International Journal of Islamic and Middle Eastern Finance and Management

Corporate culture and green environmental innovation: effects on Shariah financial performance

Soleh, Juliansyah Noor and Dini Arifian
Department of Management, La Tansa Mashiro University, Rangkasbitung, Indonesia

Received 22 October 2025
Revised 10 February 2026
Accepted 28 April 2026

Abstract

Purpose – This study aims to explore how corporate culture influences green environmental innovation and assesses its impact on Shariah financial performance within Islamic financial institutions.

Design/methodology/approach – A survey of 270 managers from institutions in Banten, Jakarta and West Java, Indonesia, was conducted. Data were analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM) to test relationships between four culture types – clan, adhocracy, hierarchy and market – green innovation dimensions (organizational practices, processes and products), and financial performance.

Findings – The results indicate that adhocracy and market culture significantly promote green innovation, while clan culture has a weaker yet positive effect. Conversely, hierarchy culture negatively affects all innovation dimensions. Green organizational practices, processes and products positively contribute to Shariah financial performance, suggesting that flexible and market-oriented cultures help align sustainability with financial objectives.

Practical implications – From a practical perspective, managers are encouraged to foster innovation-friendly environments, align market-driven incentives with environmental goals and revise rigid internal structures. Recommended mechanisms include cross-functional green teams, eco-compliance key performance indicators and integrating maqashid-al-shariah principles into environmental strategies.

Originality/value – This study advances the Islamic finance and sustainability literature by empirically connecting culture, innovation and performance, and offers practical strategies for embedding environmental innovation within Shariah-compliant financial operations.

Keywords Green environmental innovation, Clan, Adhocracy, Hierarchy, Market, Shariah financial performance

Paper type Research paper

1. Introduction

Green environmental innovation has the potential to make processes and products more energy efficient and reduce the use of green materials and energy, which is why many countries have laws that encourage businesses to use sustainable methods. However, despite these efforts, several firms have encountered significant challenges. Consequently, they have faced difficulties in attaining what Padilla-Lozano and Collazzo (2022) refer to as a "win-win" scenario, wherein environmental enhancements coincide with financial prosperity. This failure to generate both green and financial benefits has dampened some firms' motivation to pursue green environmental innovation (Roscoe *et al.*, 2019). This challenge becomes even more complex in Shariah-compliant financial institutions, where financial success is evaluated not only in terms of profitability but also in relation to ethical value creation and compliance with Islamic principles (Akhter *et al.*, 2023).

In Indonesia, the rise of Shariah-compliant financial institutions has added new dimensions to discussions around sustainability. These institutions operate under Islamic principles that promote ethical investment, environmental stewardship (*khalifah*) and social

International Journal of Islamic and Middle Eastern Finance and Management

1753-8394
DOI 10.1108/IMEFM-10-2025-0777

responsibility (*maslahah*) (Julia and Kassim, 2020). Accordingly, "Shariah Financial Performance" (SFP) cannot be understood as a mere replication of conventional accounting profitability (e.g. ROA or ROE), but rather as financial outcomes generated through activities that are consistent with Shariah objectives, ethical constraints and stakeholder welfare (Khan *et al.*, 2022; Khan *et al.*, 2024). While previous studies have explored the role of regulations, stakeholder influence and managerial orientation in driving green innovation (Arici and Uysal, 2021; Syamlan *et al.*, 2025), the theoretical mechanisms explaining how green environmental innovation contributes specifically to Shariah Financial Performance remain insufficiently articulated, particularly in emerging Islamic financial markets (Gürlek and Koseoglu, 2021).

From a theoretical standpoint, green environmental innovation may enhance Shariah Financial Performance through multiple interrelated channels. First, drawing on the resource-based view (RBV), green organizational practices, processes and products constitute firm-specific capabilities that can improve operational efficiency, reduce long-term costs and strengthen sustainable competitive advantage while remaining consistent with Shariah constraints (Barney, 2001; Liao, 2016; Gürlek and Koseoglu, 2021). Second, green innovation strengthens institutional legitimacy among regulators, customers and Shariah supervisory stakeholders by signaling adherence to ethical investment principles, environmental accountability and responsible governance (Julia and Kassim, 2020; Padilla-lozano and Collazzo, 2022). Third, green innovation operationalizes key *maqasid al-shariah* objectives – particularly the protection of wealth (*hifz al-mal*), life (*hifz al-nafs*) and the environment (*hifz al-bi'ah*) – thereby aligning economic performance with Islamic ethical imperatives and sustainability-oriented value creation (Chapra, 2016; Alhammadi *et al.*, 2022).

One area that remains underexplored is the role of corporate culture in improving environmental innovation (Iqbal, Akhtar *et al.*, 2021). Corporate culture, as a system of shared values and norms, plays a critical role in influencing organizational behavior and strategic decision-making. Despite its significance, limited research has been conducted to understand how different types of corporate culture – such as clan, adhocracy, hierarchy and market culture – drive the adoption and effectiveness of green environmental innovation. Furthermore, existing studies often treat financial performance in Islamic institutions as indistinguishable from conventional accounting outcomes, without clarifying whether financial improvements are achieved through Shariah-aligned value creation or merely labeled "Islamic" due to institutional identity.

