REVIEW PAPER

Relational Leadership in Handling Export-Based Fishery Products in Bone Regency

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ABSTRACT

This study examines the role of relational leadership in handling export-based fishery products in Bone Regency, Indonesia. Using a qualitative case study approach, data were collected through in-depth interviews, field observations, and document analysis involving key actors in the fisheries supply chain. The study applies the relational leadership framework, focusing on four main dimensions: shared purpose and vision alignment, mutual accountability, relational communication, and power sharing. The findings reveal that although formal structures, operational procedures, and quality control mechanisms are well established, their implementation remains uneven across organizational levels. Differences in understanding between managerial and operational actors lead to inconsistencies in product quality and coordination gaps. Accountability mechanisms are structurally defined but not consistently enforced, while communication tends to be reactive rather than proactive. Furthermore, decision-making authority remains relatively centralized, limiting the participation of operational actors despite their contextual knowledge. The study concludes that strengthening relational leadership through improved vision alignment, consistent accountability, effective communication, and more participatory authority distribution is essential to enhance governance effectiveness. Integrating these dimensions can improve product quality consistency, strengthen supply chain coordination, and increase the competitiveness and sustainability of fisheries exports.

Keywords: *Relational leadershi,p Fisheries supply chain, Export management, Governance*

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INTRODUCTION

The fisheries sector is a strategic sector in Indonesia's economic development due to its contribution to domestic income, employment, and the provision of nutritious food for the community. In addition to supporting national food security, the fisheries sector is also a key driver of the coastal economy and a source of livelihood for the majority of communities dependent on marine resources. This contribution becomes even more significant when the fisheries sector is integrated into the international trade system through the export of high-value fishery commodities that require compliance with quality standards, food safety, and business sustainability.

Bone Regency, South Sulawesi, boasts significant marine fisheries resource potential, with leading commodities such as tuna, skipjack tuna, and shrimp oriented toward the export market. This potential offers strategic opportunities for strengthening the regional marine-based economy if supported by an effective, efficient, and sustainable fisheries management and handling system. However, export-oriented fisheries management is not solely concerned with technical production and quality standards; it also involves governance of relationships between actors in the supply chain, coordination mechanisms, leadership, and accountability within a complex network of partnerships.

In practice, the management of export-oriented fisheries products at the regional level often faces various challenges, such as inconsistent implementation of quality standards, weak coordination between actors, and reliance on informal working relationships. These conditions have the potential to create an imbalance of roles and responsibilities within fisheries partnership networks, which can ultimately impact effectiveness, product quality stability, and sustainable access to export markets. Although several studies have addressed the technical and institutional aspects of fisheries management, in-depth studies that highlight the dynamics of social relations and leadership processes in managing intersectoral relationships in the context of regional export fisheries are still relatively limited.

Based on this context, this study focuses on the management of export-based fisheries products in Bone Regency using a relational leadership perspective. This perspective is used to understand how leadership is formed through social interactions, communication, and working relationships between actors within the fisheries partnership network, and how these processes influence the distribution of responsibilities, operational coordination, and decision-making in the management of export-based fisheries products. Thus, this study is expected to provide a more comprehensive understanding of the role of relational leadership in supporting the

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effectiveness and sustainability of export-based fisheries partnerships at the regional level.

Various studies have shown that the fisheries sector significantly contributes to regional economic growth by increasing community income and creating jobs (Maulida & Nasir, 2018). Regions with a strong export-oriented marine fisheries sector offer significant opportunities in international trade if supported by an integrated management system (Amri et al., 2024). Management of fisheries products, from capture to post-harvest handling, processing, and distribution, is a key factor in export competitiveness. Weaknesses in any link in the chain can reduce product quality and lead to rejection in international markets (Widodo et al., 2021). The success of fisheries exports is determined by the synergy between fishermen, processing units, exporters, and quality control institutions within a coordinated supply chain system (Lailah et al., 2023). The complexity of the fisheries supply chain demands effective communication and coordination between actors. Weak communication can potentially reduce product traceability and increase the risk of export rejection (Hopkins et al., 2024). Furthermore, meeting international food quality and safety standards is a key prerequisite for successful exports (Fuah et al., 2023; Lasewa et al., 2024). Regulatory dynamics and global market fluctuations also demand institutional adaptability (Siregar et al., 2024).

Despite Bone Regency's significant fishery resource potential, export-based fisheries management still faces various structural and institutional challenges. First, coordination between fishermen, business actors, and the government is not yet fully integrated, creating information gaps regarding quality standards, export regulations, and market demand. Second, limited human resource capacity and post-harvest handling technology result in fluctuating product quality and inconsistent compliance with international standards. Third, regulatory uncertainty and global price fluctuations increase business risks for fishermen and processors, while risk protection and mitigation mechanisms are suboptimal. These issues indicate that the primary challenge to export-based fisheries management in Bone Regency lies in the governance of inter-actor relationships. Weaknesses in integration, communication, and accountability mechanisms have the potential to reduce supply chain efficiency and weaken export competitiveness. Therefore, an analytical approach is needed to explain how leadership and inter-actor relationships influence the effectiveness of the export-based fisheries partnership system.

This study uses the Relational Leadership approach developed by Fischer and Singh (2012) as the primary theoretical framework. This approach views leadership as a relational process formed through social interaction, communication, distribution of responsibility, and the division of power between actors within a system. Relational Leadership is relevant to analyzing export-based fisheries management because this system involves various stakeholders with different but interdependent positions, interests, and authorities. Leadership in this context is not centered on a single actor, but rather distributed within a network of collaborative relationships.

The Relational Leadership framework consists of four main dimensions: first, Shared Purpose and Vision Alignment, which emphasizes the alignment of vision and goals between actors in meeting quality standards, sustainability, and export market orientation. Second, Mutual Accountability, which emphasizes reciprocal accountability in complying with regulations, operational standards, and product quality consistency. Third, Relational Communication, which emphasizes the importance of open and transparent communication to support coordination and adaptation to market dynamics. Finally, Power Sharing, which emphasizes the distribution of power and participation in decision-making to strengthen the involvement of fishermen and local actors. The use of this theory provides a comprehensive analytical framework for understanding how the quality of relationships and collaborative leadership influence the effectiveness of export-based fisheries management in Bone Regency.

