
Green Strategies, Digital Capabilities, and Stakeholder Value: Synthesizing RBV/NRBV and Dynamic Capability Perspectives on Sustainable Competitive Advantage

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Abstract

This research conducts a systematic literature review (SLR) to synthesize current knowledge on the role of corporate social responsibility (CSR), Environmental, Social, and Governance (ESG) practices, innovation, and digital transformation in shaping sustainable competitive advantage. Covering literature from 2000 to 2025, the review analyzes findings across industries and geographies to identify key mediators, moderators, and theoretical linkages. A comprehensive search strategy was employed across Scopus, Web of Science, and Google Scholar, following PRISMA guidelines. A total of 59 peer-reviewed articles met the inclusion criteria and were subjected to thematic analysis using frameworks informed by the Resource-Based View (RBV), Natural RBV (NRBV), Dynamic Capabilities, Stakeholder Theory, and Signaling Theory. Results indicate that CSR and ESG initiatives contribute to sustainable competitive advantage (SCA) primarily through mediators such as corporate reputation, service quality, and innovation, while digital transformation acts as an enabler that strengthens transparency, operational efficiency, and stakeholder engagement. Contextual moderators, including institutional trust, financing constraints, leadership diversity, and cultural factors, further condition these relationships. The review highlights methodological strengths (diverse designs, cross-industry evidence) and weaknesses (short-term focus, inconsistent measures, contextual narrowness). Theoretically, this review advances the RBV, NRBV, and dynamic capabilities frameworks, while integrating stakeholder and signaling theories to explain mechanisms of trust and legitimacy. Practically, it emphasizes the strategic integration of sustainability and digitalization as pathways to resilience and long-term competitiveness. The review concludes by identifying research gaps and calling for longitudinal, standardized, and context-sensitive studies to advance future scholarship.

Keywords: *Sustainable Competitive Advantage (SCA); Corporate Social Responsibility (CSR); Environmental, Social, and Governance (ESG); Innovation; Digital Transformation; Resource-Based View (RBV); Dynamic Capabilities*

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INTRODUCTION

Corporate Social Responsibility (CSR), ESG metrics, and green strategies are essential for establishing sustainable competitive advantages (SCA) across industries (Alam & Islam, 2021; Arabi, 2025; Boini & Tunguturi, 2025). Firms that effectively integrate these practices often improve their reputational capital, leading to enhanced customer loyalty, greater investor interest, and stronger employee engagement (Parray et al., 2024). Studies demonstrate that organizations committed to CSR principles frequently enjoy favorable consumer sentiment, resulting in increased sales and market share (Park et al., 2017; Srivastava, 2024). Alignment with stakeholder values not only strengthens brand loyalty but also attracts a workforce that prioritizes corporate ethics (Supriatna, 2025). Moreover, cultivating a green organizational culture can further reinforce sustainable practices and employee commitment (Aggarwal & Agarwala, 2025). Implementing green strategies can also reduce

operational costs through efficiencies and waste reductions, creating a dual outcome of environmental sustainability and economic viability (Hegab et al., 2023; C. Li et al., 2023). Additionally, firms adopting robust ESG practices benefit from improved financing conditions, as investors prefer companies with strong sustainability frameworks, which often translate into a lower cost of capital (Chang et al., 2022). Evidence also shows a positive correlation between high ESG ratings and superior stock performance, highlighting financial incentives for sustainable operations (Ben Ali & Chouaibi, 2024; Zhou et al., 2022). Similarly, in an emerging market context like Indonesia, comprehensive ESG disclosure has been linked to competitive advantages and improved firm performance (Lubis & Rokhim, 2021; Mohammad & Wasiuzzaman, 2021).

Digital transformation further strengthens firms' capacity for long-term competitiveness (Sui et al., 2024). Leveraging digital technologies enables organizations to improve operational efficiency, innovate business models, and swiftly adapt to changing market demands (Kumar, 2025; Syahnur, 2024). Research highlights that digitally transforming firms are better positioned to harness data analytics and advanced technologies for enhanced customer engagement and streamlined operations (Oladimeji & Owoade, 2024). This adaptability allows companies to capitalize on emerging opportunities, thereby reinforcing their competitive stance (Zhang et al., 2024). Furthermore, digital transformation supports sustainable practices by optimizing resource management and reducing waste. Evidence indicates that firms integrating digital solutions with sustainability enjoy broader market reach and improved supply chain capabilities (Oubrahim et al., 2023). For example, technologies such as cloud computing and the Internet of Things (IoT) facilitate real-time data collection and supply chain responsiveness, improving resource efficiency (Alonge et al., 2023).