In this study, Shariah Financial Performance is conceptualized as relative financial performance achieved by Shariah-compliant institutions through business activities that are consistent with Islamic ethical principles and sustainability objectives (Julia and Kassim, 2020; Chapra, 2016). While the empirical indicators employed rely on comparative financial performance measures commonly used in prior Islamic finance research – such as sales growth, market share and investment returns relative to competitors – (Wang, 2019; Menne *et al.*, 2022), these indicators are interpreted within a Shariah governance framework in which profit generation is constrained by ethical investment screening, risk-sharing principles and environmental responsibility (Hassan and Aliyu, 2018; Avdukic and Asutay, 2025). Thus, the "Shariah" dimension in this study does not merely reflect institutional labeling, but the performance implications of operating under Shariah governance and sustainability-oriented constraints, consistent with prior empirical approaches in Islamic finance literature (Julia and Kassim, 2020; Jan *et al.*, 2022).

This study addresses these gaps by investigating the influence of organizational culture on green environmental innovation, and how different dimensions of green innovation relate to Shariah financial performance within Indonesia's Islamic banking sector. By integrating the

competing values framework (Cameron and Quinn, 2011) and the RBV (Barney, 2018) with *maqasid al-shariah* principles, this study aims to provide a culturally grounded and contextually relevant understanding of how green environmental innovation contributes to financially sustainable and ethically compliant performance in Islamic financial institutions.

2. Literature review

Recent studies have increasingly examined the intersection between environmental innovation and Islamic finance in different contexts. For instance, Lee and Isa (2023) found that Shariah-compliant firms in Malaysia adopting environmental, social, and governance (ESG) practices were able to enhance their market reputation while simultaneously improving financial performance. Similarly, Alghafes *et al.* (2024) emphasized the importance of ESG-related factors in determining the financial stability of Islamic banks across Gulf Cooperation Council (GCC) countries. These studies suggest that Islamic financial institutions are not only pressured by regulatory requirements but also by shifting consumer preferences towards sustainable financial products.

However, much of the existing literature treats sustainability in Islamic finance as an extension of conventional ESG frameworks, without sufficiently grounding the analysis in Islamic ethical foundations such as Islamic Work Ethics (IWE), Shariah-based organizational behavior and the *maqasid al-shariah* (Dusuki and Abdullah, 2007; Beekun and Badawi, 2005; Ali and Owaihan, 2008). As a result, Islam is often used symbolically rather than analytically, limiting its explanatory power in understanding how sustainability-oriented strategies translate into Shariah Financial Performance (Hussain Khan *et al.*, 2021; Hassan and Aliyu, 2018).

2.1 Corporate culture

Corporate culture consists of a set of shared fundamental beliefs and assumptions developed by an organization to address internal cohesion and adapt to external changes (Bashir, 2022; Wang *et al.*, 2021; Provasnek *et al.*, 2017; Mady *et al.*, 2023). These core assumptions are not only widely accepted by the organization's members but are also continuously passed on to newcomers (Schein, 2016). In addition, corporate culture encompasses the values, norms and assumptions that guide decision-making and actions within the organization (Barney, 2001; Zheng *et al.*, 2023; Farzaa *et al.*, 2021; Arici and Uysal, 2021). Cameron and Quinn (2011) proposed a framework that classifies organizational culture into four distinct types, using two main dimensions: the balance between flexibility and stability, and the focus on internal versus external concerns (Nazarian *et al.*, 2017). For this study, Cameron and Quinn's (2011) classification will be adopted, dividing corporate culture into four categories: clan, adhocracy, hierarchy and market culture.

Within Islamic financial institutions, corporate culture is additionally shaped by IWE, which emphasize honesty, social responsibility, moderation and accountability to God (*taqwa*) (Beekun and Badawi, 2005; Ali and Owaihan, 2008). These ethical foundations influence organizational behavior by aligning economic objectives with moral obligations, thereby affecting how employees perceive innovation, competition and environmental responsibility (Yousef, 2001; Murtaza *et al.*, 2016). Shariah-based organizational behavior thus provides an important analytical lens for understanding how cultural values interact with strategic decisions in Islamic banking contexts (Dusuki and Abdullah, 2007; Kuanova *et al.*, 2021).

2.2 Green environmental innovation

Green environmental innovation involves creating and applying new or improved methods, systems, technologies or products designed to reduce or prevent damage to the environment

(Farzaa *et al.*, 2021; Iqbal *et al.*, 2021). Green environmental innovation can be categorized into three dimensions: green processes, green organizations and green products (Zhou *et al.*, 2021). In the context of Islamic banking, green environmental innovation should be reframed as *maqasid*-driven sustainable Islamic finance rather than manufacturing-based environmental practices (Dusuki and Abdullah, 2007; Kuanova *et al.*, 2021). Unlike manufacturing firms, Islamic banks primarily engage in financial intermediation, risk-sharing and asset-backed financing (Hassan *et al.*, 2019). Accordingly, green innovation in Islamic banking manifests through sustainable financing instruments, environmentally responsible investment screening, green sukuk, ethical credit allocation and organizational policies that integrate environmental risk into Shariah-compliant decision-making (Oladapo, 2024; Alghafes *et al.*, 2024).

