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Entrepreneurial Orientation, Digital Capability, and Sustainable Competitive Advantage in Culinary MSMEs: A Conceptual Systematic Review

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Abstract

This conceptual systematic review examines the theoretical and empirical connections among entrepreneurial orientation (EO), digital capability, innovation capability, and sustainable competitive advantage (SCA) in culinary micro, small, and medium enterprises (MSMEs), with particular attention to the moderating role of market turbulence and the enabling conditions of institutional support. Following the six-stage framework proposed by Schreiber and Cramer (2024) [28], the review first clarifies how these constructs are defined across disciplines before examining how they work together. The review draws on 45 peer-reviewed studies and gray literature sources published between 1990 and 2026, retrieved from Scopus, Web of Science, SINTA, and Google Scholar through a PRISMA 2020 protocol screening an initial pool of 112 records. A deductive and inductive coding procedure produced five perspectives and ten categories, with Krippendorff's alpha ranging from 0.69 to 0.85, satisfying all six CSR quality criteria. Findings reveal that EO and digital capability individually and jointly

predict competitive advantage only when they are channeled through active innovation capability. Three dominant thematic clusters organize the field: strategic orientation and agility-driven responsiveness; digital transformation pathways and dynamic resource orchestration; and innovation capability combined with contextually grounded sustainable competitiveness. The review identifies a persistent gap in integrated moderated mediation models that simultaneously capture EO, digital capability, innovation capability, and market turbulence within culinary MSMEs in secondary Indonesian cities. It also brings to the surface the underexplored role of halal certification and regional cultural knowledge as VRIO-qualifying resources. The review contributes a consolidated evidence map, a validated conceptual classification, and a testable structural model to guide future empirical studies, while offering practical direction for policymakers who want to shift MSME digital programs from basic tool adoption toward genuine capability building.

Keywords: Entrepreneurial Orientation, Digital Capability, Sustainable Competitive Advantage, Culinary MSMEs, Conceptual Systematic Review, Dynamic Capabilities

JEL Codes: L25 – Firm Performance and Quality, M21 – Business Economics, O33 – Technological Change: Choices and Consequences, C18 – Methodological Issues: General

1. Introduction

1.1 Problem and Scope of Research

Indonesia's culinary sector is both its most vibrant small-business ecosystem and its most strategically neglected. The subsector contributed IDR 455.44 trillion, equivalent to 41 percent of the national creative economy gross domestic product in 2020 alone, and by 2021 the government had brought 11.7 million MSMEs online with an ambition to reach 30 million (Agmasari, 2021) [2]. Yet the gap between having a digital presence and building genuine digital capability has grown rather than closed. Culinary operators across Medan, Binjai, and secondary cities in West Java report ongoing barriers: low digital literacy, inadequate infrastructure, and limited access to capital keep technology adoption at the level of social media marketing and food delivery platform listings (Harahap *et al.*, 2025; Open Data Jabar, 2023) [11, 22]. Indonesia's food and beverage market is projected to reach USD 125 billion by 2025, yet weak competitiveness among individual operators means that much of this

aggregate growth goes to platform intermediaries rather than to the micro-entrepreneurs themselves (Agmasari, 2021) ^[2]. The problem this review addresses is the absence of a consolidated, empirically validated model that explains how culinary MSMEs can turn entrepreneurial disposition and digital tools into lasting competitive advantage. Existing studies tend to test EO or digital capability in isolation, draw on samples from urban centers in Java, or treat innovation capability as an outcome rather than as the conversion bridge it is meant to be in theory. This review covers studies published from 1990 to 2026, spanning the foundational Resource-Based View and market orientation literature through the most recent digital transformation research, across culinary, creative economy, and MSME-focused work in Indonesia and comparable emerging-market settings.

Beyond this substantive gap, there is a methodological problem that compounds it. Terms such as digital capability, entrepreneurial orientation, and competitive advantage appear across the literature with quite different meanings: sometimes as inputs, sometimes as mediators, sometimes as outcomes, and sometimes as rough synonyms for closely related constructs. This inconsistency means that any attempt at synthesis risks mixing findings that are not truly comparable. A conceptual systematic review following Schreiber and Cramer (2024) ^[28] is therefore the right first step. It maps the definitional landscape before synthesis begins, resolves overlapping usages, and produces a classification solid enough to support a subsequent empirical study.

1.2 Scientific Status

The academic literature on competitive advantage in MSMEs rests on two enduring theoretical pillars. Barney (1991) ^[5] established through the VRIN framework — Valuable, Rare, Inimitable, and Non-substitutable that sustained advantage comes from superior internal resources. His later work (Barney, 1995) ^[6] refined this into the VRIO framework, adding organizational alignment as the critical condition that converts resource ownership into actual competitive returns. Priem and Butler (2001) ^[25] extended this argument by showing that resource value is ultimately determined by external market conditions rather than by the resources themselves. It is a point that directly justifies including market turbulence as a boundary condition in this review. Dynamic Capability Theory, developed by Teece *et al.* (1997) ^[32] and applied to digital settings by Warner and Wager (2019) ^[34], adds that even well-configured resource portfolios erode without mechanisms for sensing, seizing, and transforming assets as markets shift.

Within this foundation, two empirical streams have grown substantially. The first, centered on entrepreneurial orientation, shows that EO, i.e. defined through innovativeness, proactiveness, and risk-taking as first theorized by Miller (1983) ^[18] and later formalized by Covin and Slevin (1989) ^[8] consistently predicts competitive performance across family-owned manufacturing SMEs (Khan *et al.*, 2022) ^[13], culinary MSME clusters in Indonesia (Adzani & Saputra, 2022) ^[1], and creative economy subsectors in Bali (Widnyani *et al.*, 2025) ^[35]. The second stream, focused on digital capability, documents that digital transformation improves performance by raising operational efficiency and expanding market reach, with this

relationship running through innovation capacity and shaped by government support and organizational readiness (Taroreh *et al.*, 2026) ^[31]. Recent studies confirm that combining digital entrepreneurial orientation with strong social media skills significantly improves business performance and resilience for Indonesian MSMEs (Gunawan *et al.*, 2026) ^[10], while AI adoption — though currently limited to marketing and customer service — marks the frontier of digital maturity in emerging-market culinary sectors (Chernkaitpradab *et al.*, 2026) ^[7].

1.3 Rationale for a Conceptual Systematic Review

Schreiber and Cramer (2024) ^[28] propose the conceptual systematic review as a distinct form of systematic inquiry designed for situations where the main obstacle to synthesis is not a shortage of studies but a lack of shared definitional clarity. Their framework asks a more basic question before synthesis begins: what does this term actually mean across the literature, and which studies are using it in ways that can genuinely be compared? The CSR moves through six stages: identifying the tangled term, gathering informal heuristics, converting those heuristics into a rigorous analytical classification, building a corpus, coding empirically, and documenting a systematic account of term use with each stage governed by explicit quality criteria. Applying this framework to the culinary MSME competitive advantage literature is not simply a methodological preference; it is a direct response to a real obstacle. As Table 2 shows, the term digital capability carries at least two distinct meanings across the included studies: acquiring specific tools and embedding those tools into organizational routines and strategy. Treating these two meanings as interchangeable would produce a misleading picture of what the field actually knows.