Scope and Context:

Small and medium-sized enterprises (SMEs) in emerging markets often pursue and sustain competitive advantages differently than large firms in developed economies due to unique challenges and resource constraints. SMEs leverage local market knowledge, entrepreneurial agility, and community relationships, while larger firms benefit from economies of scale and established global networks. Studies show that market orientation and entrepreneurial orientation strongly influence SMEs' ability to maintain competitive advantage by fostering innovation and customer responsiveness (Elgarhy & Abou-Shouk, 2023; Yaqub et al., 2025). SMEs that cultivate innovation cultures adapt more quickly to shifting consumer preferences, a vital trait in volatile markets (N. Li & Abdullah, 2024). For instance, a SWOT analysis of Indonesian MSMEs highlighted aligning internal strengths with external green opportunities as key to SCA (Jatmiko et al., 2021). Dynamic capabilities are also central to SMEs' competitiveness, enabling them to adapt business models and strategies more rapidly than larger firms. Capabilities in knowledge sharing and innovation creation strengthen SMEs' value creation and sustain their advantage over time (Khraishi et al., 2023). These capabilities are critical in technology-intensive industries, where rapid adaptability is essential. In contrast, large firms in developed economies often exploit greater financial and technological resources, systematically embedding CSR into strategic frameworks to meet growing stakeholder expectations (Jamali & Karam, 2018). Such advantages, however, can create barriers for SMEs seeking to compete in the same markets.

Definitions and Theoretical Framing:

The notion of sustainable competitive advantage (SCA) in this review refers to a firm's ability to achieve and maintain superior performance relative to competitors through strategies that are durable and aligned with environmental and social sustainability. CSR encompasses voluntary corporate initiatives to meet societal and environmental obligations beyond compliance, whereas ESG denotes standardized criteria assessing a firm's environmental stewardship, social responsibility, and

governance practices. Digital transformation is defined as the adoption of digital technologies to fundamentally improve business processes, models, and stakeholder interactions. This review is informed by several theoretical perspectives: the Resource-Based View (RBV), which posits that valuable, rare, inimitable, non-substitutable resources underpin SCA; the Natural Resource-Based View (NRBV), which extends RBV to emphasize capabilities in environmental sustainability as sources of competitive advantage; and the Dynamic Capabilities (DC) framework, focusing on a firm's ability to integrate, reconfigure, and adapt resources in fast-changing environments. Additionally, Stakeholder Theory highlights the importance of meeting broader stakeholder interests for legitimacy and long-term success, and Signaling Theory explains how firms communicate their commitment to sustainability (e.g., through ESG disclosures) to build credibility and trust. These theories collectively frame our analysis of how green strategies and digital capabilities create stakeholder value and competitive advantage.

This systematic literature review is guided by four key research questions examining how CSR/ESG practices and green strategies contribute to sustainable competitive advantage (SCA) through mediating factors such as innovation and reputation; the ways innovation and dynamic capabilities serve as pathways to SCA in the context of sustainability and digital transformation; the role of digital transformation and knowledge-based resources in enhancing SCA alongside sustainability initiatives; and how contextual factors including institutional trust, financial constraints, leadership characteristics, and cultural norms moderate these relationships. By addressing these questions, the review seeks to advance understanding of the mechanisms linking sustainability-oriented strategies to competitive outcomes and to identify critical contingencies that impact these relationships, aiming to provide a novel integration of RBV/NRBV and dynamic capability perspectives with stakeholder and signaling theory insights. The novelty of this SLR lies in its holistic synthesis of disparate literature streams—bridging green strategy and resource-based perspectives with dynamic capabilities and stakeholder-focused views—to explain how firms can attain enduring competitive advantages that satisfy both economic and broader societal goals, with the expected contribution being a conceptual framework uniting these perspectives and practical implications for firms seeking to align sustainability and digitalization for long-term success. The remainder of the paper is organized as follows: Section 2 describes the SLR methodology; Section 3 outlines the key theories and proposes a conceptual framework; Section 4 presents synthesized findings across four thematic areas; Section 5 integrates findings and discusses implications; and Section 6 concludes with contributions and future research directions.

