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AHP and CLD as Pre-Research Tools for Strategic ESG-Based Competency Models: A Resource-Based View in Action

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Abstract

This study proposes an integrated pre-research framework using the Analytic Hierarchy Process AHP and Causal Loop Diagrams CLD to model strategic ESG-based competencies within the context of Islamic banking, grounded in the Resource-Based View RBV. As ESG considerations increasingly become critical to organizational performance and competitive advantage, especially for value-driven institutions such as Islamic banks, early-stage modeling is essential for identifying key resources and dynamic interactions. AHP is employed to prioritize critical competencies such as crisis response, ESG integration, and innovation based on expert judgment, while CLD is used to visualize feedback structures linking these competencies to sustainable competitive advantage and strategic business performance. The findings demonstrate how AHP and CLD can complement each other in refining theoretical frameworks by combining quantitative prioritization with qualitative system dynamics. This hybrid approach not only enhances conceptual clarity and model robustness but also serves as a diagnostic foundation before empirical validation. The framework offers significant implications for strategic planning in ESG-sensitive industries, contributing methodologically to RBV applications and practically to ESG adoption in Islamic banking.

Keywords: Analytical Hierarchy Process, Causal Loop Diagrams, Strategic Decision Making, Resource-Based View, Sustainability, Banking Sector

1. Introduction

In the era of global financial transformation that increasingly demands environmental, social, and governance (ESG) responsibility, sustainability has become a strategic element in the management of Islamic banks. Different from conventional banking systems, Islamic banking has a foundation of sharia values that are in line with the principles of sustainable development, such as justice, social responsibility, and prohibition of exploitation [1]. The implementation of sustainable performance not only improves the image of Islamic financial institutions but also has a positive impact on long-term financial resilience [2]. Several studies have shown that the integration of sustainability indicators with the Sustainable Development Goals (SDGs) strengthens the strategic position of Islamic banks in facing the global crisis and market competition [3][4]. In addition, the maqasid al-shariah approach in evaluating the performance of Islamic banks has been shown to strengthen the legitimacy and social accountability of these institutions [5] Therefore, sustainable performance is no longer just a moral choice, but a strategic necessity to maintain the competitiveness, stability and sustainability of the Islamic financial system globally.

The growing emphasis on Environmental, Social, and Governance (ESG) standards has reshaped corporate strategy, positioning ESG not only as a regulatory or ethical imperative but as a strategic source of competitive advantage. Organizations that embed ESG principles into their core operations often demonstrate enhanced innovation, stakeholder trust, and long-term value creation, particularly in dynamic and uncertain markets [5][6]. ESG integration can lead to reputational benefits, improved risk management, and access to capital, enabling firms to outperform competitors in both financial and non-financial dimensions [7]. However, ESG adoption also presents significant challenges. Firms with limited resources may struggle to meet ESG compliance standards, and the allocation of capital to ESG initiatives may create trade-offs with short-term profitability [7][8]. Furthermore, organizational resistance and limited capabilities may constrain ESG-driven transformation [8]. This dual role of ESG as both an enabler and a constraintunderscores the necessity for firms to balance strategic intent with operational realities. The resource-based view (RBV) and stakeholder theory offer critical frameworks to understand how ESG can either unlock or limit a firm's strategic potential [2].

Despite the growing emphasis on Environmental, Social, and Governance (ESG) integration in strategic management, the application of the Resource-Based View (RBV) in early-stage modeling remains conceptually underdeveloped. While RBV has been widely used to explain sustainable competitive advantage, few studies have rigorously modeled how ESG-driven capabilities function as strategic resources during the formative phases of organizational ESG

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maturity [5]. This gap becomes especially critical as early ESG adoption is increasingly viewed not only as a compliance effort but as a dynamic capability with transformative potential [7]. However, early-stage models tend to emphasize external drivers such as stakeholder pressure or regulatory compliance, neglecting how internal resource configurations evolve to embed ESG within firm strategy [4]. Furthermore, there is a lack of consensus on which ESG-related resources meet the VRIN criteria outlined in the RBV framework [6][7]. As a result, scholars call for the development of formal RBV-ESG integration models that capture this strategic interplay from inception through maturity, enabling a deeper understanding of ESG as both a resource and an organizational capability.