1.4 Research Hypotheses

Three directional hypotheses guide the synthetic analysis of this review, each tied to a specific tension in the existing literature:

H1: Entrepreneurial orientation positively predicts sustainable competitive advantage in culinary MSMEs, with the effect mediated by innovation capability. This hypothesis draws on Silamat *et al.* (2026) ^[30] and Widnyani *et al.* (2025) ^[35], who confirm EO-performance and EO-SCA relationships, while also responding to evidence that direct EO effects are weaker than mediated paths (Safitri *et al.*, 2026; Khan *et al.*, 2022) ^[26, 13].

H2: Digital capability positively predicts sustainable competitive advantage, with its strength depending on the presence of innovation capability as an intermediary. This responds to Taroreh *et al.* (2026) ^[31] and Nurfauzan *et al.* (2026) ^[21], who demonstrate mediated digital paths, while acknowledging Wahmuda *et al.* (2026) ^[33] and Harahap *et al.* (2025) ^[11], who document execution gaps even where capability exists.

H3a: Market turbulence positively moderates the EO-to-innovation-capability and digital-capability-to-SCA paths, strengthening returns on entrepreneurial and digital investments under high-volatility conditions.

H3b: Technological turbulence negatively moderates the link between technology resource investment and innovation capability output, suppressing returns on capital-intensive R&D during periods of rapid technological change. This

two-part framing draws from Lee and Yoo (2021) ^[16] and Miranda *et al.* (2023) ^[19], whose findings point in opposite directions depending on the type of turbulence examined.

1.5 Approach and Expected Results

A conceptual systematic review is the right design here because the primary scholarly need is not to add another data point but to first clarify what the existing data points mean, then map the empirical landscape, resolve apparent contradictions, and identify precisely where an integrated empirical model is still missing. The review applies the six-stage CSR framework (Schreiber & Cramer, 2024) ^[28], PRISMA 2020 methodology for source selection, and a three-cluster framework for organizing findings. The study aims to deliver four contributions: a validated conceptual classification of the core constructs; a consolidated evidence map positioning each major study within the integrated model; a clear gap statement specifying which construct combinations and geographic contexts remain untested; and a testable structural model that subsequent researchers can take into the field using PLS-SEM with culinary MSME samples in secondary Indonesian cities.

2. Problem Statement

The central knowledge gap this review exposes is both theoretical and empirical. On the theoretical side, the existing literature consistently turns to the Resource-Based View and Dynamic Capability Theory as foundational frameworks but rarely brings them together into a single model that specifies the conversion mechanism through which resources actually become competitive advantage. Barney (1991) ^[5] established that VRIN-qualifying resources are necessary; Priem and Butler (2001) ^[25] showed they are not sufficient without external market alignment; yet the applied MSME literature often treats EO or digital capability as if they produce advantage directly, skipping the conversion step entirely. The Korean market-orientation study by Lee and Yoo (2021) ^[16] is one of the few to model this conversion explicitly. It is showing that technological and marketing capabilities mediate the path from resources to advantage but its applicability to culinary MSMEs in Indonesia is limited by the distance in sector and geography. On the empirical side, three specific contradictions in the literature need to be resolved. First, the studies most directly relevant to the Indonesian culinary context disagree on whether EO's primary value is direct or mediated. Adzani and Saputra (2022) ^[1] confirm direct effects of innovation and EO on competitive advantage, while Safitri *et al.* (2026) ^[26] show that business innovation fully mediates the digital transformation-to-performance path, implying that EO may itself require mediation to reach its full impact. Second, digital capability studies differ on whether government support or market turbulence strengthens or weakens the capability-to-performance relationship. Nurfauzan *et al.* (2026) ^[21] find that government support amplifies digital capability's sustainability impact, while Miranda *et al.* (2023) ^[19] report that market turbulence negatively moderates eco-innovation performance. It is the opposite of what Contingency Theory would predict for proactive firms. Third, the role of locally specific resources i.e. halal certification, Sharia-aligned marketing, and regional cultural knowledge in shaping competitive differentiation is acknowledged in several Indonesian studies (Bakhtiar, 2026; Harahap *et al.*, 2025) ^[4, 11] but has not been formally

incorporated into any cross-study model as a VRIO-qualifying construct.

Beneath these empirical contradictions lies the definitional inconsistency noted above. If different studies use 'digital capability' to mean different things, tool acquisition in some and deep organizational embedding in others then their contradictory findings may not be genuine disagreements at all but artifacts of definitional mismatch. Resolving the empirical picture therefore requires first resolving the conceptual picture, which is precisely what the CSR methodology is designed to do.

3. Methodology

3.1 Overview: Applying the Schreiber and Cramer (2024) ^[28] Framework

This review follows the six-stage conceptual systematic review framework proposed by Schreiber and Cramer (2024) ^[28], layered onto a PRISMA 2020 source-selection protocol (Page *et al.*, 2021; <https://doi.org/10.1136/bmj.n71>) ^[23]. The CSR framework was chosen because the literature on competitive advantage in culinary MSMEs shows exactly the kind of tangled-term problem it is designed for: researchers use constructs with similar labels but incompatible meanings, which creates the appearance of contradiction where the real issue may be definitional misalignment. The six stages i.e. tangled term identification, heuristic gathering, analytical classification, corpus development, empirical systematization, and documentation. Its are applied sequentially in this section and in Section 5. All six analytical and empirical quality criteria required by the CSR framework are documented in Table 5.

3.2 Stage 1: Identifying the Tangled Term

The tangled terms in this review are digital capability, entrepreneurial orientation, and sustainable competitive advantage, each used across the included literature in at least two operationally distinct ways. Some studies use digital capability to describe acquiring specific tools such as social media accounts, e-commerce platforms, QRIS payment. While others use it to describe organizational routines, leadership, and human capital that embed those tools into strategic processes (cf. Pranawangrum & Ikut, 2025, with Warner & Wager, 2019) ^[24, 34]. Sustainable competitive advantage is used interchangeably with competitive performance, MSME performance, and sustainable business performance, which obscures whether studies are measuring the same thing. Entrepreneurial orientation is treated as an antecedent by most studies but as an outcome of digital training in others. These terminological instabilities meet all four conditions for a tangled term: they are used differently across authors without explanation, they would produce unpredictable search results if taken at face value, they assume a shared meaning that does not exist, and no prior systematic empirical treatment of their definitional landscape has been conducted in the culinary MSME context.

3.3 Stage 2: Identifying Heuristics

A preliminary scan of 25 key papers. It is selected for disciplinary breadth and citation density that identified five recurring heuristic dimensions that authors implicitly use to organize these constructs. These are: strategic orientation (the firm's directional posture), digital capability (the firm's technology-related assets and routines), innovation

capability (the firm's capacity to create new value), competitive advantage (the outcomes of the above), and environmental moderation (boundary conditions shaping the above relationships). Within each dimension, two to three informal sub-categories were visible across papers. These heuristics were not yet analytically rigorous. they overlapped and lacked explicit definitions but they provided the raw material for Stage 3.