METHOD

Search Strategy

To effectively retrieve studies on the intersection of sustainability and competitive advantage, we employed a comprehensive search strategy across multiple scholarly databases. The primary search was conducted in Scopus (chosen for its extensive coverage of business and management journals), complemented by searches in Web of Science and Google Scholar to ensure no major relevant studies were overlooked. Boolean operators (AND, OR, NOT) were applied to refine the scope and capture relevant keyword variations. Key search strings included combinations such as:

Foundational query: (“Corporate Social Responsibility” OR CSR OR ESG OR “sustainable business practices”) AND (“sustainable competitive advantage” OR SCA) AND (digital OR “digital transformation” OR “digital strategy”).

Expanded query: (“sustainable competitive advantage” OR SCA OR “competitive edge”) AND (CSR OR ESG OR “sustainability practices” OR “social responsibility”) AND (“digital transformation” OR “digital innovation”).

Focused empirical query: (“sustainable competitive advantage” OR SCA) AND (CSR OR ESG OR “sustainability practices”) AND (“empirical study” OR “case study”) AND (digital OR innovation).

These structured queries were iteratively adjusted to ensure comprehensive retrieval of both empirical and conceptual studies across various industries and geographic contexts, while emphasizing recent developments (especially from the last decade). We restricted the initial search to literature published between 2000 and 2025 to capture both early foundational studies and the most up-to-date research. The search was conducted in English, and we focused on peer-reviewed journal articles, with conference papers and book chapters considered only if they were highly cited and directly relevant. As part of our iterative search process, reference lists of key papers were also scanned (backward snowballing), and citation searches were performed (forward snowballing) to uncover additional studies not captured by the database queries.

Eligibility Criteria

We defined inclusion and exclusion criteria to ensure that the literature reviewed was relevant and of high quality. Inclusion criteria were: (a) peer-reviewed journal articles (and select high-quality conference proceedings) published from 2000–2025; (b) studies addressing links between CSR or ESG (including related concepts like corporate sustainability, green strategy) and competitive advantage, or studies examining innovation/digital transformation in the context of sustaining competitive advantage; (c) studies that explicitly reference theoretical frameworks such as RBV/NRBV, dynamic capabilities, stakeholder theory, or signaling in relation to sustainable advantage; and (d) articles in English. Exclusion criteria were: (a) non-scholarly or non-peer-reviewed literature (magazine articles, opinion pieces, basic technical reports), (b) articles purely technical or engineering-focused with no clear connection to firm-level competitive strategy, and (c) studies that did not address sustainability or competitive advantage even if they mentioned CSR or digital transformation tangentially. We also excluded duplicate records and, when multiple studies by the same authors on very similar data existed, we included the most comprehensive or recent version to avoid overweighting certain findings.

These criteria ensured a balance between historical depth and contemporary relevance, focusing on studies that contribute directly to understanding sustainable competitive advantage. Through this filtering, we honed in on literature that not only spans multiple contexts (industries, countries) but also connects to our theoretical lens, thereby maintaining both breadth and focus.

Screening and Selection

The review followed PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to transparently report the study selection process. Figure 1 illustrates the PRISMA flow diagram of identification, screening, eligibility, and inclusion of studies.