Academically, most studies on export-based fisheries product management still focus on technical aspects of production, quality technology, and logistics efficiency. The relational leadership dimension in fisheries supply chain governance at the regional level is still relatively limited. This study fills this gap by integrating a relational leadership perspective into the analysis of export-based fisheries product management. Practically, this study contributes to the local government, business actors, cooperatives, and fishermen's groups in Bone Regency in formulating collaborative leadership strategies that can strengthen export supply chain integration. The research findings are expected to form the basis for developing local policies that encourage alignment of vision, strengthening accountability mechanisms, improving communication quality, and a more participatory distribution of power. The urgency of this research is increasingly relevant considering that the competitiveness of fisheries exports is determined not only by the availability of natural resources, but also by the quality of governance and leadership in managing relationships between actors. By strengthening relational leadership in fisheries partnerships, Bone Regency has a greater opportunity to increase the competitiveness of export products, expand global market access, and promote the welfare of fishermen in a sustainable manner.

METHODS

This research uses a qualitative research method with a case study approach to deeply understand the process of handling export-based fishery products in Bone Regency. This approach was chosen because it allows researchers to examine the phenomenon contextually and comprehensively, particularly in uncovering the dynamics of practices, work processes, and interactions between actors involved in handling export-based fishery products. The case study focuses on one main context, namely the export-based fishery product handling system in Bone Regency, which is analyzed through four dimensions:

alignment of goals and shared vision, reciprocal accountability, relational communication, and division of authority. This approach allows researchers to explore the relationships between these dimensions in actual fishery product handling practices. Data collection was conducted through in-depth interviews, field observations, and documentation studies. Informants were selected using purposive sampling based on their involvement in and knowledge of the export-based fishery product handling process.

Data analysis was conducted using the interactive analysis model of Miles, Huberman, and Saldana (2014), which includes three main stages: data reduction, data presentation, and conclusion drawing and verification. The analysis process was cyclical and iterative, paralleling the data collection process in the field. Data validity was maintained through triangulation of sources and techniques, as well as confirmation of findings with informants, or member checking. With this approach, the research is expected to produce credible, contextual, and relevant findings that explain export-based fishery product handling practices in Bone Regency.

RESULTS AND DISCUSSION

Purpose and *Vision Alignment* in Handling Export-Based Fishery Products in Bone Regency

The shared purpose and vision alignment for handling export-oriented fishery products in Bone Regency has been formally formulated through technical guidelines for partner companies, standard operating procedures (SOPs), and technical directives from government agencies. These guidelines focus on meeting product quality standards, food safety, and export eligibility, particularly at the sorting, storage, and distribution stages. At the managerial and supervisory level, the objective of operational relations is understood as an effort to maintain consistent product quality and reputation in the international market. Actors at this level view fishery product handling as part of a strategy to maintain buyer trust and the sustainability of export contracts.

However, this study found that at the operational level, understanding of the objectives of the handling process has not been fully internalized as a shared vision. Some actors in the field still interpret handling technically as the implementation of work instructions without directly linking it to the consequences for export success. This is reflected in the following informant's statement:

"Regulatory, the goal of handling is clear, from quality to export-grade. But in the field, some still work simply following orders, not realizing that every small error can impact exports." (Interview, Ahmad, July 2025)

These findings indicate differences in the level of understanding and internalization of objectives between actors at the strategic and operational levels. This situation impacts variations in the level of care taken in handling, particularly in the early post-harvest stages, which significantly determine the final quality of export products.

Level of Actor Understanding of the Established Export Standards

Field findings indicate differences in actors' understanding of applicable export standards, including quality standards, food safety, and technical provisions for packaging and distribution. Actors directly involved in export quality control and administration generally have a more comprehensive understanding than those at the field level. Several informants stated that export standards are often understood as administrative obligations, rather than as part of the shared strategic objectives of the partnership. This condition is reflected in the persistence of fishery product handling practices that prioritize speed of distribution, while technical details affecting product quality are not fully prioritized. The Head of the Port Technical Implementation Unit (UPT) Region I stated:

"We know we have to maintain quality, but sometimes we're more focused on shipping targets. We know the general outline of export standards, but we often explain the details when there's a problem." (Interview with Arfan, July 2025)

These statements indicate that understanding of export standards tends to be general and reactive. More detailed technical explanations are usually provided when obstacles or non-conformities are identified, rather than as part of an ongoing development process. Overall, these findings indicate that export standards have not been fully internalized in the daily work practices of all actors involved in the export-based fisheries product handling chain in Bone Regency.

Consistency of objectives between policy documents and field practices

Normatively, the policy document for export-oriented fishery product management in Bone Regency contains relatively clear objectives. The document emphasizes improving product quality, meeting food safety standards, and complying with export regulations. The clarity of objectives in this formal document serves as a reference for work units involved in the fishery product management process. However, at the implementation level, variations in the level of understanding and interpretation of objectives across work units were found. Some units interpret the vision of export fishery product management as an effort to maintain overall product quality to meet international market standards. Other units are more oriented towards completing administrative and technical tasks according to their respective functions, without fully linking them to the export objective as a unified process. These differences in orientation result in less than optimal alignment of visions across work units. An informant from the South Sulawesi Provincial Maritime Affairs and Fisheries Office Branch in Bone Regency stated:

"The document clearly states that the goal is export, and quality must be maintained. However, in the field, each department sometimes focuses on its own work, and not everyone sees this process as a continuous process toward export." (Interview, Taufik, July 2025)

This statement shows that even though the objectives have been formally formulated, the internalization of the shared vision at the implementing level has not been fully established in daily work practices.

