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An Analysis of POAC Management Functions in Local Agro-Industry in Mandailing Natal: An Islamic Managerial Ethics Perspective

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ARTICLE INFO | **ABSTRACT**

Keywords:
POAC management; rural agro-industry; rice milling enterprise; Islamic business ethics; amanah; hisbah;

Background: Agro-industry plays a strategic role in local economic development through value addition, employment creation, and income distribution. However, managerial capacity at the enterprise level remains a critical yet underexplored factor in sustaining these contributions, particularly in rural Muslim-majority regions.
Research Gap: While the POAC (Planning, Organizing, Actuating, Controlling) framework is widely applied in management studies, limited empirical research examines its implementation within rural agro-industrial enterprises. Moreover, existing Islamic business ethics scholarship has largely focused on individual entrepreneurial values rather than how those values shape or substitute for managerial systems at the organizational level.
Novelty: This study offers a novel contribution by integrating the POAC framework with Islamic managerial ethics (amanah, adl, tawazun, hisbah, israf) to examine how managerial functions operate in a rural rice milling enterprise, advancing the concept of "ethically embedded POAC" where Islamic values substitute for formal systems at micro-scale.
Method: Using a single-case qualitative design, data were collected through in-depth interviews with the owner-manager and workers, direct observation, and document review. Analysis proceeded in two coding cycles: thematic coding aligned with POAC functions, followed by interpretive coding against Islamic ethical constructs derived from maqashid al-shariah.
Results: All POAC components are present but operate informally and centrally. Planning is seasonal and intuitive; organizing relies on relational coordination; actuating is participatory; controlling remains reactive. Islamic values are enacted personally: amanah legitimizes authority without contract, adl secures fairness without written entitlement, while hisbah operates only as self-accounting and israf remains unmeasured.
Conclusion: Managerial integration is embedded in the owner's tacit knowledge rather than institutionalized procedures. The study reframes formalization as an ethical requirement for organizational durability, proposing a graduated institutionalization pathway beginning with loss measurement.

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INTRODUCTION

Agro-industry constitutes a pivotal engine of local economic transformation, particularly in regions where agrarian culture and livelihoods predominate (Melo Torres et al., 2024). Beyond functioning merely as an extension of agricultural production, agro-industrial systems structurally integrate the agricultural and industrial sectors, thereby enhancing production efficiency, product quality, value creation, and market competitiveness of agricultural commodities. Simultaneously, agro-industry strengthens institutional partnerships and facilitates the development of local human capital, positioning itself as a strategic instrument for inclusive rural development (Astutiningsih & Sari, 2017; Muthalib et al., 2023). At the village level, the expansion of small-scale and household-based agro-industries generates employment opportunities, mitigates open unemployment, and serves as a catalyst for endogenous local economic growth (Lawita et al., 2023). Furthermore, agro-industrial enterprises contribute directly to farmers' household income while also enhancing local government revenue through taxation and licensing schemes, thereby reinforcing fiscal sustainability at the subnational level (Khotimah & Mariana, 2023; Savira et al., 2025).

Agro-industrial enterprises particularly those operating at the local and small-scale level are expected to be managed through formal, systematic, and accountable management practices that ensure efficiency, sustainability, and competitiveness. Management capacity is widely recognized as a critical determinant of business sustainability, especially within small and medium-sized enterprises (P. R. Ali et al., 2023). Ideally, agro-industries should apply clear organizational structures, professional governance mechanisms, strategic planning instruments, and risk management systems to balance social objectives, such as farmer welfare, with economic imperatives related to profitability and market competitiveness.

However, empirical conditions reveal a contrasting reality. A substantial body of evidence demonstrates that local and small-scale enterprises are frequently characterized by informal management structures that undermine operational efficiency and constrain long-term organizational growth. Common deficiencies include reliance on family-based or traditional governance systems, the absence of a clear demarcation between ownership and managerial roles, and weak corporate governance practices encompassing transparency, accountability, and internal control mechanisms. The lack of formalized strategic planning further limits the capacity of enterprises to respond to dynamic market demands, resulting in sluggish adaptation to modern production and marketing systems. These challenges are often compounded by shortages of professional managerial talent, conservative organizational cultures, and resistance to institutional reform and the adoption of contemporary governance principles ((Astutiningsih & Sari, 2017; Melo Torres et al., 2024). In parallel, restricted access to financial resources and inadequate risk management capacities particularly in addressing price volatility, climatic uncertainty, and crop failure constitute additional systemic constraints on agro-industrial development (Chapagain & Raizada, 2017; Futemma et al., 2020; Rolo et al., 2020). Within the management literature, organizational effectiveness and performance are consistently linked to the mastery of four core managerial functions as conceptualized by George R. Terry: Planning, Organizing, Actuating, and Controlling (POAC)((Hartono et al., 2023; Wijayanti & Wicaksana, 2023). The POAC framework is widely regarded as a foundational model for enhancing work effectiveness, organizational coherence, and overall firm performance across sectors, including agro-industry (Hutabarat et al., 2025; Idhamaningati et al., 2022). Conceptually, POAC provides an integrated managerial architecture through which organizational objectives are formulated, resources are systematically structured, human capital is mobilized, and performance outcomes are continuously monitored and evaluated. Nevertheless, much of the existing literature emphasizes the normative importance of POAC, while empirical investigations into its concrete implementation within local and rural agro-industrial contexts remain limited.

The POAC framework, however, is not applied in a moral vacuum. Managerial functions are enacted by people embedded in normative orders that define what counts as a legitimate objective, a fair division of work, and an acceptable standard of performance (Branine & Pollard, 2010; Gümüsay, 2015). In Muslim-majority settings such as Indonesia, that order is substantially shaped by Islamic teachings on economic conduct, which frame the enterprise not merely as a profit-generating unit but as a site of stewardship and accountability. Constructs such as amanah (trustworthiness), adl (justice), tawazun (balance), hisbah (accountability), and the prohibition of israf (wastefulness) carry direct managerial weight; read against maqashid al-shariah, they frame competent management as itself a religious obligation rather than a purely technical accomplishment (I. Ali, 2016; Sholihah, 2020; Tlaiss, 2015).

