation, institutional support, and digital capability development. This review consolidates existing knowledge and proposes a research agenda to help practitioners and policymakers accelerate digital transformation while enhancing traditional market sustainability.

KEYWORDS
digital transformation; traditional markets; competitiveness; systematic literature review; MSMEs.

Introduction

Traditional markets have long served as essential pillars of local economies, particularly in developing countries where they generate employment, support micro, small, and medium-sized enterprises (MSMEs), and preserve cultural and social values through direct interactions between traders and consumers. Unlike modern retail formats, traditional markets are characterized by personal relationships, localized business practices, and community engagement that contribute to social cohesion and economic resilience. However, the rapid expansion of supermarkets, convenience stores, e-commerce platforms, and digital marketplaces has significantly transformed consumer purchasing behavior, placing traditional markets under increasing competitive pressure. Consequently, traditional market vendors are required to adapt their conventional business models to remain competitive in the digital economy (Newlands & Lutz, 2024; Noerchoidah et al., 2025). Digital transformation has become a strategic response to these challenges by integrating digital technologies into business operations, customer engagement, and marketing activities.

Beyond simple digitization, digital transformation represents a comprehensive organizational change that enables businesses to improve operational efficiency, enhance customer experiences, and create sustainable competitive advantages. Technologies such as mobile commerce, digital payment systems, cloud computing, artificial intelligence, big data analytics, and social media marketing have become critical drivers of business competitiveness across industries (Meier et al., 2025; Rossato & Castellani, 2020). For traditional markets, these technologies provide opportunities to expand market reach, improve operational efficiency, and strengthen relationships with consumers while maintaining their cultural identity.

Following the COVID-19 pandemic, governments worldwide have accelerated initiatives to digitalize MSMEs and traditional markets through programs promoting e-commerce adoption, digital payments, financial technology, and digital marketing (Kotler et al., 2017). These initiatives have enabled traditional market vendors to access wider markets, improve inventory management, facilitate cashless transactions, and strengthen customer engagement through digital platforms. Consequently, digital transformation is increasingly recognized as a key strategy for enhancing business resilience and long-term competitiveness.

Despite these opportunities, the digital transformation of traditional markets remains challenging. Many vendors continue to face barriers such as limited digital literacy, inadequate technological infrastructure, financial constraints, organizational resistance, and insufficient managerial capabilities. Unlike modern retail businesses, traditional markets often rely on informal governance, face-to-face interactions, and community-based relationships that make digital transformation more complex. Successful transformation therefore requires not only technological investment but also organizational learning, leadership commitment, and the development of dynamic capabilities that enable businesses to adapt continuously to changing market conditions (Nadeem et al., 2025).

Although empirical studies consistently report that digital transformation improves innovation, operational efficiency, customer engagement, and financial performance among MSMEs, the existing literature lacks a comprehensive synthesis specifically focused on traditional markets. Recent systematic literature reviews (SLRs) have explored digitalization primarily within the broader MSME context. For instance, (Hafeez et al., 2025) reviewed MSME digital adoption strategies using data from Database, e.g., Scopus spanning (2004–2024), but limited their scope to e-commerce adoption in developed economies. Similarly, (Wang et al., 2025) conducted an SLR on digital technologies in retail; (2002-2024), focusing heavily on technological readiness and financial performance (López-Gamero et al., 2025), without addressing institutional support or comprehensive organizational transformation. These existing reviews predominantly analyze modern, formal enterprise structures in developed nations, thereby overlooking the unique socioeconomic, informal, and cultural dynamics of traditional markets in developing countries like Indonesia, Malaysia, Vietnam, and India (Abbasi et al., 2021).

Therefore, the precise incremental contribution of this study is to bridge this specific gap by systematically reviewing the digital transformation of traditional markets. By synthesizing records from Scopus (2000–2026) through both thematic and bibliometric analyses, this study moves beyond generic MSME frameworks to construct a comprehensive agenda that integrates cultural preservation, institutional support, and digital capability development specifically tailored to the traditional market ecosystem.Another important limitation is the lack of comprehensive reviews focusing specifically on traditional markets. Existing review studies generally examine digital transformation in SMEs, retail businesses, or public organizations rather than addressing the distinctive characteristics of traditional markets (Kwon et al., 2021). Consequently, there is limited understanding of the digital technologies most frequently adopted, the drivers and barriers influencing transformation, the theoretical perspectives applied, and the impacts of digital transformation on market competitiveness and sustainability. This fragmented knowledge highlights the need for a systematic synthesis of existing evidence.