Synchronization of Work Direction Between Post-Harvest, Storage, and Distribution Stages

Synchronizing work direction across post-harvest, storage, and distribution stages still faces coordination challenges. At the post-harvest stage, handling standards are generally well understood, particularly regarding hygiene, initial sorting, and quality control. However, the continuity of these standards is not always consistently maintained at the storage and distribution stages. Several informants revealed that differences in operational priorities between stages often lead to inconsistencies in product treatment. This inconsistency is reflected in differences in procedures for handling temperature, storage time, and distribution speed. An informant from the distribution unit of Port Region I of Bone Regency explained:

"Initially, the sorting was good, but if storage and shipping aren't synchronized, quality can decline. Sometimes the shipping schedule changes, even though the product is ready." (Interview, Nurul Fidyah, July 2025).

These findings indicate that although technical standards have been implemented in the initial stages, implementation in subsequent stages has not been fully integrated.

Implications of Goal Consistency on Quality of Handling

This research shows that consistency between policy documents and field practices has direct implications for the quality of export-oriented fishery product handling. Work units that have a shared understanding of the organization's goals and vision are more likely to maintain consistent product quality and minimize technical errors in operational processes. As expressed by an informant from a processing unit:

"The document clearly states the direction, especially regarding export quality standards. However, in practice, the results depend heavily on whether all units share the same understanding. If the vision is aligned, the process is usually smoother and errors can be minimized. Conversely, if there are differing priorities between departments, coordination becomes less smooth, which can impact product quality and even cause damage or delays in distribution." (Interview with Irfan Amir, July 2025).

Conversely, misaligned objectives between work units contribute to coordination gaps. These gaps increase the risk of product damage and lead to inefficiencies in handling and distribution. Thus, differing understandings of policy direction directly impact the quality of implementation on the ground.

Common orientation towards export markets as the ultimate goal

This study found that a shared orientation toward the export market directly impacts the quality of fishery product handling. Fisheries operators who view the export market as the ultimate goal tend to implement stricter product handling practices from the initial stages of processing, including sorting, packaging, and quality control. This orientation encourages caution at every stage, as the product is positioned as a commodity that must meet international standards. One informant from a processing unit stated:

"If the focus is on export, the treatment of fish will definitely be different. We've been stricter from the start because we know export standards are non-negotiable." (Interview, Arie Julian, July 2025).

These findings suggest that a uniform market orientation influences work patterns and levels of rigor in day-to-day operational processes.

The Impact of Clarity of Goals on Product Quality Consistency

Clarity of export-oriented objectives directly impacts the consistency of fishery product quality. When all actors in the value chain share a shared understanding that products are destined for the export market, quality standards are applied more disciplined and sustainably at every stage of processing. This study found that export orientation drives changes in production behavior, where business actors focus not only on catch quantity but also on quality aspects, including uniformity of size, cleanliness, freshness, and the physical condition of the product. Handling standards become more controlled from the fish landing stage, through sorting, storage, and distribution to processing units. An informant from the quality control unit stated:

"Because the goal is export, we can't afford to be lax. Quality must be stable; it can't be good today and then bad tomorrow." (Interview, Taufik, July 2025)

This statement demonstrates that goal clarity creates operational discipline in maintaining quality stability. Quality consistency is viewed as an absolute necessity, not simply an administrative standard. Thus, this study confirms that a clear market orientation serves as an internal driver in ensuring stable fishery product quality.

Impact of Orientation Similarity on Reducing Technical Errors and Product Damage

A shared orientation toward export markets contributes to reduced technical errors and damage to fishery products. Businesses with a consistent export orientation tend to demonstrate higher levels of compliance with established operational procedures and technical standards. In businesses with a strong export orientation, technical errors such as delayed cooling, substandard physical handling, sorting errors, and inaccurate distribution times are relatively rare. Handling processes are carried out with greater care and control due to the awareness that even small deviations can result in product rejection in the export market. An informant from PT Aruna Jaya Nusantara stated:

"We've been preparing for export from the start, and we're being extra careful. A small mistake could lead to a product being rejected." (Interview, Irfan Amir, July 2025)

This statement indicates that export orientation influences the operational behavior of business actors in maintaining technical accuracy and discipline. The direct impact of this increased compliance is a decrease in product damage rates during handling, storage, and distribution. Thus, the research findings confirm that a shared export orientation contributes to increased operational prudence and a reduction in technical errors in the fisheries value chain.

Mutual Accountability in Handling Export-Based Fishery Products in Bone Regency

The division of roles and responsibilities in handling export-based fishery products in Bone Regency has been normatively regulated through operational procedures and a clear division of work functions. Each stage of handling, from post-harvest, storage, to distribution, has a different technical person responsible according to their function and competence. This arrangement aims to ensure that the handling process runs in a controlled manner and in accordance with applicable export standards. However, at the implementation level, this study found variations in the understanding and implementation of roles among actors. Some actors understand the detailed boundaries of their duties according to formal procedures, while others still rely on customary practices and work experience without always referring to the division of tasks that have been determined in writing. An informant from the post-harvest unit said:

"The actual tasks already exist, but in the field, there's sometimes overlap, especially when there are time or manpower constraints." (Interview, Taufik, July 2025)

This statement indicates that even though a formal role-sharing structure is in place, overlapping responsibilities still occur in practice, particularly in dynamic operational situations or when resources are limited. Thus, there is a gap between normative role clarity and consistent implementation in the field.

Clarity of Tasks at Each Stage of Handling

Clarity of tasks at each stage of handling export-oriented fishery products plays a crucial role in maintaining product quality. In work units with a clear and documented division of tasks, the handling process is more orderly and structured, with a relatively lower rate of technical errors compared to units with less defined divisions of tasks. This study found that clarity of tasks allows each actor to specifically understand their responsibilities, including what to do, when to do it, and what quality standards must be met. This clarity creates a systematic workflow and minimizes ambiguity in technical implementation. An informant from the quality control unit stated:

"If the tasks are clear, we know each other's boundaries. So errors can be quickly identified and corrected." (Interview, Taufik, July 2025)

This statement demonstrates that task clarity not only contributes to smooth operations but also facilitates error tracing and corrective action. Thus, task clarity has direct implications for the effectiveness of quality control and performance evaluation in an export-based fisheries product handling system.