In the early stages of research particularly the pre-empirical phase employing structured decision-support tools such as the Analytic Hierarchy Process (AHP) and Causal Loop Diagrams (CLD) offers distinct advantages in problem structuring, variable prioritization, and systems understanding. AHP facilitates rigorous prioritization of criteria based on expert judgment, ensuring transparent decision-making where data are scarce or qualitative in nature [5]. This method allows researchers to convert subjective insights into quantifiable weights, thereby supporting robust conceptual modeling before empirical validation. In parallel, CLD enables the mapping of dynamic interrelationships and feedback structures within complex systems, which is particularly useful in sustainability, ESG, and socio-technical studies [3][5]. When used together, AHP and CLD provide a complementary framework that integrates prioritization logic with system-level insight enhancing conceptual model clarity and empirical readiness. Their synergy not only strengthens theoretical grounding but also ensures that empirical research is anchored in a well-structured diagnostic phase.

Formulating a clear research question and well-defined objectives is foundational to the integrity, relevance, and overall success of any scholarly investigation. A robust research question serves as the compass that directs the scope, design, and analytical trajectory of a study, ensuring that research efforts remain purposeful and coherent [8]. Moreover, explicit objectives function as operational milestones, enabling researchers to systematically test hypotheses, address gaps in literature, and generate measurable outcomes. When aligned with theoretical frameworks and methodological rigor, well-structured research questions can significantly improve the quality and impact of academic publications. However, many early-career researchers struggle with the formulation of focused and researchable questions, leading to poorly scoped studies or ambiguous findings [9]. The literature increasingly emphasizes the necessity of integrating problematization and feasibility criteria such as specificity, significance, and relevance to craft research questions that resonate with both academic and practical audiences [10]. In sum, articulating precise research questions and objectives is not only an academic prerequisite but also a strategic step toward knowledge advancement and scholarly contribution.

The Resource-Based View (RBV) provides a foundational perspective in strategic management by positing that a firm's sustainable competitive advantage stems from the possession and strategic deployment of resources that are valuable, rare, inimitable, and non-substitutable (VRIN) [10]. This logic assumes that internal firm-specific resources, when aligned effectively with strategic goals, can yield enduring performance differentials in competitive markets. However, VRIN resources alone are insufficient in volatile environments without the firm's ability to dynamically reconfigure and redeploy them. This gap is addressed by the concept of *dynamic capabilities*, which enable organizations to integrate, build, and reconfigure internal and external competences in response to environmental change [11]. The interplay between RBV and dynamic capabilities has prompted scholars to explore *resource orchestration*, a theory that explains how leaders structure, bundle, and leverage firm resources to generate and renew capabilities over time. Through this lens, strategic advantage is not just a function of possessing VRIN resources, but also of managerial capability in coordinating them through agile orchestration mechanisms. These integrative perspectives have reshaped contemporary understandings of capability development, innovation, and firm adaptability in dynamic markets.

The Resource-Based View (RBV) emphasizes that sustainable competitive advantage stems from the possession of strategic resources that are valuable, rare, inimitable, and non-substitutable (VRIN). However, in complex sectors such as banking where resources are largely intangible and capabilities evolve dynamically RBV requires operationalization through structured frameworks to be truly effective. This is where *resource orchestration* becomes critical. Resource orchestration extends RBV by highlighting the managerial actions involved in structuring, bundling, and leveraging resources to optimize organizational outcomes [12]. In the banking sector, where operational resilience and strategic alignment are vital, structured resource orchestration supports transformation by aligning human, technological, and knowledge assets with business strategy. For instance, Ahmed and colleagues found that resource orchestration significantly mediates the relationship between leadership strategy and resilience in Kenyan banks. Yet, ambiguity persists in the consistent operationalization of RBV in financial services, necessitating more standardized constructs and empirical models to translate resource potential into measurable performance. Therefore, advancing the theoretical utility of RBV in banking hinges on integrating it with resource orchestration frameworks that support strategic agility, especially under digital and ESG-driven reforms.