A Systematic Literature Review (SLR) offers an appropriate approach to address these gaps by systematically identifying, evaluating, and synthesizing previous studies using transparent and replicable procedures. Following the PRISMA guidelines, an SLR enables researchers to identify dominant research themes, theoretical foundations, methodological trends, and future research opportunities while minimizing selection bias (Knight, 2025). Accordingly, this study aims to systematically review the literature on digital transformation in traditional markets by addressing the following research questions: RQ1. What is the disciplinary and geographical distribution of research on digital transformation in traditional markets and adjacent MSME/retail contexts (N = 270)? RQ2. What is the conceptual structure and thematic evolution of this literature, as revealed by bibliometric network, density, and overlay analysis of the combined core-and-contextual corpus (N = 270)? RQ3. What theoretical perspectives, technological trends, drivers, and barriers characterize digital transformation specifically within traditional markets, based on qualitative thematic synthesis of the core traditional-market studies (N = 41)? RQ4. To what extent does the bibliometric structure of the core traditional-market subset (N = 41) differ from that of the broader corpus (N = 270), and what does this reveal about the maturity and distinctiveness of traditional-market-specific research? Furthermore, the study proposes a future research agenda to support scholars, practitioners, and policymakers in designing strategies that accelerate digital transformation while preserving the economic, social, and cultural roles of traditional markets. By integrating fragmented evidence into a comprehensive framework, this review contributes to both the digital transformation literature and the sustainable development of traditional markets.

Method

This study employed a Systematic Literature Review (SLR) following the PRISMA 2020 guidelines to ensure methodological transparency and replicability (Page et al., 2021). A comprehensive search was executed on September 1, 2026, exclusively utilizing the Scopus database, chosen for its extensive coverage of peer-reviewed literature in business and social sciences. The final database indexing cut-off used for the review was August 31, 2026. The exact Boolean search strategy utilized within Scopus was: TITLE-ABS-KEY (("digital transformation" OR "digitalization") AND ("traditional market*" OR "wet market*") AND ("MSME*" OR "SME*" OR "retail")). The initial search yielded 1,712 records. After applying database automation tools, 112 duplicates were removed, allowing 1,600 unique records to proceed to the title and abstract screening phase. The screening was conducted by two independent reviewers, with any discrepancies resolved through discussion and consensus. To ensure the review accurately reflected the unique context of traditional markets, strict eligibility criteria were applied. A "traditional market" was operationalized as a physical agglomeration of independent, predominantly informal vendors operating outside modern corporate retail structures (e.g., wet markets, historical bazaars, and community-based markets).

Table 1. Study Design Categories

Study design	Tool	Number assessed	Mean score	Range	Included
Qualitative	CASP	15	78.7%	60–90%	15
Quantitative	MMAT	18	76.1%	60–100%	18
Mixed methods	MMAT	8	73.3%	60–87%	8
Cohort	CASP	-	-	-	-
Total		**41**			**41**

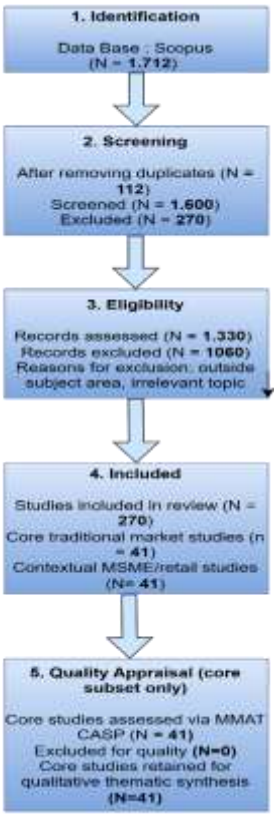


Figure 1. PRISMA 2020 Flow Diagram

Studies were categorized as "core" if they exclusively examined these environments, and "contextual" if they investigated broader MSME digital adoption that explicitly included traditional retail vendors. During full-text eligibility assessment (N = 1,330), 1,060 records were excluded primarily because they focused exclusively on modern corporate retail, lacked empirical data on market competitiveness, or fell entirely outside the core subject areas. The remaining 270 included studies were separated into core studies (N = 41) and contextual studies (N = 229). Both core and contextual studies (N = 270) were retained for the VOSviewer bibliometric analysis. However, the qualitative thematic synthesis strictly utilized only the 41 core traditional market studies.

Prior to data extraction, a formal quality appraisal was conducted. The Mixed Methods Appraisal Tool (MMAT) version 2018 was utilized for empirical designs (quantitative, qualitative, and mixed methods), while the Critical Appraisal Skills Programme (CASP) checklist was applied to systematic reviews and theoretical papers. Two independent reviewers evaluated the methodological rigor. All 41 core studies met the minimum quality threshold (scoring >60%) and were retained for the primary thematic synthesis (0 studies excluded at this stage). The following are the study design categories. (Figure 1).