Limits of Technical Authority and Responsibility

Clear, normative boundaries of authority have been established within the export-based fishery product handling system in Bone Regency. This division of authority is intended to ensure that every technical decision is made by parties with the competence and responsibility appropriate to their respective job functions. However, at the implementation level, this study found that technical authority is not always exercised consistently. Under certain conditions, particularly when operational pressures such as time constraints, surges in production volume, or other urgent situations arise, technical decisions are often made by parties who do not formally hold that authority. An informant from the CV Lintas Samudera Mandiri storage unit stated:

"Sometimes technical decisions are made quickly due to urgent circumstances, even though that's not really our responsibility." (Interview, Nurdin Kasim, July 2025)

These findings indicate that in daily operational practices, flexibility still exists that exceeds formal authority limits. This situation has the potential to weaken accountability mechanisms and increase the risk of technical errors in the handling of export-based fishery products. Overall, the results of this study demonstrate that although the reciprocal accountability system has a fairly clear structural basis, the implementation of technical authority limits still requires strengthening to ensure consistency with established standards.

Accountability mechanisms for export quality and standards

A quality control system for handling export-oriented fishery products in Bone Regency has been implemented through routine inspection procedures and recording of work results at each stage of handling. Quality control is carried out to ensure that fishery products meet the cleanliness, freshness, and technical requirements required for the export market. Recording of work results serves as both process documentation and a tool for monitoring the technical performance of work units. Structurally, the oversight mechanism is in place and is part of the standard operating procedures (SOPs) of the units involved in the handling chain.

However, this study found variations in the level of consistency in the implementation of supervision and recording. In some units, recording is carried out comprehensively, systematically, and continuously. Conversely, in other units, recording is still administrative in nature and has not been fully utilized as a basis for quality evaluation or process improvement. An informant from the quality control unit of PT Aruna Jaya Nusantara stated

"Quality checks are indeed conducted, but not everything is recorded in detail. Sometimes only what is deemed important is recorded." (Interview, Irfan Amir, July 2025)

These findings indicate that although a formal quality control system is in place, the recording function as a control and accountability instrument is not yet fully optimal across all work units.

Consequences of Non-Conformity to Procedures or Standards

Normatively, there are provisions regarding corrective measures if non-conformities are found in the handling of export-based fishery products. These provisions include procedural improvements, rejection of products that do not meet standards, and repetition of the handling process if necessary. This mechanism is designed to maintain quality consistency and prevent non-compliant products from entering the export distribution chain. However, this study found that the implementation of consequences for non-conformities has not always been strict and uniform. In some cases, procedural non-conformities were only addressed through verbal warnings or temporary adjustments without adequate documentation. This approach emphasizes immediate resolution in the field rather than formal recording as part of an accountability system. One informant stated:

"If there's a mistake, it's usually corrected immediately, but it rarely results in written sanctions. (Interview, Arfan, July 2025)

These findings indicate that consequence mechanisms tend to be short-term corrective and do not yet fully function as systematic organizational discipline instruments. This situation has the potential to weaken accountability and reduce compliance with technical standards in the long term.

The impact of accountability on work discipline and consistency

Clarity of responsibilities is strongly linked to compliance with export-oriented fishery product handling procedures in Bone Regency. Work units with a clear and well-defined division of responsibilities tend to demonstrate higher levels of work discipline, particularly in the implementation of technical procedures such as sorting, temperature control, and product packaging. Clarity of responsibilities allows each actor to specifically understand their roles and responsibilities at each stage of the process. This minimizes work practices that deviate from standard operating procedures. Conversely, in work units with less clear division of responsibilities, there is a tendency for inconsistent procedure implementation and uncoordinated interdependence. One informant stated:

"If it's clear who's responsible, people are more compliant. If it's unclear, they usually blame each other." (Interview, Ahmad, July 2025)

This statement demonstrates that clarity of responsibility directly impacts work behavior and the level of compliance with technical procedures. Thus, individual and work unit accountability plays a controlling role in maintaining consistent implementation of export standards.

Impact on the Stability of Export Product Quality

Consistently established accountability also impacts the quality stability of fishery products destined for the export market. This study found that work units with strong accountability systems are able to maintain product quality more consistently, in terms of freshness, cleanliness, and uniformity. This quality stability is achieved because each stage of processing is carried out according to the same standards and is continuously monitored. An informant from the quality control unit explained:

"Because it's clear who's responsible, quality can be maintained consistently. If there's a decline, the cause is quickly identified." (interview, Taufik, July 2025).

Product quality stability is a crucial factor in maintaining export market confidence. This finding supports the research of Irawati et al. (2024), which asserts that quality consistency in the export food supply chain is significantly influenced by a clear and consistently implemented accountability system. Overall, this sub-chapter demonstrates that effective accountability contributes significantly to improved work discipline and consistent procedural implementation in the handling of export-oriented fishery products in Bone Regency. Clarity of responsibility not only encourages compliance with procedures but also plays a crucial role in maintaining product quality stability, a key prerequisite for the export market.

Relational Communication Forms Communication) in Handling Export-Based Fishery Products in Bone Regency

The mechanism for conveying product quality information in the handling of export-oriented fishery products in Bone Regency is carried out through hierarchical and functional communication channels. Information regarding product quality conditions, such as freshness level, storage temperature, and sorting results, is routinely conveyed from field officers to the processing and quality control units. Quality information is generally conveyed through daily written reports and direct communication between officers, both verbally and through internal communication channels. This mechanism allows for the rapid receipt of technical information and serves as the basis for operational decision-making, particularly when indications of product quality decline are detected. One informant stated:

"Any time there's a change in fish quality, we immediately report it to the processing department so it can be addressed immediately." (Interview, Junaidi, July 2025)

Furthermore, this study found that reporting patterns for field conditions and quality control results were both periodic and incidental. Periodic reporting was conducted according to a predetermined schedule, while incidental reporting was conducted when quality deviations or technical constraints were discovered in the field. This reporting encompassed not only technical quality aspects but also operational constraints that could potentially impact the quality of export products. An informant from the quality control unit explained:

"If we find something in the field, we don't wait for routine reports. We report it immediately to avoid impacting export quality." (Interview, Taufik, July 2025)

These findings indicate that the communication and reporting system in place is responsive and functions as a control tool in maintaining the quality standards of export products.