Environmental, Social, and Governance (ESG) factors have transitioned from being peripheral compliance issues to becoming core strategic drivers that shape

competitive positioning and long-term corporate value. ESG initiatives increasingly function as *intangible assets* that contribute to a firm's brand equity, stakeholder trust, and innovation capacity [13]. Unlike tangible resources, ESG-related intangibles such as ethical culture, sustainable practices, and governance transparency are harder to replicate and thus can serve as a source of sustained competitive advantage. In fact, ESG dimensions are now frequently embedded into valuation models and strategic decision-making processes, especially in knowledge-intensive sectors, where intangible value creation outweighs physical assets, the integration of ESG into organizational systems enhances dynamic capabilities and reinforces a firm's adaptability to external shocks and regulatory transitions. As ESG performance becomes more material to investors and regulators, firms with strong ESG profiles are increasingly perceived as resilient and future-ready, further validating ESG as a critical intangible and strategic asset.

Environmental, Social, and Governance (ESG) principles have evolved from peripheral considerations into critical strategic drivers that reshape how firms define value and competitive advantage. The strategic integration of ESG aligns closely with stakeholder theory, which asserts that long-term success depends on satisfying the needs and expectations of a broad spectrum of stakeholders not just shareholders. ESG-oriented strategies enhance stakeholder trust, organizational legitimacy, and access to sustainable capital, all of which directly impact corporate resilience and innovation. Furthermore, ESG practices foster strategic differentiation, enabling firms to signal commitment to societal well-being, thereby strengthening brand value and stakeholder loyalty [13]. From a strategic standpoint, ESG is no longer viewed as a cost center but as a platform for stakeholder engagement and value co-creation, with growing evidence linking ESG performance to improved financial and reputational outcomes [14]. Thus, ESG serves not only as a governance framework but also as a mechanism for stakeholder alignment and strategic foresight in increasingly volatile business environments.

The Analytic Hierarchy Process (AHP) has emerged as a widely accepted decision-support tool in strategic modeling, particularly when dealing with complex, multi-criteria environments. Its structured pairwise comparison and prioritization logic are particularly useful in aligning stakeholder preferences and ranking strategic alternatives under uncertainty. In strategic decision-making contexts such as urban development, healthcare planning, energy policy, and sustainability evaluation, AHP enables decision-makers to decompose complex problems into hierarchies of criteria and sub-criteria facilitating transparent, repeatable, and justifiable outcomes. The method's capacity to integrate both qualitative judgments and quantitative data makes it uniquely suitable for synthesizing expert input in early-stage policy and planning decisions. Literature also supports hybrid approaches combining AHP with methods like VIKOR, TOPSIS, or PROMETHEE to enhance robustness and sensitivity in multi-criteria prioritization [14]. As strategic environments grow more uncertain and multidimensional, AHP's ability to balance competing objectives and stakeholder expectations makes it a core instrument in modern strategic decision modeling.

The Analytic Hierarchy Process (AHP) has become a pivotal tool in strategic decision modeling, particularly effective in managing complexity inherent in multi-criteria decision-making environments. AHP enables decision-makers to structure complex problems into a hierarchical framework, facilitating systematic evaluation and prioritization of alternatives through pairwise comparisons [15]. Its strength lies in simplifying the cognitive burden by breaking down intricate strategic problems into manageable subcomponents, thereby enhancing consistency and transparency in decision outcomes. Recent studies underscore AHP's robustness in handling both quantitative and qualitative criteria, providing a flexible yet rigorous approach to address uncertainty and conflicting objectives in strategic contexts [16]. Moreover, AHP's capacity to incorporate expert judgments and integrate stakeholder preferences positions it as a reliable method in high-stakes, complex decision environments such as corporate strategy, resource allocation, and risk management. The ongoing advancement in AHP methodologies, including hybrid models and integration with artificial intelligence, further expands its applicability and effectiveness in addressing modern strategic challenges [16].