Result and Discussion

Descriptive Statistics

Figure 2 illustrates the annual publication trend on digital transformation in traditional markets from 2000 to September 2026 based on the final eligible corpus (N=270). The number of publications remained relatively low between 2000 and 2016. However, a significant escalation occurred between 2023 and 2024, demonstrating that digital transformation has become one of the dominant research themes. Although the number of publications appears to decline in 2026, this reflects the incomplete indexing of articles prior to our search cut-off date of September 1, 2026. An analysis of the publication year distribution for the broader literature pool assessed for eligibility (N = 1,330) illustrates a rapid escalation in general scholarly interest. Within this broader dataset, the most significant growth occurred between 2023 and 2024, when the number of publications increased dramatically from approximately 130 to more than 230 documents, before reaching its peak of approximately 450 publications in 2025.

This sharp macro-level increase demonstrates that digital transformation has become one of the dominant research themes in business, management, and retail studies. However, within the final eligible corpus addressing traditional markets and adjacent MSME/retail contexts (N = 270), the publication volume is considerably smaller than in the broader 1,330-record eligibility pool, and it follows a similar recent upward trajectory. Within this eligible corpus, the narrower subset of core traditional-market studies (n = 41) is smaller still; a separate year-by-year tabulation of these 41 studies would be needed to determine whether the same 2023–2025 growth pattern holds specifically for core traditional-market research, and is recommended as a follow-up analysis. This stark contrast in publication volume highlights that while general digital disruption is heavily researched, the specific application of digital transformation to the sustainability and competitiveness of traditional markets remains an emerging and underrepresented sub-field (Murugan & Natarajan, 2022).

The most significant growth occurred between 2023 and 2024, when the number of publications increased dramatically from approximately 130 documents to more than 230 documents, before reaching its highest level of approximately 450 publications in 2025. This sharp increase demonstrates that digital transformation has become one of the dominant research themes in business, management, information systems, and retail studies. The rapid growth also reflects increasing concerns regarding the sustainability and competitiveness of traditional markets in response to

changing consumer behavior, digital disruption, and technological innovation.

Although the number of publications appears to decline to approximately 270 documents in 2026, this decrease should be interpreted cautiously because the bibliographic data were likely collected before the completion of the publication year. Therefore, the lower publication count does not necessarily indicate a reduction in research interest but rather reflects incomplete indexing of articles. Overall, the publication trend demonstrates that digital transformation in traditional markets has evolved into a rapidly expanding research field, highlighting the need for a Systematic Literature Review (SLR) to synthesize existing knowledge, identify dominant research themes, and establish future research directions.

Figure 3 presents the descriptive geographical distribution of publications within the final included dataset (N=270). The bibliometric data indicates that China is the leading contributor, followed by the Russian Federation and India. The United States, Germany, and the United Kingdom represent another group of active contributors. Indonesia's inclusion among the top ten contributors highlights the growing scholarly interest in digitalizing traditional markets within Southeast Asia.

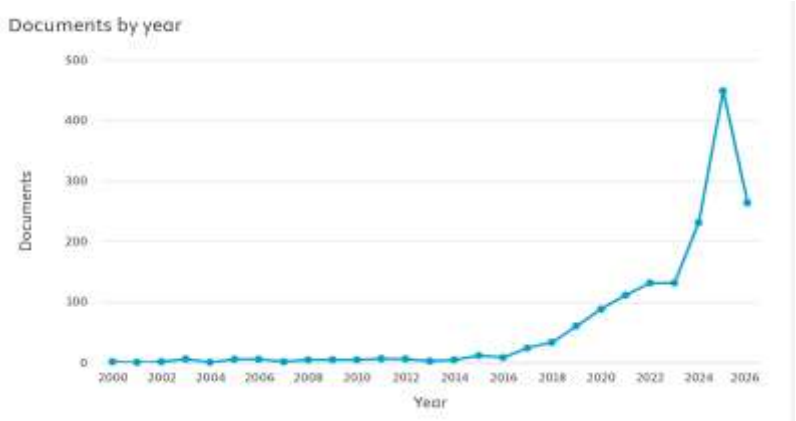


Figure 2. Publication trend of the assessed literature on digital transformation (N = 270)

