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Research Article

Environmental, Social, and Governance (ESG) Practices in Small and Medium-Sized Restaurants: A Qualitative Study from Macau

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ABSTRACT

Background: Environmental, Social, and Governance (ESG) practices have become increasingly important for businesses worldwide, yet research on ESG adoption in Small and Medium-sized Enterprises (SMEs), particularly in the restaurant sector, remains limited. Macau's restaurant industry, comprising over 2,400 establishments employing more than 36,000 workers, provides a valuable context for understanding how SMEs approach sustainability in a unique cultural and regulatory environment.
Objective: This study explores the specific ESG practices adopted by SME restaurants in Macau, investigates the motivations driving these implementations, and identifies the barriers and enablers influencing ESG adoption in this sector.
Methods: Employing a qualitative research design, semi-structured in-depth interviews were conducted with eight owners and managers of SME restaurants in Macau. Participants operated between one and six establishments, employing 6 to 70 individuals each. Thematic analysis was applied to interview transcripts to identify patterns, themes, and insights regarding environmental initiatives, social responsibility, governance practices, and factors affecting ESG adoption.
Results: Findings reveal that government regulations serve as the primary driver of environmental initiatives, particularly in reducing plastic usage and implementing food waste management programs. However, adoption remains uneven due to financial constraints and operational limitations such as space restrictions. Social responsibility practices, including collaboration with charitable organizations and hiring individuals with disabilities, are undertaken cautiously and often suspended during economic downturns. Fair trade product adoption faces consumer resistance due to price sensitivity. Governance initiatives focus predominantly on operational efficiency through electronic workflow adoption and risk management practices, with stakeholder relationships characterized by informal, personalized approaches rather than formal governance structures. A significant knowledge gap exists regarding ESG frameworks and certifications, with participants unaware of formal sustainability standards despite engaging in some related practices.
Conclusion: ESG adoption in Macau's SME restaurants is primarily driven by cost-saving opportunities and regulatory compliance rather than investor interest or consumer trust considerations. The sector requires tailored approaches including industry-specific ESG frameworks, financial incentives, hands-on training, and peer-to-peer learning networks to overcome adoption barriers. This study contributes to understanding how SME restaurants engage with sustainability in a context where formal ESG awareness remains limited but practical implementation is emerging through regulatory and operational drivers.

1. INTRODUCTION

1.1 The Global Rise of ESG and Its Relevance to SMEs

The concept of Environmental, Social, and Governance (ESG) has emerged as a dominant framework for evaluating corporate sustainability and ethical impact (Li, Wang, Sueyoshi, & Wang, 2021). Originally developed for investors to assess non-financial risks and opportunities, ESG has evolved into a comprehensive approach that influences corporate strategy, stakeholder relationships, and long-term value creation (Craig, 2023). The three pillars of ESG encompass environmental stewardship (resource consumption, emissions, waste management), social responsibility (employee welfare, community engagement, human rights), and governance quality (leadership structures, ethical practices, transparency) (Jaime, 2023).

Historically, ESG discourse has concentrated on large corporations and publicly listed entities, which face mandatory disclosure requirements and pressure from institutional investors (Park & Jang, 2021). However, the collective impact of Small and Medium-sized Enterprises (SMEs) on environmental and social outcomes is substantial. SMEs constitute the vast majority of businesses globally, employ significant portions of the workforce, and collectively generate considerable environmental footprints (Esposito, Scandurra, & Thomas, 2021). In the European Union alone, SMEs account for approximately 64% of industrial pollution, highlighting the urgency of extending ESG considerations to this sector (European Commission, 2022).

1.2 The Restaurant Industry: A Critical Context for ESG

The restaurant industry presents a particularly compelling context for examining ESG practices due to its distinctive operational characteristics. Restaurants are intensive consumers of energy and water, generate substantial waste—particularly food waste—and maintain complex supply chains with significant environmental and social implications (Camelo & Nogueira, 2024). Food waste alone represents a critical global challenge, with approximately one-third of all food produced for human consumption lost or wasted annually (Food and Agriculture Organization, 2019). The restaurant sector contributes significantly to this problem through over-preparation, plate waste, and supply chain inefficiencies (Principato, Di Leo, Mattia, & Pratesi, 2021).

Simultaneously, restaurants are labor-intensive enterprises that employ diverse workforces, often including vulnerable workers, and serve as community gathering places with significant social influence (Mun & Jang, 2018). Employee welfare, working conditions, and career development opportunities in restaurants have substantial implications for social sustainability. Furthermore, restaurants' governance practices—encompassing food safety management, regulatory compliance, and ethical sourcing—directly affect public health and consumer trust (Guillet & Mattila, 2010).

1.3 Macau's Restaurant Sector: Opportunities and Challenges

Macau, a Special Administrative Region of China with a unique cultural heritage blending Portuguese and Chinese influences, presents a distinctive context for studying ESG practices in SME restaurants. According to the Statistics and Census Service of Macau (2023), 2,430 restaurants operated in the food and beverage industry in 2022, employing approximately 36,515 staff members. These establishments range from traditional family-run tea shops to contemporary international cuisine venues, reflecting Macau's status as a UNESCO Creative City of Gastronomy.

The concentration of SMEs in Macau's restaurant sector underscores their importance to the local economy. SMEs in Macau face unique challenges including high operating costs, intense competition, labor shortages, and vulnerability to economic fluctuations—particularly given the territory's dependence on tourism and gaming revenues (Dallago, 2000). The COVID-19 pandemic exacerbated these challenges, fundamentally altering consumer behavior and operational realities for restaurant businesses (Pandey, 2021).

Despite these pressures, there are indications that some SME restaurants in Macau have begun implementing practices aligned with ESG principles, often without explicit awareness of the ESG framework. Government initiatives addressing plastic reduction and food waste management have catalyzed environmental actions, while some establishments engage in community-oriented activities reflecting social responsibility (Environmental Protection Bureau, 2024). However, systematic understanding of ESG adoption in this sector remains limited.

1.4 Research Gap and Rationale

While the literature on ESG practices has expanded substantially, several gaps persist. First, empirical research on ESG implementation in SMEs remains underdeveloped compared to large corporations, with limited understanding of how smaller enterprises approach sustainability given their resource constraints and operational realities (Esposito et al., 2021). Second, sector-specific studies examining ESG in the restaurant industry are scarce, despite the industry's distinctive sustainability challenges (Camelo & Nogueira, 2024). Third, research in Asian contexts, particularly in Special Administrative Regions with unique cultural and regulatory environments like Macau, is limited.

This study addresses these gaps by investigating ESG practices in Macau's SME restaurants through qualitative inquiry. Understanding how these enterprises engage with environmental, social, and governance issues is essential for developing targeted policies, support mechanisms, and industry guidance that can enhance sustainability outcomes while respecting SME constraints.