2.3 Clan culture and green environmental innovation

Clan culture is characterized by a focus on building strong interpersonal relationships, providing mutual support and fostering a sense of harmony and collaboration within the organization (Cameron and Quinn., 2011). From the perspective of IWE, clan culture reinforces moral commitment, knowledge sharing and collective accountability, which are critical for embedding sustainability-oriented behaviors into daily organizational practices (Beekun and Badawi, 2005; Murtaza *et al.*, 2016). Such ethical cohesion facilitates *maqasid*-driven innovation by encouraging employees to view environmental responsibility as a shared moral obligation rather than an externally imposed requirement (Hassan *et al.*, 2019). Consequently, clan culture can support green organizational practices and environmentally conscious product and service development in Shariah-compliant institutions (Yousef, 2001).

Clan culture emphasizes a warm, friendly work environment, where leaders act as mentors or parental figures, echoing the Islamic concept of exemplary leadership (*qudwah hasanah*). Trust is foundational, allowing for open communication between managers and employees. This culture cultivates an environment where knowledge is freely exchanged, and employees actively learn from one another, facilitating organizational knowledge transfer (Vasileiou *et al.*, 2022; Parrilli *et al.*, 2023). Within an Islamic context, this is further reinforced by the religious emphasis on mutual cooperation (*ta'awun*) and collective responsibility, which are essential for building cohesive teams committed to both ethical and environmental objectives.

Environmental policies, stakeholder pressure, resource availability and managerial cognition interact with the relational structure of clan culture to create enabling conditions for green environmental innovation (Lee and Isa, 2023; Isa and Lee, 2020; Kwan *et al.*, 2018). Based on the above discussion, the following hypotheses are proposed:

H1. Clan culture influences green organizations.

H2. Clan culture influences green processes.

H3. Clan culture influences green products.

2.4 Adhocracy culture and green environmental innovation

Adhocracy culture prioritizes creating an environment that fosters innovation, embraces change and encourages individual initiative and independence (Mohsni *et al.*, 2023; Cameron and Quinn., 2011). Within this culture, organizations aim to build a dynamic atmosphere where challenge, risk-taking and creativity are valued, especially in the pursuit of environmental goals (Tariq *et al.*, 2019; Zheng *et al.*, 2023; Lee and Isa, 2023). Given that green organizations, processes and products often involve high levels of uncertainty and risk,

organizations with an adhocracy culture are more inclined to make bold, environmentally innovative decisions. In such an environment, the drive for green environmental innovation typically emerges organically from the organization's members, rather than through formal, structured decision-making processes.

Adhocracy culture enables *maqasid*-driven innovation by allowing Islamic banks to design novel Shariah-compliant financial instruments that support environmental sustainability, such as green sukuk or sustainable financing schemes (Gürlek and Koseoglu, 2021; Aliyu *et al.*, 2017). This alignment between innovation and ethical reasoning strengthens the role of green innovation as a strategic capability rooted in Islamic principles rather than a replication of conventional practices (Dusuki and Asyraf, 2008).

Adhocracy culture is characterized by its ability to tolerate stress and adapt to challenging situations. As environmental regulations become stricter, this type of culture encourages organizations to pursue green organizations, processes and products in response to external pressures. This adaptability is particularly relevant in Shariah-compliant settings, where firms must respond not only to regulatory demands but also to religious imperatives concerning environmental preservation and social responsibility (*khalifah and amanah*). Accordingly, the following hypotheses are formulated:

H4. Adhocracy culture influences green organizations.

H5. Adhocracy culture influences green processes.

H6. Adhocracy culture influences green products.

2.5 Hierarchical culture and green environmental innovation

The principles of stability and control form the foundation of a hierarchical culture (Cameron and Quinn., 2011). Organizations with a hierarchical culture are typically structured around a clear chain of command and adhere to formal rules and regulations. These companies are led by conservative and risk-averse management styles, with an emphasis on maintaining operational stability and efficiency over the long term (Morgan and Vorhies, 2018). Given the focus on predictability and order within a hierarchy culture, firms are often less inclined to engage in green organizations, processes and products, as such innovations often come with higher levels of uncertainty and risk, which may conflict with the culture's preference for stability and control.

In Shariah-compliant financial institutions, hierarchical features are often embedded within formal Shariah governance frameworks, including Shariah Supervisory Boards (SSBs), Shariah compliance audits and layers of procedural review designed to ensure conformity with Islamic legal principles (Muryanto, 2023; Rahim *et al.*, 2024). While these structures are essential for safeguarding Shariah compliance and stakeholder trust (Chapra, 2016; Hassan and Aliyu, 2018), excessive procedural rigidity may constrain *maqasid*-oriented innovation by limiting organizational flexibility and experimentation (Cameron and Quinn 2011; Gürlek and Koseoglu, 2021). Accordingly, hierarchical culture in Islamic banks may play a dual role: preserving ethical legitimacy while potentially inhibiting adaptive green innovation when governance mechanisms dominate strategic discretion (Farooqi, 2006). Within such centralized structures, limited autonomy and restricted knowledge sharing may further suppress the collaboration and creativity required for implementing green organizational practices, processes and products. Thus, the following hypotheses are proposed:

H7. Hierarchical culture impacts green organizations.

