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Business Sustainability Through Seafood Value Chain Practices of Seafood Restaurants in Lapu-Lapu City

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ABSTRACT

This qualitative phenomenological study explored the seafood value chain practices of seafood restaurants in Lapu-Lapu City and examined how these practices contribute to business sustainability. Ten seafood restaurant owners, managers, and key personnel were selected through purposive sampling and interviewed through semi-structured, face-to-face interviews. The interview data were transcribed, reviewed by participants, and analyzed through inductive thematic analysis. Findings across the seafood value chain showed that restaurants experienced inconsistent delivery conditions but responded through strict quality control and temperature management. Within operations, inventory management, stock control, food safety, and sanitation practices were emphasized. Outbound logistics presented difficulties in preserving the temperature, freshness, texture, and presentation of cooked seafood during delivery, with packaging and rider-handling limitations contributing to quality deterioration. Marketing and sales practices centered on social media promotions, customer satisfaction and word-of-mouth, and pricing adjustments. Service-related findings highlighted delays and the need for quick responses to customer complaints. Across the People, Planet, and Profit dimensions, the study identified staff inconsistency in following handling procedures, basic waste-management practices with limited advanced sustainability initiatives, and price instability accompanied by adaptive cost-management strategies. Overall, the findings indicate that business sustainability is closely connected to coordinated supplier management, seafood-handling efficiency, service reliability, employee performance, environmental practices, and financial management. The study recommends stronger supplier coordination, standardized receiving procedures, continuous staff training, improved waste-management systems, and more strategic sustainability practices.

Keywords: *Business sustainability, seafood value chain, phenomenological study, restaurant operations, sustainability practices, Lapu-Lapu City, People, Planet, Profit, adaptive management, food safety, service quality*

INTRODUCTION

The seafood industry faces sustainability challenges associated with overfishing, ecosystem degradation, and weaknesses in value-chain processes. The Food and Agriculture Organization (FAO, 2020) reported continuing pressure on global fish stocks, while Béné et al. (2016) emphasized the relationship between fisheries and food-system sustainability. Weak traceability and cold-chain systems can also compromise seafood quality and safety (Macusi et al., 2024; Smith et al., 2023). Restaurants occupy an important position between seafood suppliers and consumers and can influence demand for sustainably sourced seafood (Jacquet et al., 2010).

From a value-chain perspective, sourcing, inbound logistics, operations, marketing, and service are interconnected activities that can affect organizational performance and competitive advantage (Porter, 1985; Khan et al., 2021). For seafood restaurants, these activities are particularly important because seafood is highly perishable and requires appropriate handling, temperature control, sanitation,

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and timely service. The FAO Code of Conduct for Responsible Fisheries also provides international guidance for responsible fisheries and sustainable use of aquatic resources (FAO, 1995).

The sustainability of seafood businesses is also connected to the United Nations Sustainable Development Goals. SDG 12 emphasizes responsible consumption and production, SDG 14 addresses the conservation and sustainable use of oceans and marine resources, and SDG 8 concerns sustainable economic growth and decent work (United Nations, 2015). These goals provide a broad context for examining how seafood restaurants manage their operations and environmental responsibilities.

Within the Philippine context, fisheries management continues to face concerns involving overfishing, coordination, and market-based sustainability approaches (Zondervan & Tolentino-Zondervan, 2022). Research has also identified concerns related to seafood traceability, quality, and safety in local supply chains (Macusi et al., 2024), as well as fish-market waste management (De Ungria et al., 2023). These concerns are particularly relevant to coastal tourism destinations such as Lapu-Lapu City, where seafood restaurants interact with suppliers, local communities, and tourism markets.

Related studies across Southeast Asia identify similar challenges. Fauzi and Anna (2020) discussed cold-chain and post-harvest issues in Indonesia; Phong et al. (2018) and Nguyen et al. (2025) examined sustainability and competitiveness issues in Vietnam; Chuenpagdee and Juntarashote (2011) discussed coastal resource degradation and waste-management concerns in Thailand; and Nurani et al. (2019) described logistical inefficiencies and fragmentation in Malaysian seafood supply chains. Ha and Shakur (2017), in contrast, examined consumer demand for sustainably sourced seafood in Singapore. Together, these studies show the relevance of sourcing, logistics, sustainability, and consumer demand to seafood-related businesses in the region.