Transparency and accuracy of technical information

The accuracy of technical data plays a critical role in determining the effectiveness of quality control in the handling of export-oriented fishery products in Bone Regency. Technical data, including product physical quality, catch volume, and storage conditions, serve as the primary basis for partner companies and supervisory units in assessing product compliance with established export standards. The accuracy of this data determines the accuracy of technical decision-making at every stage of handling, from post-harvest to distribution to export markets. Field findings indicate that discrepancies between reported data and the actual condition of the product have the potential to cause delays in quality control. This is reflected in the statement of one informant:

"If field data doesn't reflect the actual situation, we often take action too late. Sometimes, we only discover that the product has deteriorated after it arrives at the sorting facility." (Interview, Ahmad, July 2025)

This statement indicates that inaccurate data can lead to errors in technical planning, such as storage temperature settings, shipping scheduling, and determining further treatment during the sorting process. This situation increases the risk of product quality degradation before necessary technical interventions are implemented. Conversely, when data is delivered accurately, consistently, and timely, quality control processes can be implemented preventatively, significantly reducing the potential for product damage and rejection by export markets. Furthermore, accurate technical data also contributes to increased trust among actors in the supply chain. Technical decisions based on valid data encourage stronger work coordination and minimize conflicts arising from differing perceptions of product condition. In addition to accuracy, this study also found that the speed of delivery of technical information is a crucial factor in the export-based fishery product handling system. Delays in information regarding quality issues directly impact increased levels of product damage and yield loss, especially for commodities that are highly sensitive to changes in temperature and time. An informant who manages a cold storage facility stated:

"If there's a problem in the field but the information is late, it's usually beyond repair. The product's quality has already declined." (Interview, Nurdin Kasim, July 2025)

These findings indicate that information delays result in missed opportunities for timely corrective action. Thus, communication speed serves as a risk mitigation mechanism in export-based fisheries product handling systems.

The role of communication in resolving operational constraints

Active and coordinated communication plays a strategic role in controlling product quality decline and overcoming distribution barriers in the handling of export-oriented fishery products in Bone Regency. Effective communication allows relevant parties to promptly receive information about changes in product condition, cold chain disruptions, or shipping delays, which can be used as a basis for technical decision-making. An informant from PT Aruna Jaya Nusantara stated:

"If there's a decline in quality, we usually coordinate directly through the working group. From there, a quick decision is made whether to re-sort the product or expedite delivery." (Interview, Irfan Amir, July 2025)

This statement demonstrates that communication serves as an operational problem-solving mechanism that allows for rapid corrective action before the impact of quality degradation becomes widespread. Through coordinated communication, business actors can immediately determine technical steps such as re-sorting, adjusting storage methods, or accelerating distribution to maintain product quality according to export standards. Conversely, this study also found that when communication is not rapid and transparent, distribution bottlenecks tend to prolong handling times. This condition increases the risk of product damage and reduces its selling value in the export market. Furthermore, the results of the study indicate that the quality of communication significantly influences the technical decision-making process. Decisions regarding re-sorting, storage adjustments, or changes in distribution channels are highly dependent on the completeness, clarity, and timeliness of information conveyed between actors. An informant from the Port Technical Implementation Unit (UPT) Region I of Bone Regency stated

"Technical decisions are usually made quickly if the information is clear. If the data is incomplete, we have to double-check, and that takes time." (Interview, Arfan, July 2025)

These findings demonstrate that clear and structured communication can accelerate the decision-making process and improve the accuracy of technical actions. Conversely, incomplete or inconsistent communication can potentially create uncertainty, prolong processing times, and increase the risk of technical errors that impact the quality and export eligibility of fishery products.

The Role of Power Sharing in Handling Export-Based Fishery Products in Bone Regency

The authority to determine standards, technical procedures, and product handling adjustments within the export-based fishery product handling system in Bone Regency generally rests with the exporting company and its technical unit, which has formal authority. Meanwhile, operational implementation at the field level follows established guidelines and regulations. Quality standards, sorting procedures, storage, and packaging refer to export regulations that have been established in writing and

disseminated to technical implementers. An informant stated:

"Regarding standards and procedures, we can't make decisions on our own. Everything has its own set of guidelines, and any adjustments must be approved by the relevant authorities." (Interview, Junaidi, July 2025)

This statement indicates that the division of authority is hierarchical yet structured, so that strategic technical decisions are not made unilaterally at the field level. This pattern contributes to the consistent application of quality standards, although in some circumstances it requires intensive coordination to avoid hampering the response to urgent situations. This study also found that the division of authority is adjusted to the technical competencies and work functions of each actor. Actors with technical backgrounds and experience in handling fishery products are given operational authority in accordance with standard procedures, while strategic decisions remain at the managerial or institutional level. An informant from the Port Technical Implementation Unit (UPT) Region I of Bone Regency stated:

"We focus on technical handling in the field according to standard operating procedures. If there are major issues, we report them before making any further decisions." (Interview, Arfan, July 2025)

These findings indicate that operational authority is exercised within clearly defined functional boundaries, reducing the potential for overlapping roles and technical errors. Overall, the distribution of authority within the export-based fisheries product handling system in Bone Regency demonstrates a relatively clear and structured pattern.

Flexibility of decision making in handling exports

Decision-making flexibility in responding to changing quality conditions and export regulations is limited but targeted. Technical adjustments related to product handling, such as changes to sorting, packaging, or storage procedures, are generally made based on formal direction from those with technical and regulatory authority. An informant from the quality control unit stated:

"If there's a change in standards from the destination country, we can't immediately change procedures. Official instructions must be issued first to ensure all processing steps remain consistent." (interview, Junaidi, July 2025)

This statement demonstrates that operational flexibility remains within the framework of export regulatory compliance. While responses are not always immediate, this mechanism serves to prevent inconsistent application of standards that could potentially compromise a product's export eligibility.