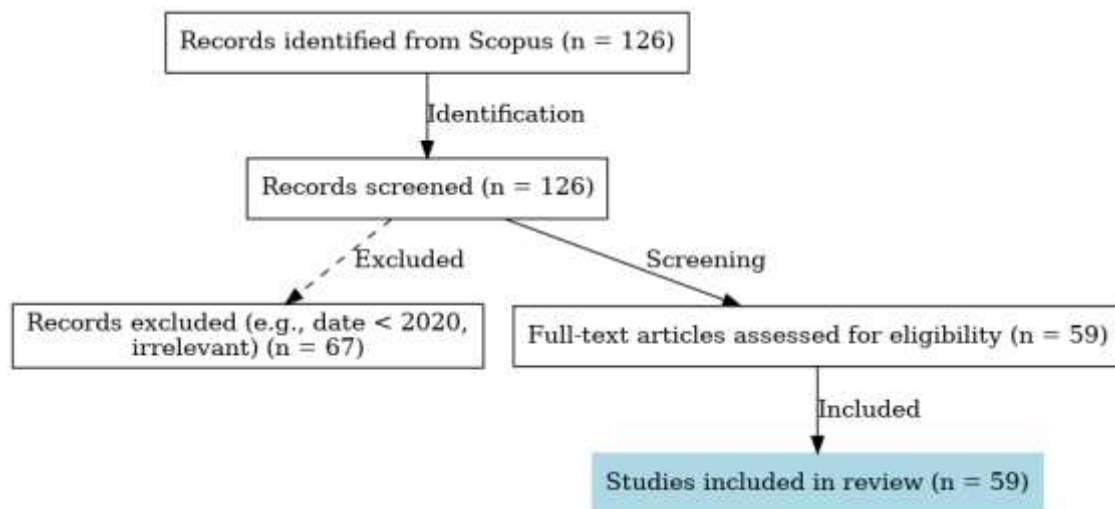


Figure 1: PRISMA flow diagram illustrating the screening and selection of studies.

Source: Results of the researcher's analysis (2025)

Identification: Our initial database search in Scopus yielded 126 records after removing obviously irrelevant titles and duplicates (no duplicate entries were found across databases in this case). Additional searches in Web of Science and Google Scholar did not substantially increase the count (any unique relevant references were later incorporated via snowballing).

Screening: We first screened the titles and abstracts of the 126 records against the inclusion criteria. Studies clearly outside the scope were excluded at this stage. For example, papers focusing solely on technical efficiency improvements with no CSR or strategic context were filtered out. We also applied a date filter here to exclude studies prior to 2000. This screening resulted in the exclusion of a substantial number of records – notably, a set of older studies (e.g., those before 2020 that did not address recent ESG practices) were set aside. In total, 67 records were excluded during title/abstract screening (for reasons such as being outside the time range, lacking relevance to SCA, or not being empirical/theoretical studies).

Eligibility: We obtained the full texts of the remaining 59 studies for detailed review. Each article was read to assess its methodology, theoretical grounding, and findings. We performed a quality appraisal (discussed below) during this full-text review. Articles that did not meet quality standards or did not substantially address the nexus of sustainability (CSR/ESG or innovation/digitalization) and competitive advantage were considered for exclusion. However, at this stage, all 59 full-text articles were deemed relevant and sufficiently rigorous to be included.

Inclusion: Ultimately, 59 studies were retained in the final synthesis. These represent the core dataset for our review. The included studies span various countries (from the US, Europe, and Asia to emerging economies), a range of industries (manufacturing, services, technology, etc.), and employ diverse research methods (quantitative surveys, case studies, meta-analyses, literature reviews). This final set of articles was systematically analyzed to extract themes, insights, and points of convergence or divergence, as reported in Section 4.

Quality Assessment

To ensure the reliability and validity of the review, we undertook a quality assessment of the studies included. Three key tools/frameworks guided this process:

PRISMA Checklist: We used PRISMA guidelines not only for reporting but also as a general quality benchmark to ensure our review process was thorough and transparent. For each study, we checked that objectives, methodology, and findings were clearly stated (this helped exclude papers that were vague or methodologically unsound).

CASP (Critical Appraisal Skills Programme): The CASP checklists for qualitative and quantitative studies were used to critically appraise each article. This involved examining whether the study had a clear research question, appropriate design, sound methodology (e.g., adequate sample size, validated measures, robust analysis), and justified conclusions. For example, in quantitative papers, we assessed whether key constructs like “competitive advantage” or “sustainability performance” were measured in a valid way.

AMSTAR (A Measurement Tool to Assess Systematic Reviews): For any meta-analyses or literature reviews among our sources, we applied the AMSTAR criteria to evaluate their rigor. This helped in weighting evidence from these studies appropriately in our synthesis.

Each study was rated on these aspects, and only studies that met basic quality thresholds (e.g., empirical studies with appropriate data analysis, conceptual papers with logical argumentation and connection to existing literature) were included in the thematic analysis. Overall, the use of these tools ensured comparability and minimized bias by filtering out low-quality evidence. As a result, the synthesis in subsequent sections is built upon a robust foundation of studies, giving confidence in the insights drawn about sustainability and competitive advantage.

