

ESG Practices in Macau's Small to Medium-Sized Restaurants

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Abstract—Through qualitative interviews with eight owners and managers, this research explores Environmental, Social, and Governance (ESG) practices in Macau's Small and Medium-sized Enterprises (SMEs) restaurants. Key findings reveal that government regulations often drive environmental initiatives like reducing plastic use and improving food management. Social responsibility is less emphasised, with limited collaboration on charitable efforts due to financial constraints. Governance practices include electronic workflows and risk management, focusing on operational efficiency instead of attracting investors. The study highlights that cost-savings and operational efficiency are primary drivers for ESG implementation in SME restaurants rather than investor interest or consumer trust.

Keywords—Environmental, Social, and Governance (ESG) practices, Small and Medium-sized Enterprises (SMEs), restaurants

I. INTRODUCTION

In recent years, there has been a growing global emphasis on Environmental, Social, and Governance (ESG) practices to achieve sustainable development and address pressing social and environmental challenges (Li, 2021). While ESG practices have primarily been associated with large-scale corporations and listed companies (Park *et al.*, 2021), it is equally important for Small and Medium-sized Enterprises (SMEs), particularly within the restaurant industry, to embrace and implement ESG principles (Esposito *et al.*, 2021).

This study aims to explore the specific ESG practices adopted by SME restaurants in Macau and the motivations driving these implementations. According to data from the Statistics and Census Service of Macau, 2430 restaurants were operating in the food and beverage industry in 2022, employing approximately 36,515 staff members. This highlights the significant presence of SMEs in the restaurant sector, underscoring their importance to the local economy (Dallago, 2000).

Despite the potential impact of ESG practices on job creation and employee well-being, many SME restaurant owners and managers in Macau remain unaware of ESG concepts. However, some have begun implementing certain practices, indicating a willingness to adopt ESG principles. With adequate government support and promotion, these SMEs could serve as role models for effective ESG implementation, benefiting their businesses and inspiring other sectors to adopt sustainable practices (Chandrasekhar, 2023).

To fully leverage the potential of SME restaurants as ESG role models, the government must proactively promote ESG awareness and provide support mechanisms, such as

capacity-building programs and financial incentives (Zhang, 2023). This research employs a qualitative approach to investigate ESG practices in SME restaurants, addressing key questions regarding specific implementations and the benefits and challenges associated with adopting these practices.

II. LITERATURE REVIEW

ESG practices have gained substantial traction as integral strategies for firms that incorporate sustainability and responsibility into their operations (Craig, 2023; Li, 2021). ESG comprises three critical dimensions: the environmental dimension assesses a company's ecological impact, the social dimension emphasises stakeholder and community interactions, and the governance dimension focuses on internal procedures and ethical factors (Jaime, 2023). Various studies have highlighted the positive correlation between ESG practices and entities' financial performance and stability (EBA Report, 2021). However, while large corporations are often mandated to disclose their ESG status for compliance, stakeholder engagement, and branding, the application of ESG practices within SMEs, especially in the restaurant industry, remains underexplored.

The restaurant sector uniquely confronts challenges and opportunities concerning ESG integration due to distinct resource consumption patterns—notably energy and water- and substantial waste generation (Camelo & Nogueira, 2024). Key ESG practices pertinent to this industry span several areas:

A. Environmental Dimension

The environmental impact of restaurants is significant, particularly concerning energy use and waste production, which encompasses food packaging, storage, preparation, and cleaning (Karen, 1994). Critical areas within the environmental dimension include energy efficiency, water conservation, waste management, and sustainable sourcing.

Energy Efficiency: Research advocates for restaurants to enhance energy efficiency by investing in energy-efficient equipment like HVAC systems and LED lighting. While the initial costs may be higher, the long-term benefits often outweigh these expenses by reducing overall energy consumption (Tan *et al.*, 2019).