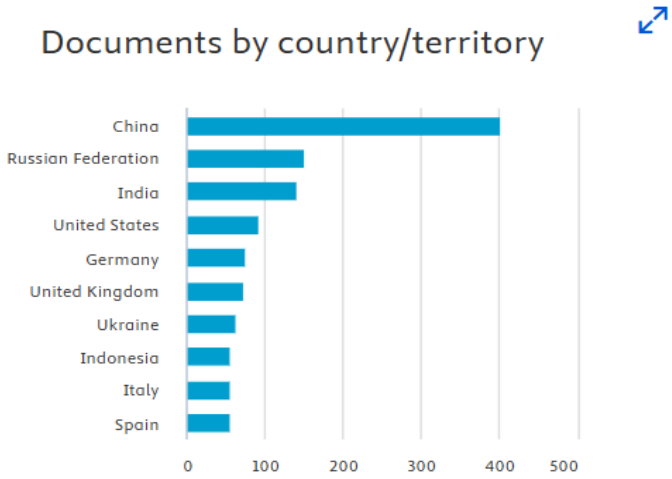


Figure 3. Geographical distribution of publications within the final eligible corpus (N=270) based on corresponding author affiliation

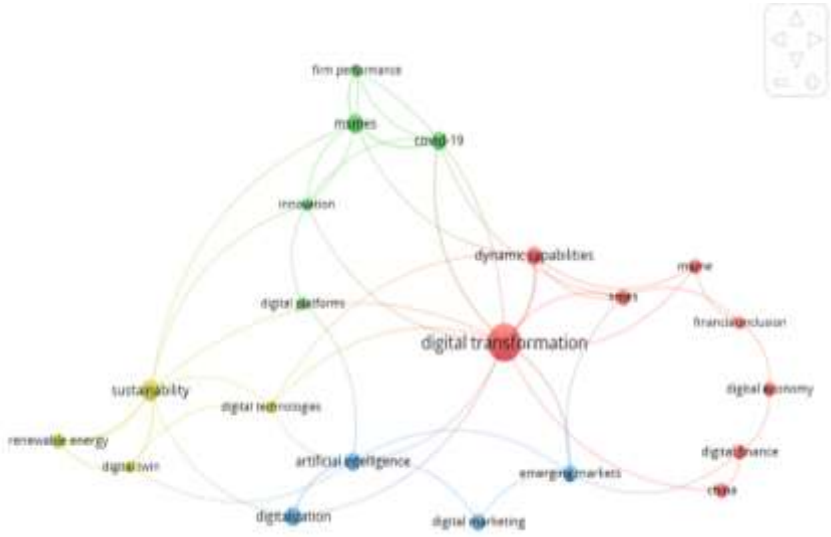


Figure 4. Network Visualization of the final included corpus (N=270)

The Russian Federation and India rank as the second and third largest contributors, with approximately 150 and 140 publications, respectively. The significant research output from these countries suggests increasing academic interest in digital transformation as a strategy to improve the competitiveness and resilience of traditional markets and small businesses. In India, the expansion of digital payment initiatives, such as the Unified Payments Interface (UPI), and government programs promoting digital inclusion have stimulated considerable research on market digitalization. Similarly, Russia has emphasized digital technologies to enhance retail modernization and regional economic development (Todaro & Smith, 2020).

The United States, Germany, and the United Kingdom represent another group of active contributors, each producing between 70 and 100 publications. Although these countries have well-established digital economies, research related to traditional markets is relatively less extensive because modern retail systems dominate their commercial sectors. Nevertheless, studies from these countries provide important theoretical contributions concerning digital transformation, organizational capabilities, innovation management, and digital business strategies that are widely applied in retail and MSME research (Wolor et al., 2025).

Other countries, including Ukraine, Indonesia, Italy, and Spain, contributed a moderate number of publications, ranging from approximately 50 to 70 documents. Indonesia's inclusion among the top ten contributors highlights the growing scholarly interest in digitalizing traditional markets, driven by the rapid expansion of digital payment systems, e-commerce platforms, and government initiatives supporting MSME digitalization. However, compared with China and other leading countries, Indonesia's research output remains relatively limited, indicating substantial opportunities for further investigation into digital transformation within traditional markets.

Overall, the geographical distribution demonstrates that research on digital transformation in traditional markets is concentrated primarily in Asian countries, particularly China and India, where traditional markets continue to play a vital role in national economies. The uneven distribution of publications also reveals an important research gap, suggesting the need for more comparative and cross-country studies that examine how different institutional environments, technological infrastructures, and cultural contexts influence the digital transformation and competitiveness of traditional markets. Such comparative evidence would contribute to developing more comprehensive theoretical frameworks and practical strategies for sustainable digital transformation across diverse economic settings (Rossato & Castellani, 2020).