RESULTS AND DISCUSSION

Integrating Insights into a Unified Framework for SCA

Our systematic review demonstrates that CSR/ESG practices, innovation, digitalization, and various contextual factors are deeply interconnected in shaping sustainable competitive advantage (SCA). To conceptualize this, one can imagine a unified framework with three interdependent pillars that drive SCA:

(1) **CSR/ESG as Foundational Drivers:** CSR and ESG initiatives form a base that enhances a firm’s brand reputation, builds stakeholder trust, and improves access to capital. They align business practices with societal values and ethical norms. In the long run, these initiatives act as both ethical imperatives and strategic assets, providing a license to operate and opportunities for differentiation. For instance, by achieving high ESG ratings or excelling in community engagement, companies may enjoy preferential treatment from investors (lower cost of capital) and stronger customer loyalty, thereby securing a foundation for long-term advantage.

(2) **Innovation as a Value-Creation Mechanism:** Innovation – especially responsible or sustainability-oriented innovation – translates these sustainability commitments into tangible outcomes such as new products, services, or processes that reinforce differentiation and efficiency. It’s the engine that converts intent into actual competitive offerings. For example, developing a new recyclable material or a carbon-efficient production process can set a firm apart from competitors. Our review highlighted that absorptive capacity (the ability to absorb and utilize external knowledge) both mediates and moderates this pillar, ensuring knowledge is effectively integrated and applied. Without innovation, CSR efforts can stagnate as mere compliance or PR; with innovation, they evolve into unique value propositions.

(3) **Digitalization as an Enabler:** Digital transformation acts as a cross-cutting enabler that strengthens both CSR and innovation efforts. Digital tools enhance transparency (e.g., blockchain for supply chain traceability), improve reputation management (social media engagement on CSR topics), and facilitate efficiency (AI and data analytics optimizing resource use). Through capabilities like big

data analytics and IoT, firms become more agile and responsive to stakeholder expectations. For example, real-time data from IoT sensors can help a company quickly adapt to reduce waste, directly improving both sustainability and cost competitiveness. Digitalization thus ties together the pillars by increasing the speed and scale at which CSR and innovation can impact the market.

These pillars operate within a contextual scaffold of moderators such as institutional trust, financing conditions, leadership diversity, and cultural/regulatory environments, as discussed in Section 4.4. The framework must account for feedback loops as well: success in one pillar can reinforce others. For instance, CSR-driven reputation gains (pillar 1) create goodwill that may ease stakeholder acceptance of innovations (pillar 2) or digital initiatives (pillar 3). Similarly, efficiencies from digitalization can free resources to invest in more CSR or R&D. In essence, the pillars are not siloed; they synergize.

Methodological Strengths and Weaknesses in SCA Research

Our review spanned a variety of studies with differing designs. Reflecting on the methodology of this body of research:

Strengths:

Diverse Research Designs: The literature includes quantitative surveys, longitudinal analyses, meta-analyses, case studies, and conceptual models. This triangulation is a strength, as it approaches the SCA question from multiple angles, enhancing validity. For example, broad cross-sectional surveys provide generalizability across industries, while in-depth case studies (like the Alibaba case) offer nuanced insights into mechanisms. Meta-analyses synthesize these insights, providing overall effect estimates. Collectively, this diversity helps build a richer understanding than any single method could.

Quantitative Rigor: Many studies employ advanced statistical techniques (SEM, multi-level modeling, necessary condition analysis, etc.), which lend rigor to testing complex relationships and mediation/moderation effects. Some use longitudinal or panel data (e.g., Fortune 500 ESG persistence studies) to address causality and timing, which is crucial in SCA research to distinguish short-term from sustained advantage. The use of control variables and large samples in various studies adds robustness to findings (for instance, studies controlling for firm size, industry, GDP per capita, etc., isolate the incremental effect of CSR or innovation on performance).

Cross-Industry and Cross-Geography Coverage: Evidence spans manufacturing, services, tech, SMEs, MNCs, and multiple countries (from the US and EU to China, Africa, and Latin America). This broad coverage enhances external validity – it suggests which findings are pervasive (e.g., reputation as a mediator is seen in both East and West) versus which are context-specific. It also shows policymakers that these issues matter globally, not just in one type of economy.

Weaknesses:

Short-Term Orientation: A significant portion of empirical studies is cross-sectional, measuring CSR engagement and performance (or competitive advantage proxy) at the same time. This static snapshot limits insight into how relationships play out over time or whether advantages truly persist (sustainability of advantage). SCA, by definition, is about durability, and cross-sectional designs cannot confirm durability. While some longitudinal studies exist, they are fewer. This short-term focus sometimes underestimates lag effects (e.g., an innovation might hurt short-term profits but yield long-term SCA, which cross-sectional data could miss).