Water Conservation: Restaurants are high water consumers. Effective water conservation practices include installing low-flow faucets and employing efficient dishwashing systems (Magida, 2021; Styles *et al.*, 2015).

Waste Management: The issue of food waste is pervasive in the restaurant industry and contributes substantially to

broader environmental concerns. Estimates indicate that approximately 20% of food production in the European Union is wasted annually (FoodDrinkEurope, 2020), a concern mirrored in Macau, where organic food waste represents 30–40% of municipal solid waste (Environmental Protection Bureau, 2024). Effective waste management strategies, including recycling, composting, and food donation programs, can significantly mitigate landfill waste and enhance resource utilisation (Principato *et al.*, 2021). Restaurants can adopt practices such as offering portion-size options, encouraging customers to order appropriately, and providing take-out containers to reduce leftover food (Move for Hunger, 2024).

Sustainable Sourcing: Sourcing sustainable, local, or organic food products is another critical initiative that minimises transportation-related carbon footprints and supports local communities (Coley *et al.*, 2009; Schnell, 2013). It reflects not only a commitment to environmental responsibility but also social responsibility.

B. Social Dimension

The social dimension of ESG encompasses employee welfare, customer satisfaction, and community engagement. Key aspects include:

Employee Well-being and Development: Ensuring employee welfare is vital, especially given the high turnover rates inherent in the restaurant industry (Mun & Jang, 2018). Providing fair wages, comprehensive benefits, and a safe work environment contributes to employee stability and service quality. Additionally, offering training and development programs enhances workers' competencies and career progression (Habon *et al.*, 2019).

Diversity and Inclusion: Embracing diversity within the workforce is crucial for fostering a creative and innovative environment. Research suggests racial and gender diversity increases sales and market share (Herring, 2009). While addressing diversity may entail additional investments, the long-term benefits include improved productivity and enhanced company reputation (Schur *et al.*, 2014). Inclusive practices support employees and enhance customer experiences by accommodating diverse needs.

Customer Satisfaction and Experience: Food safety, quality, and attentive service significantly influence customer loyalty (Namkung & Jang, 2007; Lin *et al.*, 2022). Meeting dietary needs and preferences fosters a welcoming environment, facilitating positive patron interactions. Establishing feedback mechanisms and engaging in community events are strategies to enhance customer satisfaction and loyalty through two-way communication.

C. Governance Dimension

The governance aspect of ESG encompasses policies and practices that shape a restaurant's operational framework (Guillet & Mattila, 2010). Essential components of effective governance include:

Ethical Business Practices: Governance emphasises adherence to laws and standards, particularly in food safety, labour practices, and transparent financial reporting (Homebase Team, 2024). Implementing ethical practices is essential for customer trust and crucial for mitigating risks related to compliance failures.

Responsible Leadership and Decision-Making:

The governance structure of SME restaurants should promote responsible leadership and decision-making processes. This includes having a clear organisational structure, defined roles and responsibilities, and a board or ownership group that actively oversees the restaurant's operations and strategic direction. In this sense, restaurant owners or managers can make decisions that balance financial performance with social and environmental considerations (Wellton & Lainpelto, 2021).

Stakeholder Engagement and Transparency: To ensure business sustainability, SME restaurants should prioritise regular engagement with key stakeholders, including employees, customers, suppliers, and the local community. Engaging these groups through open communication, feedback mechanisms, and transparent reporting on sustainability initiatives cultivates a collaborative atmosphere. This approach helps articulate stakeholders' concerns and ideas, fostering a sense of ownership, enhancing morale, and improving operational efficiency (Don, 2024).

Risk Management and Business Continuity: Effective governance in SME restaurants should address risk management and business continuity planning. This includes identifying and mitigating operational, financial, and reputational risks and developing strategies to ensure the restaurant's resilience in the face of disruptions, such as natural disasters, supply chain issues, or unexpected events (Pandey, 2021).