H8. Hierarchical culture impacts green processes.

H9. Hierarchical culture impacts green products.

2.6 Market culture and green environmental innovation

Market culture is a results-driven organizational culture that prioritizes competition, focusing on achieving a large market share and enhancing customer satisfaction (Cameron and Quinn 2011; Nazarian *et al.*, 2017). As consumer demand for green products continues to rise, organizations shaped by a market-oriented culture are more likely to pursue green organizations, processes and products. This drive for innovation is motivated by the desire to satisfy customer preferences and capture a greater share of the market.

However, in the Indonesian Islamic banking context, market-oriented culture operates under strong Shariah governance, regulatory oversight by the Financial Services Authority and active SSBs (Chapra, 2016; Hassan and Aliyu, 2018). These institutional mechanisms constrain purely profit-driven behavior and require that competitive strategies remain aligned with Shariah principles and sustainability mandates.

As a result, market culture in Indonesian Islamic banks may promote green innovation not solely as a competitive tactic, but as a means of achieving regulated, ethically constrained performance that satisfies both market demands and *maqasid al-shariah* objectives (Cameron and Quinn 2011; Julia and Kassim, 2020). This context helps explain why market-oriented culture may behave differently in Indonesian Islamic banking compared to findings from conventional or non-Islamic settings (Gürlek and Koseoglu, 2021; Jan *et al.*, 2022).

In Shariah-compliant financial institutions, market orientation can be ethically aligned with Islamic principles, particularly when pursued through the lens of *maslahah* (promotion of public benefit) and *amanah* (trustworthiness) (Chapra, 2016; Hassan and Aliyu, 2018). The concept of hisbah – market accountability to ensure fairness, transparency and the well-being of society – also reinforces the legitimacy of environmentally sustainable practices as part of institutional performance (Hussain Khan *et al.*, 2021; Beekun and Badawi, 2005). Furthermore, the Islamic value of excellence in work (*itqan*) encourages institutions to go beyond minimal compliance and pursue best practices, including sustainability leadership, innovation and environmental stewardship (*khalifah*) (Beekun and Badawi, 2005). Therefore, the following hypotheses are developed:

H10. Market culture impacts green organizations.

H11. Market culture impacts green processes.

H12. Market culture impacts green products.

2.7 Green environmental innovation and Sharia financial performance

In today's highly competitive business landscape, companies must focus on fostering individual competitiveness, which makes innovation a critical factor for success. Innovation not only helps firms maintain an edge over their competitors, but it also enhances their ability to adapt and thrive, ultimately leading to improved performance. Green organizations, processes and products, which focus on reducing environmental harm throughout the product lifecycle, represent a key strategy in this context. By implementing such sustainable innovations, firms can gain a market advantage, drive revenue growth and improve Sharia financial performance (Jan *et al.*, 2022; Rashedul, 2022).

Green organizations, processes and products play a pivotal role in optimizing the use of raw materials, minimizing pollutant emissions and offering a cost-effective advantage. In addition, it facilitates the creation of superior and more inventive products, which can help distinguish a company from its competitors (Jan *et al.*, 2022). When companies adopt green technologies and develop environmentally friendly products, they often garner positive recognition from governments, consumers and other stakeholders. This enhanced reputation not only helps businesses expand their market share and improve customer satisfaction but also strengthens their Sharia financial performance (Julia and Kassim, 2020). According to the RBV, a company's sustained competitive edge and superior performance arise from its distinct, valuable, scarce and hard-to-replicate resources and capabilities (Liao, 2016).

From *a maqasid al-shariah* perspective, such innovation contributes directly to the protection of wealth (*hifz al-mal*), life (*hifz al-nafs*) and the environment (*hifz al-bi'ah*), positioning green innovation as an ethical and strategic imperative rather than a purely technical or operational practice (Chapra, 2016; Dusuki and Asyraf, 2008). Thus, green organizations, processes and products in Islamic finance represent institutional mechanisms through which sustainability objectives are operationalized within Shariah constraints (Zhang *et al.*, 2021; Oladapo, 2024), the following hypotheses are proposed:

H13. Green organizations impact Shariah financial performance.

H14. Green processes impact Shariah financial performance.

H15. Green products impact Shariah financial performance.

Building upon the analysis provided above, we developed the theoretical model shown in Figure 1.

3. Research methodology

3.1 Sample and procedures

This research used a questionnaire to gather data, using established scales to ensure robust measurement. To guarantee the validity and reliability of the questions, the study underwent a thorough translation process, which included back-translation and multiple revisions to resolve any inconsistencies or unclear items. Before launching the main study, a pilot test was conducted with 20 Shariah financial institutions in the Banten province. Feedback from this pilot led to refinements in the questionnaire, addressing issues such as unclear wording and ambiguous phrasing.