Contextual Narrowness: Many studies focus on single industries or single countries, which, while providing depth, constrain generalizability. For instance, conclusions drawn from the banking sector in one country might not hold in manufacturing elsewhere. Our review noted that relatively fewer studies explicitly compared contexts in the same design (exceptions exist, like multi-country

meta-analyses). This silo approach can lead to fragmented findings, where each study finds something slightly different, leaving practitioners unclear on overall patterns. It also means potential interaction effects between variables and context are underexplored.

Measurement Challenges: Researchers use varied measures for key constructs. CSR performance is measured by everything from KLD/Refinitiv ESG scores to self-reported scales, which are not directly comparable. Competitive advantage is even more problematic – some use financial metrics (ROA, market share), others use perceptual competitive position, and others use composite indexes. Non-standardized ESG ratings (some emphasize environmental factors, others equally weigh social aspects, etc.) complicate meta-analysis or comparison. Furthermore, few studies measure “sustained” advantage *per se*; most use current performance as a proxy. This measurement inconsistency can produce seemingly conflicting results. Additionally, endogeneity (the issue that good firms might both do CSR and perform well for unobserved reasons) is often handled imperfectly – not all studies use techniques like instrumental variables or fixed-effects models to ensure causality.

In sum, while the SCA literature provides valuable insights, addressing its methodological limitations would further strengthen the evidence base. Future research should incorporate longitudinal designs to capture persistence, expand multi-context analyses to unpack contingencies, and work towards more standardized or clearly justified measures of core constructs (or at least triangulate with multiple measures).

Research Gaps and Inconsistencies

Building on the methodological critique, our review reveals several content gaps and inconsistencies that future research should address:

Lack of Unified Models: Few studies attempt to integrate CSR/ESG, digital transformation, and innovation into a single holistic framework. Most examine one dyad (e.g., CSR and performance) without the others, or maybe two factors but not the whole picture. This silo approach misses interaction effects – for example, how digital transformation might alter the CSR-performance link. We see a need for studies that model the simultaneous influence of multiple factors (CSR, innovation, digital, plus dynamic capabilities) on SCA to reflect reality, where firms do all these things in tandem. Conceptual work like the “sustainability-based view” is a start, but empirical validation is needed.

Contextual Variability Underexplored: As noted, results differ significantly by context (firm size, sector, geography). While our discussion qualitatively identified moderators, quantitative comparative research is sparse. Future studies should directly test differences: e.g., run the same survey in multiple countries or industries to formally compare coefficients. Or use multi-level modeling (firms nested in regions) to assess how country-level factors modify firm-level relationships. There's also little research on informal contexts (e.g., family firms vs. non-family firms, or informal economies) – how does that change the SCA equation?

Insufficient Longitudinal Studies: We reiterate the need for more longitudinal and even historical research. Some debates (like durability of sustainability-based advantages) can only be settled with time-series data. It would be valuable to see studies that track firms over, say, a decade: do early adopters of sustainability maintain an edge, or do competitors catch up? Are there “persistence factors” (like continuously evolving capabilities) that keep the advantage? Similarly, studies around shocks (like COVID-19 or recessions) could be done in retrospect to see if sustainability-oriented firms recovered faster and sustained an advantage post-shock.

Standardization Deficits: Ambiguity in definitions is an academic gap. “Sustainability” means different things across studies – some equate it to environmental practices, others include social aspects. “Digital transformation” is similarly broad (ranging from basic IT adoption to full business model change). And “competitive advantage” is often proxied by short-term performance or

subjective ratings. We need clearer, possibly sector-specific, definitions or at least acknowledgment of what is being measured. For competitive advantage, more use of relative measures (like market share relative to competitors, persistence of abnormal profits, etc.) would be useful to truly capture an edge, rather than just performance in isolation. Without such standardization, it's challenging to accumulate consistent evidence.

Addressing these gaps would push the field forward. For instance, a unified model could be tested by a large-scale project combining data on CSR (maybe from ESG databases), innovation (patents or R&D spend), and digital adoption (IT expenditure or digital index) with performance and context data, analyzed together – something feasible with big data approaches.

Another area of inconsistency is the directionality of effects: some studies see CSR lead to innovation, others see innovation lead to better CSR (through efficiencies). It's likely a virtuous cycle, but research hasn't conclusively untangled it. Case studies or temporal analyses could help clarify such bidirectional relationships.