1.5 Research Objectives

This study aims to achieve three primary objectives:

1. **To identify and describe** the specific ESG practices currently implemented by SME restaurants in Macau across environmental, social, and governance dimensions.
2. **To explore** the motivations, drivers, and barriers influencing ESG adoption in this sector, including the roles of regulation, economic factors, and owner-manager values.
3. **To develop** recommendations for policymakers, industry associations, and SME owners to enhance ESG engagement in ways that align with sector characteristics and constraints.

1.6 Significance of the Study

This research contributes to academic understanding of ESG in SME contexts by providing empirical evidence from an under-researched industry and location. It extends the literature on sustainability in hospitality by examining how restaurants navigate environmental, social, and governance considerations within resource constraints. Practically, the findings inform policy development by identifying effective regulatory approaches and support mechanisms that can facilitate ESG adoption. For SME owners and managers, the study offers insights into how peers are approaching sustainability and identifies opportunities for improvement.

2. LITERATURE REVIEW

2.1 Conceptualizing ESG: Origins and Evolution

The term ESG was first coined in the 2004 United Nations Global Compact report "Who Cares Wins," which argued that integrating environmental, social, and governance factors into capital markets makes business sense and leads to more sustainable investments (United Nations Global Compact, 2004). This framework built upon earlier concepts including Corporate Social Responsibility (CSR), socially responsible investing, and sustainable development, but introduced a more structured approach to evaluating corporate performance across non-financial dimensions.

The **environmental dimension** assesses an organization's impact on natural systems, including resource consumption (energy, water, materials), emissions and pollution, waste management, biodiversity impacts, and climate change vulnerability (Li et al., 2021). For restaurants, key environmental considerations include energy efficiency in kitchen operations, water conservation, sustainable sourcing of ingredients, and management of food and packaging waste (Camelo & Nogueira, 2024).

The **social dimension** examines an organization's relationships with stakeholders, including employees, customers, suppliers, and communities. Key aspects include labor practices (fair wages, working conditions, health and safety), diversity and inclusion, human rights, community engagement, and customer welfare (Jaime, 2023). In restaurant contexts, social considerations encompass employee treatment, food safety, customer satisfaction, and contributions to local communities (Mun & Jang, 2018).

The **governance dimension** addresses how organizations are directed and controlled, including leadership structures, shareholder rights, ethical conduct, transparency, and risk management (Guillet & Mattila, 2010). For SMEs, governance often manifests differently than in large corporations, with greater emphasis on owner-manager values, informal decision-making processes, and stakeholder relationships (Wellton & Lainpelto, 2021).

2.2 ESG in SME Contexts: Distinctive Considerations

Research on ESG in SMEs has highlighted several distinctive characteristics that differentiate SME approaches from those of large corporations (Esposito et al., 2021). First, SMEs typically face resource constraints—limited financial capital, managerial capacity, and technical expertise—that restrict their ability to implement comprehensive ESG programs. Second, SMEs often lack formal ESG reporting requirements and face less pressure from investors and regulators, reducing external drivers for adoption. Third, SME owner-managers play a disproportionate role in shaping organizational values and practices, making individual attitudes toward sustainability critically important.

Despite these constraints, SMEs possess certain advantages in pursuing sustainability. Their smaller scale enables greater flexibility and faster decision-making, allowing rapid adaptation to changing conditions. Proximity to customers and communities facilitates understanding of local sustainability concerns. Informal organizational structures can enable values-driven action without bureaucratic hurdles (Jenkins, 2006).

Research has identified multiple drivers of SME engagement with sustainability, including cost savings from resource efficiency, regulatory compliance, customer expectations, owner-manager values, and competitive differentiation (Revell, Stokes, & Chen, 2010). Barriers include limited awareness of sustainability issues and solutions, perceived complexity of implementation, financial constraints, time pressures, and skepticism about business benefits (Parker, Redmond, & Simpson, 2009).

2.3 Environmental Practices in Restaurants

The environmental impact of restaurants has received increasing research attention, with studies examining energy consumption, water usage, waste generation, and sustainable sourcing.

Energy efficiency represents a significant opportunity for restaurants to reduce both environmental impact and operating costs. Kitchen equipment—refrigeration, cooking appliances, ventilation systems—accounts for substantial energy consumption. Research by Tan, Lau, Yong, Khan, and Nguyen (2019) found that Malaysian restaurants adopting energy-efficient equipment achieved meaningful cost reductions despite higher initial investments. LED lighting, high-efficiency HVAC systems, and energy management systems represent common interventions.

Water conservation is critical given restaurants' intensive water use for food preparation, cleaning, and sanitation. Styles, Schoenberger, and Galvez-Martos (2015) documented water management practices in European hospitality, identifying opportunities including low-flow fixtures, efficient dishwashers, and staff training on water conservation. Magida (2021) demonstrated that water scarcity directly impacts restaurant financial performance, creating business case for conservation.

Waste management, particularly food waste reduction, has emerged as a priority area. Estimates indicate that approximately 20% of food produced in the European Union is wasted annually (FoodDrinkEurope, 2020). In Macau, organic food waste constitutes 30-40% of municipal solid waste (Environmental Protection Bureau, 2024). Principato et al. (2021) developed a restaurant food waste map identifying sources including over-preparation, spoilage, and plate waste, with interventions spanning menu design, portion control, inventory management, and customer education.

Sustainable sourcing encompasses procurement of local, organic, seasonal, and ethically produced ingredients. Research by Coley, Howard, and Winter (2009) examined food miles and carbon emissions associated with different distribution approaches, finding local sourcing can reduce transportation impacts. Schnell (2013) explored community-supported agriculture and local food systems, highlighting both environmental and social benefits of shortened supply chains.

2.4 Social Practices in Restaurants

The social dimension of restaurant sustainability encompasses employee welfare, customer relations, and community engagement.

Employee well-being and development is particularly important given the restaurant industry's reputation for high turnover, demanding working conditions, and limited career advancement (Mun & Jang, 2018). Research by Haben et al. (2019) demonstrated that training and development programs positively impact employee performance and productivity. Fair wages, safe working conditions, and opportunities for advancement contribute to employee satisfaction and retention, with consequent benefits for service quality and operational consistency.

Diversity and inclusion in restaurant workforces has received increasing attention. Herring (2009) found that racial and gender diversity correlates with increased sales and market share, suggesting business benefits beyond ethical considerations. Schur et al. (2014) examined accommodation of employees with disabilities, finding that supportive practices enhance productivity and company reputation.

Customer satisfaction and experience fundamentally depends on food quality, service, and attention to customer needs. Namkung and Jang (2007) demonstrated that food quality significantly influences customer satisfaction and behavioral intentions. Lin, Marine-Roig, and Llonch-Molina (2022) examined how restaurants accommodate special dietary needs, highlighting the importance of menu flexibility and staff knowledge for customer inclusion.