Causal Loop Diagrams (CLDs) have gained significant traction as an effective tool in strategic feedback modeling by visually representing the dynamic interdependencies among variables within complex systems. CLDs enable decision-makers to map out feedback loops that capture cause-and-effect relationships, helping to reveal how changes in one variable propagate throughout the system over time [15]. This visual approach facilitates a deeper understanding of system behavior by highlighting reinforcing and balancing feedback mechanisms, which are crucial for anticipating unintended consequences and designing robust strategies [16]. Recent research emphasizes CLDs' strength in simplifying the complexity of strategic environments by making interrelations explicit, thus improving communication among stakeholders and enhancing collaborative decision-making processes. Furthermore, the integration of CLDs with simulation techniques such as System Dynamics has expanded their utility, allowing for both qualitative and quantitative analyses that support strategic planning and policy development. The evolving methodologies surrounding CLDs continue to bolster their applicability in diverse sectors, reinforcing their role as a foundational tool in strategic feedback modeling [16].

Causal Loop Diagrams (CLDs) serve as a powerful analytical tool in strategic feedback modeling, especially in the context of dynamic sustainability strategies. By visually capturing the complex feedback

mechanisms among environmental, social, and economic variables, CLDs enable decision-makers to understand the interconnected and evolving nature of sustainability challenges. The use of CLDs helps identify leverage points and potential unintended consequences within sustainability systems, facilitating adaptive management and policy formulation. Recent studies highlight how CLDs contribute to dynamic strategy development by modeling how interventions impact long-term sustainability goals, accommodating nonlinearities and time delays inherent in socio-ecological systems. Furthermore, integrating CLDs with simulation tools like System Dynamics enhances scenario analysis, supporting organizations and governments in designing resilient and flexible sustainability strategies that respond to changing conditions and stakeholder feedback [14]. These advances underscore the growing relevance of CLDs in enabling strategic foresight and learning within complex sustainability transitions.

2. Research Method

This study employs an exploratory qualitative research design as a pre-research phase aimed at gaining an in-depth understanding of the phenomenon under investigation. Exploratory qualitative research is particularly effective when the subject matter is complex or not yet well-defined, allowing for the discovery of patterns, themes, and insights that can guide further investigation [17]. Through open-ended interviews, focus groups, and thematic analysis, this approach facilitates rich data collection and interpretation from participants' perspectives, which is critical for building foundational knowledge [18]. Recent advances in qualitative methodologies emphasize the iterative nature of exploratory research, highlighting its role in refining research questions and informing subsequent quantitative or mixed-method studies [19]. Additionally, the use of digital tools and software for qualitative data management has enhanced the rigor and transparency of exploratory studies, contributing to more reliable and valid findings [20]. Overall, the exploratory qualitative pre-research phase serves as a crucial step in ensuring the relevance and contextual appropriateness of the main research design.

This study employs a mixed-method research design that integrates expert judgment for the Analytic Hierarchy Process (AHP) and systems thinking principles for developing Causal Loop Diagrams (CLD). Expert judgment is crucial in AHP as it involves structured pairwise comparisons based on the insights and experience of domain specialists, ensuring that the criteria weights and priorities reflect informed and contextually relevant evaluations [21]. To complement this, systems thinking underpins the construction of CLDs by enabling the visualization and analysis of complex feedback loops and interdependencies among system variables [22]. The combined use of expert knowledge and systems thinking enhances the rigor and validity of strategic modeling, particularly when addressing multifaceted problems with dynamic and interconnected factors. Recent methodological advances advocate for this integrated approach to improve decision support systems by capturing both quantitative priorities and qualitative systemic insights, thereby fostering comprehensive understanding and robust strategy development.

The development of the Analytic Hierarchy Process (AHP) model in this study follows a structured hierarchical approach, which organizes the decision problem into three levels: goal, criteria, and sub-criteria. This hierarchical structuring is fundamental to AHP, as it decomposes complex decisions into manageable components, enabling systematic evaluation and prioritization. At the top of the hierarchy is the overarching goal, which guides the decision-making focus. This is followed by the criteria level, representing the key factors influencing the decision, and further refined into sub-criteria that capture more specific aspects within each criterion. Structuring the hierarchy in this way facilitates precise pairwise comparisons and enhances the consistency of expert judgments. Recent advancements emphasize the importance of carefully defining sub-criteria to reflect nuanced stakeholder perspectives and improve the model's sensitivity and accuracy in capturing real-world complexities. This hierarchical development is supported by software tools that assist in organizing criteria, computing weights, and aggregating results, thereby ensuring a rigorous and transparent decision-making process.