Speed of adaptation to international market demands

The speed of adaptation to international market demands is heavily influenced by decision-making processes and effective coordination between work units. Market demands related to product size, freshness, packaging, and supply consistency drive the need for rapid technical adjustments at the operational level. One informant stated:

"Export market demand changes rapidly. If coordination is smooth, adjustments can be made quickly. But if not, things usually get stuck in the approval process." (interview, Taufik, July 2025).

These findings indicate that decision-making flexibility is not solely determined by technical capabilities, but also by the authority structure and smooth communication. When coordination channels are effective, adaptation to market demand can be achieved without disrupting product quality stability. These findings support previous studies, which emphasized that the speed of adaptation in the fisheries export system depends heavily on the balance between strict quality control and adequate operational discretion at the executive level. Overall, the flexibility of decision-making in handling export-based fisheries products in Bone Regency demonstrates a controlled adaptive pattern. This system allows for adjustments to changes in quality, regulations, and international market demands, while maintaining consistent standards and the export eligibility of fishery products.

The impact of division of authority on the effectiveness of handling

The division of authority aligned with technical functions and competencies directly contributes to operational efficiency in handling export-oriented fishery products. Clear authority allows for rapid technical decision-making without waiting for hierarchical instructions that could potentially slow down the handling process. One informant explained:

"If the authority is clear, we can immediately make technical decisions on the ground without having to wait for multiple approvals, so the process is not delayed." (interview, Taufik, July 2025).

This statement indicates that proportional authority provides space for technical implementers to act responsively to product conditions, particularly in the sorting, storage, and packaging stages. Operational efficiency is achieved because the workflow becomes more streamlined, handling time can be shortened, and the risk of quality degradation due to delays can be minimized. This finding is in line with the results of previous research which stated that decentralization of technical authority at the operational level has a positive effect on the efficiency of the export fishery product supply chain, particularly in the context of time-sensitive post-harvest handling.

Proportional distribution of authority also impacts the smooth distribution and final quality of exported fishery products. Clear authority in setting delivery schedules, quality verification, and technical distribution adjustments allows for a more coordinated logistics flow with minimal disruption. An informant involved in distribution management stated:

"If it's clear who has authority, distribution is smoother because decisions can be made quickly when problems

arise, without waiting for each other." (interview, Junaidi, July 2025).

These findings indicate that proper authority allocation prevents overlapping decisions and minimizes the risk of miscommunication between work units. Consequently, final product quality is maintained through to the shipping stage, and distribution to export markets is guaranteed on schedule. Overall, the proportional authority allocation in handling export-oriented fishery products in Bone Regency has been shown to increase handling effectiveness, both in terms of operational efficiency and smooth distribution and final product quality. A clear and functional authority structure is a crucial foundation for the sustainability of a competitive and resilient fishery export system.

Strengthening governance of fisheries product handling

The integration of these four dimensions contributes to strengthening fisheries product management governance in Bone Regency. Aligned goals and a shared vision provide a clear work direction for all work units, while mutual accountability reinforces the division of roles and responsibilities within the management system. This is supported by relational communication, which enables effective cross-unit coordination, and a division of authority that ensures technical decision-making is carried out according to function and competence. An informant from CV Lintas Samudera Mandiri stated:

"Now the process is more organized, everyone knows their role, and coordination between departments is clearer than before." (interview, Ahmad, July 2025)

This statement indicates that strengthening governance is not only reflected in formal structures, but also in more focused and coordinated daily work practices.

DISCUSSION

This discussion demonstrates that the export-based fisheries product management system in Bone Regency has a sound structural foundation, particularly in terms of goal alignment, role allocation, and quality control mechanisms. However, this alignment has not been fully internalized as a collective vision across all levels of actors. Differences in understanding between the managerial and operational levels have led to implementation tending towards a procedural approach, lacking a deep sense of quality. Consequently, compliance is more administratively oriented than focused on the substantive quality of export products.

Furthermore, there are gaps in understanding of export standards and inconsistencies between policies and field practices. Export standards are often positioned as external controls, rather than as internal guidelines for work behavior. This situation results in weak coordination across stages, from post-harvest to distribution, potentially compromising product quality. However, in the fisheries export system, each stage is interconnected and determines the final quality, necessitating a comprehensive integration of vision and understanding among stakeholders.

In terms of accountability, the division of roles and responsibilities is normatively established, but has not been consistently implemented in practice. Variations in the implementation of tasks and authorities indicate a gap between the formal structure and operational dynamics. Clarity of duties and boundaries of authority has proven crucial in reducing technical errors, strengthening quality control, and preventing overlapping responsibilities. However, weak consistency in recording and implementing consequences for procedural violations remains a challenge in building a robust accountability system.

Relational communication is a key factor in maintaining coordination and product quality stability. Findings show that a structured communication flow supports the rapid and accurate delivery of technical information, thereby accelerating decision-making and resolving operational challenges. In time- and temperature-sensitive cold chain systems, communication quality is crucial for the success of quality control. Therefore, strengthening documentation, standardizing reporting, and integrating data are essential for improving communication effectiveness.

Furthermore, the distribution of authority demonstrates a relatively balanced pattern between managerial control and operational autonomy. Decision-making flexibility is limited but targeted, thus maintaining compliance with export standards. Proportional distribution of authority has been shown to increase operational efficiency, accelerate response to market dynamics, and maintain product quality stability. This demonstrates that the balance between regulation and flexibility is a crucial factor in an international standards-based export system.

Overall, strengthening fisheries governance in Bone Regency requires the integration of four key dimensions: vision alignment, accountability, communication, and authority distribution. These four dimensions are interconnected and form a more coordinated, adaptive, and quality-oriented system. Therefore, increasing export competitiveness depends not only on technical aspects but also on the quality of governance that can unify vision, clarify responsibilities, strengthen communication, and ensure the appropriate distribution of authority.