The formal data collection commenced in March 2024 and continued for one month, targeting Shariah financial firms across Banten, Jakarta and West Java. Respondents were selected from middle and senior management positions, ensuring that the individuals

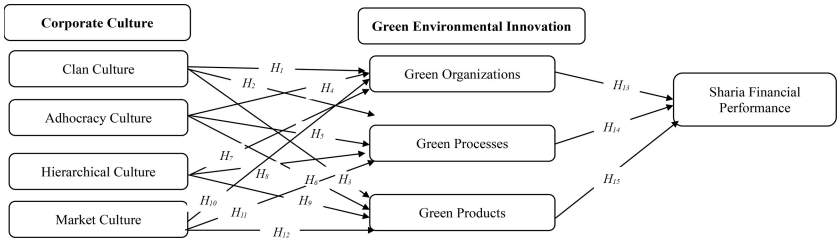

Figure 1. Theoretical model

completing the survey were well-acquainted with the operations of their respective firms, thus providing reliable and accurate responses. Senior and middle managers were chosen deliberately because access to audited financial statements and ESG disclosures is restricted in many Indonesian Islamic banks, and these managers are directly involved in strategic decision-making, Shariah compliance coordination and sustainability initiatives (Jan *et al.*, 2022).

A total of 450 questionnaires were distributed, with 332 completed surveys returned, resulting in a response rate of 73.78%. After eliminating 62 invalid questionnaires, 270 valid responses remained, yielding an effective response rate of 81.33%. Although the study relies on a single knowledgeable respondent per firm, this approach is consistent with prior organizational-level research in Islamic finance and sustainability, where firm-level variables are commonly captured through informed managerial assessments (Podsakoff *et al.*, 2003; Julia and Kassim, 2020; Jan *et al.*, 2022).

3.2 Measurement

This study examined three main variables: Shariah financial performance, green environmental innovation and corporate culture. To measure these variables, a five-point Likert scale was used, with 1 representing "strongly disagree" and 5 indicating "strongly agree."

The corporate culture measurement scale used in this study was based on the frameworks developed by Cameron and Quinn (2011) and Gürlek and Koseoglu (2021), consisting of ten items in total. These items were distributed across four types of corporate culture: "clan culture, adhocracy culture, hierarchy culture, and market culture" (Cameron and Quinn 2011; p. 21), with two items assigned to each category. For example, statements related to clan culture included "Loyalty and trust keep our company united." In the case of adhocracy culture, an example statement is "Goal fulfilment and the search for success keeps our company united." For hierarchy culture, a statement might be "Our firm is a place which stands out because of structure and order," and for market culture a typical statement is "In our company, success is defined by technological and service innovations."

The environmental innovation measurement scale used in this study was adapted from the work of Singh *et al.* (2020), comprising nine items in total. These items were categorized into three groups: green organizations (three items), green processes (three items) and green products (three items). For example, a statement related to green organizations might be "Our firm's management often uses novel management systems to manage green environmental innovation." A statement for green processes could be "Our firm often updates innovatively manufacturing processes to protect against contaminations." Finally, for green products, an example statement would be "Our firm often emphasizes on developing new green products through new technologies to easily recycle their components."

To assess Shariah financial performance was measured using a three-item scale adapted from Wang (2019) and Menne *et al.* (2022), which included three key items. Examples of the items include: " Compared with major competitors, the sales growth of our firm is higher," "Compared with major competitors, the market share of our firm is higher" and "Compared with major competitors, the investment return rate of our firm is higher." In this study, Shariah financial performance reflects financial outcomes achieved under Shariah governance constraints, including ethical investment screening, risk-sharing principles and oversight by SSBs (Dusuki and Abdullah, 2007).

3.3 Common method bias

To mitigate the risk of common method bias (CMB), both procedural and statistical approaches were employed in line with best practices for PLS-SEM (Kock, 2023). Procedurally, respondent anonymity was assured, scale items were dispersed across different

sections of the instrument and no ambiguous or leading questions were included. In addition, independent variables (corporate culture), mediating variables (green environmental innovation) and dependent variables (Shariah financial performance) were positioned in separate sections of the questionnaire to reduce respondents' ability to infer hypothesized relationships. Statistically, full collinearity assessments were conducted to detect potential method bias. As recommended by Kock and Lynn (2012), variance inflation factors (VIFs) for all variables were examined using SmartPLS. The results showed that all full collinearity VIF values were below the threshold of 3.3, indicating that CMB was not a significant threat to the integrity of the data. This approach is considered more appropriate for PLS-SEM than Harman's single-factor test, particularly in models involving formative perceptions and organizational-level variables (Alam *et al.*, 2025; Javed *et al.*, 2024). This approach is considered more appropriate for PLS-SEM than traditional Harman's single-factor test or CFA-based assessments, which are more suited to covariance-based SEM. The use of full collinearity diagnostics provides a robust indication that multicollinearity and method bias are not present at problematic levels in this study.