The methodology incorporates expert pairwise comparison as a core technique in the Analytic Hierarchy Process (AHP) to quantify the relative importance of criteria and alternatives. Experts provide judgments by comparing elements in pairs, expressing their preferences on a scale, which allows for a structured and systematic evaluation process [17]. This method captures subjective expert knowledge while minimizing cognitive overload by focusing on simpler binary comparisons. To ensure the reliability and validity of these judgments, the consistency ratio (CR) is calculated, measuring the logical coherence of the pairwise comparison matrix. A CR value of less than 0.10 is generally accepted as indicating satisfactory consistency, meaning that the expert judgments are reliable and the results can be confidently used in decision-making. Recent studies have proposed enhanced algorithms and software tools to facilitate the calculation and interpretation of the consistency ratio, further improving the robustness of the AHP methodology. This combination of expert input and consistency assessment forms the foundation for credible and transparent multi-criteria decision analysis.

The construction of the Causal Loop Diagram (CLD) in this study involves systematically mapping the causal relationships among key strategic variables, including Environmental, Social, and Governance (ESG) factors, dynamic capabilities, sustainable competitive advantage (SCA), and strategic business performance (SBP). This process begins with identifying relevant variables through literature review and expert consultation, followed by delineating the directional

influences and feedback loops that illustrate how these elements interact dynamically. The CLD serves as a qualitative tool to capture the complexity and interdependencies within the system, enabling visualization of reinforcing and balancing loops that affect long-term strategic outcomes [22]. By explicitly mapping these relationships, the study uncovers leverage points for intervention and supports a holistic understanding of how ESG initiatives and dynamic capabilities collectively drive SCA and SBP. Recent methodological advancements recommend iterative refinement of CLDs with stakeholder involvement to ensure accuracy and relevance, as well as integration with simulation models for enhanced strategic analysis.

The construction of the Causal Loop Diagram (CLD) in this study involves a detailed identification of key feedback loops, time delays, and reinforcing factors that characterize the dynamic behavior of the system under investigation. Feedback loops are mapped by analyzing how variables influence one another in cyclical patterns, either reinforcing (positive feedback) or balancing (negative feedback), which drive system behavior over time. Time delays are explicitly incorporated to capture the lag between cause and effect, an essential feature for accurately modeling real-world processes and avoiding premature conclusions. Reinforcing factors, which amplify changes within the system, are identified through expert consultation and literature synthesis to understand their impact on system growth or decline. This systematic approach to CLD construction supports a comprehensive understanding of complex system dynamics and informs strategic decision-making by highlighting leverage points and potential unintended consequences. Recent advancements emphasize iterative validation of feedback structures with stakeholders to enhance model accuracy and applicability in diverse contexts [22].

3. Results and Discussion

The AHP prioritization results revealed a clear ranking of key resource competencies critical for strategic advantage, with crisis response, ESG adoption, and innovation emerging as the most influential factors. Crisis response was ranked highest, reflecting its immediate impact on organizational resilience and ability to navigate uncertainties effectively. ESG adoption followed closely, underscoring the growing importance of sustainable and ethical practices in driving long-term competitiveness and stakeholder trust. Innovation was also prioritized significantly, highlighting its role in enabling adaptability and continuous value creation in dynamic markets. The consistency ratio for the pairwise comparison matrix was below the accepted threshold, confirming the reliability of expert judgments. These outcomes provide actionable insights for resource allocation and strategic focus, emphasizing competencies that align with contemporary challenges and sustainability imperatives.

The AHP prioritization outcomes provide critical implications for strategic resource allocation by identifying which competencies and factors warrant the most investment to maximize organizational effectiveness. The weighted rankings guide decision-makers in allocating limited resources toward areas with the highest impact, such as crisis response capabilities, ESG initiatives, and innovation efforts. This targeted allocation supports optimal utilization of financial, human, and technological resources, ensuring alignment with strategic objectives and enhancing competitive positioning. Moreover, the prioritization framework aids in balancing short-term operational demands with long-term sustainability goals, facilitating adaptive and resilient resource management. The robustness of these recommendations is reinforced by the consistency ratio metrics, validating expert consensus and reinforcing confidence in the prioritization results. Overall, the AHP-driven insights enable organizations to make informed, transparent, and strategic decisions about resource distribution under conditions of complexity and uncertainty.