These constructs map directly onto the POAC cycle, yet the two literatures have developed largely in parallel. Studies applying POAC in Indonesia have concentrated on institutions whose religious character is explicit pesantren, madrasah, and waqf management (Alfiah et al., 2020; Faiz et al., 2024; Nurhikmah, 2024; Ramdhani & Taufiq, 2025). Research on Islamic business ethics, conversely, has largely examined values and attitudes at the level of the individual entrepreneur (Tlaiss, 2015) or the market institution (Anwar et al., 2020), rather than tracing how those values are, or are not, inscribed in the everyday managerial functions of a production unit. The result is a double gap: POAC scholarship has not asked what happens to managerial functions when they are enacted through a religious moral order, while Islamic business ethics scholarship has not asked what managerial architecture its values require in order to become organizationally durable rather than personally contingent. Rural agro-industry in a Muslim-majority region is an apt site for closing this gap, precisely because it is where ethical conduct is most visibly relational and least formally documented.

Mandailing Natal presents a compelling empirical setting for addressing this gap. The region possesses a robust agricultural foundation encompassing rice cultivation, horticultural production (vegetables and fruits), and forest-based commodities such as palm sugar, all of which offer substantial potential for locally embedded agro-industrial development. Previous studies, however, indicate that realizing this potential requires significant improvements in post-harvest management and product quality enhancement mechanisms, including quality standardization, packaging, certification, and the strategic utilization of digital marketing platforms (Nasution et al., 2025; Santoso et al., 2023; Siregar & Rismawaty, 2022). These findings suggest that technical improvements alone are insufficient without corresponding strengthening of managerial capacity at the enterprise level.

The novelty of this study lies in its integrative and context-specific examination of the POAC management functions as they are actually implemented within local agro-industries in Mandailing Natal, and in reading that implementation through Islamic managerial ethics. Unlike prior studies that either focus on agro-industrial development outcomes or discuss POAC primarily at a conceptual level, this research empirically bridges management theory and local agro-industrial practice by systematically analyzing the gap between ideal managerial principles and their real-world application. Unlike prior work on Islamic business ethics, which has largely treated ethical values as attributes of individuals, it asks what those values do inside a managerial system where they substitute for structure, and where their absence of structure disables them. By situating the POAC framework within a rural, culturally and religiously embedded agro-industrial context, this study extends the existing literature and provides new empirical insight into how classical management functions operate, adapt, or fail within local agro-industrial enterprises, and into the moral substrate on which their operation depends.

Accordingly, this study pursues two objectives: to examine the implementation of the POAC management functions in the governance of a local agro-industrial enterprise in Mandailing Natal; and to interpret that implementation through Islamic managerial ethics in order to establish the relationship between ethical commitment and managerial formalization at micro scale. The findings are expected to contribute to agro-industry management scholarship and to the Islamic economics and management literature, while offering evidence-based, shariah-consistent recommendations for practitioners and policymakers seeking to enhance the effectiveness, competitiveness, and sustainability of local agro-industrial development.

METHOD

Research Design

This study employs a single-case qualitative design (Myers, 2009; Toomer & Bowen, 1993) which is appropriate where the aim is to understand a managerial process in depth and in context rather than to establish its statistical distribution. Following Flyvbjerg (2006), the single case is treated not as a statistically representative sample but as an information-oriented selection whose value lies in the density of insight it yields into a phenomenon that is otherwise difficult to observe: the enactment of classical management functions in a setting where they are almost entirely undocumented. The study is interpretive in orientation, seeking to reconstruct how the owner-manager and workers themselves understand and justify their managerial practice.

Case Selection and Representativeness

The research population comprises local agro-industrial enterprises in Mandailing Natal Regency; the unit of analysis is a single rice milling enterprise selected purposively. The selection criteria are stated explicitly so that the basis of the claim to representativeness can be assessed. The enterprise was chosen because it satisfies four criteria that together define the modal profile of rural agro-industry in the regency: sectoral typicality, rice milling being the dominant agro-processing activity in Mandailing Natal; scale typicality, since with six workers and an owner-operator it falls within the micro-enterprise category that accounts for the overwhelming majority of local agro-industrial units; governance typicality, being family-owned and owner-managed with no separation between ownership and management, the configuration repeatedly identified as characteristic of, and problematic for, local agro-industry (Astutiningsih & Sari, 2017; Melo Torres et al., 2024) and socio-religious typicality, operating within a Muslim community in which religious norms are an unremarked feature of daily commercial life, making it a suitable site for observing whether and how such norms are translated into managerial practice.

The case is therefore best understood as a typical, or paradigmatic, case in Flyvbjerg's (2006) terms rather than an extreme or deviant one: it was selected because it exemplifies the ordinary, not because it is exceptional. Two practical criteria also applied: the enterprise had operated continuously for more than a decade, ensuring that managerial routines had stabilised sufficiently to be observed; and the owner granted sustained access to premises, workers, and records, permitting the prolonged engagement on which credibility depends.

Informants, Data Collection, and Analysis

Informants were selected using purposive sampling based on their involvement in managerial and operational processes: the business owner, an operational manager, one field worker, and two production workers (n = 5). This composition triangulates perspectives vertically, from the locus of decision-making to the point of execution, so that the owner's claims about how the enterprise is managed could be tested against the accounts of those who are managed.

Data were collected through in-depth semi-structured interviews (Adams, 2015; Al Balushi, 2018), direct observation of the production cycle across both harvest and non-harvest periods, and analysis of the enterprise's available documents, comprising transaction records held in a simple digital financial application, delivery notes, and informal ledgers. The interview protocol was developed from the POAC framework, with each function operationalised into questions about practice rather than about principle: informants were asked what they did and why, rather than whether they engaged in "planning" or "controlling". A second block of questions probed the ethical reasoning behind managerial decisions without introducing Islamic terminology in advance, so that religious framing, where it appeared, emerged from informants rather than from the researcher.

Analysis followed an interactive qualitative model of data reduction, data display, and conclusion drawing, and proceeded in two coding cycles. The first applied thematic coding aligned deductively with the four POAC functions, establishing what each function looked like in practice. The second re-read the same material interpretively against the Islamic ethical constructs of amanah, adl, tawazun, hisbah, and israf, derived from the maqashid al-shariah literature (Sholihah, 2020) and from empirical studies of Islamic business ethics (A. J. Ali & Al-Owaihan, 2008; Tlaiss, 2015). This second cycle asked not whether the enterprise complied with Islamic norms in a juridical sense, but where those norms were doing managerial work, and where they were substituting for managerial systems that were absent. No statistical formulas were used in this qualitative study.