4. Findings and discussion

Prior to performing the SEM analysis, this study first assessed the measurement model, as it was crucial for assessing the composite reliability (CR), average variance extracted (AVE) and the overall reliability of the variables involved. To gauge reliability, both composite reliability and Cronbach's alpha (CA) were used. The results of the confirmatory factor analysis revealed that the factor loadings for all items exceeded 0.70 (Hair *et al.*, 2020), confirming the good convergent validity of the variables (see Table 1). In addition, this study

Table 1. Reliability results

Variable	Item	Factor loading	AVE	Composite reliability	α	VIP
Clan culture	CC1	0.735	0.678	0.764	0.891	1.67
	CC2	0.762				
Adhocracy culture	AC1	0.843	0.619	0.814	0.809	1.89
	AC2	0.812				
Hierarchy culture	HC1	0.867	0.709	0.764	0.801	1.58
	HC2	0.775				
Market culture	MC1	0.723	0.679	0.801	0.804	1.59
	MC2	0.883				
Green organizations	GO1	0.787	0.677	0.821	0.781	1.78
	GO2	0.878				
	GO3	0.878				
Green processes	GPR1	0.876	0.719	0.798	0.765	1.87
	GPR2	0.845				
	GPR3	0.867				
Green products	GPD1	0.798	0.609	0.791	0.812	1.38
	GPD2	0.878				
	GPD3	0.876				
Sharia financial performance	SFP1	0.889	0.721	0.826	0.788	1.86
	SFP2	0.890				
	SFP3	0.797				

Note(s): CC = clan culture; AC = adhocracy culture; HC = hierarchy culture; MC = market culture; GO = green organizations; GPR = green processes; GPD = green products; SFP = Sharia financial performance

assessed discriminant validity using both the heterotrait-monotrait (HTMT) ratio and the Fornell–Larcker criterion (Fornell and Larcker, 1994). As shown in Table 2, the HTMT ratio values are all below the threshold of 0.90.

The findings from the structural model estimation reveal several results regarding the impact of corporate culture on green environmental innovation. Clan culture has a positive and significant effect on green organizations ($\beta = 0.107$; $t = 2.714$; $p < 0.01$) and green products ($\beta = 0.157$; $t = 2.614$; $p < 0.01$), but does not significantly influence green processes ($\beta = 0.062$; $t = 1.342$; $p > 0.05$). Therefore, *H1* and *H3* are supported, while *H2* is not supported. Adhocracy culture positively influences green organizations ($\beta = 0.128$; $t = 3.174$; $p < 0.01$), green processes ($\beta = 0.267$; $t = 3.231$; $p < 0.01$) and green products ($\beta = 0.317$; $t = 3.917$; $p < 0.01$), supporting *H4*, *H5* and *H6*. Hierarchy culture has a negative and significant impact on green organizations ($\beta = -0.247$; $t = 2.541$; $p < 0.05$), green processes ($\beta = -0.117$; $t = 2.172$; $p < 0.05$) and green products ($\beta = -0.221$; $t = 2.318$; $p < 0.05$), thus supporting *H7*, *H8* and *H9*. Market culture positively affects green organizations ($\beta = 0.257$; $t = 3.287$; $p < 0.01$), green processes ($\beta = 0.372$; $t = 3.614$; $p < 0.01$) and green products ($\beta = 0.347$; $t = 3.524$; $p < 0.01$), supporting *H10*, *H11* and *H12*.

To identify the magnitude of multicollinearity, VIF is a widely used metric. As a recently revised rule of thumb, the VIF values of the variables in a model should be below 3.0 (Hair *et al.*, 2020). VIF values presented in Table 2 are well below the upper threshold, thus, enabled us to proceed further in structural model.

In addition, the results presented in Table 3 indicate that green organizations ($\beta = 0.342$; $t = 3.674$; $p < 0.01$), green processes ($\beta = 0.172$; $t = 2.264$; $p < 0.05$) and green products ($\beta = 0.182$; $t = 2.576$; $p < 0.05$) all have a significant positive effect on Sharia financial performance. Therefore, hypotheses *H13*, *H14* and *H15* are supported. The final model of the study is illustrated in Figure 2.

The objective of this study is to examine the relationships between corporate culture, green environmental innovation and Sharia financial performance, focusing on a sample of 270 Shariah financial institutions. Using a partial least squares structural equation model (PLS-SEM), the research aims to analyze how these factors interact and their impact on the financial outcomes of Sharia financial institutions.

Clan culture has a positive influence on green environmental innovation, while hierarchy culture tends to hinder it. Both clan and hierarchy cultures primarily focus on internal aspects of a company, and since green organizations innovation is also driven by internal factors, these cultural types impact it more than other forms of innovation, such as green processes or

Table 2. Discriminant validity results

Variables	CC	AC	HC	MC	GO	GPR	GPD	SFP
Clan culture	*0.785*							
Adhocracy culture	0.757	*0.864*						
Hierarchy culture	0.741	0.811	*0.872*					
Market culture	0.712	0.744	0.788	*0.790*				
Green organizations	0.577	0.731	0.655	0.705	*0.718*			
Green processes	0.545	0.651	0.632	0.689	0.689	*0.790*		
Green products	0.458	0.601	0.612	0.576	0.601	0.687	*0.789*	
Sharia financial performance	0.441	0.586	0.544	0.543	0.574	0.598	0.689	*0.803*

Note(s): Diagonal elements represent the square root of AVE. CC = clan culture; AC = adhocracy culture; HC = hierarchy culture; MC = market culture; GO = green organizations; GPR = green processes; GPD = green products; SFP = Sharia financial performance