Finally, another gap is psychological and behavioral mechanisms at the micro-level – we got hints (like employee pride mediating CSR to performance). More work linking individual or organizational behavior changes (like employee engagement, learning, customer perceptions) to the macro-competitive outcomes would enrich our understanding of how exactly these strategies translate to advantage.

Contributions to Theory-Building

Despite the gaps, our review advances several theoretical perspectives:

RBV/NRBV Expansion: We provide evidence that CSR and digital capabilities can be conceptualized as strategic resources in RBV terms – they are valuable, can be rare (not all firms authentically commit), inimitable (culture and stakeholder trust are hard to copy), and non-substitutable in markets that care about sustainability. This extends RBV by explicitly including non-traditional resources like a trustworthy reputation or a robust analytics capability as part of the resource arsenal leading to SCA. The NRBV is reinforced by many findings linking environmental practices to performance (through innovation and efficiency). Our synthesis suggests NRBV is highly relevant, but firms realize its benefits mostly through developing complementary capabilities (like innovation, DC). Thus, we theoretically enrich RBV/NRBV by integrating them: a firm needs both unique sustainability resources and the capability to refresh them over time.

Dynamic Capabilities Strengthening: The review strongly supports the notion that dynamic capabilities (DC) are essential to translate sustainability efforts into SCA. Absorptive capacity, learning, agility – these are dynamic capabilities that repeatedly appeared as mediators or moderators. By highlighting studies that show, for example, how absorptive capacity mediates innovation outcomes or how agility helps SMEs compete, we underscore that possessing resources is not enough – firms must continuously adapt them. This is a contribution to DC theory by situating it in the sustainability context: DC are the connective tissue that makes green strategies fruitful rather than one-off. We also see evidence that firms lacking certain DC (like flexibility or a data-driven culture) see weaker results, emphasizing DC theory's assertion that meta-capabilities determine how well operational capabilities (like CSR, tech adoption) can be utilized.

Stakeholder and Signaling Theories: Our integrated findings lend support to stakeholder theory by showing legitimacy and trust are pivotal. Many mediators (reputation, trust, purchase intention) are stakeholder reactions, aligning with the theory that attending to stakeholder needs underpins long-term success. We also see signaling theory in action: credible ESG disclosures, ESG assurance, and visible sustainability actions serve as signals that differentiate firms. For example, high-CSR firms buffered stock declines in crises – a market signal interpretation. This confirms that

part of achieving SCA is effectively signaling one's qualities to stakeholders. We contribute by clarifying that the strength of the signal and its credibility (e.g., third-party assurance, consistency over time) are critical – a nuance signaling theory can incorporate when applied to CSR. Additionally, some inconsistency in results can be explained by signaling theory: if stakeholders don't receive or trust the signal (like in low-trust contexts), the effect on SCA is lost.

In combination, these theoretical contributions offer an integrated view: sustainable competitive advantage arises not from one theory's domain but from a combination – resources/capabilities provide the potential, dynamic capabilities and innovation processes realize that potential, and stakeholder relations and signaling ensure that realization is recognized and rewarded in the market.

Our review, therefore, builds a case for a multi-theory approach to sustainable competitive advantage, where RBV, NRBV, DC, stakeholder, and signaling theories are not competing but complementary, each addressing a piece of the puzzle.

Contributions to Managerial Practice

From a practical perspective, the findings of this review suggest several strategic imperatives for managers seeking sustainable competitive advantage:

Strategic Integration: Managers must move beyond treating CSR or digital initiatives as side projects or cost centers. Instead, the evidence encourages integrating CSR, innovation, and digital transformation into a coherent core strategy. For example, sustainability goals should be embedded in innovation pipelines (every new product should ideally have a sustainability benefit), and digital investments should be aimed at both efficiency and transparency. Firms that treated sustainability and digitalization as central to their business model (rather than peripheral) showed resilience and adaptability. The implication is to ensure alignment – e.g., if a company's strategy is customer-centric, weave sustainability into customer value propositions, and use digital platforms to communicate and deliver that value.