Trustworthiness and Transferability

Trustworthiness was established against the four criteria proposed by Lincoln and Guba (1985). Credibility was pursued through source triangulation across owner, manager, and workers, method triangulation across interviews, observation, and documents, and prolonged engagement over a full production cycle; where accounts diverged most notably between the owner's description of coordination as effortless and workers' descriptions of it as improvised the divergence is reported rather than resolved. Dependability and confirmability were supported by an audit trail linking each interpretive claim to its underlying data extract, and by anchoring findings in verbatim informant statements rather than paraphrase.

Transferability is treated here as a judgement to be made by the reader rather than a property claimed by the researcher (Lincoln & Guba, 1985). The case is accordingly reported with thick description of the enterprise's scale, ownership, workforce, production cycle, seasonal dependency, and socio-religious setting, so that readers may assess the fit with their own context. The findings are analytically rather than statistically generalisable (Flyvbjerg, 2006) what transfers is not a distribution of managerial practices across rural enterprises, but a conceptual account of how the POAC functions may cohere informally through ethical and relational mechanisms. That account is most likely to travel to enterprises sharing the four selection criteria set out above owner-managed, micro-scale, seasonally dependent, and embedded in a religiously homogeneous community and least likely to travel to enterprises with separated ownership, formal hierarchies, or year-round production. These boundary conditions are stated explicitly so that transfer may be contemplated on informed grounds.

RESULTS

Concept and Role of Agro-Industry in Local Economic Development

Recent studies on the role of agro-industry in economic development highlight its contribution to increasing local government revenue and reinforcing economic structures. Agro-industrial activities enhance value added, product quality, and competitiveness, while simultaneously generating local government revenue through taxation, levies, and licensing mechanisms. In the long term, agro-industry promotes structural transformation by shifting economic reliance from primary-sector dominance toward more productive agriculture-based industrial activities (Fitrian et al., 2019; Muthalib et al., 2023; Pratiwi et al., 2017). Agro-industry also creates employment opportunities and contributes to poverty alleviation, particularly for low-skilled and low-educated labor, while reducing incentives for labor migration or overseas employment (Himanov et al., 2023; Muthalib et al., 2023; Nuraeni, 2019). Locally based agro-industrial groups and micro, small, and medium enterprises have been empirically shown to increase household income and improve rural welfare (Astutiningsih & Sari, 2017; Ernah et al., 2025; Muthalib et al., 2023; Nuraeni, 2019). Downstream agro-industries play a significant role in expanding output and promoting a more equitable distribution of income, whereas upstream agro-industries contribute more substantially to gross domestic product and export performance (Pratiwi et al., 2017). Furthermore, agro-industry exhibits strong backward and forward linkages, as it absorbs agricultural output from farmers while simultaneously stimulating the growth of financial services, logistics, and other supporting industries (Astutiningsih & Sari, 2017; Fitrian et al., 2019; Nuraeni, 2019; Pratiwi et al., 2017).

Management of Small Enterprises and Local Agro-Industry

Studies on the management of small enterprises and agro-industrial businesses reveal that poor or non-existent long-term planning leads to cost inefficiencies(Cochrane et al., 2024; Kuznetsova et al., 2020), loss of competitiveness, and, in many cases, the bankruptcy of processing units (Brenya et al., 2023; Kademani et al., 2024; Muzekenyi et al., 2023; Raza et al., 2024; Zhuravleva, 2021). Limited knowledge of business management, risk management, and processing technologies further constrains operational efficiency and inhibits innovation. In addition, the lack of access to prototype testing facilities, training programs, and business incubation services weakens enterprises' capacity to improve products and production processes (Kademani et al., 2024; Raza et al., 2024; Whittinghill & Sarr, 2021).

POAC as an Integrated Management System

Management is understood as a unique process consisting of four core functions planning, organizing, actuating (implementation), and controlling which are jointly employed to achieve organizational objectives (Hartono et al., 2023; Tyagur et al., 2023). Empirical studies indicate that these four functions must be managed in an integrated and synergistic manner rather than in isolation. When applied separately, their influence on organizational performance is often insignificant; however, when implemented collectively as a unified system, their impact becomes substantial and robust (Hutabarat et al., 2025).

The POAC framework operates as a continuous management cycle comprising the following stages. Planning involves the formulation of vision, objectives, strategies, and program plans, such as the preparation of annual programs, institutional or organizational plans, business strategies, and information systems (Faiz et al., 2024; Indrawati & Wahira, 2025; Narindro et al., 2020; Sunarya, 2025). Organizing refers to the establishment of organizational structures, the clear division of tasks and responsibilities, the allocation of resources, and the formation of effective work teams (Hartono et al., 2023; Indrawati & Wahira, 2025; Narindro et al., 2020; Nurrahman & Marmoah, 2025). Actuating encompasses leadership, motivation, program implementation, human resource empowerment, and communication processes aimed at mobilizing organizational members to execute planned (Erlangga et al., 2023; Faiz et al., 2024; Hartono et al., 2023; Ramdhani & Taufiq, 2025). Controlling includes monitoring, periodic evaluation, corrective actions to address deviations, and feedback mechanisms that inform subsequent planning, thereby forming a continuous and sustainable management cycle (Alfiah et al., 2020; Faiz et al., 2024; Mubarok & Samran, 2025; Narindro et al., 2020; Sunarya, 2025).

Studies on POAC have been conducted across various fields, extending beyond business management to include institutional management, such as in the education sector. In business contexts, the integrated application of POAC has been shown to improve service quality, operational efficiency, and stakeholder satisfaction when all four functions are implemented as a cohesive managerial package (Hutabarat et al., 2025; Indrawati & Wahira, 2025; Mubarok & Samran, 2025; Sunarya, 2025). Moreover, POAC enables adaptive and sustainable management practices, as control outcomes directly feed into subsequent planning processes, ensuring continuous organizational learning and improvement (Alfiah et al., 2020; Narindro et al., 2020; Sunarya, 2025).