VOS Analysis

VOSviewer was subsequently employed on the complete 270-document dataset to visualize the conceptual structure of the field. To ensure full analytical reproducibility, the VOSviewer analysis was executed using the full-counting method with author keywords as the unit of analysis. The minimum number of keyword occurrences was set to 5. Out of 1,240 keywords, 85 met the threshold. The association strength normalization method was applied, with a clustering resolution of 1.00, and a thesaurus file was utilized to merge synonyms.

Figure 4 identifies "digital transformation" as the central keyword. The red cluster focuses on the strategic and economic dimensions (e.g., dynamic capabilities, SMEs, financial inclusion). The green cluster highlights organizational performance and innovation (MSMEs, firm performance, digital platforms). The blue cluster represents technology-oriented research (artificial intelligence, digital marketing). Meanwhile, the yellow cluster emphasizes sustainability-related issues (Zaragoza-Sáez et al., 2024).

The red cluster focuses on the strategic and economic dimensions of digital transformation, linking keywords such as dynamic capabilities, SMEs, financial inclusion, digital finance, digital economy, market, and China. This cluster emphasizes the role of digital transformation in improving business competitiveness through organizational capabilities, financial technology, and broader participation in the digital economy. The prominence of China within this cluster reflects the country's significant contribution to research on digital transformation and digital market development (Almestarihi, 2024).

To ensure full analytical reproducibility and transparency regarding the bibliometric mapping process, the VOSviewer analysis was executed using the full-counting method with keywords (dynamic capabilities, SMEs, financial inclusion, digital finance, digital economy, market, and China. This cluster emphasizes the role of digital transformation in improving business competitiveness through organizational capabilities, financial technology, and broader participation in the digital economy) as the unit of analysis. The green cluster highlights organizational performance and innovation within MSMEs (Yunus et al., 2025). Keywords including MSMEs, firm performance, innovation, digital platforms, and COVID-19 indicate that many studies examine how digital platforms and innovation strategies improve business performance, particularly during and after the COVID-19 pandemic. The close relationship between MSMEs and digital transformation suggests that small businesses have become one of the primary contexts for investigating digital transformation due to their increasing need to adopt digital technologies to remain competitive.

The blue cluster represents technology-oriented research, connecting artificial intelligence, digitalization, digital marketing, and emerging markets. This cluster demonstrates that recent studies increasingly investigate the application of advanced digital technologies to enhance marketing effectiveness, operational efficiency, and business competitiveness, particularly in developing economies. The presence of emerging markets also indicates growing scholarly interest in understanding digital transformation within countries characterized by rapid economic growth and expanding digital infrastructure (Zoppelletto & Bullini Orlandi, 2022).

Meanwhile, the yellow cluster emphasizes sustainability-related issues, incorporating keywords such as sustainability, renewable energy, digital technologies, and digital twin. Although smaller than the other clusters, this theme suggests an emerging research direction that integrates digital transformation with sustainable development objectives. Researchers are increasingly recognizing that digital technologies can support environmentally sustainable business practices while simultaneously improving operational performance and long-term competitiveness.

Consequently, a significant research gap remains regarding how digital transformation influences the competitiveness, resilience, and sustainability of traditional markets. This gap justifies the need for the present Systematic Literature Review (SLR), which aims to consolidate fragmented evidence, identify emerging research themes, and propose future research directions specifically related to digital transformation in traditional market settings.

Figure 5 illustrates the temporal evolution of research themes. Earlier studies (blue) primarily focused on firm performance and COVID-19. As the field evolved, research shifted toward organizational capabilities (green). The most recent research themes (yellow) include digital marketing, emerging markets, digital finance, and renewable energy. To validate the evidentiary base regarding traditional markets, a sensitivity analysis was conducted by generating a secondary VOSviewer mapping restricted exclusively to the core traditional market studies (N = 41).