III. METHODOLOGY

The qualitative research methodology employed in this study, utilising in-depth interviews, is well-suited to exploring the research topic of ESG practices in Macau SME restaurants. This approach is commonly used in studies on SMEs and sustainability practices, as it allows for a more comprehensive understanding of the experiences and perspectives of business owners. Furthermore, in-depth interviews enable SME owners and managers to provide detailed explanations and insights through open-ended questions, which is particularly valuable when investigating a complex and often subjective topic like ESG practices. This qualitative approach allows for a deeper exploration of the subtle distinctions/differences and contextual factors that may influence the adoption and implementation of ESG practices within SMEs (Gorman *et al.*, 2005). While the sample size in the conducted research may be relatively small, the quality and depth of the data collected through in-depth interviews can often compensate for the limited number of participants. The interviewees' subjective assessment and personal interpretation are crucial in understanding the real-world challenges and motivations that shape the ESG practices of SMEs in the Macau restaurant industry (Seidman, 2006; Sutton & Austin, 2015).

The interviews were conducted with restaurant owners and managers to gather their insights and experiences regarding ESG practices. There are no fixed rules for sample size in qualitative research, as the goal is to achieve data saturation—the point at which no new information or themes emerge from additional interviews (Braun & Clarke, 2021). Additionally, Macau, a relatively small city, has fewer SMEs operating in the restaurant industry than larger economies. After conducting interviews with eight owners and managers

of SME restaurants, we observed that their responses were largely repetitive. As a result of above said data saturation, we decided to conclude our interviews.

The interview questions address aspects of environmental sustainability, social responsibility, and good governance practices within the SME restaurant industry. The questions are designed based on the various aspects of ESG practices based on our literature review. The questions cover current practices, influencing factors, benefits and advantages, challenges, impact assessment, changes in customer preferences, employee involvement, financial implications, areas for improvement, and the relationship between ESG practices and long-term success.

The owners and managers of these interviewed SME restaurants operate between 1 to 6 establishments, employing 6 to 70 individuals each. The in-depth interviews were conducted face-to-face with owners of establishments meeting our criteria. A consent form was presented to the interviewees to address any potential concerns. This form included the researcher's name, topic, and a commitment to maintain anonymity. Participants were informed that they had the right to withdraw their consent at any time before the publication of the research (Marshall *et al.*, 2006).

IV. RESULT AND DISCUSSION

Unlike large or listed companies, our research reveals that SME restaurants in Macau are often unfamiliar with the concepts of ESG and may not have heard of it. Additionally, they are viewed as relatively slow to adopt ESG practices due to a lack of external stakeholder pressure. Despite this lack of awareness, some SME restaurants have implemented a few ESG practices in their day-to-day operations in common environmental initiatives, community engagement, and governance initiatives. A few factors affecting the adoption of ESG by SME restaurants are also identified.

A. Environmental Initiatives

The findings from our research indicate that SME restaurants in Macau are increasingly adopting environmental practices, primarily driven by government regulations and initiatives. Two significant focus domains are limiting plastic use and implementing food management and waste recycling programs.

Limiting Plastic Use: Since 2020, the Macau government has enforced measures to reduce plastic usage, including bans on specific disposable items. Six of the eight interviewees reported adopting biodegradable straws and drink stirrers. Furthermore, two interviewees mentioned incorporating biodegradable plates, cutlery, and cups into their operations. Interviewee 1 highlighted SMEs' financial pressures, stating, *"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"*. This sentiment underscores the need for supportive frameworks that enable SMEs to transition to environmentally friendly alternatives without incurring excessive costs.

While government regulations act as a catalyst for change, interviewees expressed concerns about adopting these practices' financial implications. Interviewee 3 noted, *"The use of degradable or paper tableware comes at a higher cost*

than plastic tableware", reflecting the challenges of balancing sustainability with competitive pricing. These insights reveal that while the regulatory environment is essential, it is equally important for the government to provide support to alleviate the financial burdens associated with implementing sustainable practices.