3.4 Stage 3: Analytical Classification of Heuristics

The five heuristic dimensions were formalized into five Perspectives (P1 through P5) and ten Categories (C1a through C5b), meeting the three analytical quality criteria required by Schreiber and Cramer (2024) ^[28]: definiteness (each category explicitly defined), selectivity (no coding unit assignable to two categories within the same perspective), and independence (no category a logical subset of another). Table 2 presents the full classification.

Table 1: Literature search strategy: databases, search strings, and inclusion outcomes

Database	Primary Search Terms	Boolean Connectors	Records Retrieved	Records Included
Scopus	"entrepreneurial orientation" OR "digital capability" OR "digital transformation"	AND "competitive advantage" OR "sustainable performance" OR "MSME" OR "SME" OR "culinary" AND "Indonesia" OR "emerging market"	38	16
Web of Science	"entrepreneurial orientation" OR "digital capability" OR "innovation capability"	AND "competitive advantage" OR "SME" OR "culinary" AND "emerging market" OR "developing economy"	29	11
SINTA	"orientasi kewirausahaan" OR "kapabilitas digital" OR "UMKM kuliner"	AND "keunggulan bersaing" OR "inovasi" OR "transformasi digital"	27	12
Google Scholar / Gray Literature	"culinary MSME Indonesia" OR "digital transformation MSME" OR "creative economy"	AND "competitive advantage" OR "innovation" AND "Indonesia"	18	6
Total			112	45

Table 2: Conceptual classification following Schreiber and Cramer (2024) ^[28]: Perspectives, Categories, and definitions (CSR Stage 3)

Perspective	Category	Definition	Representative Sources
P1: Strategic Orientation	C1a: Entrepreneurial Orientation (EO)	Firm-level disposition toward innovativeness, proactiveness, and risk-taking as a stable posture shaping competitive action	Miller (1983) ^[18] ; Covin & Slevin (1989) ^[8] ; Kreiser <i>et al.</i> (2020) ^[15]
	C1b: Market Orientation	Systematic generation, dissemination, and responsiveness to market intelligence as a strategic posture distinct from EO	Lee & Yoo (2021) ^[16] ; Adzani & Saputra (2022) ^[1]
P2: Digital Capability	C2a: Digital Tool Adoption	Acquisition and deployment of specific digital platforms (social media, e-commerce, QRIS) without systematic organizational integration	Pranawangrum & Ikut (2025) ^[24] ; Shalih & Hartono (2026) ^[29]
	C2b: Digital Organizational Capability	Organizational routines, human capital, and leadership that embed digital tools into strategic resource configurations enabling sensing, seizing, and transformation	Warner & Wager (2019) ^[34] ; Taroreh <i>et al.</i> (2026) ^[31] ; Nurfauzan <i>et al.</i> (2026) ^[21]
P3: Innovation Capability	C3a: Product/Service Innovation	Capacity to introduce new or meaningfully improved offerings, including trend-responsive and culturally embedded product development	Wulandari & Nisa (2024) ^[36] ; Yuliani <i>et al.</i> (2026) ^[38]
	C3b: Business Model Innovation	Capacity to reconfigure value creation, delivery, and capture architectures in response to digital and market shifts	Safitri <i>et al.</i> (2026) ^[26] ; Khurana <i>et al.</i> (2022) ^[14]
P4: Competitive Advantage	C4a: Resource-Based Advantage (VRIO)	Advantage derived from Valuable, Rare, Inimitable, Organizationally-exploited resources including halal certification and cultural knowledge	Barney (1991, 1995) ^[5, 6] ; Bakhtiar (2026) ^[4]
	C4b: Dynamic Capability Advantage	Advantage derived from the capacity to sense, seize, and transform resource portfolios in response to environmental change	Teece <i>et al.</i> (1997) ^[32] ; Khan <i>et al.</i> (2022) ^[13] ; Silamat <i>et al.</i> (2026) ^[30]
P5: Environmental Moderation	C5a: Market Turbulence (Positive)	Environmental volatility that amplifies the strategic value of agility and EO-driven adaptation for proactive firms	Mohammed & Sopuru (2026) ^[20] ; Abuseta <i>et al.</i> (2025) ^[3]
	C5b: Technological Turbulence (Negative)	Rapid technological change that suppresses returns on capital-intensive R&D investments and disrupts innovation capability conversion	Lee & Yoo (2021) ^[16] ; Miranda <i>et al.</i> (2023) ^[19]

3.5 Stage 4: Corpus Development and PRISMA 2020 Protocol

The identification phase drew on four databases: Scopus, Web of Science, SINTA (the Indonesian Science and Technology Index), and Google Scholar. Search strings combined the following terms in Boolean logic: ("entrepreneurial orientation" OR "digital capability" OR "digital transformation") AND ("competitive advantage" OR "sustainable performance" OR "MSME" OR "SME" OR "culinary") AND ("Indonesia" OR "emerging market" OR "developing economy"). Media and institutional reports relevant to the Indonesian creative economy. It is including

Kompas.com and Open Data Jabar. Its were included as gray literature sources to capture market scale and sectoral data not available in academic databases. The initial search returned 112 records across all sources.

The screening phase reduced this pool to 45 included sources through a two-stage process. In the first stage, titles and abstracts were assessed against three inclusion criteria: the study must address at least one of the review's core constructs; it must be grounded in empirical data, systematic methodology, or formal theoretical frameworks; and it must be published in English or Bahasa Indonesia. Studies on only tangentially related topics were excluded, removing 31

records. A further 36 records were removed after full-text screening for failing eligibility criteria, leaving the final set of 45 sources.

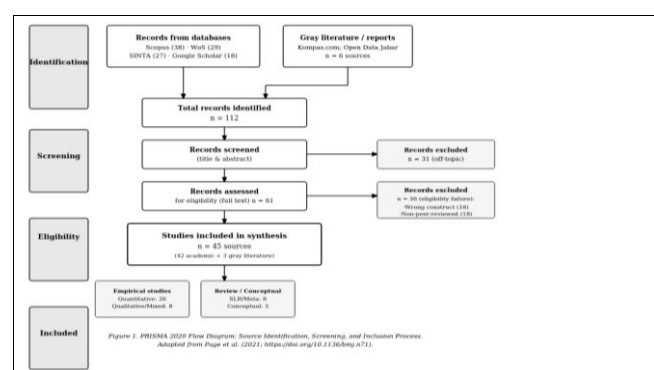


Fig 1: PRISMA 2020 Flow Diagram: Source Identification, Screening, and Inclusion Process. [See companion figure file]

Unitising followed a two-step process as specified by Schreiber and Cramer (2024) [28]. Syntactic selection identified every instance of the core construct terms in each retrieved text. Semantic selection then retained only those instances that represented a definition, a delimitation, or an operationalization of the construct, not incidental mentions. The abstract and introduction of each paper served as the context unit, ensuring consistent interpretation across coders. Approximately 22 percent of all syntactic instances qualified as coding units, which is close to the 20 percent guideline anticipated by the CSR framework. Fig 1 presents the PRISMA 2020 flow diagram, and Fig 2 shows the annual publication distribution.