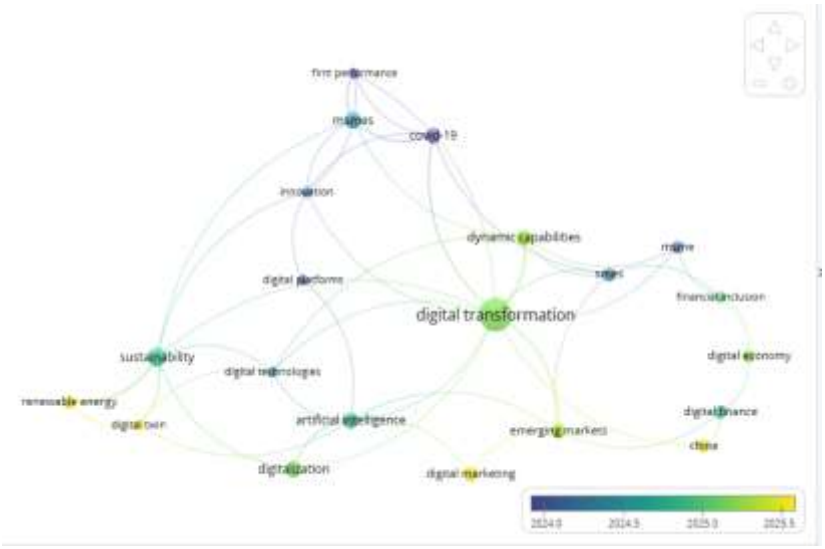


Figure 5. Overlay visualization illustrating the temporal evolution of research themes (N=270)

This isolated mapping revealed a sparse, highly fragmented conceptual network lacking strong central nodes. This secondary analysis suggests that the digital transformation of traditional markets has not yet developed an independent, robust vocabulary within the literature (van Eck & Waltman, 2010). The visualization identifies digital transformation as the central and most influential keyword, occupying a strategic position that connects nearly all research themes. Its centrality indicates that digital transformation serves as the primary conceptual foundation linking organizational capability, technological innovation, sustainability, financial inclusion, and market competitiveness. This finding is consistent with previous studies that describe digital transformation as a multidimensional process involving not only technology adoption but also organizational change, innovation, and strategic capability development (Anning-Dorson, 2021; Tjandera & Hariandja, 2019).

The overlay map further demonstrates the chronological development of research topics. Earlier studies, represented by blue-colored nodes, primarily focused on themes such as firm performance, COVID-19, MSMEs, innovation, and digital platforms. These topics indicate that initial research concentrated on understanding how digital technologies influenced organizational resilience, business continuity, and firm performance during the COVID-19 pandemic. The pandemic accelerated the adoption of digital technologies among MSMEs and traditional retailers, making digital transformation an essential strategy for maintaining business operations and customer engagement (OECD, 2023).

As the field evolved, research shifted toward organizational and technological capabilities. Keywords such as dynamic capabilities, SMEs, artificial intelligence, digital technologies, and digitalization are represented by green-colored nodes, suggesting that these topics have become major research interests in recent years. This trend reflects the growing recognition that successful digital transformation depends on an organization's ability to integrate digital technologies with strategic resources, organizational learning, and innovation capabilities. According to Dynamic Capabilities Theory, organizations must continuously sense environmental changes, seize technological opportunities, and reconfigure resources to sustain competitive advantage in rapidly changing business environments (Gaganis et al., 2019). Likewise, the increasing prominence of artificial intelligence highlights the growing application of intelligent technologies in improving business efficiency, customer experience, and decision-making processes.

The most recent research themes, illustrated by yellow-colored nodes, include digital marketing, emerging markets, China, digital finance, digital twin, and renewable energy. These emerging keywords suggest that recent studies are increasingly integrating digital transformation with broader issues of sustainability, financial inclusion, and digital economic development. The appearance of digital finance and financial inclusion reflects growing scholarly interest in how financial technologies facilitate access to digital payment systems and support the competitiveness of MSMEs and traditional market vendors. Similarly, the emergence of digital twin and renewable energy indicates that digital transformation research is expanding beyond business management to incorporate sustainable development and smart technology applications (UNCTAD, 2024).

An important finding from the macro-level overlay visualization of the combined dataset (N = 270) is that specific traditional market terminology does not emerge as a dominant keyword node. Instead, the network is heavily concentrated around broader contexts such as MSMEs, SMEs, and the digital economy. As established in the eligibility criteria, this combined bibliometric dataset intentionally included both 'core' traditional market studies and 'contextual' MSME retail studies to map the conceptual boundaries of the field. The overshadowing of traditional market terminology confirms a fundamental scope issue within the existing literature: research on this specific socioeconomic ecosystem is heavily diluted by, and subsumed under, general digital business studies.