Despite the availability of fisheries and seafood-supply-chain research, the source thesis identifies a gap in research focused specifically on restaurant-level sustainability practices in the Philippines, particularly in coastal and tourism-driven cities. Jones et al. (2016) noted the importance of small food businesses in environmental outcomes, while Tsironi et al. (2020) highlighted food-safety concerns associated with seafood handling. Olsen et al. (2014) also demonstrated the relevance of consumer responses to sustainable seafood. The present study therefore examines the lived experiences of seafood restaurant operators across the seafood value chain and relates those experiences to the People, Planet, and Profit dimensions of business sustainability.

Philosophical and Methodological Stance

The study adopts an atheoretical approach in which the researchers intentionally set aside established theoretical assumptions during data collection and initial analysis so that themes could emerge from participants' lived experiences. The study also takes a naturalistic, interpretivist position informed by constructivism and relativism. Knowledge is treated as context-dependent and co-constructed through interaction between researchers and participants. Semi-structured interviews and inductive thematic analysis were therefore used to capture participants' own accounts of seafood handling and business sustainability.

Research Questions

The study sought to determine the experiences of seafood restaurant owners, managers, and key personnel in handling seafood across five value-chain areas: (1) inbound logistics, (2) operations, (3) outbound logistics, (4) marketing and sales, and (5) services. It also examined how these experiences contribute to business sustainability in terms of (a) People, (b) Planet, and (c) Profit, and identified recommendations based on the findings.

METHODOLOGY

Research Design

A qualitative phenomenological research design was employed to understand how seafood restaurants in Lapu-Lapu City experience and implement seafood value-chain practices in relation to

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business sustainability. The design was consistent with the study's interpretivist philosophical stance and its use of semi-structured interviews and inductive thematic analysis.

Research Setting

The study was conducted in Lapu-Lapu City, Cebu, Philippines, a coastal and tourism-oriented area where seafood restaurants interact with fishing communities, wet markets, suppliers, and a tourism-driven customer base. The setting was selected because restaurant operations involve seafood sourcing, receiving, storage, preparation, serving, marketing, and waste management, all of which are relevant to sustainability.

Participants and Sampling

Ten individuals representing seafood restaurant owners, managers, and key personnel participated in the study. Purposive sampling was used because participants needed to possess direct experience relevant to the research questions. Inclusion criteria required the participant to be a seafood restaurant owner or manager operating their own business in Lapu-Lapu City for at least two years and to give permission for a semi-structured personal interview. Individuals operating outside Lapu-Lapu City or for less than two years, as well as those who did not consent, were excluded.

Criterion	Inclusion	Exclusion
Location	Seafood restaurant operating in Lapu-Lapu City	Seafood restaurant operating outside Lapu-Lapu City
Experience	Owner/manager operating the business for at least 2 years	Owner/manager operating for less than 2 years
Participation	Gives permission for the semi-structured interview	Refuses permission

Research Instrument

The primary instrument was a researcher-developed semi-structured interview guide administered through face-to-face interviews. The guide explored participants' experiences in handling seafood across inbound logistics, operations, outbound logistics, marketing and sales, and services, as well as their perceived contribution to People, Planet, and Profit dimensions of business sustainability.

Data Collection Procedures

Before data collection, the researchers prepared the interview guide, contacted qualified participants, and obtained informed consent. Each interview was conducted face-to-face at a convenient time and location and lasted approximately 30–45 minutes. With permission, interviews were recorded and supplemented with brief notes. Recordings were transcribed verbatim. Participants were represented using pseudonyms to protect confidentiality, and transcripts were reviewed for accuracy and returned to participants for confirmation before thematic analysis.

Data Analysis

The interview transcripts were analyzed using inductive thematic analysis. The researchers repeatedly read the transcripts, generated initial codes, grouped related codes into categories, developed emerging themes, and reviewed and defined those themes. The analysis focused on patterns grounded in participants' actual experiences rather than predetermined theoretical categories. Findings were presented narratively and supported by selected participant quotations.

Trustworthiness

Trustworthiness was addressed through member checking, peer debriefing, and data triangulation. The researchers also emphasized clear communication with participants, informed consent, confidentiality, careful data handling, and procedures intended to support credibility, transferability, and confirmability.

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Ethical Considerations

The study followed the ethical principles of beneficence, nonmaleficence, justice, and autonomy. Participation was voluntary and based on informed consent. Participants were informed about the purpose and conditions of the research and were allowed to decline or withdraw without negative consequences. Confidentiality and privacy were maintained, and the researchers sought to minimize potential psychological or professional risks.