Community engagement encompasses restaurants' relationships with local communities through charitable activities, local sourcing, and community events. These activities build goodwill, enhance reputation, and strengthen social ties that can support business resilience (Don, 2024).

2.5 Governance Practices in Restaurants

Governance in restaurant contexts encompasses structures and processes for decision-making, risk management, and stakeholder accountability.

Food safety and regulatory compliance represent fundamental governance responsibilities with direct implications for public health and business viability. Homebase Team (2024) outlined the complex regulatory landscape restaurants must navigate, including health inspections, food handling certifications, and labor law compliance. Effective governance ensures systematic attention to these requirements.

Risk management in restaurants spans operational risks (supply chain disruptions, equipment failures), financial risks (cash flow volatility, cost inflation), and reputational risks (food safety incidents, negative reviews). Pandey (2021) examined risk management during COVID-19, highlighting the importance of business continuity planning and adaptive capacity.

Leadership and decision-making in SME restaurants often reflects owner-manager values and management style. Wellton and Lainpelto (2021) explored how professional knowledge culture, leadership practices, and sustainability intertwine in restaurant operations, finding that owner commitment significantly influences sustainability outcomes.

Stakeholder relationships—with employees, suppliers, customers, and regulators—shape restaurant governance. Guillet and Mattila (2010) provided a descriptive examination of corporate governance in hospitality, highlighting the importance of transparent communication and accountability mechanisms.

2.6 Regulatory Context: Macau's Environmental Policies

Macau's government has implemented several environmental initiatives relevant to restaurant operations. The Environmental Protection Bureau (DSPA) has promoted waste reduction and recycling programs, including organic waste recycling initiatives (Environmental Protection Bureau, 2024). Since 2020, regulations have restricted single-use plastics, banning specific disposable items and encouraging adoption of biodegradable alternatives.

These regulatory efforts create both drivers and constraints for restaurant ESG practices. While regulations mandate certain environmental actions, they also impose compliance costs that can strain SME resources. The effectiveness of these policies depends on enforcement mechanisms, availability of affordable alternatives, and support for SME implementation (Zhang, 2023).

2.7 Theoretical Framework: Drivers of SME ESG Adoption

Drawing on institutional theory and stakeholder theory, several frameworks explain SME engagement with sustainability. Institutional theory suggests that organizations adopt practices in response to coercive (regulatory requirements), normative (industry standards), and mimetic (competitive imitation) pressures (DiMaggio & Powell, 1983). For SME restaurants, government regulations represent coercive pressures, while industry associations and peer behavior create normative and mimetic influences.

Stakeholder theory emphasizes that organizations respond to the expectations of various stakeholders—employees, customers, suppliers, regulators, communities—who can affect or are affected by organizational activities (Freeman, 1984). SME restaurants may adopt ESG practices in response to customer preferences for sustainable dining, employee expectations for fair treatment, or community expectations for responsible behavior.

The resource-based view suggests that ESG practices can become sources of competitive advantage when they are valuable, rare, and difficult to imitate (Barney, 1991). Cost savings from efficiency improvements, differentiation through sustainability positioning, and enhanced stakeholder relationships represent potential competitive benefits from ESG adoption.

3. METHODOLOGY

3.1 Research Design

This study employed a qualitative research design to explore ESG practices in Macau's SME restaurants. Qualitative methodology is particularly appropriate for investigating complex, context-dependent phenomena where participant perspectives and experiences are central to understanding (Gorman, Clayton, Shep, & Clayton, 2005). The exploratory nature of the research—examining a relatively under-researched topic in a specific context—aligns with qualitative approaches that prioritize depth over breadth and seek to understand meanings, motivations, and processes.

In-depth semi-structured interviews served as the primary data collection method, enabling flexible exploration of participant experiences while maintaining focus on research objectives (Seidman, 2006). This approach allowed participants to provide detailed explanations, share examples, and articulate perspectives in their own words, generating rich data about ESG implementation in real-world contexts.

3.2 Sampling and Participant Recruitment

Purposive sampling was employed to select participants meeting specific criteria: ownership or management of SME restaurants operating in Macau, with direct knowledge of business operations and decision-making. Consistent with qualitative research practice, sample size was determined by data saturation—the point at which additional interviews yield no new information or themes (Braun & Clarke, 2021).

Given Macau's relatively small geography and limited number of SME restaurants compared to larger economies, the sample aimed to capture diversity in restaurant types, sizes, and operational characteristics. Initial recruitment targeted restaurants identified through business directories and industry associations, supplemented by snowball sampling where participants referred other eligible restaurant owners.

Interviews continued until thematic saturation was achieved, with eight participants completing in-depth interviews. This sample size aligns with qualitative research norms where rich, detailed data from carefully selected participants can provide meaningful insights despite limited numbers (Sutton & Austin, 2015).

Table 1 presents characteristics of participating restaurants and respondents.

Table 1. Participant and Restaurant Characteristics

Participant ID	Position	Establishments	Employees	Cuisine Type	Years in Operation
R1	Owner	2	45	Cantonese	15
R2	Manager	1	25	Macanese-Portuguese	8
R3	Owner	3	70	International	12
R4	Owner	1	12	Noodle specialty	20
R5	Owner-Manager	2	38	Dim sum	10
R6	Manager	1	18	Japanese	5
R7	Owner	6	65	Fast casual	7
R8	Owner	1	6	Local tea shop	25

3.3 Data Collection

Semi-structured interviews were conducted between March and June 2025, each lasting approximately 60-90 minutes. Interviews took place at participants' restaurants or alternative locations of their choosing, based on preference and convenience. All interviews were conducted in Cantonese, the primary language of participants, with translation to English during analysis and reporting.

The interview protocol addressed five domains derived from the literature review:

1. **Environmental practices**: Current initiatives in energy efficiency, water conservation, waste management, sustainable sourcing; motivations for adoption; perceived benefits and challenges.
2. **Social responsibility**: Employee welfare practices, community engagement activities, diversity and inclusion efforts; factors influencing these practices; outcomes observed.
3. **Governance practices**: Decision-making structures, risk management approaches, stakeholder relationships, compliance systems; how governance supports or constrains sustainability.
4. **Drivers and barriers**: Factors influencing ESG adoption including regulation, economics, customer expectations, owner values; obstacles encountered.
5. **Awareness and knowledge**: Familiarity with ESG concepts and frameworks; understanding of sustainability certifications; information sources and learning.

The semi-structured format allowed flexibility to pursue emergent themes while ensuring consistent coverage of key topics across interviews. Probes and follow-up questions explored participant responses in depth, eliciting examples and detailed explanations.