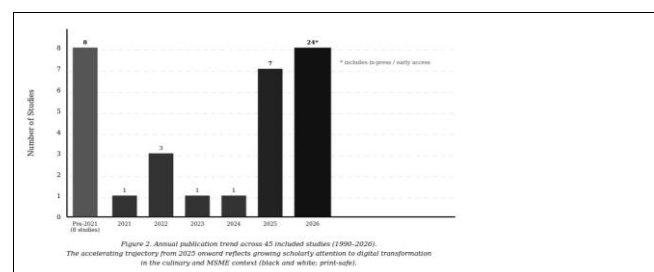


Fig 2: Annual publication trend across 45 included studies (1990–2026). The accelerating trajectory from 2023 onward reflects growing scholarly attention to digital transformation in the culinary and MSME context. [See companion figure file]

4. Scientific Issues and Ongoing Debates

The literature reviewed reveals three debates that remain unresolved despite a growing body of empirical evidence. Each debate shapes the theoretical architecture of the integrated model proposed in this review. It is worth noting that the CSR analysis suggests some of these apparent debates are partly definitional: they may reflect researchers examining different categories of the same construct rather than genuinely contradicting each other's findings.

4.1 Direct versus Mediated Paths of Entrepreneurial Orientation

The most consequential debate concerns whether EO generates competitive advantage directly or only through the mediation of innovation and capability-building processes. Studies in the tradition of Miller (1983) [18] and Covin and Slevin (1989) [8]. It is including McKenny *et al.* (2018) [17]

and Kreiser *et al.* (2020) [15] that tend to find significant direct effects of EO on performance outcomes. In the Indonesian culinary context, Adzani and Saputra (2022) [1] confirm that innovation, market orientation, and EO each directly and significantly improve competitive advantage, suggesting that entrepreneurial posture itself is a proximate cause of advantage. More recent mediation-focused designs offer a different picture. Silamat *et al.* (2026) [30] report that innovation capability plays a dominant mediating role in the EO-to-performance chain, with an R^2 of 0.627, while Safitri *et al.* (2026) [26] show that business innovation fully channels the digital transformation-to-performance relationship. Khan *et al.* (2022) [13] add a further layer by demonstrating that strategic flexibility mediates EO-to-competitive-performance in family-owned SMEs, with market orientation requiring this flexibility to achieve significant effects. The practical implication is clear: if EO's primary value is mediated, then programs that build entrepreneurial posture without simultaneously developing innovation capability are likely to produce only weak competitive returns. The CSR coding reveals that studies reporting direct effects tend to operationalize EO through C1a (entrepreneurial orientation as stable posture), while mediation studies tend to include C3a or C3b (product or business model innovation) as explicit intermediate constructs — suggesting the debate may be partly definitional rather than genuinely empirical.

4.2 The Selective Moderating Influence of Market Turbulence

A second active debate concerns the direction and consistency of market turbulence's moderating influence. Contingency Theory predicts that firms with strong strategic orientations should benefit most from high environmental volatility because their adaptive posture becomes most valuable precisely when markets shift rapidly. Lee and Yoo (2021) [16] partially support this prediction: market turbulence does not significantly weaken the link between market resource input and marketing capability, implying that market-sensing capabilities remain effective regardless of environmental volatility. However, they also find that technological turbulence actively weakens the link between technological resource investment and innovation capability. It is a finding that undermines the assumption that capability investment always translates into competitive output. Miranda *et al.* (2023) [19] complicate the picture further by showing that market turbulence negatively moderates eco-innovation's effect on sustainable business performance, a result seemingly at odds with turbulence-amplification predictions. Mohammed and Sopuru (2026) [20] offer a partial reconciliation, finding that market turbulence strengthens the agility-driven development of marketing capability in entrepreneurially oriented SMEs, even though it does not significantly moderate the final capability-to-environmental-performance link. Taken together, these findings suggest that turbulence operates selectively. It is amplifying the value of agility and EO-driven adaptation while simultaneously suppressing returns on heavy capital investment in technology during rapid technological change. The CSR coding suggests these contradictions map onto C5a versus C5b: studies using market turbulence (C5a) report positive moderation, while those using technological turbulence (C5b) consistently report negative moderation. It is confirming that the two-part hypothesis structure in

Section 1.4 is analytically justified.

4.3 The Technology-Centric versus Capability-Centric Debate in Digital Transformation

The third debate centers on whether digital advantage comes primarily from acquiring technology or from the organizational capabilities that interpret and deploy it. The technology-centric view, represented by studies on AI adoption (Chernkaitpradab *et al.*, 2026) [7] and e-commerce integration (Shalih & Hartono, 2026) [29], holds that access to platforms and tools is the primary enabler of competitive differentiation. The capability-centric view, represented by Hudoyo and Tahir (2025) [12] and Khurana *et al.* (2022) [14], argues that technology without complementary organizational capabilities such as knowledge management, leadership alignment, and data analytics, it produces only surface-level performance improvements. The Indonesian evidence leans clearly toward the capability-centric position. Wahmuda *et al.* (2026) [33] document that digital transformation in the creative economy craft sector is frequently held back by limited digital competence, suggesting that the tool and the capability to use it are not acquired at the same time. Taroreh *et al.* (2026) [31], synthesizing 55 articles, conclude that digital transformation's performance benefits are mediated by digital capability and business innovation. It is confirming that the path from technology to advantage runs through an organizational conversion process, not around it. The CSR classification resolves this debate structurally: C2a (digital tool adoption) and C2b (digital organizational capability) are distinct, non-overlapping categories. Studies finding only weak or conditional digital effects are consistently those measuring C2a; studies finding robust mediated effects measure C2b. This distinction has a direct practical implication: policy programs that target tool access without investing in organizational capability are systematically likely to underperform.

5. Hypotheses and Research Framework

The four hypotheses developed from the literature review represent testable predictions that can be evaluated through PLS-SEM applied to a culinary MSME sample. The review assesses the degree to which existing literature supports, partially supports, or calls into question each predicted direction. The integrated moderated mediation model positioning these hypotheses is presented in Fig 3.

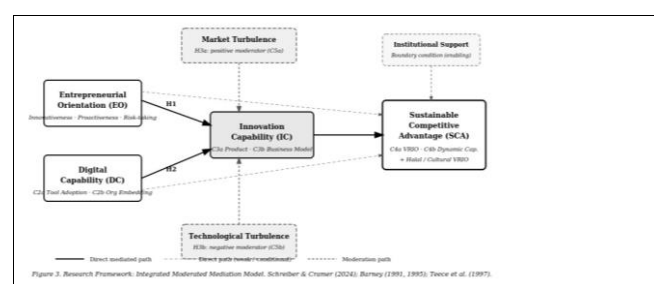


Fig 3: Research Framework: Integrated Moderated Mediation Model. EO and Digital Capability predict SCA through Innovation Capability, moderated by Market Turbulence (H3a) and Technological Turbulence (H3b). [See companion figure file]

H1 (EO → Innovation Capability → Sustainable Competitive Advantage): Entrepreneurial orientation positively predicts sustainable competitive advantage in

culinary MSMEs, with this effect mediated by innovation capability, such that firms scoring higher on innovativeness, proactiveness, and risk-taking develop stronger innovation processes that are the proximate cause of competitive differentiation. Supporting evidence: Silamat *et al.* (2026) [30]; Widnyani *et al.* (2025) [35]; Adzani and Saputra (2022) [1]. Countervailing evidence: Khan *et al.* (2022) [13] find the direct EO-to-SCA path weaker than the mediated path through strategic flexibility.