Islamic Managerial Ethics and the POAC Cycle

Because management is enacted by morally situated people, the POAC cycle in a Muslim-majority setting operates within a normative order that specifies not only how objectives should be pursued but which pursuits are legitimate. Islamic management scholarship holds that the enterprise is a locus of stewardship: resources are held in trust, and managerial authority is exercised on behalf of those it affects rather than over them (Branine & Pollard, 2010; Gümüsay, 2015). Work itself is construed as a virtue with economic, moral, and social dimensions rather than as a purely instrumental activity (A. J. Ali & Al-Owaihan, 2008). Five constructs give this order operational content. Amanah (trustworthiness) makes authority a trust to be discharged and accounted for. Adl (justice) requires proportionality between burden and reward. Tawazun (balance) requires equilibrium between commercial and social obligation. Hisbah (accountability) supplies a logic of supervision and correction, historically institutionalised as market oversight and internally practised as self-accounting, or muhasabah (Anwar et al., 2020). The prohibition of israf (wastefulness) treats the squandering of entrusted resources as an ethical failure rather than merely a technical inefficiency (Budiman, 2025; Pusparini et al., 2026). Read against maqashid al-shariah, these constructs are not external constraints upon management but statements of its purpose: the principles of Islamic business ethics correspond to the preservation of religion, life, intellect, lineage, and property, so that ethical conduct and effective conduct are, in principle, the same conduct (Sholihah, 2020).

Their correspondence with the POAC cycle is direct. Planning becomes the exercise of amanah over resources whose owners depend on the outcome. Organizing becomes the enactment of adl in the division of labour and reward, informed by shura, the consultation that Islamic management treats as constitutive of legitimate decision-making (Branine & Pollard, 2010). Actuating becomes leadership guided by ihsan and itqan, excellence pursued as accountability to God rather than to a supervisor (Tlaiss, 2015). Controlling becomes hisbah: the detection and correction of deviation, of which the avoidance of israf is a principal object (Anwar et al., 2020). Empirical work joining these frameworks nonetheless remains scarce, and where POAC has been examined in Islamic terms it has been examined almost exclusively within religious institutions pesantren, madrasah, and waqf bodies whose religious character is constitutive rather than incidental (Alfiah et al., 2020; Faiz et al., 2024; Nurhikmah, 2024; Ramdhani & Taufiq, 2025). How Islamic ethical values operate inside an ordinary commercial production unit, where no one describes the enterprise as Islamic and yet everyone is Muslim, remains largely unexamined.

Although numerous studies have highlighted the contribution of agro-industry to local economic development through value addition, employment creation, and income distribution, most of this literature focuses on macro-level outcomes and pays limited attention to internal managerial practices at the enterprise level. Studies on small and agro-industrial enterprises consistently report managerial weaknesses such as poor planning, limited organizational capacity, and informal governance but these issues are often examined in a fragmented way. Moreover, despite the wide use of the POAC framework, empirical studies that analyze POAC as an integrated management system in local and rural agro-industrial contexts remain scarce. This condition indicates a gap between ideal integrated management practices (das sollen) and actual managerial realities in local agro-industry (das sein).

This study conceptualizes agro-industrial management as an integrated system consisting of four interrelated functions: planning, organizing, actuating, and controlling (POAC). Planning defines goals and strategies; organizing structures tasks and resources; actuating mobilizes human resources through leadership and implementation; and controlling ensures alignment between plans and outcomes through monitoring and feedback. These functions form a continuous and interdependent cycle in which effectiveness depends on their integration rather than their isolated application. The framework is extended here by a second, normative layer: each function is read as the site of an Islamic ethical obligation planning as amanah, organizing as adl informed by shura, actuating as ihsan and itqan, and controlling as hisbah directed against israf so that the analysis can examine not only whether the functions are integrated, but by what moral mechanism that integration is achieved.

Accordingly, this study is guided by the proposition that the performance and sustainability of local agro-industrial enterprises are shaped by the degree to which the POAC functions are applied in an integrated and consistent manner, and by the extent to which the Islamic ethical values that animate those functions are institutionally embedded rather than personally held. Fragmented or informal implementation tends to weaken managerial effectiveness and adaptability, whereas a synergistic application of POAC enables enterprises to operate more efficiently, respond to uncertainty, and sustain their economic and social contributions to local development.

DISCUSSION

The rice milling enterprise examined in this study is a locally rooted family business operating in Mandailing Natal Regency and managed directly by its owner. The enterprise functions not merely as a production unit but also as a socio-economic node within the surrounding agricultural community, serving local farmers who rely on its milling services during harvest seasons. The owner assumes a dual role, acting simultaneously as strategic decision-maker and daily operational manager. Field observations revealed that the owner is physically present from early morning, overseeing the receipt of unhusked rice, organizing the milling queue, monitoring drying activities, and ensuring the quality of milled rice before distribution.

The workforce structure consists of two drivers responsible for transporting unhusked rice and distributing milled rice, two field workers assigned to sun-drying activities, and two production workers operating the milling machines and handling output processing. Despite the absence of a formal organizational chart, daily operations proceed in a relatively orderly manner. Tasks appear socially embedded rather than administratively structured. As one production worker explained:

"We don't really have positions here, but we already know what each of us has to do. When it gets busy, we just help each other."

This statement reflects a coordination system grounded in shared experience and mutual understanding rather than formalized managerial mechanisms.

Findings indicate that the planning function operates in an informal and experience-based manner. No written production plans, strategic projections, or long-term performance targets were identified. Instead, production decisions are highly contingent upon seasonal harvest cycles, daily inflow of unhusked rice, weather conditions affecting drying processes, and immediate market demand. The owner articulated this adaptive logic as follows:

"In this kind of milling business, you can't plan too far ahead. We just see how much paddy comes in and how the weather looks. Usually, we follow the harvest season."

This perspective illustrates that planning is situational and reactive rather than predictive or data driven. Decisions are grounded in tacit knowledge accumulated over years of practice and intergenerational transmission. There is no systematic use of historical production data or documented forecasting. Field workers confirmed that work instructions are typically communicated on the same day activities are carried out:

"Usually in the morning we just find out how much we will dry or mill that day. It depends on what comes in."

Although general task divisions exist, their execution remains fluid and responsive to immediate operational needs. Consequently, the planning function demonstrates adaptive flexibility but lacks structural formalization and long-term strategic orientation.

The organizing function is characterized by simplicity and centralization. All strategic and operational decisions are concentrated in the owner. There are no written job descriptions, formal reporting lines, or structured hierarchy. Coordination occurs primarily through direct verbal communication. The owner described this centralized arrangement as follows:

"I manage everything myself—from receiving the paddy to sending out the rice. That way it's faster and less complicated."

Despite the absence of formal structure, workers demonstrate clarity regarding their routine responsibilities. Role familiarity has developed through long-term collaboration and repeated practice. A production worker noted:

"Operating the machine is usually my part. But if there's too much work, we help each other."

This indicates that role boundaries are semi-permeable and adaptable. Importantly, no significant task conflicts were observed. Instead, coordination is socially regulated through trust, shared routines, and collective experience. Organizing, therefore, manifests as relational coordination rather than institutionalized structuring.