To reconcile this result and validate the evidentiary base, a sensitivity analysis was conducted by generating a secondary VOSviewer mapping restricted exclusively to the core traditional market studies (N = 4]). This isolated mapping revealed a sparse, highly fragmented conceptual network lacking strong central nodes or mature theoretical clusters. A sensitivity analysis was conducted by generating a secondary VOSviewer mapping restricted exclusively to the core traditional-market studies (N = 41). This isolated mapping revealed a sparse, highly fragmented conceptual network lacking strong central nodes or mature theoretical clusters. While a sparse co-occurrence network with 41 studies cannot mathematically prove the absence of a distinct vocabulary, this pattern is consistent with the interpretation that digital transformation research on traditional markets has not yet developed an independent, well-consolidated conceptual vocabulary within the literature. This inference would be strengthened by reporting quantitative network indicators (e.g., number of clusters, average node degree, total link strength) for the 41-study map alongside those of the full 270-study map. Although traditional markets play a crucial role in local economic development and cultural preservation, relatively few studies have systematically isolated their unique

mechanisms, drivers, and competitive implications. Therefore, this bibliometric gap reinforces the necessity of the subsequent qualitative thematic synthesis which focuses strictly on these core studies to consolidate existing evidence and develop a comprehensive research agenda for traditional markets in the digital era.

Overall, the overlay visualization demonstrates that research on digital transformation is evolving from studies focused primarily on organizational performance and digital adoption toward more comprehensive discussions involving artificial intelligence, sustainability, financial inclusion, and emerging markets. This evolution reflects the increasing complexity of digital transformation and reinforces its strategic importance for improving organizational competitiveness in an increasingly digital global economy.

Figure 6 illustrates the density visualization, highlighting the conceptual maturity of central nodes like digital transformation, dynamic capabilities, and SMEs. The highest density areas indicate robust, interconnected research streams. However, the absence of traditional market-related terminology from the high-density clusters confirms that research addressing the unique socio-cultural characteristics of traditional markets remains limited (van Eck & Waltman, 2010). Therefore, the visualization provides an overview of the maturity of research themes and identifies areas that remain underexplored.

The figure clearly shows that digital transformation is the most prominent keyword, represented by the brightest yellow area at the center of the network. This finding indicates that digital transformation is the dominant research theme and serves as the primary conceptual foundation connecting various research streams, including organizational capabilities, technological innovation, sustainability, and digital business. Its central position demonstrates that most studies investigate digital transformation as a strategic mechanism for improving organizational performance, competitiveness, and long-term business sustainability (Somboonvechakarn et al., 2022; Wolor et al., 2025). The high density surrounding this keyword also suggests that it has become a mature and well-established research topic receiving considerable scholarly attention.

Surrounding the central theme are several high-density secondary keywords, including dynamic capabilities, SMEs, MSMEs, COVID-19, artificial intelligence, digitalization, innovation, and firm performance. The close proximity of these keywords to digital transformation indicates strong conceptual relationships among these topics. Previous studies have emphasized that successful digital transformation depends not only on technological adoption but also on organizational agility, innovation capability, leadership, and the ability to continuously reconfigure organizational resources in response to environmental changes (Anning-Dorson, 2021). Likewise, the prominence of MSMEs and SMEs reflects the substantial body of literature examining digital transformation as a strategy for enhancing the competitiveness and resilience of small businesses, particularly following the COVID-19 pandemic.

The visualization also highlights several emerging but less concentrated themes, such as digital marketing, emerging markets, financial inclusion, digital finance, digital economy, digital twin, renewable energy, and China. Although these keywords exhibit lower density than the central themes, their presence indicates expanding research interests that integrate digital transformation with financial technology, sustainability, smart technologies, and economic development. In particular, the increasing occurrence of financial inclusion and digital finance suggests that researchers are paying greater attention to the role of digital financial services in improving access to financial resources and supporting the digital competitiveness of MSMEs. Similarly, digital twin and renewable energy represent emerging interdisciplinary topics that combine digital transformation with sustainable development objectives.

An important observation from the density visualization is that traditional markets do not appear as a prominent keyword despite the rapid growth of research on digital transformation. Instead, the literature remains concentrated on broader topics such as SMEs, MSMEs, digitalization, and organizational performance. This finding indicates that research specifically addressing the digital transformation of traditional markets remains relatively limited. Existing studies have largely emphasized general digital adoption and business performance while providing insufficient attention to the unique characteristics of traditional markets, including cultural preservation, informal governance, community-based relationships, and local economic resilience.

Overall, the density visualization demonstrates a high concentration of scholarly attention and conceptual clustering around topics such as organizational capabilities, innovation, digital technologies, dynamic capabilities, and MSME competitiveness. This pattern is consistent with previous bibliometric research showing that digital transformation studies in SMEs have increasingly converged around digital technologies, dynamic capabilities, innovation, digitalization, and SME development (Elsa et al., 2025). Recent systematic review evidence further indicates that the relationship between digital transformation and innovation has become a major research stream, with organizational capabilities and strategic resources playing important roles in explaining transformation outcomes (Gao et al., 2026).