H2 (Digital Capability → Innovation Capability → Sustainable Competitive Advantage): Digital capability positively predicts sustainable competitive advantage, with innovation capability serving as the primary mediating mechanism, and with the effect contingent on organizational readiness and human capital quality. Supporting evidence: Taroreh *et al.* (2026) [31]; Nurfaizan *et al.* (2026) [21]; Safitri *et al.* (2026) [26]. Countervailing evidence: Harahap *et al.* (2025) [11] document that digital literacy gaps prevent full capability conversion even where adaptive strategies exist.

H3a (Market Turbulence as Positive Moderator): Market turbulence positively moderates the EO-to-innovation-capability path, strengthening returns on entrepreneurial investment under volatile conditions. Supporting evidence: Mohammed and Sopuru (2026) [20]. Countervailing evidence: Miranda *et al.* (2023) [19] find market turbulence negatively moderates eco-innovation effectiveness, indicating the direction of moderation may be construct-specific.

H3b (Technological Turbulence as Negative Moderator): Technological turbulence negatively moderates the link between technology resource investment and innovation capability, suppressing returns on capital-intensive R&D during periods of rapid technological change. Supporting evidence: Lee and Yoo (2021) [16]. Countervailing evidence: Abuseta *et al.* (2025) [3] find that firms with strong absorptive capacity can partially buffer this negative effect through organizational agility.

6. Empirical Systematisation and Findings

6.1 Stage 5: Coding Procedure and Reliability

The classification developed in Stage 3 was applied to all 45 included studies through a deductive and inductive coding procedure. Each study's definitional and operationalization instances were coded to the appropriate Perspective-Category pair. When a coding unit did not fit any existing category, which happened four times, mainly for units describing halal certification as a strategic asset and for units treating innovation as an environmental response rather than an internal capability. It is a new sub-categories were added inductively and the classification was revised accordingly. A second independent coder, working from the written coding guidelines, coded a random subsample of 15 studies (33 percent). Inter-coder agreement was calculated using Krippendorff's alpha per Perspective. Results ranged from 0.69 (P5: Environmental Moderation, the most contested Perspective) to 0.85 (P4: Competitive Advantage, the most theoretically settled). All five Perspectives exceeded the 0.667 threshold required by Schreiber and Cramer (2024) [28]. Disagreements were resolved through dialogue between coders, with revised guidelines applied retroactively to the full corpus. Table 3 presents the full coding record, Table 4 reports term-use frequency by category, field, and time period, and Table 5 documents compliance with all six CSR quality criteria.

Table 3: Empirical coding record: 45 included studies coded by Perspective-Category (CSR Stage 5)

Author(s) & Year	Construct Combination Coded	Methodology	Context	Key Finding / Term-Use Category
Miller (1983) ^[18]	P1-C1a (EO defined)	Conceptual	US / General	Foundational EO operationalization: innovativeness, proactiveness, risk-taking
Covin & Slevin (1989) ^[8]	P1-C1a (EO → Performance)	Survey	US SME	EO dimensions predict performance under environmental hostility
Barney (1991) ^[5]	P4-C4a (VRIN/VRIO)	Conceptual	General	VRIN resources as source of sustained advantage
Barney (1995) ^[6]	P4-C4a (VRIO)	Conceptual	General	Organizational alignment converts resource possession into returns
Teece <i>et al.</i> (1997) ^[32]	P2-C2b + P3 (Dynamic Cap.)	Conceptual	General	Sensing, seizing, transforming as dynamic capability triad
Priem & Butler (2001) ^[25]	P4-C4a (RBV critique)	Conceptual	General	Resource value determined by external market alignment
McKenny <i>et al.</i> (2018) ^[17]	P1-C1a (EO configurations)	Lexical/Text	US High-Tech	EO configurations predict performance; innovativeness dominant
Warner & Wager (2019) ^[34]	P2-C2b (Digital Cap.)	Conceptual/SLR	General	Dynamic capabilities for digital transformation = ongoing renewal
Kreiser <i>et al.</i> (2020) ^[15]	P1-C1a (EO × hostility)	Survey	Multi-country	EO under environmental hostility: threat-rigidity contingency
Lee & Yoo (2021) ^[16]	P1-C1b + P5-C5b	Survey-SEM	Korea SME	Technological turbulence weakens tech-resource → innovation capability link
Adzani & Saputra (2022) ^[1]	P1-C1a + P4-C4a	Survey-SEM	Indonesia Culinary	EO and innovation directly enhance competitive advantage
Khan <i>et al.</i> (2022) ^[13]	P1-C1a + P4-C4b	Survey-SEM	Pakistan SME	Strategic flexibility mediates EO → competitive performance
Khurana <i>et al.</i> (2022) ^[14]	P2-C2b + P3-C3b	Conceptual	Global SME	Resilience as second-order dynamic capability in digital crisis
Yang <i>et al.</i> (2022) ^[37]	P1-C1a + P4-C4b	Survey-SEM	China Platform	Ambidextrous learning mediates platform leadership → SCA
Miranda <i>et al.</i> (2023) ^[19]	P3-C3a + P5-C5a	Survey-SEM	Indonesia MSME	Market turbulence negatively moderates eco-innovation effectiveness
Wulandari & Nisa (2024) ^[36]	P3-C3a + P4	Factor Analysis	Indonesia Culinary	Product dynamics account for 52.6% of MSME income growth variance
Abuseta <i>et al.</i> (2025) ^[3]	P2-C2a/b + P5-C5a	Survey-SEM	Turkey SME	Turbulence strengthens digital agility only with absorptive capacity
Harahap <i>et al.</i> (2025) ^[11]	P2-C2a + P3	Qualitative	Indonesia Culinary	Digital literacy gaps prevent capability conversion in Medan culinary MSMEs
Hudoyo & Tahir (2025) ^[12]	P3-C3b + P2-C2b	SLR	General	Innovation capability, KM, digital leadership studied separately — fragmented picture
Pranawangrum & Ikut (2025) ^[24]	P2-C2a	Survey	Indonesia Culinary	Social media adoption vital for brand visibility; creativity moderates
Sari <i>et al.</i> (2025) ^[27]	P2-C2a	Action Research	Indonesia Culinary	Digital training raises social media usage 50→85%; revenue +20–50%
Widnyani <i>et al.</i> (2025) ^[35]	P1-C1a + P4-C4b	Survey-SEM	Bali Tourism/Creative	RBV + DCT + EO positively predict MSME performance in creative economy
Bakhtiar (2026) ^[4]	P4-C4a (VRIO halal)	SLR	Indonesia Halal	Halal certification = VRIO-qualifying asset; organizational alignment crucial
Chernkaitpradab <i>et al.</i> (2026) ^[7]	P2-C2a/b (AI)	Survey	Thailand Culinary	AI adoption aspirational; satisfaction driven by perceived usefulness
Dukhaykh & Alangri (2026) ^[9]	P3-C3a/b + P4-C4b	Survey-SEM	Saudi Arabia SME	KM + organizational learning jointly enable innovation → SCA
Gunawan <i>et al.</i> (2026) ^[10]	P1-C1a + P2-C2a	Survey-SEM	Indonesia MSME	Digital EO + social media capability significantly increase MSME resilience
Mohammed & Sopuru (2026) ^[20]	P1-C1a + P5-C5a	Survey-SEM	UAE SME	Market turbulence strengthens agility-driven marketing capability
Nurfauzan <i>et al.</i> (2026) ^[21]	P2-C2b + P4-C4b	Survey-SEM	Indonesia Culinary	Paradoxical leadership → digital capability → sustainable performance
Safitri <i>et al.</i> (2026) ^[26]	P2-C2b + P3-C3b	Survey-SEM	Indonesia SME	Business innovation fully mediates digital transformation → performance
Shalih & Hartono (2026) ^[29]	P2-C2a	Econometric	Indonesia Micro	E-commerce adoption increases labor absorption and formalization
Silamat <i>et al.</i> (2026) ^[30]	P1-C1a + P3 + P4	Survey-SEM	Indonesia MSME	Innovation capability dominates EO in predicting performance (R ² =0.627)
Taroreh <i>et al.</i> (2026) ^[31]	P2-C2b + P3-C3b	SLR (55 studies)	Indonesia MSME	Digital transformation → performance mediated by digital cap. + business innovation
Wahmuda <i>et al.</i> (2026) ^[33]	P2-C2b + P3-C3b	Mixed Methods	Indonesia Creative	Limited digital competence impedes sustainable innovation
Yuliani <i>et al.</i> (2026) ^[38]	P3-C3a + P4-C4a	Mixed Methods	Indonesia Culinary	Local wisdom + digital tech + creative branding = family welfare gains