3.4 Ethical Considerations

Ethical protocols were followed throughout the research process. Participants received information about research purposes, procedures, and their rights prior to interviews. Written consent was obtained, with explicit guarantees of anonymity and confidentiality (Marshall et al., 2006). Participants were informed of their right to withdraw at any time before publication. All identifying information was removed from transcripts and replaced with participant codes. Data were stored securely with access limited to the research team.

3.5 Data Analysis

Interviews were audio-recorded with participant permission, transcribed verbatim in Cantonese, and translated to English for analysis. Thematic analysis following Braun and Clarke's (2021) six-phase approach was employed:

1. **Familiarization**: Repeated reading of transcripts to develop intimate knowledge of data content.
2. **Initial coding**: Systematic identification of meaningful segments related to research questions, using open coding to capture both anticipated and emergent themes.
3. **Theme development**: Organization of codes into potential themes, examining relationships and patterns across the dataset.
4. **Theme review**: Checking themes against coded extracts and entire dataset to ensure coherence and appropriate representation.
5. **Theme definition**: Refining and naming themes, developing clear definitions and boundaries.
6. **Writing**: Integrating thematic analysis with literature and research questions to construct coherent narrative.

Analysis was iterative, moving between data and emerging interpretations. Regular team discussions reviewed coding decisions and thematic interpretations, enhancing analytical rigor through multiple perspectives. Memo-writing documented analytical decisions and tracked evolution of interpretations.

3.6 Trustworthiness and Rigor

Several strategies enhanced the trustworthiness of findings (Lincoln & Guba, 1985). **Credibility** was supported through prolonged engagement with the context, member checking where participants reviewed summary interpretations, and peer debriefing within the research team. **Transferability** was addressed through thick description of context and participants, enabling readers to assess applicability to other settings. **Dependability** was enhanced through systematic documentation of research procedures and audit trail.

Confirmability was supported by maintaining clear links between data and interpretations, with illustrative quotes supporting thematic claims.

4. FINDINGS

4.1 Environmental Practices: Regulation-Driven Adoption with Operational Constraints

Analysis revealed that environmental practices among Macau's SME restaurants are primarily driven by government regulations, with adoption varying based on operational capacity and financial considerations.

4.1.1 Plastic Reduction Initiatives

All participants reported awareness of government regulations restricting single-use plastics, and six of eight had implemented changes in response. The most common adaptations were adoption of biodegradable straws and drink stirrers, which participants viewed as relatively straightforward substitutions. Two restaurants had extended plastic reduction to include biodegradable plates, cutlery, and cups for takeaway service.

However, participants consistently expressed concerns about the financial implications of these changes. R1 articulated the tension between environmental responsibility and economic viability:

"The economic climate in Macau has already placed significant financial strain on SMEs. Imposing the burden of environmental protection measures solely on SMEs would only impair their challenges. We want to do the right thing for the environment, but we also need to keep our businesses viable."

R3 highlighted the cost differential between conventional and sustainable alternatives:

"The use of degradable or paper tableware comes at a higher cost than plastic tableware. When we're competing on price, especially for takeaway business, these additional costs are difficult to absorb. Customers want environmentally friendly options, but they're not always willing to pay more for them."

These findings suggest that while regulation effectively drives initial adoption, the economic sustainability of environmental practices depends on cost structures and market conditions. Without mechanisms to address cost differentials—through subsidies, economies of scale in sustainable product supply, or customer willingness to pay premiums—regulatory mandates may create compliance burdens that strain SME viability.

4.1.2 Food Waste Management and Recycling

Three participants confirmed participation in the Macau Environmental Protection Bureau's organic waste recycling program. R2 described participation positively:

"We participate in the food waste recycling program organized by the government. This measure does not incur additional costs to the restaurants because the collection and processing are handled through the program. It's a good example of how government support can make environmental practices accessible."

However, operational constraints limited participation for others. R4 explained:

"Due to limited restaurant space, installing a waste recycling machine on-site is unrealistic. We simply don't have the physical space for additional equipment, and our kitchen layouts can't accommodate the required separation and storage areas."

This finding highlights how physical infrastructure constraints—common in dense urban environments like Macau—can limit SME participation in sustainability programs even when willingness exists. Space limitations affect not only waste management but also capacity for energy-efficient equipment, renewable energy installation, and other environmental initiatives requiring physical footprint.

4.1.3 Proactive Food Management

Despite varying participation in formal recycling programs, all participants reported implementing food management practices to optimize consumption and minimize waste. These proactive approaches reflected operational efficiency considerations rather than explicit environmental motivation.

R6 described a philosophy embedded in restaurant culture:

"We operate with an 'eight-tenths full' philosophy in our kitchen. This approach can help minimize food waste, as people are less likely to over-consume when portions are reasonable. It's about respecting food and avoiding the waste that comes from over-preparation."

R7 emphasized data-driven menu management:

"We regularly review our menu item popularity and remove dishes with low demand. This reduces the ingredients we need to stock, minimizes spoilage, and keeps our menu focused on what customers actually want. It's good for business and reduces waste simultaneously."

These practices demonstrate that operational efficiency considerations can drive environmental outcomes even without explicit ESG framing. Cost reduction through reduced ingredient waste, improved inventory management, and streamlined operations aligns business interests with environmental benefits—a promising avenue for promoting sustainability in SME contexts.

4.2 Social Responsibility: Cautious Engagement Shaped by Economic Realities

Social responsibility practices among participants revealed a pattern of cautious engagement, tempered by financial constraints and limited by economic downturns.

4.2.1 Collaboration with Charitable Organizations

Three participants reported current or past collaborations with charitable organizations, primarily involving consignment arrangements where restaurants sold products from charities to generate revenue for social causes. R5 described a long-standing partnership:

"We maintained this cooperation for 5 or 6 years, selling products from a local charity in our restaurant. It felt good to contribute, and our customers appreciated knowing that their purchases supported good causes. But then the economy turned down and impacted the revenue of our restaurant. We had to focus on core business and unfortunately couldn't continue the partnership."

This experience illustrates the vulnerability of social responsibility initiatives to economic pressures. When revenues decline and survival concerns intensify, discretionary activities—even those with social value—become difficult to sustain. The implication is that SME social responsibility may require integration with core business activities rather than remaining peripheral, and may benefit from economic buffers during downturns.

R6 described a different model that proved more sustainable:

"Our partnership with an association involves displaying their information and occasionally hosting small fundraising events. This partnership not only helps raise awareness for the associations but also provides an opportunity for the restaurant owners to gain a better understanding of their work. There's minimal cost involved, so it's been sustainable even when business is challenging."

This cost-neutral approach suggests opportunities for social engagement that align with SME resource constraints. Partnerships requiring minimal financial outlay, leveraging restaurant visibility and customer relationships, may prove more durable than arrangements requiring direct financial contributions.