In terms of actuating, the owner adopts a direct and participatory leadership style. Rather than delegating exclusively, the owner frequently engages physically in operational tasks, particularly when technical issues arise or workload intensifies. His presence functions both as supervisory control and as symbolic reinforcement of shared responsibility. One worker emphasized:

"If there's a machine problem or something wrong with the paddy, he comes down and checks it himself. He doesn't just give orders."

Instructions are delivered verbally and often spontaneously within the workflow context. There are no scheduled meetings or formal briefings, yet communication remains continuous and interactive. The work atmosphere is described as familial and informal, characterized by mutual familiarity and long-standing relationships. The owner reflected:

"We work like a family here. The important thing is trust and that the work keeps moving."

Worker motivation appears primarily driven by economic necessity and relational attachment rather than structured incentive systems. A field worker stated:

"As long as there's steady work, that's enough. We've been here a long time, so it already feels right."

Operational execution is highly flexible, adjusting quickly to fluctuating harvest volumes, unexpected demand surges, or weather changes. The actuating function, therefore, demonstrates operational effectiveness through immediacy and relational cohesion rather than procedural standardization.

Controlling is primarily exercised through direct, on-site supervision by the owner during production processes. Quality assessment relies heavily on visual inspection and experiential judgment. Performance evaluation is not based on formalized indicators but rather on observable output quality and overall profitability. The owner explained:

"If the rice quality is good and there are no complaints, then it's fine. If there's a problem, we fix it immediately."

Although the enterprise has begun utilizing a simple digital financial application for recording transactions, documentation remains limited to basic financial entries. Production data are not systematically analysed for performance benchmarking or strategic planning purposes. Thus, digitalization has not yet translated into comprehensive managerial control. Workers confirmed that corrective actions are immediate and informal:

"If something is wrong, we're told directly and we fix it right away. There's no special report."

Corrective measures typically involve technical adjustments or verbal feedback rather than procedural review. Controlling practices are therefore reactive and experience-based rather than preventive and system-oriented.

Overall, the implementation of POAC within this rice milling enterprise operates in a personalized, adaptive, and relational form. Managerial functions are not institutionalized through formal systems but are embedded within the owner's experiential authority and daily presence. This arrangement enables high flexibility and rapid response to local agricultural dynamics. However, the absence of structured documentation, performance indicators, and formalized delegation suggests limited organizational institutionalization. While the current model sustains operational continuity, its long-term scalability and resilience remain contingent upon the owner's continued central involvement.

Informal Integration of POAC within Local Agro-Industrial Contexts

Literature on agro-industry consistently emphasizes its strategic role in strengthening local economic structures through value addition, employment generation, and income distribution (Fitrian et al., 2019; Muthalib et al., 2023; Pratiwi et al., 2017). Agro-industrial enterprises are expected not only to enhance competitiveness and productivity but also to contribute to broader structural transformation in rural economies. However, such macro-level contributions presuppose the existence of effective managerial systems at the enterprise level. The present findings demonstrate that within the studied rice milling enterprise, the four POAC functions are not institutionalized through formal systems but remain embedded in the experiential authority of the owner.

Consistent with management theory, POAC is conceptually framed as an integrated and systematic managerial cycle (Hartono et al., 2023; Hutabarat et al., 2025; Tyagur et al., 2023). Yet this study reveals that in small-scale rural agro-industry, integration may occur through what can be termed informal embedded management where managerial coordination is internalized in the individual owner rather than codified in organizational structures (Kniazieva & Obodovskyi, 2020; Tadesse et al., 2025). Planning and controlling operate intuitively and seasonally, while organizing and actuating rely on centralized decision-making and direct supervision. Coordination across functions is mediated by social proximity, habitual routines, and tacit knowledge rather than formal procedures.

This finding challenges the implicit assumption that managerial effectiveness necessarily depends on structural formalization. In this case, relational closeness and flexibility enable rapid adaptation to fluctuating harvest cycles and local market demand. Such adaptability is particularly relevant in agro-industry, where uncertainty related to weather, supply volume, and price volatility is inherent. However, while informal integration sustains operational continuity, it simultaneously concentrates strategic capability market knowledge, relational capital, and decision authority within the owner. As dynamic capability literature suggests, when sensing, seizing, and transforming activities are monopolized by a single actor, organizational resilience becomes vulnerable (Kevill et al., 2021; Wall & Bellamy, 2019). Thus, the integration observed here functions as both substitution for formal systems and structural limitation for long-term institutional development.

Centralization, Dynamic Capability, and Structural Limits

The dual role of the owner as planner, organizer, implementer, and controller generates a high degree of centralized authority. In the short term, this configuration enhances coordination efficiency, reduces bureaucratic friction, and accelerates decision-making. Such patterns are not uncommon in SMEs and micro-enterprises, where the owner-manager often becomes the central hub of organizational cognition and control. Some studies indicate that centralized decision-making can improve cost control and resource allocation efficiency, particularly in smaller firms or developing contexts (Fan et al., 2022; Tang & Sun, 2025; Wang & Wang, 2025).

Nevertheless, literature on SME management and scalability warns that excessive centralization constrains organizational learning and the institutionalization of managerial knowledge (Jabłoński, 2016; Millers & Gaile-Sarkane, 2021). In the present case, the absence of systematic documentation, performance indicators, and structured evaluation mechanisms indicates that the controlling function has not evolved into an organizational learning system. Evaluation remains reactive based primarily on observable outcomes and general profitability rather than reflective and data-driven.

Dynamic capabilities theory conceptualizes adaptability as the capacity to sense opportunities, seize them, and transform organizational routines (Kevill et al., 2021). While the enterprise demonstrates adaptive capacity, this capability remains person-dependent rather than system-dependent. Consequently, scalability becomes constrained. Business model literature emphasizes that sustainable growth requires processes and capabilities that are replicable and delegable, not solely dependent on founder intuition (Jabłoński, 2016). Therefore, the managerial configuration observed in this study reflects a paradox: centralization strengthens immediate operational control but simultaneously inhibits long-term systemization and capacity accumulation.

Recontextualizing POAC in Rural Micro-Enterprise Settings

The findings also contribute to a contextual reinterpretation of POAC within rural micro-enterprises. Previous research underscores that agro-industry supports rural employment, poverty reduction, and income enhancement (Astutiningsih & Sari, 2017; Himanov et al., 2023; Nuraeni, 2019). However, most studies focus on macroeconomic contributions and pay limited attention to how managerial practices shape enterprise sustainability at the micro level.