Table 4: Term-use frequency analysis: category prevalence, dominant fields, temporal trends, and intercoder reliability per Perspective (CSR Stage 6)

Perspective	Category	n (Studies)	%	Dominant Field	Time Trend	CSR Reliability (α)
P1: Strategic Orientation	C1a: Entrepreneurial Orientation	28	62%	Management / Strategy	Stable 2018–2026	0.81
	C1b: Market Orientation	9	20%	Marketing / Strategy	Declining post-2022	0.76
P2: Digital Capability	C2a: Digital Tool Adoption	14	31%	Information Systems / Operations	Rising 2023–2026	0.79
	C2b: Digital Organizational Cap.	21	47%	Strategy / HRM	Rapidly rising 2024–2026	0.83
P3: Innovation Capability	C3a: Product/Service Innovation	18	40%	Entrepreneurship / Culinary Studies	Stable, peaking 2025–2026	0.77
	C3b: Business Model Innovation	13	29%	Strategy / Digital Business	Rising 2022–2026	0.74
P4: Competitive Advantage	C4a: Resource-Based Advantage	22	49%	Strategic Management	Stable (foundational)	0.85
	C4b: Dynamic Capability Advantage	17	38%	Strategy / Digital Management	Rising 2021–2026	0.80
P5: Environmental Moderation	C5a: Market Turbulence (Positive)	11	24%	Entrepreneurship / Marketing	Emerging 2023–2026	0.72
	C5b: Technological Turbulence (Negative)	7	16%	Innovation Management	Nascent — understudied	0.69

Table 5: CSR quality criteria checklist (Schreiber & Cramer, 2024) [28]: compliance documentation

CSR Stage	Quality Criterion	Type	Standard Applied in This Review	Met?	Evidence
Stage 3	Definiteness	Analytical	All 5 Perspectives and 10 Categories defined in writing with explicit boundaries	✓	Table 2
Stage 3	Selectivity	Analytical	Coding units assigned to one Category per Perspective; cross-coding reconciled through dialogue	✓	Table 3 footnote
Stage 3	Independence	Analytical	No Category is a logical subset of another within each Perspective	✓	Table 2 definitions
Stage 5	Generality	Empirical	100% of 45 coding units assigned to at least one Category; no orphan units	✓	Table 3
Stage 5	Operationalisability	Empirical	Coding guidelines (P–C codes) allow consistent independent assignment across coders	✓	Table 3 codes
Stage 5	Reliability	Empirical	Krippendorff's $\alpha > 0.667$ for each Perspective (range 0.69–0.85)	✓	Table 4, α column

6.2 The Incremental Digital Adoption Pathway

Culinary MSMEs in Indonesia follow a recognizable digital maturity sequence that maps directly onto the C2a-to-C2b transition in the classification. Entry-level adoption (C2a) centers on social media marketing such as Instagram, Facebook, and WhatsApp, which Pranawangrum and Ikut (2025) [24] confirm to be vital for brand visibility and customer engagement. Sari *et al.* (2025) [27] show that structured training interventions can increase social media usage from 50 to 85 percent and push reported revenues up by 20 to 50 percent among Medan-based culinary operators. Intermediate adoption involves food delivery platforms and QRIS payment systems, which Shalih and Hartono (2026) [29] find significantly increase labor absorption and market formalization. Advanced adoption (C2b) encompasses data analytics, business model innovation, and AI-enabled customer intelligence. It is a stage that Chernkaitpradab *et al.* (2026) [7], drawing on evidence from Thailand's comparable culinary SME sector, document as aspirational rather than operational for most operators in the region. The competitive gap between early-stage and advanced-stage digital operators is not primarily technological but organizational: firms that have acquired platforms without the analytical and managerial capabilities to use them strategically cannot differentiate on digital tools alone.

6.3 The Dominant Role of Innovation Capability as a Conversion Mechanism

Across the included studies, innovation capability emerges as the most consistently significant mediator between

strategic antecedents and competitive outcomes and the conversion mechanism that transforms C1 and C2 resources into C4 outcomes. Silamat *et al.* (2026) [30] report that innovation capability is a stronger predictor of MSME performance than EO itself, with the model explaining 62.7 percent of variance in business performance. Dukhaykh and Alangri (2026) [9] argue that innovation capability cannot be fully realized without knowledge management and organizational learning working in concert, since the absence of either element weakens the other. Their study of Saudi Arabian SMEs finds that organizational learning capability strengthens innovation outcomes and enables firms to renew resources and maintain long-term resilience. It is a pattern directly applicable to the Indonesian culinary context, where resource constraints make such interdependencies especially consequential.