RESULTS

Inbound Logistics: Inconsistent Delivery Conditions and Strict Quality Control

Participants described inconsistent delivery conditions as a major challenge. Delivery delays, transportation conditions, and insufficient cooling could affect seafood freshness before the products reached the restaurant. Participants reported that they responded by inspecting seafood upon arrival and checking sensory indicators such as the eyes, gills, smell, color, and physical condition. Temperature control and adequate icing were also emphasized. These practices were consistent with the need for seafood to remain under appropriate temperature conditions because of its rapid deterioration (FAO, 2020; Tsironi et al., 2020). Supply-chain delays and cold-storage limitations have likewise been identified as risks to seafood freshness and safety (Macusi et al., 2024; Smith et al., 2023).

Operations: Inventory Management, Food Safety, and Sanitation

Participants reported systematic inventory management and stock control to prevent over-ordering, reduce spoilage, and maintain freshness. Daily inventory monitoring and forecasting were described as mechanisms for matching supply with demand. Restaurants also emphasized food safety and sanitation, including separating seafood from other food products, cleaning utensils, and maintaining hygiene procedures. These findings are consistent with the importance of seafood storage, handling, and sanitation in reducing contamination risks (Khan et al., 2021; Tsironi et al., 2020). Porter (1985) similarly places operational activities within the value chain through which organizations create value and manage efficiency.

Outbound Logistics: Difficulty Preserving Cooked Seafood Quality During Delivery

Participants experienced difficulties in maintaining the temperature, freshness, texture, and presentation of cooked seafood after it left the kitchen. Travel time, traffic, waiting time, and delivery conditions were described as factors that can cause food to cool and become less appealing. Packaging limitations could also result in changes in food presentation, spills, moisture accumulation, or other physical deterioration. The source literature cited in the thesis emphasizes the importance of suitable packaging and delivery handling for temperature-sensitive food products (Restaurantware, 2024; Delucci, 2024). Food-delivery guidance likewise identifies dispatch coordination, transport handling, and packaging as operational considerations (Maya Business, 2024; OpenTable, 2024).

Marketing and Sales: Digital Promotion, Customer Satisfaction, and Pricing

Participants described social media as an accessible promotional channel. Restaurants posted photographs of seafood products and promotional offers to attract customers. Customer satisfaction and word-of-mouth were also identified as important sales drivers, with participants describing repeat patronage and recommendations as outcomes of good food and service. These observations correspond with literature on strategic social media marketing (Felix et al., 2017; Kaplan & Haenlein, 2010) and customer responses, satisfaction, and word-of-mouth in hospitality and tourism contexts (Bigné et al., 2018; Kotler & Keller, 2016).

Pricing adjustments were another marketing and sales practice. Participants explained that seafood prices could vary according to supplier conditions, requiring restaurants to adjust selling prices or use promotions to maintain customer demand and margins. The source thesis relates this experience to the broader problem of seafood supply and market instability (Smith et al., 2023).

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Service: Delays Affecting Service Quality and Customer Satisfaction

Participants identified delays in serving freshly prepared seafood as a service challenge. During busy periods, longer waiting times could cause food to cool before reaching customers. Participants also described customer complaints and the need to communicate expected waiting times and respond promptly to concerns. Because seafood is perishable and its perceived quality can be affected by temperature and freshness, timely service is particularly relevant. The source study connects these observations with Olsen et al. (2014), Smith et al. (2023), and Jacquet et al. (2010).

Business Sustainability: People

The People dimension revealed two related themes: staff inconsistency in following proper handling procedures and customer safety and health consciousness. Participants reported that some employees did not consistently follow established handling procedures, even after training. Differences in employee attitudes, habits, and compliance created variations in performance. Participants nevertheless emphasized customer health and safety, including asking about seafood allergies and ensuring that products were safe to consume. Human factors and employee compliance are important to food-safety performance (Khan et al., 2021), while workforce and behavioral issues can affect operational consistency (Béné et al., 2016).

Business Sustainability: Planet

The Planet dimension was characterized by basic waste-management practices and limitations in more advanced sustainability initiatives. Participants reported waste segregation and regular collection, including separating seafood-related waste. One practice involved using some organic seafood waste as fertilizer. However, participants also identified infrastructure limitations, such as insufficient waste collection capacity, as barriers to more comprehensive sustainability initiatives. Waste management is an important component of environmental sustainability in food systems (FAO, 1995; De Ungria et al., 2023), while infrastructure limitations can constrain sustainability implementation (Zondervan & Tolentino-Zondervan, 2022).