Food Management and Waste Recycling: Regarding food management and waste recycling, three out of eight interviewees confirmed their participation in the Macau Environmental Protection Bureau's organic waste recycling program. Interviewee 2 shared, *"We participate in the food waste recycling program... This measure does not incur additional costs to the restaurants"*. However, there were contrasting viewpoints; Interviewee 4 expressed, *"Due to limited restaurant space, installing a waste recycling machine on-site is unrealistic"*. This highlights SMEs' operational challenges regarding space and capacity to engage in waste recycling effectively.

Despite these obstacles, all interviewees reported implementing food management programs to optimise consumption and minimise waste. Interviewee 6 explained their "eight-tenths full" philosophy to limit overconsumption, stating, *"This approach can help minimise food waste, as people are less likely to over-consume"*. Additionally, Interviewee 7 noted, *"We regularly review our menu item popularity and remove dishes with low demand"*, emphasising proactive strategies to manage food waste.

Overall, the findings suggest that while there is a willingness among SME restaurants to engage in environmental initiatives, operational constraints and financial considerations must be addressed. Strong governmental support and resources could facilitate a smoother transition towards sustainability in the restaurant sector, ensuring that SMEs can balance their economic viability with environmental responsibility.

B. Community Engagement and Social Responsibility

Analysing community engagement and social responsibility among SME restaurants in Macau reveals a cautious but evolving commitment to social practices, shaped heavily by financial constraints and operational realities. The findings suggest three primary areas of engagement: collaboration with charity organisations, hiring individuals with disabilities, and adopting fair trade products.

Collaboration with Charity Organizations: Several restaurant owners, including Interviewees 2, 5, and 6, have taken the initiative to collaborate with charity organisations. This often involves consigning products from charities to generate revenue for charitable causes. However, as Interviewee 4 articulated, these collaborations are not without challenges: *"We maintained this cooperation for 5 or 6 years...but then the economy turned down and impacted the revenue of our restaurant"*. This statement underscores how economic pressures can affect long-term partnerships with charitable entities. Conversely, Interviewee 6 highlighted a cost-neutral collaboration that benefits both parties: *"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"*. Such collaborations appear mutually beneficial when structured to minimise financial impact, indicating a potential

avenue for increased engagement.

Hiring Individuals with Disabilities: Another notable practice among SME restaurants is hiring individuals with disabilities, as shared by Interviewee 5: *“We have made an effort to hire individuals with minor disabilities. In fact, these individuals have found them to be dedicated and hardworking”*. This demonstrates a commitment to inclusivity, although the interviewee also noted the necessity for additional training and communication to create a harmonious work environment. This reflects a conscientious effort to integrate social responsibility within the operational framework of the restaurant, albeit with the recognition that it entails additional responsibilities.

Fair Trade Products: Many SMEs have experimented with offering fair trade products, such as coffee and tea. However, the reception has been lukewarm. Interviewee 8 remarked, *“I have procured fair trade products...but most of these products do not attract consumers”*. This sentiment was echoed by Interviewee 2, who stated, *“While procuring more fair-trade products could help support vulnerable groups, it does not benefit SME restaurants much”*. The challenges outlined indicate a disconnect between the intention to promote fair trade and actual consumer behaviour. The preference for more competitive pricing over ethical considerations reflects the hurdles SMEs face in adopting socially responsible practices without jeopardising financial viability.

Overall, the findings indicate a willingness among SME restaurants in Macau to engage in community-oriented practices. However, economic realities and operational challenges often tempered the degree of involvement. Enhancing support structures, creating awareness, and fostering partnerships that do not impose a financial burden could empower these restaurants to expand their social responsibility initiatives further.

C. Governance Initiatives

The governance initiatives identified from small to medium sized restaurants focus on workflows, risk management, and stakeholder management.