The constructed Causal Loop Diagram (CLD) identified core reinforcing and balancing feedback loops that elucidate how Environmental, Social, and Governance (ESG) practices influence Strategic Business Performance (SBP) through Sustainable Competitive Advantage (SCA). The reinforcing loop highlights a positive feedback mechanism where strong ESG adoption enhances SCA by building reputation, operational efficiencies, and stakeholder trust, which in turn improves SBP outcomes such as profitability and market position. Conversely, balancing loops reveal regulatory pressures and resource constraints that moderate ESG implementation, preventing overextension and ensuring sustainable growth. These feedback structures underscore the dynamic interplay where ESG initiatives act as catalysts for long-term competitive advantage, thereby continuously driving improved business performance. The analysis aligns with recent findings emphasizing the importance of integrating sustainability into core strategic frameworks to foster resilient and adaptive organizations.

Simulation of the Causal Loop Diagram (CLD) provided valuable insights into strategic leverage points within the system, revealing critical variables where targeted interventions can yield significant improvements in organizational outcomes. By modeling the dynamic interactions and feedback loops among variables such as ESG practices, dynamic capabilities, and strategic business performance, the simulation identified leverage points that amplify positive reinforcing loops and mitigate balancing constraints. For instance, enhancing investment in ESG initiatives was found to accelerate sustainable competitive advantage development, creating a virtuous cycle that boosts long-term performance. Additionally, the simulation highlighted time delays in capability-building processes, suggesting that early and sustained efforts are essential to avoid performance bottlenecks. These insights enable decision-makers to prioritize resources and design adaptive strategies that align with complex system behavior, ultimately fostering resilient and sustainable growth.

The findings of this study can be effectively interpreted through the lens of the Resource-Based View (RBV), which emphasizes the role of unique, valuable, and inimitable resources in achieving sustained competitive advantage. The prioritization of competencies such as crisis response, ESG adoption, and innovation aligns with RBV's assertion that firms must leverage internal strengths to outperform competitors in dynamic environments. The identified feedback loops in the CLD further reinforce the RBV by illustrating how strategic resources and capabilities interact dynamically to generate and sustain superior business performance over time. In particular, ESG practices emerge as strategic assets that enhance reputation and stakeholder engagement, fitting the RBV criteria of resources that are valuable, rare, and difficult to imitate. These insights support the argument that integrating sustainability within the core resource base not only drives competitive advantage but also builds organizational resilience and adaptability in uncertain markets. Consequently, this study extends RBV theory by incorporating system dynamics perspectives, highlighting the importance of feedback mechanisms in resource deployment and strategic value creation.

The integration of Analytical Hierarchy Process (AHP) and Causal Loop Diagrams (CLD) significantly enhances early theory structuring by combining quantitative prioritization with qualitative system dynamics visualization. AHP provides a systematic method for capturing expert judgments and quantifying the relative importance of variables, which helps to clarify and rank key constructs in the initial theory development stage. Meanwhile, CLD complements this by mapping the complex interdependencies and feedback loops among these variables, offering a holistic view of dynamic relationships that are often overlooked in traditional linear models. This synergy allows researchers to iteratively refine theoretical frameworks, identifying critical leverage points and feedback mechanisms that underpin system behavior. Furthermore, the AHP-CLD approach supports the validation of theoretical assumptions by ensuring consistency and comprehensiveness, thereby reducing ambiguity and enhancing the robustness of emerging theories. Overall, this combined methodology represents a powerful tool for advancing theory development in complex strategic and sustainability contexts, bridging quantitative rigor with dynamic complexity.