4.2.2 Hiring Individuals with Disabilities

One participant reported deliberate efforts to employ individuals with disabilities. R5 shared:

"We have made an effort to hire individuals with minor disabilities. In fact, these individuals have found them to be dedicated and hardworking. They bring a positive attitude and are often more committed than some other employees. Of course, it requires additional training and communication to create a harmonious work environment, but the investment has been worthwhile."

This practice reflects social responsibility integrated with operational considerations—hiring decisions based on individual capabilities and contributions rather than solely charitable motivation. The recognition that inclusive hiring can benefit business performance (through employee dedication and positive workplace culture) suggests that social and business objectives can align when practices are thoughtfully implemented.

4.2.3 Fair Trade Product Adoption

Several participants had experimented with offering fair trade products, particularly coffee and tea, but reported limited success. R8 observed:

"I have procured fair trade products for our coffee and tea offerings. The intention was good—to support vulnerable producers and offer ethical choices to customers. But most of these products do not attract consumers. They sit on the shelf while conventional products sell. The price difference matters to our customers."

R2 echoed this experience:

"While procuring more fair-trade products could help support vulnerable groups, it does not benefit SME restaurants much. Our customers are price-sensitive, and fair trade products cost more. Unless customers are willing to pay the premium, we can't sustain offering these products."

These findings reveal a fundamental tension in social responsibility through product choice. When consumers prioritize price over ethical considerations—particularly in mass-market segments—SMEs face difficult trade-offs between social aspirations and business viability. This suggests that fair trade and similar initiatives may require consumer education, price parity mechanisms, or market segmentation to achieve broader adoption.

4.3 Governance Practices: Efficiency-Driven with Personalized Stakeholder Relations

Governance practices among participants focused on operational efficiency, risk management, and personalized stakeholder relationships rather than formal governance structures typical of larger corporations.

4.3.1 Electronic Workflow Adoption

All participants reported adopting electronic workflows, primarily through food delivery platforms that integrated ordering, payment, and kitchen management. This adoption was driven by operational efficiency considerations rather than governance formalization.

R2 emphasized the value proposition:

"Although we incurred expenditures for the systems, these are minimal compared to our other regular operating expenses. The efficiency and convenience brought by these electronic workflows are clearly visible. Orders are transmitted directly to the kitchen, reducing errors and saving staff time. Financial reports are generated automatically, making tax filing much simpler."

R6 added:

"The integration with delivery platforms has transformed how we operate. We can manage orders from multiple channels through one system, track sales patterns in real-time, and adjust operations accordingly. The efficiency gains more than justify the system costs."

These electronic workflows serve governance functions—improving accuracy, enabling financial tracking, supporting compliance—without being framed as governance practices. This pattern suggests that SME governance enhancements may be most effectively promoted through operational efficiency framing rather than governance language.

4.3.2 Risk Management Practices

Food safety and workplace safety emerged as priority governance areas, driven by regulatory requirements and recognition of potential liabilities. Participants reported systematic attention to government guidelines and internal monitoring.

R1 described their approach:

"With the promotion by government departments on food safety and working premises, we have implemented daily monitoring of kitchen cleanliness and food handling practices. We have not experienced any issues with work-related injuries or food poisoning complaints, which reflects our commitment to these practices."

R5 linked safety practices to employee relations:

"We maintain good relationships with our employees, as they are an important asset of the company. This includes providing safety equipment, training on proper procedures, and creating an environment where they feel comfortable reporting concerns. Good safety practices protect both employees and the business."

These findings indicate that risk management in SME restaurants is integrated with daily operations rather than formalized in separate governance structures. The connection between safety practices and employee relations suggests that governance and social dimensions of ESG can be mutually reinforcing.

4.3.3 Personalized Stakeholder Management

Relationships with employees and shareholders were characterized by informal, personalized approaches distinct from formal governance mechanisms in larger organizations. R1 described practices reflecting owner values:

"We provide loans to employees if necessary—an approach rarely seen in larger companies due to various constraints. This reflects our view that employees are part of our extended family. When they face difficulties, we help if we can. This builds loyalty and commitment that benefits the business over the long term."

Shareholder relationships varied based on ownership structure. Family-owned restaurants exhibited centralized decision-making with limited formal governance. Multi-shareholder entities maintained more collaborative approaches while preserving personal relationships. R7 explained:

"Although we have 5 shareholders, the scale still allows us to have discussions together to strategize and operate the business. We meet regularly, talk through decisions, and work through differences informally. We don't need complex governance structures because we know and trust each other."

This personalized approach to stakeholder management leverages the advantages of small scale—direct relationships, mutual knowledge, flexibility—while potentially creating vulnerabilities around succession planning, conflict resolution, and decision-making consistency.

4.4 Knowledge Gaps and Awareness Limitations

A significant finding was the limited awareness of ESG concepts, frameworks, and certifications among all participants. Despite implementing practices aligned with ESG principles, participants lacked the conceptual vocabulary and systematic understanding to frame these activities within sustainability frameworks.

4.4.1 Unfamiliarity with ESG Frameworks

When asked about ESG or sustainability certifications, all participants indicated unfamiliarity. R3's response was typical:

"ESG? I'm not familiar with that term. Is it related to environmental protection? We do things to reduce waste and save energy, but I don't know about any certifications."

Even participants engaged in government environmental programs lacked understanding of formal frameworks. R2, who participated in the food waste recycling program, admitted:

"We participate in the recycling program, but honestly, we don't know much about how the waste is processed afterward. The government collects it, and we trust they handle it properly. We haven't looked into certifications or standards."

This knowledge gap represents a significant barrier to systematic ESG improvement. Without understanding frameworks, SMEs cannot assess their current performance against standards, identify improvement priorities, or communicate achievements to stakeholders.

4.4.2 Missed Opportunities for Recognition

The knowledge gap also represents missed opportunities for SMEs to gain recognition for their sustainability efforts. Participants implementing environmental practices could potentially qualify for certifications or awards, but lack awareness prevents pursuit of these opportunities.

R4 reflected on this after learning about certification possibilities during the interview:

"If there are certifications that would recognize our waste reduction efforts, that could be valuable for marketing. Customers increasingly care about these things. But we didn't know such things existed, and we wouldn't know how to apply."

This finding suggests that awareness-building and information dissemination could unlock value for SMEs already implementing sustainable practices, enabling them to leverage these activities for competitive advantage.

4.5 Perceptions of Government Support

Participants uniformly expressed desire for stronger government support for sustainability initiatives, while noting limitations of past programs.

4.5.1 Experiences with Past Programs

R1 recalled participating in a government energy-efficient product subsidy program:

"I had applied for the program and installed the subsidized equipment. But the energy-saving effects were not very noticeable, and eventually, my restaurant had to renovate and discontinue the use of the subsidized products. The program sounded good, but the actual benefits didn't materialize."