Adoption of Electronic Workflows: SME restaurants have widely embraced electronic workflows provided by food delivery platforms to streamline customer orders and kitchen management operations. These systems enhance efficiency, reduce human error, and facilitate the generation of financial reports necessary for tax purposes. Interviewee 2 stated, *“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”*. This sentiment reflects a consensus among SME owners that despite the maintenance costs, the long-term efficiency and operational smoothness benefits justify the investment in technology. Furthermore, Interviewee 6 remarked on how adopting these electronic workflows facilitates their operations, demonstrating a clear trend towards modernising management practices in the SME restaurant sector.

Risk Management: Food and workplace safety are paramount for SME restaurants, where mismanagement can lead to serious legal liabilities. The adoption of government guidelines on food handling and workplace safety is prevalent

among interviewees, who implement internal monitoring practices to ensure compliance. As stated by Interviewee 1, *“With the promotion by government departments on food safety and working premises, we have not experienced any issues with work-related injuries or food poisoning complaints”*. This proactive approach to risk management reflects an understanding that safety measures can also enhance productivity. Many establishments also introduced daily monitoring of kitchen cleanliness and provided additional safety equipment to minimise workplace hazards. Interviewee 5 emphasised, *“We maintain good relationships with our employees, as they are an important asset of the company”*. By prioritising risk management, SME restaurants safeguard their employees and enhance overall operational resilience, demonstrating a commitment to creating a safe work environment that ultimately contributes to business success.

Stakeholder Management: Managing relationships with employees and shareholders is a key governance initiative for SME restaurants. Unlike large corporations, SME owners emphasise flexible and informal relationships with their staff, fostering a supportive work environment. Interviewees highlighted practices such as providing informal staff care programs. Interviewee 1 noted, *“We provide loans to employees if necessary—an approach rarely seen in larger companies due to various constraints”*. This personal approach to stakeholder management is crucial for building a strong organisational culture. Moreover, the relationships with shareholders vary based on business structure; family-owned restaurants tend to exhibit centralised decision-making, while multi-shareholder entities have a more collaborative governance style. Interviewee 7 stated, *“Although we have 5 shareholders, the scale still allows us to have discussions together to strategise and operate the business”*. This highlights the adaptability within SME governance structures, where personal relationships and direct communication facilitate effective management. Overall, SME restaurants create a work environment that values employee contributions, enhancing performance and strengthening stakeholder loyalty.

D. Other Insights

Assessing or Measuring the Impact of ESG Practices: The research revealed a significant gap in knowledge regarding sustainability frameworks and certifications among SME restaurant owners in Macau. All interviewees said they were unaware of any formal ESG frameworks or certifications related to their practices. Upon clarification, they acknowledged that they had not applied for any sustainability certifications, particularly concerning energy-efficient electrical appliances. This lack of awareness was echoed by the three interviewees who participated in the food waste recycling program initiated by the Macao Environmental Protection Bureau; they admitted to being uninformed about the specific handling procedures for their collected waste. This indicates a knowledge deficit and a missed opportunity for leveraging such initiatives to enhance their sustainability practices. Interviewee 1 noted, *“Despite our participation in the program, we are unclear on how to handle the materials effectively”*, highlighting the need for clearer guidance and support from governmental bodies. The

insights suggest that, while some SME restaurants engage in sustainability practices, the absence of structured knowledge regarding ESG impacts hampers their ability to measure and report on these efforts effectively.

Observations on Government Policies Regarding ESG:

The interviewees were unanimous in their view that the government should proactively promote and support ESG initiatives within the SME restaurant sector. They emphasised the need for equitable support to foster a competitive environment. Interviewee 1 recalled a previous experience with the government's energy-efficient product subsidy program, stating, *"I had applied for the program, but the energy-saving effects were not very noticeable, and eventually, my restaurant had to renovate and discontinue the use of the subsidised products."*, illustrating the ineffectiveness of past initiatives. Similarly, Interviewee 8 added, *"A decade ago, I had tried to introduce food waste recycling machines, but without government support, how can SMEs go further?"*. These statements reflect a broader sense of frustration over the limitations of government policies. The insights reveal a persistent gap in the practical support for SMEs to adopt and implement effective ESG practices. A more robust government framework is required to bridge this gap, which offers clear guidelines and effective incentives. This would help SMEs understand ESG better and empower them to integrate such practices meaningfully into their operations, fostering a culture of sustainability within the industry.