Stakeholder Engagement: Across the board, engaging stakeholders emerged as key. Managers should leverage digital tools (social media, online forums, collaborative platforms) to actively involve customers, employees, communities, and investors in the CSR journey. This could mean co-creating sustainable innovations with customers, being transparent about operations to the public, or involving employees in volunteering and idea generation for CSR projects. Engagement builds buy-in, which boosts the impact of sustainability initiatives on loyalty and reputation. For instance, inviting customers to trace the supply chain of a product via a mobile app not only signals transparency but can increase customer trust and willingness to pay, reinforcing competitive advantage.

Building Resilience: The review underscored that dynamic capabilities and adaptability are crucial, especially in crises. Managers should invest in developing these capabilities – for example, by training staff in change management, encouraging knowledge sharing, and scenario planning for disruptions. The COVID-19 pandemic taught many firms that those which could pivot (to remote work, to new offerings, to supporting communities) fared better. Thus, as a practical step, building a culture and systems for agility (quick decision-making, flexible processes) is as important as specific investments in green tech or marketing. It's the combination that yields a sustained edge. Regularly updating risk assessments to include social/environmental risks and ensuring contingency plans integrate CSR (like community support during disasters) will prepare firms to use CSR as a resilience tool.

Context Sensitivity: Managers should perform a candid context analysis when devising sustainability strategies. This means understanding their unique environment – regulatory outlook, cultural attitudes, competitor behavior, and stakeholder expectations. For instance, if operating in a

region with skeptical consumers, a manager might implement third-party audits or certifications for their CSR programs to strengthen credibility. Or in a highly regulated industry, proactively exceeding regulations can differentiate the firm and perhaps help shape future standards (turning compliance into a competitive advantage rather than a burden). Tailoring approaches – perhaps emphasizing employee well-being in cultures valuing paternalism or emphasizing environmental innovation in markets where eco-consciousness is high – will likely yield better results than one-size-fits-all CSR programs. Essentially, managers should use context as a guide for where to focus sustainability efforts for maximum competitive payoff (be it product eco-innovation, community relations, transparency, etc.).

By following these practices, firms can avoid common pitfalls such as engaging in disjointed or insincere CSR that stakeholders ignore, or investing in innovation without support of culture, which might fail internally. Instead, they can aim for a virtuous cycle: integrated strategy drives authentic stakeholder engagement, which fosters loyalty and innovation, which in turn reinforces strategy.

The implications for policymakers are also noteworthy: fostering environments that reward sustainable practices (through awareness campaigns, incentives for green innovation, strengthening institutional trust and transparency) can amplify how much firms' sustainability efforts contribute to national competitive advantage. Policies that encourage standardized sustainability reporting or subsidize digital infrastructure indirectly support firms in the sustainability → SCA journey.

In conclusion, companies that strategically integrate sustainability and digitalization into their business model, actively engage stakeholders, remain adaptable, and tailor their actions to their context, are well-poised to convert these investments into durable competitive advantages.

CONCLUSION

This systematic literature review examined the multifaceted relationship between corporate social responsibility (CSR), ESG practices, innovation, digital transformation, and sustainable competitive advantage (SCA). The evidence suggests that while CSR and ESG initiatives can directly enhance reputation and stakeholder trust, their impact on SCA is most consistently realized through mediating factors such as innovation capability, service quality, and corporate reputation. Digital transformation emerges as a critical enabler, amplifying effectiveness through transparency and operational agility. Contextual moderators, including institutional trust, financing constraints, leadership diversity, and cultural norms, significantly shape these relationships. For instance, firms in high-trust environments derive greater benefits from CSR, while resource-constrained SMEs struggle unless sustainability is coupled with innovation. Additionally, inclusive leadership styles further enhance the integration of CSR into core strategy.

From a theoretical perspective, this review validates RBV and NRBV propositions that intangible resources, such as trusted brands and green technologies, can be sources of SCA when combined with dynamic capabilities to continuously reconfigure these resources. Meanwhile, stakeholder and signaling theories clarify how trust and legitimacy translate sustainable practices into sustained performance. Practically, managers must integrate CSR, innovation, and digitalization into coherent strategies, using digital analytics for eco-efficiency, engaging stakeholders in co-creation, and cultivating dynamic capabilities for resilience—as evidenced during COVID-19, when strong CSR reputations buffered against shocks.

Methodologically, the field requires longitudinal designs, standardized metrics, and multi-context comparisons to address current limitations in establishing causality. Ultimately, SCA is a dynamic construct co-created through the interplay of green strategies, digital capabilities, and

context-aware management, enabling firms to achieve profitability while contributing to broader societal well-being.

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