This experience illustrates the importance of program design and implementation quality. Subsidies alone may not suffice if products are ineffective or if programs lack follow-through. Well-intentioned policies can actually discourage future participation if initial experiences disappoint.

4.5.2 Desire for Comprehensive Support

R8 expressed frustration with lack of support for earlier sustainability initiatives:

"A decade ago, I had tried to introduce food waste recycling machines. I was interested in reducing waste and saw potential benefits. But without government support—technical advice, financial assistance, coordination with waste processors—how can SMEs go further? We don't have the resources to figure all this out alone."

This perspective highlights the need for comprehensive support beyond simple subsidies. SMEs require technical guidance, implementation assistance, and ongoing coordination to successfully adopt sustainability practices. Fragmented or one-time support may be insufficient for meaningful change.

4.5.3 Recognition of Effective Regulation

Despite critiques, participants acknowledged that certain government measures had been effective. Plastic reduction regulations received particular praise for creating clear requirements and leveling the competitive playing field.

R3 noted:

"The plastic restrictions have been effective because everyone has to follow them. It's not a choice—all restaurants must reduce plastic use. This means we're all facing the same requirements, so there's no competitive disadvantage. And customers understand because it's government policy."

This observation aligns with institutional theory predictions about coercive isomorphism: when all organizations face the same requirements, compliance becomes normalized and competitive distortions are minimized. Well-designed regulations can effectively drive industry-wide change.

4.6 Factors Affecting ESG Adoption

Synthesizing findings across environmental, social, and governance dimensions, several key factors influencing ESG adoption in SME restaurants emerged.

Table 2. Factors Affecting ESG Adoption in SME Restaurants

Factor	Description	Evidence from Findings
Regulatory requirements	Government mandates create baseline adoption, particularly for environmental practices	Plastic reduction regulations drove universal awareness and widespread adoption of biodegradable alternatives
Financial costs and benefits	Cost implications significantly influence adoption decisions; cost-saving practices more readily adopted	Efficiency practices (food management, electronic workflows) widely adopted; cost-increasing practices (fair trade products) face resistance
Operational feasibility	Physical space, staff capacity, and operational integration affect ability to implement	Space constraints limited waste recycling participation despite willingness
Economic conditions	Business viability concerns constrain discretionary sustainability activities during downturns	Charitable collaborations suspended during economic pressure
Knowledge and awareness	Limited understanding of ESG frameworks and certification opportunities restricts systematic improvement	Universal lack of ESG framework awareness despite implementation of related practices
Government support quality	Program design, implementation support, and follow-through influence adoption success	Past subsidy program ineffectiveness discouraged further participation
Consumer behavior	Customer willingness to support sustainable options affects viability	Price sensitivity limited fair trade product adoption despite availability
Owner-manager values	Personal commitment influences willingness to pursue sustainability beyond compliance	Inclusive hiring practices reflected owner values despite additional effort

5. DISCUSSION

5.1 The Primacy of Regulation and Efficiency in Driving ESG

A central finding of this study is that ESG adoption in Macau's SME restaurants is primarily driven by two forces: regulatory requirements and operational efficiency considerations. Environmental practices are predominantly responses to government mandates, particularly plastic reduction regulations. Governance practices are largely efficiency-driven, with electronic workflow adoption and risk management practices implemented for operational benefits rather than governance formalization.

This finding contrasts with ESG drivers commonly emphasized in literature on large corporations, where investor pressure, stakeholder expectations, and reputational considerations feature prominently (Li et al., 2021; Park & Jang, 2021). For SMEs in this context, abstract concepts like "investor interest" or "consumer trust" hold little sway. Instead, tangible factors—regulatory compliance requirements and observable efficiency gains—motivate action.

This pattern aligns with institutional theory's emphasis on coercive pressures (DiMaggio & Powell, 1983) and with research on SME sustainability drivers that identifies regulation and cost savings as primary motivators (Revell et al., 2010). It suggests that promoting ESG in SME contexts may require different approaches than those effective for large corporations, emphasizing regulatory frameworks that create level playing fields and highlighting efficiency benefits of sustainable practices.

The effectiveness of plastic reduction regulations in driving widespread adoption—despite cost concerns—demonstrates the power of well-designed mandates. By applying uniformly to all restaurants, these regulations eliminated competitive concerns about first-mover disadvantages. This finding has important implications for policy design: regulations that create universal requirements may be more effective than voluntary programs that create perceived disadvantages for early adopters.

5.2 The Fragility of Social Responsibility Under Economic Pressure

Social responsibility practices emerged as particularly vulnerable to economic pressures. Collaborations with charitable organizations, while valued by participants, were among the first activities suspended when revenues declined. This fragility reflects the discretionary nature of many social initiatives, which remain peripheral to core business operations rather than integrated into value creation.

This finding extends understanding of SME social responsibility by highlighting the conditional nature of engagement. While literature has documented SME social responsibility practices (Jenkins, 2006), less attention has been paid to their sustainability under economic stress. The Macau context, with its recent experience of pandemic-related economic disruption, provides insight into how social responsibility fares when survival pressures intensify.

The contrast between vulnerable charitable collaborations and more durable inclusive hiring practices is instructive. Hiring individuals with disabilities, while requiring additional effort, was integrated into core operations and perceived as contributing to business performance through employee dedication. This integration with business operations may explain its greater resilience compared to peripheral charitable activities.

For policymakers and support organizations seeking to enhance SME social responsibility, these findings suggest value in promoting practices that align social and business objectives. Programs that help SMEs identify "win-win" opportunities—where social responsibility contributes to operational performance—may prove more sustainable than those relying on charitable motivation alone.

5.3 The Governance-Efficiency Nexus in SME Contexts

Governance practices among participants were consistently framed in operational efficiency terms rather than governance language. Electronic workflow adoption improved order accuracy and financial reporting; risk management practices protected against liabilities and supported employee relations. Participants described these practices in terms of their operational benefits, not their governance functions.

This finding has important implications for how governance is conceptualized and promoted in SME contexts. Traditional governance frameworks, developed for large corporations with separation of ownership and management, may not resonate with SME owner-managers who view their businesses through operational lenses. Promoting governance enhancements may require translation into operational efficiency language and connection to tangible business benefits.

The personalized approach to stakeholder relationships—providing employee loans, informal shareholder discussions—reflects both advantages and limitations of SME governance. Direct relationships enable flexibility and responsiveness that formal governance structures cannot match. However, they may also create vulnerabilities around succession, conflict resolution, and decision-making consistency as businesses grow or ownership transitions occur (Wellton & Lainpelto, 2021).