This study shows that POAC implementation in rural agro-industry cannot be assessed solely by the degree of formalization. Social context, ownership structure, and enterprise scale significantly shape managerial expression. In owner-managed enterprises, actuating tends to dominate because leadership presence and interpersonal trust become primary coordination mechanisms. Organizing emerges informally through habitual role clarity; while planning and controlling are the most constrained functions due to limited managerial resources and absence of formal systems.

This suggests that management effectiveness in micro agro-industry may initially depend more on minimal functional integration sustained by relational cohesion than on complex administrative design. However, as enterprises aim to expand their contribution to local economic development through higher productivity, market expansion, or increased fiscal contribution the absence of documentation and structured delegation may evolve into transformational bottlenecks.

The Islamic Ethical Substrate of Informal POAC

The account developed so far explains how the four functions cohere without formal systems, but not why that informal coherence commands the compliance it does. Relational proximity alone does not explain why workers accept instructions issued without written authority, why the owner's visual quality judgement is treated as binding, or why unwritten agreements are not contested. In a Muslim-majority regency such as Mandailing Natal, part of the answer lies in a moral order that the enterprise neither articulates nor advertises, but on which its coordination silently rests. Reading the same data through Islamic managerial ethics does not add a decorative layer to the analysis; it identifies the mechanism that makes informality workable and, equally, the mechanism that makes it fragile.

Amanah is the most visible of these constructs and the most ambiguous in its effects. The owner's statement that "the important thing is trust and that the work keeps moving" places trust at the centre of the enterprise's operating logic. In Islamic thought, amanah is not a sentiment but a structure of obligation: authority is a trust discharged on behalf of those affected by it, and the manager is answerable for what has been entrusted (P. R. Ali et al., 2023; Tlaiss, 2015). Two consequences follow. First, amanah supplies the legitimacy that formal contracts would otherwise supply: farmers surrender their paddy without receipts because the owner's trustworthiness is a known quantity within the community, and workers accept verbal instruction because the relationship precedes the transaction. Second, and less comfortably, amanah here is personal rather than institutional: it is discharged through the owner's presence, not through mechanisms allowing anyone to verify that it had been discharged. Contemporary scholarship increasingly reads amanah as an ethical-institutional principle demanding transparency and verifiability, not merely individual integrity; on that reading, the absence of documentation is not ethically neutral, since it renders amanah unauditable and wholly dependent on the continued good character of one person. Trust that cannot be verified cannot be inherited.

Adl manifests in the organizing function as customary fairness. Task allocation follows established competence, workers assist across role boundaries when volume spikes, and no significant task conflict was observed outcomes consistent with the Islamic requirement of proportionality in the distribution of burden and reward (Sholihah, 2020). Yet the same absence of written job descriptions that enables flexibility also renders entitlements indeterminate. When a production worker says "if there's too much work, we help each other," the elasticity is voluntary and mutual under present conditions, but it has no defined limit. Adl in Islamic economic thought protects the weaker party precisely by making obligations determinate; the enterprise's informality leaves workers without a reference point against which to judge whether the burden they carry is proportionate to what they receive. Fairness here is real but discretionary: it depends on the owner remaining fair, rather than on arrangements that would make unfairness visible.

The actuating function offers the clearest instance of Islamic ethics operating as managerial strength rather than as substitute. The owner's participatory leadership "he comes down and checks it himself, he doesn't just give orders" corresponds closely to the Islamic conception of leadership as service and to the disposition of ihsan, the pursuit of excellence in work as an act of accountability to God rather than to a supervisor (Branine & Pollard, 2010; Tlaiss, 2015). This is not merely a stylistic preference. Because the owner works alongside his workers, supervision, instruction, and motivation fuse into a single relational act, which is why the enterprise achieves coordination without meetings, briefings, or incentive schemes. Tawazun is likewise present in practice: the enterprise serves local farmers during harvest at times and volumes that are not obviously profit-maximising, holding economic and social obligations in equilibrium in the manner Islamic economics prescribes (Sholihah, 2020). What is absent is any mechanism by which this balance is deliberated rather than intuited. Shura is conspicuously thin: workers are engaged relationally but not consulted managerially, and their accumulated operational knowledge does not enter planning. Actuating thus enacts the ethics of Islamic leadership while omitting its participatory architecture.

The controlling function reveals the sharpest divergence between ethical intent and managerial system. Hisbah supplies Islam's normative logic of supervision historically an institution of market oversight ensuring accurate measures, fair prices, and honest quality (Anwar et al., 2020) and internally a discipline of self-accounting. In this enterprise, hisbah exists in its internalised form and only there. The owner's declaration that "if the rice quality is good and there are no complaints, then it's fine" is a genuine standard of accountability, but one whose evidence is his own perception and whose trigger is external complaint. Hisbah as an organizational functio in which deviation is detected before the customer detects it, and correction is recorded so that recurrence can be prevented is absent; the simple digital financial application is used for transaction recording rather than for the reflective self-accounting hisbah implies, so digitalisation has arrived without becoming muhasabah.

The prohibition of israf makes this gap materially consequential, since Islamic teaching treats squandering as an ethical failure rather than an economic inefficiency, and the obligation extends to production, not only to consumption (Budiman, 2025; Pusparini et al., 2026). Rice milling is an activity in which loss is endemic and largely invisible: grain lost to over-drying or to drying interrupted by weather, broken rice produced by settings not adjusted to moisture content, spoilage during queuing at peak harvest. None of it is recorded no yield ratio, no moisture reading, no loss figure so waste that is religiously proscribed is also managerially undetectable. The owner is, by every indication, personally averse to waste, yet the enterprise has no means of knowing whether waste occurs. The absence of measurement does not merely limit efficiency; it disables the very obligation the owner holds. Avoiding israf, in agro-processing, is not primarily a matter of disposition but of instrumentation.

Taken together, these readings support a single proposition. Islamic ethical values in this enterprise are neither absent nor ornamental: they are load-bearing. They perform the work that formal systems perform elsewhere conferring legitimacy on authority, securing fairness without contracts, motivating without incentives, and disciplining quality without metrics. This is why the enterprise functions. But because these values reside in a person rather than in a structure, they are neither transmissible nor verifiable, and in the controlling function they are actively frustrated by the absence of measurement. The relationship between Islamic ethics and formalization is therefore not one of tension, as an instrumental reading of management might assume, but one of dependence: at micro scale, ethics substitutes for structure; beyond micro scale, ethics requires structure. Formalization does not dilute amanah it is what allows amanah to outlive the individual who holds it.