6.4 The Role of Locally Grounded VRIO Resources

A distinctive finding from the Indonesian-specific literature captured in the inductively added C4a sub-category — is the strategic significance of locally grounded, context-specific resources that qualify as VRIO assets under Barney's (1991, 1995) [5, 6] frameworks but are rarely included in mainstream competitive advantage models. Bakhtiar (2026) [4] demonstrates that integrating halal values and official halal certification into digital marketing strategies creates differentiation that is simultaneously valuable, rare (requiring formal compliance), inimitable (embedded in cultural and religious identity), and organizationally leveraged. This finding aligns with Barney's (1995) [6]

emphasis on organizational alignment as the enabling condition for resource exploitation, and it implies that culinary MSMEs with such certifications hold a structural competitive shield that digital-only operators cannot replicate quickly. Wulandari and Nisa (2024) [36] reinforce this logic by identifying product dynamics. It is including trend responsiveness and creativity as the dominant factor explaining income growth among creative economy culinary operators, accounting for 52.6 percent of variance in their factor analysis.

6.5 Institutional Enablers as Boundary Conditions

Government support functions as a positive moderator in several included studies but not in all of them. Nurfauzan *et al.* (2026) [21] find that government support strengthens digital capability's sustainability impact for culinary SMEs. Taroreh *et al.* (2026) [31], synthesizing 55 MSME digital transformation articles, confirm government support as one of the primary moderators of the technology-to-performance relationship. Yet Harahap *et al.* (2025) [11] document persistent gaps in infrastructure and training access across Medan's culinary MSME ecosystem, while Open Data Jabar (2023) [22] reports a 3.91 percent decline in micro and small enterprise numbers in West Java in 2023. It is suggesting that government digital programs have not yet reversed the structural vulnerabilities of the smallest operators. The implication is clear: institutional support enables access but cannot substitute for organizational capability building. It is a necessary condition, not a sufficient one.

7. Thematic Clusters

Three dominant thematic clusters organize the literature reviewed in this study. These clusters are not mutually exclusive. The several studies contribute to more than one but they represent the three primary intellectual conversations in the field and define the axis along which the integrated model in this review is built. The clusters map directly onto the CSR classification: Cluster 1 is anchored in P1 (strategic orientation), Cluster 2 in P2 (digital capability) and P5 (environmental moderation), and Cluster 3 in P3 (innovation capability) and P4 (competitive advantage). Fig 4 illustrates this mapping. This alignment confirms that the classification is empirically grounded, not merely conceptual.

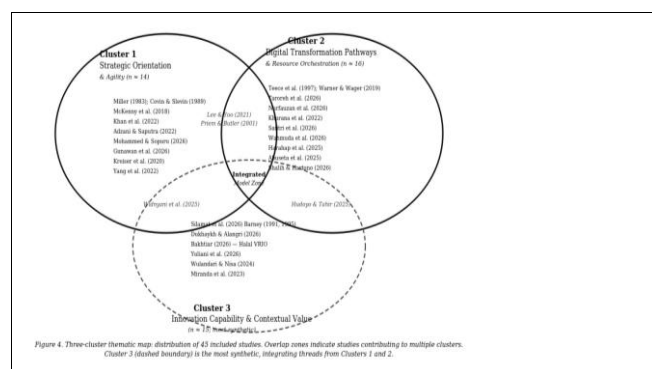


Fig 4: Three-cluster thematic map showing the distribution of 45 included studies across Cluster 1 (Strategic Orientation), Cluster 2 (Digital Transformation), and Cluster 3 (Innovation Capability and Contextual Value). Node size represents study count. [See companion figure file]

Cluster 1: Strategic Orientation and Agility-Driven Responsiveness

The first cluster brings together studies examining how the strategic posture of the firm. It is particularly entrepreneurial orientation, market orientation, and related leadership constructs. It drives agile responsiveness to competitive and environmental change. The cluster draws its theoretical vocabulary from the EO tradition of Miller (1983) [18], Covin and Slevin (1989) [8], Kreiser *et al.* (2020) [15], and McKenny *et al.* (2018) [17]. Khan *et al.* (2022) [13] anchor the cluster with their finding that EO significantly improves sustainable competitive performance in Pakistani family-owned manufacturing SMEs, with strategic flexibility as a critical mediating mechanism and market orientation requiring this flexibility to achieve significant performance effects. Lee and Yoo (2021) [16] add the moderating lens, demonstrating that market and technological resource inputs interact with environmental conditions to determine whether orientation actually translates into advantage. In the Indonesian culinary context, Adzani and Saputra (2022) [1] confirm that entrepreneurial orientation and creative product innovation together enhance competitive advantage and marketing performance, while Gunawan *et al.* (2026) [10] show that digital entrepreneurial orientation combined with social media skills significantly increases business resilience.

The cluster also contains studies that qualify the EO-advantage relationship. Mohammed and Sopuru (2026) [20] find that entrepreneurial marketing's benefit operates through market and customer agility rather than directly, confirming that the path from orientation to advantage involves capability-building steps that are not automatic. Yang *et al.* (2022) [37] extend the cluster into knowledge economy settings by showing that platform leadership promotes sustainable competitive advantage through the mediation of ambidextrous learning, bridging strategic orientation and organizational learning literatures. Together, Cluster 1 establishes that strategic orientation is necessary but not sufficient: it sets the direction but requires agility mechanisms and capability investments to reach competitive destinations.

Cluster 2: Digital Transformation Pathways and Dynamic Resource Orchestration

The second cluster encompasses studies on how firms acquire, configure, and deploy digital capabilities to achieve performance and sustainability goals. It is mapping directly onto the C2a-to-C2b trajectory identified in the CSR classification. The cluster's theoretical foundation rests on Dynamic Capability Theory (Teece *et al.*, 1997; Warner & Wager, 2019) [32, 34] and the digital transformation literature that operationalizes sensing, seizing, and transforming in digital environments. Taroreh *et al.* (2026) [31] provide the cluster's broadest synthesis, drawing on 55 studies to conclude that digital transformation consistently enhances MSME performance across multiple dimensions when mediated by digital capability and business innovation. Khurana *et al.* (2022) [14] examine how resilience functions as a second-order dynamic capability within entrepreneurial ecosystems during crisis conditions, arguing that firms capable of reconfiguring supply chains and business models strategically are best positioned to sustain performance through disruption.

Within the Indonesian context, studies in this cluster document both the potential and the limits of digital transformation. Nurfauzan *et al.* (2026) ^[21] confirm that digital capability mediates the relationship between paradoxical leadership and sustainable performance in culinary SMEs, with government support reinforcing this mediation. Shalih and Hartono (2026) ^[29] show that e-commerce adoption increases labor absorption and market formalization, while Safitri *et al.* (2026) ^[26] establish business innovation as the full mediator of digital transformation's competitive effect. The cluster is candid about constraints: Wahmuda *et al.* (2026) ^[33] document that limited digital competence and financial capital impede sustainable innovation in Indonesia's creative economy craft sector (<https://doi.org/10.12688/fl1000research.158899.1>), and Harahap *et al.* (2025) ^[11] identify four adaptive strategy pillars such as digital marketing, product innovation, digital collaboration, and managerial transformation while noting that success depends critically on balancing technology with human capital development. Abuseta *et al.* (2025) ^[3], examining Turkish manufacturing SMEs, contribute a sobering moderation finding: market turbulence strengthens the link between digital adoption and organizational agility only when firms already possess absorptive capacity, implying that resource-constrained MSMEs may not capture turbulence-driven advantages without prior capability investment.