5.4 The Knowledge Gap as Critical Barrier

The universal lack of awareness regarding ESG frameworks and certifications represents a critical barrier to systematic sustainability improvement. Participants implemented practices aligned with ESG principles—waste reduction, employee welfare, risk management—without understanding how these activities connect to broader sustainability frameworks or how they could be leveraged for competitive advantage.

This knowledge gap has multiple consequences. First, it prevents SMEs from assessing their current performance against standards, identifying gaps, and prioritizing improvements. Second, it limits ability to communicate sustainability achievements to stakeholders who increasingly value such information. Third, it forecloses opportunities to gain recognition through certifications or awards that could enhance reputation and customer appeal.

The finding aligns with research identifying knowledge limitations as significant SME sustainability barriers (Parker et al., 2009). However, it extends this literature by documenting that knowledge gaps persist even when SMEs are implementing relevant practices. The issue is not merely lack of action but lack of conceptual frameworks that would enable systematic improvement and value capture from existing actions.

Addressing this gap requires targeted information dissemination and capacity-building efforts. Industry associations, government agencies, and support organizations have roles in translating ESG concepts for SME audiences, demonstrating relevance to restaurant operations, and providing accessible pathways to certification and recognition.

5.5 The Promise and Limitations of Government Support

Participants' experiences with government support programs revealed both potential and pitfalls. Effective programs—notably plastic reduction regulations—demonstrated how well-designed policies can drive industry-wide change. Ineffective programs—such as the energy-efficient product subsidy that delivered disappointing results—illustrate how poor implementation can discourage future participation.

The desire expressed for comprehensive support—beyond simple subsidies to include technical guidance, implementation assistance, and ongoing coordination—aligns with literature emphasizing the multidimensional nature of SME sustainability support needs (Zhang, 2023). SMEs lack internal capacity to navigate complex sustainability transitions alone; they require external partners who can provide expertise, troubleshooting, and connection to broader systems (waste processing infrastructure, certification bodies, sustainable product suppliers).

The finding that past program ineffectiveness discouraged further participation highlights the importance of quality in support program design. Failed programs not only waste resources but can create lasting skepticism that undermines future initiatives. Policymakers should prioritize program quality over quantity, ensuring that support mechanisms are well-designed, adequately resourced, and effectively implemented before scaling.

5.6 Theoretical Implications

This study contributes to theoretical understanding of ESG in SME contexts in several ways. First, it extends institutional theory by demonstrating how coercive pressures (regulation) effectively drive environmental practice adoption, while normative and mimetic pressures appear weaker in this context. The level playing field created by universal regulations addresses SME concerns about competitive disadvantage—a barrier not fully captured by existing institutional frameworks.

Second, the findings refine understanding of stakeholder influences on SME sustainability. While stakeholder theory emphasizes multiple stakeholder groups (Freeman, 1984), this study found that stakeholder influences are filtered through economic viability considerations. Customer preferences for sustainable options, for example, influenced practices only when customers demonstrated willingness to pay for sustainability. This suggests need for theoretical models that incorporate economic constraints as mediators of stakeholder influence.

Third, the study contributes to resource-based view applications in sustainability by demonstrating that efficiency-driven sustainability practices can create competitive advantage through cost reduction, while practices requiring additional investment without clear returns face adoption barriers. This suggests that SME sustainability strategies should prioritize practices offering dual benefits—environmental or social value combined with operational efficiency—over those requiring pure charity motivation.

5.7 Practical Implications

The findings carry several implications for practice, spanning policy development, industry association activities, and individual SME actions.

For policymakers, implications include:

- Design regulations that apply uniformly to create level playing fields and address SME competitive concerns
- Provide comprehensive support beyond subsidies, including technical guidance, implementation assistance, and coordination with relevant infrastructure
- Ensure program quality through careful design, pilot testing, and ongoing evaluation to avoid creating discouraging experiences
- Invest in awareness-building and information dissemination about ESG frameworks and certification opportunities
- Support development of industry-specific ESG guidelines that address restaurant sector realities

For industry associations, implications include:

- Develop peer learning networks where SMEs can share experiences with sustainability practices
- Translate ESG concepts into restaurant-relevant language and demonstrate connections to operational concerns
- Facilitate collective purchasing arrangements to reduce costs of sustainable products
- Create recognition programs that highlight SME sustainability achievements and build customer awareness
- Advocate for supportive policies and programs that address sector-specific needs

For SME owners and managers, implications include:

- Recognize that sustainability and efficiency often align—practices reducing waste and energy use typically improve both environmental and financial performance
- Explore cost-neutral social responsibility opportunities, such as information partnerships with charitable organizations
- Consider how sustainability practices can be integrated into core operations rather than remaining peripheral activities
- Seek information about certifications and recognition programs that could enhance reputation and customer appeal
- Participate in peer learning and industry association activities to build knowledge and share experiences

6. CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Key Findings

This qualitative study explored ESG practices in Macau's SME restaurants, revealing a complex landscape where adoption is shaped by regulatory requirements, operational efficiency considerations, economic constraints, and limited awareness of formal sustainability frameworks.

Key findings include:

Environmental practices are primarily driven by government regulations, particularly plastic reduction mandates, with adoption varying based on operational capacity and financial considerations. While all participants implement some environmental initiatives, participation in formal programs like waste recycling is limited by space constraints and resource availability. Proactive food management practices, motivated by efficiency concerns, demonstrate alignment between business and environmental interests.

Social responsibility practices are characterized by cautious engagement, vulnerable to economic pressures. Charitable collaborations are valued but often suspended during downturns. Inclusive hiring practices, integrated with operations, show greater durability. Fair trade product adoption faces consumer resistance due to price sensitivity, highlighting tensions between social aspirations and market realities.

Governance practices focus on operational efficiency through electronic workflow adoption and risk management, with personalized stakeholder relationships reflecting SME scale and owner-manager values. Governance enhancements are most effectively promoted through efficiency framing rather than formal governance language.

Knowledge gaps regarding ESG frameworks and certifications are universal, preventing systematic improvement and limiting ability to leverage sustainability achievements for competitive advantage.

Government support is desired but past program ineffectiveness has created skepticism. Well-designed regulations that create level playing fields prove effective; comprehensive support addressing multiple implementation dimensions is needed.

6.2 Contributions of the Study

This study makes several contributions to knowledge. Empirically, it provides detailed evidence of ESG practices in an under-researched context—SME restaurants in Macau—documenting both practices adopted and factors shaping adoption. The qualitative approach generates rich understanding of owner-manager perspectives, motivations, and constraints that survey methods would miss.

Theoretically, the study extends understanding of SME sustainability by demonstrating the primacy of regulation and efficiency as drivers, the fragility of social responsibility under economic pressure, and the governance-efficiency nexus in SME contexts. It refines institutional and stakeholder theories for SME applications by highlighting the mediating role of economic viability in shaping responses to external pressures.