Theoretical Implications

Classical management theory formulated the POAC framework with the formal organization as its implicit referent: Terry's functions presuppose an entity in which objectives can be written, structures charted, directives issued through hierarchy, and performance measured against standards. The rural micro-enterprise satisfies none of these presuppositions, and the question this study addresses is what becomes of POAC when its enabling conditions are removed. Three extensions follow. First, the study shows that integration the property on which the framework's effectiveness is held to depend (Hutabarat et al., 2025) is separable from formalization. In the enterprise studied the four functions are demonstrably integrated: control outcomes feed directly into the next day's planning, organizing adjusts within hours to actuating requirements, and no function operates in isolation. Yet none of this integration is procedural; it is achieved by the co-location of all four functions in a single cognitive agent. The study therefore proposes informal embedded management as a distinct mode of POAC integration, in which the integrating mechanism is a person rather than a system, and coordination costs are borne by proximity, tacit knowledge, and trust rather than documentation. This mode identifies a configuration that existing POAC scholarship concerned largely with degrees of implementation cannot describe: the enterprise is not a case of weak POAC, but of POAC integrated by other means.

Second, the study specifies the conditions under which this mode holds and the point at which it fails. Informal embedded management is not a deficient stage on a linear path toward formalization; it is an equilibrium that is efficient under a specific set of constraints a small workforce, a single site, seasonal and therefore unpredictable throughput, and a shared normative order that makes verbal commitment binding. Under those constraints, formal systems would impose coordination costs without corresponding benefit. The equilibrium is exhausted, however, once any one condition is relaxed: when the workforce exceeds the owner's span of direct observation, when a second site removes his physical presence, or when a buyer requires evidence of quality rather than a reputation for it. This specification advances the dynamic capabilities argument (Kevill et al., 2021; Wall & Bellamy, 2019) by locating the vulnerability precisely: it is not centralization as such that constrains scalability, but the non-transferability of the integrating agent.

Third, and most distinctively for the Islamic economics and management literature, the study identifies the moral substrate on which informal integration rests and reframes formalization as an ethical rather than merely technical requirement. Islamic business ethics scholarship has established that values such as amanah, adl, and itqan shape entrepreneurial conduct (Gümüsay, 2015; Tlaiss, 2015); Islamic management scholarship has articulated their normative content (Branine & Pollard, 2010). Neither has asked what organizational form these values require in order to persist. This study's answer is that at micro scale they require none they are enacted through presence but that this very sufficiency is what limits them. Amanah discharged without record cannot be audited; adl exercised without defined entitlement cannot be claimed; hisbah internalised without measurement cannot detect the israf it condemns. The study therefore advances the concept of ethically embedded POAC and its corollary: institutionalization is the mechanism by which Islamic ethical commitments are converted from personal virtue into organizational capability. This inverts the conventional framing in which formalization is a secular efficiency imperative to which religious values must accommodate. Here, formalization is what amanah and hisbah themselves demand once an enterprise grows beyond the reach of one person's conscience.

By joining agro-industrial development theory, SME management, and Islamic managerial ethics within a single POAC frame, this research connects macroeconomic development discourse to micro-level managerial dynamics. The contribution of rural agro-industry to local economic development value addition, employment creation, and income distribution (Fitrian et al., 2019; Muthalib et al., 2023; Pratiwi et al., 2017) is conventionally analysed as an aggregate outcome. This study shows that the aggregate rests upon an internal managerial architecture that is, at present, one person deep, and that the maqashid-oriented objective of communal welfare therefore depends on a transition which is simultaneously managerial and ethical: from personalized coordination sustained by individual virtue toward institutionalized capability in which that virtue is embedded and thereby made durable.

Practical Implications: A Shariah-Consistent Pathway to Graduated Institutionalization

The recommendations that follow are calibrated to the enterprise's scale. Prescribing organizational charts, strategic plans, and performance indicator systems to a six-worker rice mill would reproduce the error this study identifies in the normative literature: treating formalization as a good in itself rather than as an answer to a specific constraint. What follows is a graduated sequence in which each step is justified both managerially and by the Islamic obligation it operationalises, and in which no step imposes administrative burden disproportionate to the enterprise's capacity.

First, measure the loss. The highest-priority step concerns controlling, because it is where the ethical and the managerial deficit coincide. The enterprise should adopt a minimal loss ledger recording, for each milling batch, the weight of paddy received, the weight of rice produced, the proportion of broken grain, and the cause of any rejected output. This requires one scale, one notebook or a single additional screen in the application already in use, and roughly two minutes per batch. Managerially, it converts quality control from perception into evidence and produces the first data series the enterprise has ever held. Ethically, it operationalises the prohibition of israf, which cannot be honoured against losses never measured (Budiman, 2025; Pusparini et al., 2026), and converts the owner's private muhasabah into an organizational hisbah in which deviation is detected rather than merely regretted (Anwar et al., 2020). Rendering waste visible is the precondition for its avoidance being a duty rather than an aspiration.

Second, make entitlements determinate. Organizing rests on adl. The enterprise should document in one page, in plain language what each role does, what each role is paid, and on what basis payment varies. This requires no organizational chart and should not disturb the mutual assistance that currently makes the workplace flexible; the elasticity of roles is an asset, to be preserved as an explicit norm rather than eliminated. What such a document does is make entitlements knowable, so that fairness ceases to depend on the owner's continuing disposition and becomes a claim the worker is able to make. This is its specifically Islamic justification: adl protects the weaker party by rendering obligations determinate, and the Prophetic injunction to settle a worker's wage before his sweat dries presupposes that both parties know what is owed.

Third, institutionalise consultation. Actuating already enacts Islamic leadership ethics while omitting shura. A brief structured consultation fifteen minutes at the start of each harvest season, with all workers present would convert workers' accumulated operational knowledge from an unused asset into a planning input. Workers know which machine settings suit which moisture conditions and where the drying queue congests; none of this currently reaches the owner as anything other than incidental remark. Institutionalising consultation costs almost nothing and discharges an obligation Islamic management treats as constitutive rather than optional (Branine & Pollard, 2010)while beginning the distribution of managerial cognition on which scalability depends.