Table 3. Path coefficients results

Hypotheses	Paths	Standardized (β)	*t*-value	*p*-value	Decision
H1	CC → GO	0.107	2.714	0.007	Supported
H2	CC → GPR	0.062	1.342	0.180	Not supported
H3	CC → GPD	0.157	2.614	0.009	Supported
H4	AC → GO	0.128	3.174	0.002	Supported
H5	AC → GPR	0.267	3.231	0.001	Supported
H6	AC → GPD	0.317	3.917	0.000	Supported
H7	HC → GO	−0.247	2.541	0.011	Supported
H8	HC → GPR	−0.117	2.172	0.030	Supported
H9	HC → GPD	−0.221	2.318	0.021	Supported
H10	MC → GO	0.257	3.287	0.001	Supported
H11	MC → GPR	0.372	3.614	0.000	Supported
H12	MC → GPD	0.347	3.524	0.000	Supported
H13	GO → SFP	0.342	3.674	0.000	Supported
H14	GPR → SFP	0.172	2.264	0.024	Supported
H15	GPD → SFP	0.182	2.576	0.010	Supported

Note(s): Bootstrapping was performed with 5,000 resamples. CC = clan culture; AC = adhocracy culture; HC = hierarchy culture; MC = market culture; GO = green organizations; GPR = green processes; GPD = green products; SFP = Sharia financial performance
Source(s): Authors' own work

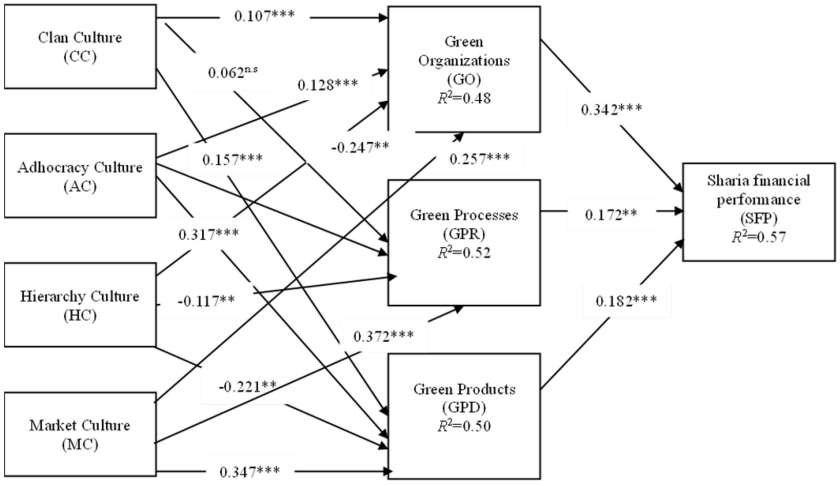

Figure 2. Structural model

Note(s): Standardized path coefficients (β) are reported. R^2 values indicate the amount of variance explained. ***$p < 0.01$; **$p < 0.05$; *$p < 0.10$; n.s = not significant. CC = clan culture; AC = adhocracy culture; HC = hierarchy culture; MC = market culture; GO = green organizations; GPR = green processes; GPD = green products; SFP = Sharia financial performance
Source: Authors' own work

green products. Clan culture fosters an environment of trust and openness to change, which encourages green organizational innovation (Zhao *et al.*, 2024; Yan *et al.*, 2025). On the other hand, hierarchy culture, which emphasizes stability, control and structure, creates a more rigid environment that can stifle innovation in this area.

Adhocracy culture and market culture both play a beneficial role in driving the green environmental innovation dimensions. Adhocracy cultures are characterized by a focus on innovation, external engagement and promoting autonomy, which often encourages companies to take more risks in their approach to green environmental innovations (Gürlek and Koseoglu, 2021). While this finding aligns with the competitive logic of innovation, it raises an important conceptual tension within the Shariah context. Market culture is typically associated with aggressive competition, performance pressure and profit maximization, which may appear at odds with Shariah principles emphasizing stewardship (*khalifah*), social welfare (*maslahah*) and long-term ethical responsibility (Cameron and Quinn 2011; Chapra, 2016; Dusuki and Abdullah, 2007).

Contrary to the findings of Gürlek and Koseoglu (2021), this study found a positive relationship between market culture and green environmental innovation. Market culture are centered around competition, maximizing market share and enhancing customer satisfaction (Roscoe *et al.*, 2019). As consumer demand for green products continues to rise, the influence of market culture on promoting green environmental innovation becomes increasingly crucial.

Green organizations, green processes and green products all contribute positively to the Sharia financial performance, aligning with the perspectives of Wang (2019) and Padilla-Lozano and Collazzo (2022). Their arguments, grounded in resource-based theory, suggest that environmental innovations play a crucial role in developing a firm's unique dynamic capabilities. These capabilities, once internalized, become valuable strategic assets for the company. By alleviating stakeholder pressure and enhancing the company's capacity for learning and innovation, green innovations can help reduce operational costs and provide a competitive advantage, ultimately boosting Sharia financial performance. In addition, green environmental innovation helps reduce resource usage and energy consumption (Zhou *et al.*, 2021; Tariq *et al.*, 2019), further supporting the Sharia financial performance. Importantly, within Islamic financial institutions, this relationship reflects more than conventional financial gains. Green innovation contributes to Shariah financial performance by strengthening ethical legitimacy, reducing environmental risk exposure and aligning financial outcomes with *maqasid al-shariah* objectives – particularly the protection of wealth, life and the environment (Zhou *et al.*, 2021; Elkington, 1997; Chapra, 2016; Dusuki and Abdullah, 2007).