CONCLUSION

This research shows that the management of export-oriented fisheries products in Bone Regency is determined not only by technical aspects but also by the quality of relational leadership among actors in the supply chain. Alignment of goals and a shared vision have been established normatively, but have not been fully internalized at the operational level, resulting in varying understandings and inconsistencies in quality. Mutual accountability has a structural basis, but still faces obstacles in the form of unclear authority boundaries, overlapping roles, and weak implementation of consequences. Meanwhile, relational communication has been structured and supports the delivery of technical

information, but it still tends to be reactive and not optimal as a means of continuous collective learning.

On the other hand, the division of authority exhibits a centralistic tendency, thus limiting the participation of operational actors in decision-making, even though they possess important contextual knowledge. Overall, the application of relational leadership in this system has been ongoing but is not yet optimal. Therefore, strengthening vision alignment, consistent accountability, quality communication, and a more participatory division of authority are key to improving governance effectiveness. Integrating these four dimensions has the potential to strengthen management quality, maintain consistency, and enhance the competitiveness and sustainability of fisheries exports in Bone Regency.

REFERENCES

1. Alzate Rendón, I. C., Álvarez Gallo, S. M., & Boada, A. (2025). Supply chain resilience through collaborative networks and dynamic capabilities: Evidence from an agri-food productive chain in Colombia. Discover Sustainability, 6, 1312. https://doi.org/10.1007/s43621-025-02094-9
2. Amamou, A., Chabouh, S., Sidhom, L., Zouari, A., & Mami, A. (2025). Agri-food supply chain sustainability indicators from a multi-capital perspective: A systematic review. Sustainability, 17(9), 4174. https://doi.org/10.3390/su17094174
3. Amri, K., Rahman, A., & Syamsuddin, R. (2024). Potensi dan daya saing komoditas perikanan laut berorientasi ekspor di wilayah pesisir Indonesia. Marine Policy, 157, 105847. https://doi.org/10.1016/j.marpol.2023.105847
4. Arianto, B., & Oktaviani, T. (2025). Transparency and accountability in bribery prevention in village fund governance based on citizenship behavior. Journal of Accounting and Investment, 26(1), 335–359. https://doi.org/10.18196/jai.v26i1.20840
5. Bush, T. (2013). Distributed leadership: The model of choice in the 21st century. Educational Management Administration & Leadership, 41(5), 543–544. https://doi.org/10.1177/1741143213489497
6. Chen, H., Fang, T., Liu, F., Pang, L., Wen, Y., Chen, S., & Gu, X. (2020). Career adaptability research: A literature review with scientific knowledge mapping in Web of Science. International Journal of Environmental Research and Public Health, 17(16), 5986. https://doi.org/10.3390/ijerph17165986
7. Chen, J. C., Silverthorne, C., & Hung, J. Y. (2006). Organization communication, job stress, organizational commitment, and job performance of accounting professionals in Taiwan and America. Leadership & Organization Development Journal, 27(4), 242–249. https://doi.org/10.1108/01437730610666000
8. Duan, J.-X., Hu, W.-X., & Zhang, Z.-G. (2025). The impact of focal firm digitalization on supply chain resilience: A supply chain collaboration perspective. Sustainability, 17(21), 9505. https://doi.org/10.3390/su17219505
9. Fan, Y. (2025). Accountability in public organization: A systematic literature review and future research agenda. Public Organization Review, 25(1), 295–310. https://doi.org/10.1007/s11115-024-00792-y
10. Fischer, D., & Singh, P. (2012). Relational leadership within business partnerships in India: A process framework. Journal of Applied Business Research, 36(5), 205–228. https://doi.org/10.19030/jabr.v36i5.10359
11. Fischer, R., & Singh, J. (2012). Relational leadership: Exploring the social processes of leadership. The Leadership Quarterly, 23(3), 489–502. https://doi.org/10.1016/j.leaqua.2012.03.003
12. Flynn, B. B., Huo, B., & Zhao, X. (2010). The impact of supply chain integration on performance: A contingency and configuration approach. Journal of Operations Management, 28(1), 58–71. https://doi.org/10.1016/j.jom.2009.06.001
13. Fuah, R. W., dkk. (2024). Analysis of the economic potential of tuna by-products: A case study of Morotai Island, North Maluku. Agrikan: Jurnal Agribisnis Perikanan, 17(1), 335–339. https://doi.org/10.52046/agrikan.v17i1.2084
14. Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. Review of International Political Economy, 12(1), 78–104. https://doi.org/10.1080/09692290500049805
15. Hall, R., Johnson, P., & Squires, D. (2011). Authority clarity and performance consistency in standardized organizations. Public Management Review, 13(6), 889–907. https://doi.org/10.1080/14719037.2011.589618
16. Hopkins, C. R., Roberts, S. I., Caveen, A. J., Graham, C., & Burns, N. M. (2024). Improved traceability in seafood supply chains is achievable by minimising vulnerable nodes in processing and distribution networks. Marine Policy, 159, 105910. https://doi.org/10.1016/j.marpol.2023.105910
17. Irvan, M. A. N., & Amalia, E. (2025). How accountability shapes the impact of government effectiveness on corruption outcomes. E-Jurnal Akuntansi, 35(8). https://doi.org/10.24843/EJA.2025.v35.i08.p09
18. Irawati, S., Hayat, A., Juniar, A., & Handayani, S. A. (2024).Exploring accountability and transparency in government agency management: A literature review. Ilomata International Journal of Management, 5(3), 743–762. https://doi.org/10.61194/ijjm.v5i3.1189

19. Kamalia, A., & Firmansyah, A. (2024). The moderating role of leadership in testing government performance accountability. Journal of Accounting, Finance, and Management, 5(4), 311–325. https://doi.org/10.35912/jakman.v5i4.3228

20. Lai, X., Zhang, Y., & Wang, L. (2024). Sustainability in global agri-food supply chains: Insights from a comprehensive literature review and the ABCDE framework. Foods, 13(18), 2914. https://doi.org/10.3390/foods13182914

21. Lailah, F., Yuliati, N., & Syah, MA (2023). Supply chain analysis and added value of exported surimi products. Anterior Journal, 22(Special-1), 5–11. https://doi.org/10.33084/anterior.v22iSpecial-1.5345
.