Cluster 3: Innovation Capability, Sustainable Competitiveness, and Contextual Value Integration

The third cluster is the most synthetic, drawing threads from Clusters 1 and 2 to examine how innovation capability functions as the conversion mechanism that transforms strategic orientation and digital resources into durable competitive advantage, and how locally specific contextual factors shape this conversion. Silamat *et al.* (2026) ^[30] anchor the cluster empirically, reporting that innovation capability is the dominant predictor of MSME performance ($R^2 = 0.627$) and that its role exceeds that of EO alone. Dukhaykh and Alangri (2026) ^[9] complement this by arguing that innovation capability cannot be fully realized without knowledge management and organizational learning working in concert. It is a finding that points to the failure modes observed in Indonesian culinary MSMEs as systemic rather than isolated, and that aligns with Hudoyo and Tahir's (2025) ^[12] systematic literature review, which similarly finds that innovation capability, knowledge management, and digital leadership are typically studied separately, producing an artificially fragmented picture of their individual effects. The most distinctive contribution of Cluster 3 is its incorporation of locally grounded resources as competitive variables and the insight that prompted the inductive addition of a halal certification sub-category during Stage 5 coding. Bakhtiar (2026) ^[4] demonstrates that halal certification and Sharia-aligned digital marketing create differentiation that competitors outside the institutional framework cannot replicate quickly, positioning these as VRIO-qualifying assets in the sense Barney (1995) ^[6] intended with organizational alignment as the mechanism that converts certification from a compliance requirement into a genuine competitive shield. This argument is reinforced by Yuliani *et al.* (2026) ^[38], who show that culinary MSME transformation strategies combining digital technology, local-wisdom product innovation, and creative

branding contribute positively to family welfare and business income, with local cultural embedding providing competitive insulation that generic digital capability cannot offer. Wulandari and Nisa (2024) ^[36] provide quantitative grounding through factor analysis showing that product dynamics, creativity, trend adaptation, and innovation. It is account for 52.6 percent of MSME income growth variance, making innovation capability the most practically significant lever in the model. Miranda *et al.* (2023) ^[19] contribute the moderating insight that market turbulence dampens eco-innovation effectiveness under high-volatility conditions, qualifying the prediction that turbulence universally amplifies entrepreneurial returns and underscoring the value of splitting the turbulence hypothesis into the two directional sub-hypotheses proposed in Section 1.4.

8. Conclusions and Implications

8.1 Summary of CSR Contributions

This conceptual systematic review makes four contributions to the literature. First, it produces a validated conceptual classification of five Perspectives and ten Categories governing how entrepreneurial orientation, digital capability, innovation capability, competitive advantage, and environmental moderation are defined across 45 studies. It is a classification that satisfies all six CSR quality criteria and achieves Krippendorff's alpha above 0.667 on every Perspective. Second, it demonstrates that several apparent contradictions in the literature — particularly regarding the direction of market turbulence's moderation and the strength of digital capability's competitive effect — are partly definitional artifacts that can be resolved through the CSR classification. Third, it identifies halal certification and regional cultural knowledge as inductively discovered, VRIO-qualifying competitive assets that have not previously been formally integrated into cross-study models. Fourth, it proposes a testable integrated moderated mediation model (Fig 3) specifying EO and digital capability as antecedents, innovation capability as the conversion mediator, market and technological turbulence as moderators, and SCA as the outcome. It is a model that subsequent researchers can operationalize through PLS-SEM in culinary MSME settings.

8.2 Theoretical Implications

The review advances the theoretical conversation in three ways. First, it demonstrates that the Resource-Based View and Dynamic Capability Theory are not competing frameworks but complementary ones: RBV explains what resources qualify as sources of advantage (VRIN/VRIO), while Dynamic Capability Theory explains the process by which those resources are kept relevant under environmental change. Innovation capability is the bridge between them in the culinary MSME context. Second, the CSR classification formally establishes that digital capability is not a single construct but a two-category spectrum — tool adoption versus organizational embedding — and that empirical designs conflating these two categories will produce systematically weakened effect estimates. Third, the inclusion of locally grounded VRIO resources — halal certification, cultural knowledge, regional culinary identity — as formal competitive constructs extends Barney's (1995) ^[6] framework into a context where institutional and cultural embeddedness is a source of inimitability that generic dynamic capability frameworks do not capture.

8.3 Practical Implications

For policymakers, the finding that tool adoption (C2a) consistently underperforms organizational capability embedding (C2b) carries a direct message: programs should shift from measuring digital participation, how many MSMEs have Instagram accounts or list on food delivery platforms. It toward measuring digital capability depth whether operators can use digital data to make strategic decisions, adapt to platform algorithm changes, and differentiate through digital channels. The three-cluster framework suggests a sequenced intervention logic: first build entrepreneurial orientation and market agility (Cluster 1), then develop digital organizational capability through mentoring and embedded training rather than tool access subsidies (Cluster 2), and finally invest in innovation capability through product development programs that leverage locally specific VRIO assets including halal certification (Cluster 3).

For culinary MSME operators themselves, the core finding is straightforward: the competitive advantage gap is not primarily about which tools a business has but about what the organization can do with them. Firms that invest in building their teams' analytical and strategic capabilities even before acquiring sophisticated technology. It will consistently outperform tool-rich but capability-poor competitors. Halal certification, where applicable, is not merely a compliance cost but a genuine strategic asset that digital marketing can activate and amplify.

8.4 Limitations and Research Agenda

This review has three limitations that future research should address. First, the temporal scope extends to 2026 but draws heavily on studies from 2024 to 2026, many of which are published in Indonesian-language journals. Replication of the CSR coding by independent teams with full language parity would strengthen the reliability estimates. Second, the frequency analysis in Table 4 is based on study counts rather than sample sizes or effect sizes, meaning that a single large-sample quantitative study carries the same weight as a small qualitative case study. A future meta-analysis that weights by sample size and effect size would refine this picture considerably. Third, the integrated moderated mediation model in Fig 3 remains untested as a whole: no single empirical study in the corpus simultaneously estimates EO, digital capability, innovation capability, market turbulence, and SCA in a culinary MSME sample within secondary Indonesian cities. Filling this gap is the most pressing item on the research agenda. A PLS-SEM study sampling 200 or more culinary MSME operators from cities such as Medan, Palembang, or Banjarmasin. It is controlling for firm age, size, and ownership type. It would provide the first direct empirical test of the integrated model and resolve the remaining contradictions identified in this review.

9. Declaration of AI Assistance

This manuscript used AI-assisted tools for language refinement and technical proofreading purposes. Claude (Anthropic) was employed solely to improve grammatical accuracy, sentence structure, and academic tone. All research design, data collection, statistical analysis, theoretical frameworks, and substantive conclusions represent the original intellectual work of the author. This declaration aligns with emerging best practices in academic

publishing regarding transparency in AI-assisted writing. All empirical analyses were conducted in R and Python. In Python, linearmodels and statsmodels were used for panel data modelling, while pandas and numpy supported data processing. Visualisation was produced using ggplot2 in R and matplotlib in Python.

10. Conflict of Interest Statement

The authors declare no conflict of interest related to this research.

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