This integrated synthesis underscores that Shariah financial performance emerges from the interaction between culture, innovation and governance (Barney, 2001; Padilla-lozano and Collazzo, 2022). Adhocracy and market culture drive the form and intensity of green innovation, hierarchy culture safeguards its religious legitimacy and green innovation acts as the operational bridge linking ethical mandates with financial sustainability (Cameron and Quinn 2011; Wang, 2019). Rather than treating "Shariah" as a peripheral label, the findings demonstrate that Shariah principles shape both the constraints and opportunities through which innovation affects (Chapra, 2016).

4.1 Theoretical implication

This study contributes to the literature on corporate culture, green innovation and Shariah financial performance by highlighting the differentiated roles of organizational culture types in shaping sustainability outcomes within Islamic financial institutions (Cameron and Quinn, 2011; Padilla-lozano and Collazzo, 2022). Beyond confirming positive correlations, the

findings reveal structural tensions between innovation-driven cultures and Shariah-based ethical mandates, thereby extending existing theories that often assume alignment between market competitiveness and sustainability outcomes (Barney, 2001; Chapra, 2016).

Specifically, the positive role of market culture in driving green innovation should not be interpreted as unconditionally beneficial (Roscoe *et al.*, 2019). From an Islamic governance perspective, an excessive reliance on market-oriented logic may incentivize symbolic or reputational sustainability practices – commonly referred to as "greenwashing" – where Islamic banks adopt visible green labels or products to meet consumer demand without substantive environmental impact (Delmas and Burbano, 2011; Farook *et al.*, 2011). This insight introduces a "dark side" of market culture in Shariah-compliant settings and suggests that cultural drivers of innovation must be analyzed alongside ethical control mechanisms rooted in *maqasid al-shariah* (Chapra, 2016; Dusuki and Abdullah, 2007).

The study also refines the conceptual understanding of hierarchy culture in Islamic finance by repositioning it as an enabling ethical constraint rather than a purely inhibiting force (Chapra, 2016; Dusuki and Abdullah, 2007). While hierarchy may slow exploratory innovation, it plays a critical theoretical role in preserving Shariah legitimacy and preventing ethically misaligned innovation (Hassan and Aliyu, 2018; Dusuki and Abdullah, 2007). This nuanced interpretation advances Islamic management theory by demonstrating that innovation in Islamic finance is contingent upon compliance-based legitimacy, not merely organizational flexibility.

4.2 Practical implication

From a managerial perspective, the findings suggest that Islamic bank leaders should move beyond generic calls to "foster innovation" and instead adopt explicitly Shariah-compliant sustainability governance mechanisms. For instance, banks can develop Green Key Performance Indicators (Green KPIs) aligned with *maqasid al-shariah*, such as the proportion of financing allocated to environmentally sustainable projects, reductions in operational carbon intensity, or the integration of environmental risk screening within Shariah approval processes. These KPIs would allow managers to balance competitive market pressures with substantive environmental accountability. Embedding sustainability into employee training, performance evaluations and reward systems may support the development of green organizations (Arici and Uysal, 2021). Regulators and SSBs could formalize Shariah-aligned green innovation guidelines by embedding environmental criteria into Shariah governance frameworks, including mandatory environmental impact assessments for large-scale financing approvals (Dusuki and Abdullah, 2007; Chapra, 2016). Such policies would reduce the risk of greenwashing while supporting authentic *maqasid*-driven innovation.

4.3 Study limitations

This study has several limitations. First, it focused only on Shariah-compliant financial institutions in three Indonesian provinces, which may limit the generalizability of the findings. Broader geographical coverage would provide more representative insights. Second, firm-level characteristics such as size, age, or governance were not considered, though these factors may moderate the impact of culture and innovation on performance. Third, the reliance on self-reported survey data raises the risk of response bias; future studies could combine surveys with secondary or qualitative data. Fourth, the cross-sectional design restricts causal inference, suggesting that longitudinal approaches are needed.

5. Conclusion

This study aims to understand how various factors influence the integration of green innovation into business practices and their ultimate impact on financial performance, with a particular focus on Sharia financial outcomes. This research provides practical insights into managing green environmental innovation. It emphasizes the importance of cultivating organizational cultures that support creativity and responsiveness to market dynamics – particularly adhocracy and market-oriented cultures – which positively influence green innovation. Firms should also avoid rigid structures and instead promote flexibility, collaboration and experimentation. Investing in green initiatives across organizations, processes and products, while leveraging external knowledge and optimizing internal resources, can enhance both innovation and Sharia financial performance.

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Corresponding author
Soleh can be contacted at: soleh@unilam.ac.id