22. Lalwani, N. (2023). Accounting and auditing with blockchain technology and artificial intelligence – An empirical study. International Journal of Management, Public Policy and Research, 2(4), 63–74. https://doi.org/10.55829/ijmpr.v2i4.190

23. Lasewa, R., Naiu, A. S., & Mile, L. (2024). Development of a traceability system for fresh tuna loin (Thunnus sp) quality based on various handling temperatures at FPU XYZ using quick response (QR) codes. Asian Journal of Fisheries and Aquatic Research, 26(11), 109–120. https://doi.org/10.9734/ajfar/2024/v26i11834

24. Li, J., Adnan, H. M., & Gong, J. (2023). Exploring cultural meaning construction in social media: An analysis of Liziqi's YouTube channel. Journal of Intercultural Communication, 23(4), 01–12. https://doi.org/10.36923/jicc.v23i4.237

25. Luning, P. A., Marcelis, W. J., & Jongen, W. M. F. (2011). Food quality management in the fish supply chain. Trends in Food Science & Technology, 22(6), 303–311. https://doi.org/10.1016/j.tifs.2011.01.004

26. Luning, P. A., Marcelis, W. J., Rovira, J., van Boekel, M. A. J. S., Uyttendaele, M., & Jacxsens, L. (2011). A tool to diagnose context riskiness in view of food safety activities and microbiological safety output. Trends in Food Science & Technology, 22(Suppl. 1), S67–S79. https://doi.org/10.1016/j.tifs.2010.09.009

27. Maulida, A. D. S., & Nasir, M. (2018). Analisis peranan sub sektor perikanan terhadap pertumbuhan ekonomi di Provinsi Aceh. Jurnal Ilmiah Mahasiswa Ekonomi Pembangunan (JIM-EKP). https://jim.usk.ac.id/EKP/article/view/10619

28. Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook (3rd ed.). Sage Publications. https://www.sagepub.com/en-us/nam/qualitative-data-analysis/book246128

29. Mursalin, & Khaeriyah. (2024). Accountability and transparency in regional budget management for good governance. International Journal of Economics, Commerce, and Management. https://doi.org/10.62951/ijecm.v2i4.991

30. Pettigrew, A. M. (2012). Context and action in the transformation of the firm: A reprise. Journal of Management Studies, 49(7), 1304–1328. https://doi.org/10.1111/j.1467-6486.2012.01054.x

31. Prencipe, A. (2025). Accountability between compliance and legitimacy: Rethinking governance for corporate sustainability. Sustainability, 17(20), 9305. https://doi.org/10.3390/su17209305

32. Putra, D. A., & Lestari, E. (2023). Traceability systems and sustainability in fisheries export markets. Ocean & Coastal Management, 231, 106401. https://doi.org/10.1016/j.ocecoaman.2022.106401

33. Putri, A. S. (2024). Government performance accountability: The role of IT, internal control, performance-based budgeting, and organizational commitment. Jurnal Akuntansi dan Auditing Indonesia, 29(2). https://doi.org/10.20885/jaai.vol29.iss2.art11

34. Qu, Z. (2025). Research on intelligent development and processing for traceability of aquaculture supply chains using IoT and big data technologies. Journal of Cleaner Production, 365, 140056. https://doi.org/10.1016/j.jclepro.2023.140056

35. Siahay, A.Z.D. (2023). Building public trust through transparency and accountability: A systematic review of the role of public sector accounting. Journal of Economic Resources, 6(2), 1504. https://doi.org/10.57178/jer.v6i2.1504

36. Siregar, ES, Syahrunsyah, S., Rahmat, R., Apdillah, D., Zuhri, MS, Sukmawati, N., Al Azmi, AS, Salam, A., & Syapiq, M. (2024). Implications of fisheries sector investment for Indonesia's economic growth and sustainability. Community Development Journal, 5(3), 5301–5305. https://doi.org/10.31004/cdj.v5i3.29876

37. Subramanian, N., Joshi, A., & Bagga, D. (2023). Transparent and traceable food supply chain management. https://arxiv.org/abs/2305.12188

38. Sutoyo, MAH, HD, E., & Yanita, M. (2023). Designing a catfish information system using supply chain analysis in Muaro Jambi Regency. Journal of Agricultural Economics and Agribusiness, 7(4), 1201–1209. https://doi.org/10.21776/ub.jepa.2023.007.04.1

39. Trienekens, J. H. (2011). Agricultural value chains in developing countries: A framework for analysis. International Food and Agribusiness Management Review, 14(2), 51–82. https://doi.org/10.22004/ag.econ.103988

40. Trienekens, J. H. (2021). Agricultural value chains in developing countries: A framework for analysis.

International Food and Agribusiness Management Review, 14(2), 51–83. https://doi.org/10.22004/ag.econ.103987

41. Trienekens, J. H., & Zuurbier, P. J. P. (2008). Quality and safety standards in the food industry: Developments and challenges. International Journal of Production Economics, 113(1), 107–122. https://doi.org/10.1016/j.ijpe.2007.02.050
42. Trienekens, J. H., & Zuurbier, P. (2021). Quality and safety standards in food supply chains. British Food Journal, 123(2), 431–447. https://doi.org/10.1108/BFJ-03-2020-0229
43. Widodo, A. A., Sadiyah, L., & Satria, F. (2021). Characterizing of skipjack (Katsuwonus pelamis) supply chain on pole and line fishery in Indonesia FMA 714 and adjacent. Indonesian Fisheries Research Journal, 27(2), 69–78. https://doi.org/10.15578/ifrj.27.2.2021.69-78
44. Zhang, L., Huang, H., Chen, N., & Chen, H. (2025). Policy-driven supply chain digitalization and corporate sustainability: Evidence from China's innovation pilot. Sustainability, 17(19), 8762. https://doi.org/10.3390/su17198762
45. Zhao, N., Hong, J., & Lau, K. H. (2023). Impact of supply chain digitalization on supply chain resilience and performance: A multi-mediation model. International Journal of Production Economics, 259, 108817. https://doi.org/10.1016/j.ijpe.2023.108817.