Practically, the findings inform policy design by identifying effective regulatory approaches and needed support mechanisms. They guide industry association activities by highlighting peer learning and information dissemination needs. They assist SME owners by demonstrating how sustainability and efficiency can align and suggesting approaches to social responsibility that integrate with operations.

6.3 Recommendations

Based on the findings, the following recommendations are offered for enhancing ESG adoption in Macau's SME restaurants:

6.3.1 For Government Policymakers

Develop industry-specific ESG frameworks and guidelines. Collaborate with industry associations to create ESG guidance tailored to restaurant operations, addressing sector-specific issues (food waste, energy-intensive equipment, supply chain considerations) while respecting SME resource constraints. Standardized frameworks would help SMEs understand relevant practices and assess their performance.

Provide comprehensive financial incentives. Expand beyond simple subsidies to include tax incentives, reduced fees for sustainable product imports, and support for collective purchasing arrangements that reduce costs of sustainable alternatives. Consider graduated incentives that reward progressive improvement rather than one-time adoption.

Offer hands-on training and implementation support. Develop programs pairing SMEs with technical advisors who can assess operations, identify improvement opportunities, and guide implementation. Support should extend through implementation, not end at equipment purchase or program enrollment.

Strengthen infrastructure for sustainability. Invest in waste processing capacity, sustainable product supply chains, and certification infrastructure that enable SME participation. Ensure that government-supported programs have adequate backend capacity to handle participation.

Enhance information dissemination. Develop accessible communications about ESG concepts, available support programs, and certification opportunities. Use multiple channels—industry associations, business media, direct outreach—to reach SME owners.

Evaluate program effectiveness systematically. Assess past and current programs to identify what works, document failures to avoid repetition, and continuously improve support quality. Share evaluation findings transparently to build trust and enable learning.

6.3.2 For Industry Associations

Facilitate peer-to-peer learning networks. Create forums where SME owners can share experiences with sustainability practices, learn from peers' successes and challenges, and build collective knowledge. Workshops, seminars, and site visits can enable knowledge exchange.

Develop recognition programs. Create awards and certification programs highlighting SME sustainability achievements, providing positive reinforcement and enabling recognized businesses to leverage achievements for customer appeal.

Advocate for supportive policies. Represent SME interests in policy discussions, articulating sector needs and advocating for programs that address real constraints. Provide policymakers with grounded understanding of SME operational realities.

Provide collective purchasing arrangements. Organize group purchasing of sustainable products to achieve economies of scale and reduce individual SME costs. This could include biodegradable packaging, energy-efficient equipment, and fair trade ingredients.

Translate ESG concepts for member audiences. Develop communications explaining ESG in restaurant-relevant terms, demonstrating connections to operational concerns, and highlighting business cases for sustainability practices.

6.3.3 For SME Owners and Managers

Start with efficiency-focused practices. Prioritize sustainability practices that offer clear operational benefits—energy efficiency, waste reduction, inventory optimization—to generate savings that can fund further sustainability investments.

Integrate social responsibility with operations. Look for opportunities where social responsibility aligns with business activities—inclusive hiring, local sourcing, customer engagement around causes—rather than treating it as separate charitable activity.

Seek information about available support. Investigate government programs, industry association activities, and certification opportunities. Many resources may exist that owners are unaware of.

Participate in peer learning. Engage with industry associations, attend workshops, and connect with peers to share experiences and learn from others. Collective learning can accelerate individual improvement.

Document and communicate achievements. Track sustainability practices implemented and their outcomes. When customers increasingly value sustainability, documented achievements can support marketing and customer engagement.

6.4 Limitations and Future Research Directions

This study has several limitations that suggest directions for future research.

Sample limitations. The sample of eight participants, while appropriate for qualitative inquiry and achieving data saturation, limits generalizability. Future research could employ survey methods with larger samples to assess prevalence of practices and test relationships suggested by qualitative findings.

Single-city context. The Macau context, with its unique regulatory environment, economic structure, and cultural characteristics, may limit transferability to other locations. Comparative studies across multiple cities or countries would illuminate how context shapes ESG adoption.

Owner-manager perspectives only. The study focused on owner-manager perspectives, excluding employees, customers, suppliers, and other stakeholders whose views might differ or provide additional insight. Multi-stakeholder research could reveal different dimensions of ESG practices.

Self-reported practices. Reliance on participant self-report may overstate practices due to social desirability bias or understate them due to lack of awareness. Observational methods or document review could supplement interviews in future research.

Cross-sectional design. The study captured practices at a single point in time, limiting understanding of how practices evolve. Longitudinal research tracking SMEs over time would reveal adoption processes, sustainability of practices, and responses to changing conditions.

Limited attention to outcomes. The study focused on practices and adoption factors, not on measuring outcomes of ESG implementation. Future research should examine relationships between ESG practices and business performance metrics—financial outcomes, customer satisfaction, employee retention—to strengthen business case evidence.

Sector boundaries. The study focused exclusively on restaurants. Future research could examine ESG practices in other SME sectors, enabling cross-sector comparison and identification of sector-specific patterns.

Quantitative hypothesis testing. The propositions emerging from this qualitative study could be tested through quantitative research examining relationships between regulatory environment, operational characteristics, owner attitudes, and ESG adoption.

6.5 Concluding Remarks

This study has provided a detailed exploration of ESG practices in Macau's SME restaurants, revealing a landscape where adoption is shaped by regulation, efficiency considerations, economic constraints, and limited awareness. The findings demonstrate that SMEs can and do implement practices aligned with ESG principles, even without explicit ESG framing, when these practices align with operational needs and regulatory requirements.

However, the study also reveals significant gaps between current practices and systematic ESG engagement. Limited awareness of frameworks and certifications, vulnerability of social responsibility to economic pressures, and inconsistent government support quality constrain the sector's sustainability potential. Addressing these gaps requires coordinated efforts from policymakers, industry associations, and individual businesses.

The path forward involves recognizing SME distinctiveness—their resource constraints, operational focus, and vulnerability to economic fluctuations—while leveraging their advantages of flexibility, personal relationships, and owner-manager commitment. Effective strategies will translate ESG concepts into operational language, create level playing fields through regulation, provide comprehensive implementation support, and build on the demonstrated willingness of SME owners to engage in practices that align business and sustainability objectives.

As global attention to sustainability intensifies, the collective impact of SMEs becomes increasingly significant. Macau's restaurant sector, with its thousands of establishments and tens of thousands of employees, represents both challenge and opportunity. Understanding how these businesses approach environmental, social, and governance issues is essential for developing supports that enable them to contribute to sustainability while maintaining viability. This study contributes to that understanding, providing foundations for action and directions for continued inquiry.

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