Business Sustainability: Profit

The Profit dimension revealed price fluctuations and market instability as central financial challenges. Participants explained that seafood prices could change daily depending on suppliers and availability, creating difficulty in maintaining stable prices and profit margins. Restaurants responded by seeking alternative suppliers, comparing costs, adjusting prices when necessary, and managing inventory to reduce losses. The findings are consistent with the source literature describing seafood-market instability and the need for adaptive sourcing and inventory practices (Zondervan & Tolentino-Zondervan, 2022; Smith et al., 2023; Porter, 1985).

DISCUSSION

The findings portray business sustainability as an operational process that extends across the seafood value chain rather than as a stand-alone environmental program. At the inbound stage, supplier reliability, delivery conditions, and temperature management affect the quality of the raw material. Within operations, inventory control and sanitation help preserve quality and reduce spoilage. During outbound logistics, packaging and transport conditions influence the customer's experience of the finished product.

Marketing and service activities connect operational quality with customer relationships. Participants' reliance on social media, customer recommendations, and pricing adjustments suggests that restaurants use relatively accessible mechanisms to attract and retain customers. The findings also show that service responsiveness matters because delays can diminish the quality of perishable seafood and generate customer complaints.

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The People, Planet, and Profit findings reveal that sustainability implementation is uneven. Restaurants demonstrate awareness and adoption of basic practices, particularly in food safety, employee guidance, waste segregation, and cost management. At the same time, staff inconsistency, limited waste-management infrastructure, supply disruptions, and price volatility constrain the development of more systematic long-term sustainability practices. The evidence therefore points to the importance of coordination among restaurant operators, suppliers, employees, and local institutions.

CONCLUSION

Based on the experiences reported by the ten participants, seafood restaurants in Lapu-Lapu City sustain their operations through interconnected value-chain practices involving supplier management, seafood handling, inventory control, service delivery, marketing, employee performance, waste management, and financial adaptation. The study identified six broad sustainability-related factors: supplier management, seafood-handling efficiency, customer service reliability, employee performance, environmental practices, and financial management.

The findings also indicate that sustainability practices are often implemented as responses to immediate operational demands rather than as fully developed long-term systems. Delivery disruptions, seafood price fluctuations, staff-related inconsistencies, limited waste-management infrastructure, and service delays create constraints that restaurants must manage through adaptive measures. Strengthening coordination and standardization across the value chain may therefore support more consistent sustainability practices.

RECOMMENDATIONS

- Strengthen coordination with seafood suppliers to improve delivery timeliness, temperature control, icing, and product condition upon arrival.
- Develop and consistently use a seafood-receiving checklist covering appearance, smell, physical condition, temperature, and icing.
- Improve communication with customers about expected waiting times, especially during peak periods and for seafood dishes requiring longer preparation.
- Strengthen coordination between kitchen and service personnel so freshly prepared seafood is served or dispatched promptly.
- Conduct regular and refresher training on seafood storage, preparation, sanitation, service, and standard handling procedures, supported by supervision and monitoring.
- Improve waste-management systems by maintaining segregation and exploring feasible uses of appropriate seafood waste, while coordinating with available collection and disposal services.
- Develop systematic sustainability plans that integrate People, Planet, and Profit considerations into routine restaurant management rather than treating sustainability only as a short-term operational response.
- Future studies may include a larger and more diverse participant pool, additional coastal cities, suppliers and customers, and longitudinal observation of seafood value-chain practices.

Author Contributions

Author 1: Conceptualization, Methodology, **Author 2:** Data curation, Writing-Original draft preparation; **Author 3**: Investigation, Validation, **Author 4**: Visualization, Writing- Reviewing; **Author 5:** Supervision, Editing; **Author 6:** Writing- Reviewing, Supervision.

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Generative AI Statement

The authors used ChatGPT (Open AI) solely as a language-support tool to improve the clarity, coherence, and grammatical accuracy of the manuscript. All AI-assisted outputs were critically reviewed, revised, and validated by the authors to ensure the accuracy, integrity, and originality of the

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content. The authors accept full responsibility for the final version of the manuscript and its published content.

Ethical Considerations

Prior to the data gathering, ethical approval was obtained from the University of Cebu Academic Research Ethics Committee (UCAREC). The approved protocol ensured adherence to the principles of respect for persons, beneficence, justice, voluntary participation, informed consent, confidentiality, and anonymity, and compliance with the Data Privacy Act throughout the research process.

Declaration of Competing Interest

The authors declare that they have no competing financial, professional, or personal interests that could have influenced the conduct, findings, or publication of this study.

Data Availability

Data will be made available by the corresponding author on request.

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