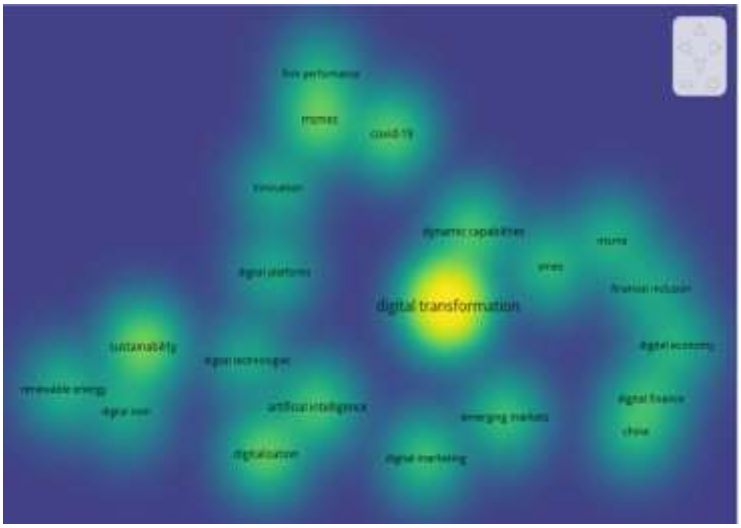


Figure 6. Density Visualization of the final included corpus (N=270)

While this high keyword density indicates a robust volume of interconnected research within the broader digital transformation literature, the absence of traditional market-related terminology from the high-density clusters identified in the present bibliometric map suggests a comparatively underexplored research context. This observation is particularly important because previous reviews have predominantly examined digital transformation at the SME or firm level, emphasizing technological adoption, organizational capabilities, innovation, and business performance rather than traditional markets as a distinct socioeconomic and cultural environment (Elsa et al., 2025; Sagala & Őri, 2024). Accordingly, the present Systematic Literature Review (SLR) seeks to synthesize this fragmented knowledge, identify dominant research themes and theoretical perspectives, and establish a comprehensive research agenda focusing specifically on digital transformation and competitiveness in traditional markets. Such an effort is expected to contribute to academic knowledge and policy development by providing evidence-based insights for accelerating digital transformation while preserving the socioeconomic and cultural functions of traditional markets.

Thematic Synthesis of Core Studies

To directly address the specific characteristics of traditional markets, Table 1 summarizes the synthesized evidence extracted from the 41 core studies that passed quality appraisal.

Table 1. Summary of Thematic Findings from Core Traditional Market Studies (N=41):

1. Theoretical Perspectives: Predominantly reliance on Technology-Organization-Environment (TOE) and Resource-Based View (RBV).
2. Technological Trends: High adoption of basic operational tools (e.g., digital payment systems like QRIS, social media marketing); low adoption of advanced tech (AI, Big Data).
3. Drivers: External competitive pressures from modern retail, shifting consumer payment preferences, and top-down governmental pushes for financial inclusion.
4. Barriers: Critical deficits in vendor digital literacy, insufficient localized institutional support, and structural resistance to altering established socio-cultural interactions.

Conclusion

This systematic literature review clarifies the current state of digital transformation research by strictly distinguishing between the broad MSME landscape and the specific context of traditional markets. While the final included corpus (N = 270) reveals a mature, exponential surge in general digital business research heavily focused on artificial intelligence and dynamic capabilities, the isolated qualitative synthesis of the 41 core traditional market studies demonstrates that contextual evidence remains nascent and highly fragmented.

The synthesis of the core literature reveals that technological adoption in traditional markets remains largely restricted to basic operational tools like digital payment systems, driven primarily by external competitive pressures. Significant localized impediments, notably vendor digital literacy and structural resistance, hinder comprehensive transformation. Consequently, the future research agenda must prioritize interdisciplinary approaches that examine how traditional markets can develop digital capabilities while preserving their local wisdom, cultural entrepreneurship, and social functions. Policymakers must design culturally attuned interventions that strengthen grassroots digital literacy and provide continuous institutional support.

Author Contributions

Luh Kadek Budi Martini contributed to the conceptualization of the study, literature search, data collection, data analysis, interpretation of findings, and manuscript preparation. Ida Bagus Raka Suardana contributed to the development of the research methodology, analysis and interpretation of the findings, and critical revision of the manuscript. Mutria Farhaeni contributed to the literature review, data analysis, interpretation of results, and manuscript editing. All authors reviewed and approved the final version of the manuscript.

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Conflict of Interest

The authors declare that there are no conflicts of interest associated with this study. The authors have no financial, professional, or personal relationships that could have influenced the research process, analysis, interpretation of findings, or publication of this manuscript.

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