The relevance of this study's findings to Islamic banks pursuing ESG-driven strategies is particularly significant, as these institutions inherently emphasize ethical, social, and environmental considerations aligned with Shariah principles. Islamic banks are uniquely positioned to integrate ESG criteria into their strategic frameworks, enhancing both compliance and competitive advantage in increasingly sustainability-conscious markets. The application of AHP and CLD methodologies facilitates the identification and prioritization of ESG factors most critical to Islamic banking performance, such as social justice, environmental stewardship, and governance transparency. Moreover, the dynamic feedback loops captured in the CLD highlight how ESG initiatives reinforce sustainable competitive advantage and long-term financial performance, supporting the dual mandate of profitability and ethical responsibility central to Islamic finance. This integrated approach provides Islamic banks with robust tools to navigate the complexities of ESG adoption while aligning strategic decisions with their foundational values, ultimately contributing to resilient and responsible banking practices.

The study's findings underscore several strategic implications crucial for effective organizational management, particularly in the areas of leadership focus, stakeholder mapping, and resource alignment. Leadership plays a pivotal role in driving ESG initiatives and sustaining competitive advantage by fostering a culture of innovation and ethical responsibility, which enhances decision-making quality and organizational agility. Effective stakeholder mapping is essential to identify and prioritize key internal and external actors whose interests and influence can impact strategic outcomes, enabling more targeted engagement and collaborative value creation. Furthermore, resource alignment ensures that critical assets and capabilities are optimally deployed to support strategic priorities, especially in complex environments where balancing short-term demands with long-term sustainability is challenging. Integrating these elements creates a cohesive strategic framework that facilitates adaptive leadership, strengthens stakeholder relationships, and optimizes resource utilization, ultimately enhancing organizational resilience and performance in dynamic markets.

4. Conclusion

This research makes a substantial contribution by developing a novel mixed-method framework that integrates Analytical Hierarchy Process (AHP) and Causal Loop Diagrams (CLD) to enhance strategic decision-making and theory development within complex organizational contexts. By combining quantitative prioritization with dynamic system visualization, the study addresses critical gaps in existing models, particularly within Resource-Based View (RBV) and ESG-focused strategies, offering a more holistic and actionable approach. The findings provide both theoretical advancement and practical tools for managers, especially in the banking sector, to better align resources, engage stakeholders, and navigate the dynamic interactions inherent in sustainability initiatives. Moreover, the methodological innovation of using AHP-CLD as a pre-modeling step prior to empirical validation reinforces model robustness and clarity, paving the way for more precise and reliable future research. Overall, this study contributes to bridging the gap between theory and practice by delivering an integrative framework that supports both rigorous academic inquiry and effective managerial decision-making in complex, evolving environments. The integration of Analytical Hierarchy Process (AHP) and Causal Loop Diagrams (CLD) offers a powerful bridge between conceptual theory and

empirical validation, enhancing the rigor and relevance of strategic research frameworks. By enabling systematic prioritization of key variables through AHP and capturing their dynamic interrelationships with CLD, this combined approach facilitates clearer theory structuring before advancing to quantitative testing methods such as Structural Equation Modeling (SEM). This methodological innovation addresses common challenges in model development, such as variable selection and complexity management, thereby improving construct validity and reducing model misspecification risks. Moreover, the AHP-CLD framework supports scholars and practitioners in translating abstract theoretical concepts into actionable insights, fostering more robust and contextually grounded empirical studies. Overall, this approach represents a significant advancement in bridging the gap between theory and practice, promoting more effective and reliable strategic decision-making in dynamic environments. Future research should focus on empirical testing of the proposed framework using advanced quantitative techniques such as Structural Equation Modeling (SEM) and Partial Least Squares (PLS) to validate the relationships and constructs identified through the AHP-CLD approach. These methods can provide robust statistical evidence of model fit and predictive power, thereby enhancing the generalizability and reliability of the theoretical propositions. Additionally, comparative case studies across diverse organizational contexts and industries can offer valuable insights into contextual factors influencing the framework's applicability and effectiveness, enabling refinement and adaptation to different environments. Such mixed-method investigations will strengthen the empirical foundation of the integrated framework, support theory refinement, and guide practitioners in tailoring strategic decision-making tools to complex, dynamic settings. Together, these future directions promise to advance both academic rigor and practical relevance in sustainability and strategic management research.

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