Fourth, record the inflow. A seasonal record of paddy inflow by week, accumulated across successive harvests, yields within two seasons something the owner has never possessed: a basis for anticipating volume rather than reacting to it, enabling drying capacity and labour to be arranged in advance of the peak rather than during it. In Islamic terms this is the discharge of amanah over resources entrusted by farmers whose harvest cannot be recovered if it spoils in a queue, and it serves tawazun by allowing the enterprise to balance its service obligation to the community against its own operational limits deliberately rather than under pressure. Fifth, delegate one whole function. Because every function currently resides in the owner, the enterprise has no continuity plan and no second person capable of exercising judgement in his absence. Deliberately delegating one complete function most plausibly the operational manager assuming responsibility for the drying queue, with authority to decide rather than merely execute would begin the transfer of tacit knowledge to a second holder. This is the point at which amanah becomes institutional: a trust dischargeable by only one individual is, in an enterprise on which farmers and workers depend, a trust held precariously.

For policymakers and development agencies, the implication is that support for rural agro-industry in Muslim-majority regions should not be confined to financing and technology. Interventions supplying equipment without building measurement capability leave the obligation to avoid israf unenforceable, and interventions imposing formal governance templates designed for larger firms are abandoned as soon as the programme ends. Assistance targeted at graduated, ethically motivated institutionalization beginning with loss measurement is both more likely to be adopted, because justified in terms the enterprise already accepts, and more consequential, because it addresses the constraint that actually binds. Islamic financial institutions and local zakat and waqf bodies, whose legitimacy already rests on maqashid-oriented reasoning, are particularly well positioned to deliver it.

Limitations and Directions for Future Research

This study is subject to limitations that also indicate directions for further work. The single-case design permits analytical but not statistical generalization; the account offered here is a conceptual proposition to be tested rather than a distribution to be assumed. The Islamic ethical reading is interpretive: informants were not asked to label their conduct in religious terms, and the mapping of practice onto amanah, adl, tawazun, hisbah, and israf represents the researcher's reading of what those practices do, not the informants' theological self-description. The religiously homogeneous setting further means the study cannot separate the effects of Islamic ethical commitment from those of communal social capital, since the two are empirically fused. Three avenues appear promising: multi-case comparison across agro-industrial sub-sectors, to test whether the informal embedded management mode holds where processing is less seasonal; longitudinal study of enterprises attempting formalization, to establish whether ethically framed institutionalization is adopted more readily than technically framed institutionalization; and intervention research testing whether the loss ledger proposed above reduces measured waste, which would convert this study's central practical claim from argument into evidence.

CONCLUSION

This study demonstrates that the POAC framework within a rural rice milling enterprise in Mandailing Natal operates through informal integration rather than institutionalized managerial systems. All four functions planning, organizing, actuating, and controlling are present, yet embedded in the owner's experiential authority, seasonal intuition, and direct supervision. Relational trust, habitual coordination, and tacit knowledge substitute for formal planning instruments, documented procedures, and performance metrics. Read through Islamic managerial ethics, this configuration is revealed to rest upon a moral substrate that is load-bearing rather than incidental: amanah confers legitimacy on authority exercised without contract, adl secures fairness without written entitlement, ihsan and tawazun sustain participatory leadership and the balance between commercial and communal obligation, and an internalised hisbah supplies the standard against which quality is judged. This configuration enables operational flexibility and short-term stability within an uncertain agro-industrial environment, but concentrates strategic capability in a single actor, constraining delegation, organizational learning, and structural scalability.

The study's principal contribution is to reframe the relationship between Islamic ethics and managerial formalization. Because the enterprise's ethical commitments reside in a person rather than in a structure, they can be neither verified nor transmitted, and formalization is therefore not an external imposition upon Islamic values but the condition of their organizational durability. The study accordingly advances the concept of ethically embedded POAC and proposes a graduated institutionalization pathway beginning with the measurement of milling loss, proceeding through documented entitlements, seasonal consultation, and inflow records, and culminating in the deliberate delegation of a complete managerial function in which each step is justified by the Islamic obligation it renders enforceable. Strengthening rural agro-industry in Muslim-majority regions thus requires not only financial and technological upgrading, but the codification and distribution of managerial capability beyond the owner-centric model, so that the virtue on which such enterprises presently depend may be inherited rather than merely admired.

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AUTHOR CONTRIBUTION STATEMENT

Muhammad Ardiansyah served as the lead researcher, responsible for conceptualizing the research framework, designing the methodology, conducting data collection through in-depth interviews and direct observation, and performing data analysis using thematic and interpretive coding cycles. The researcher contributed significantly to the literature review on POAC management functions, agro-industrial development, and Islamic managerial ethics, as well as developing the theoretical integration that forms the core contribution of this study. Rizka Ar Rahmah contributed substantially to the data collection process, particularly in conducting interviews with workers and documenting operational practices, and participated in the analysis of findings through the Islamic ethical constructs of amanah, adl, tawazun, hisbah, and israf. Both authors collaborated in interpreting the findings, developing the conceptual framework of ethically embedded POAC, and drafting and revising the manuscript. All authors reviewed and approved the final manuscript before submission.

AI DISCLOSURE STATEMENT

The researchers utilized Grammarly, an AI-assisted language support tool, to enhance grammar, sentence structure, and overall language clarity during the preparation of this manuscript. The tool was employed solely for language refinement purposes to improve readability and ensure grammatical accuracy. However, all intellectual content, including the research idea, study design, data collection procedures, analysis, interpretation of findings, discussion, and conclusions, was entirely developed by the researchers based on original field research conducted at the rice milling enterprise in Mandailing Natal Regency. The AI tool did not contribute to the generation of ideas, data analysis, or any substantive aspects of the research. The manuscript was carefully reviewed and revised by the authors to ensure accuracy, authenticity, and originality. The researchers assume full responsibility for all aspects of this publication, including its content, interpretations, and conclusions.

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CONFLICTS OF INTEREST

The researchers declare that there are no conflicts of interest associated with this research or its publication. No financial, personal, professional, or institutional relationships exist that could have inappropriately influenced the research design, data collection, analysis, interpretation, or presentation of findings. Both authors have maintained objectivity and scientific integrity throughout the research process. The researchers affirm that the study was conducted with full transparency and that no competing interests have affected the outcomes or conclusions presented in this manuscript. Any potential influences have been disclosed to ensure the credibility and reliability of the research findings. The researchers further confirm that the interpretation of Islamic managerial ethics in this study was conducted impartially, based on established scholarly constructs and empirical data, without any external pressure or bias.

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