E. Factors Affecting Adoption of ESG by SME Restaurants

From the analysis of the interviews under each of the ESG initiatives, we identified several key factors that influence the adoption of ESG practices among SME restaurants:

1) Perceived complexity and burden

The interviews revealed that restaurant owners and managers perceived ESG initiatives as complex and burdensome, potentially adding to their operational challenges. The lack of clear guidance, resources, and support appeared to deter them from actively pursuing sustainable practices, making it difficult to meet the requirements and implementation process.

2) Lack of knowledge and awareness

Another factor uncovered was the interviewees' overall lack of knowledge and awareness regarding the relationship between sustainable development and their restaurant, the related sustainability frameworks, certifications, and the potential impact of ESG initiatives. Many interviewees misconceived that ESG was irrelevant to their business and did not bring financial benefits. While some recognised the potential cost-saving benefits of good risk management, there was a general lack of familiarity with sustainability frameworks and certifications, particularly those related to energy-efficient equipment. This knowledge gap presents a significant barrier to the industry's ability to realise the advantages of ESG.

3) Limited understanding of sustainability programs

Even for the existing sustainability programs, such as the food waste recycling initiative, the interviewees displayed a limited understanding of the processes involved. While some

restaurants participated in the program, they were unaware of the specific waste handling procedures. This suggests a need for better communication and education around the available ESG-related programs and their implementation.

4) Insufficient government support

Several interviewees highlighted the need for stronger government support and policies to promote ESG adoption. Past experiences with limited effectiveness of government subsidy programs and lack of support for implementing sustainability systems further discouraged restaurants from investing in ESG-related efforts. Some government measures, such as those aimed at limiting the use of plastics, have demonstrated promising results and showcase the potential impact of well-designed policies.

V. CONCLUSION AND RECOMMENDATION

Our findings reveal that not all ESG practices advocated in the literature review universally apply to SME restaurants in Macau. Even a few are being adopted, not by all the interviewees. Given the diverse nature of the industry, SME restaurants need to carefully consider their specific operational practices and determine which key ESG practices are most relevant and feasible for their circumstances. It is important to recognise that there is no one-size-fits-all approach, and each restaurant SME should assess and prioritise the ESG practices that align with their industry and business goals.

Our research has gained valuable insights into the challenges of encouraging SME restaurants to implement an ESG approach. We have learned that simply explaining the importance of ESG to attract investor interest or build consumer trust is not an effective strategy for this sector. Key drivers for SME restaurants focus more on cost-savings and operational efficiency rather than broader ESG considerations. Additionally, we identified gaps between general ESG practices for SMEs and those specifically applicable to the restaurant industry.

A. Recommendation

Based on the insights gained from understanding the unique factors affecting ESG adoption by SME restaurants, we can now explore more tailored approaches to improve engagement and implementation in this sector. The following recommendations are potential strategies that policymakers and industry stakeholders could consider to encourage the adoption of ESG practices by SME restaurants:

1) Developing industry-specific ESG frameworks and guidelines

Policymakers and industry associations could work together to develop ESG frameworks and guidelines that specifically address the unique operational and financial constraints of SME restaurants. This would help ease the concerns that implementing ESG practices may lead to higher costs compared to non-adopters. Establishing standardised frameworks and guidelines would create a fair and competitive environment where all market participants have the same starting point.

2) Providing financial incentives

Cost-savings and operational efficiency are key considerations for SME restaurants when adopting ESG

practices. Policymakers could introduce financial incentives, such as tax credits or subsidies, to encourage SME restaurants to invest in ESG initiatives. These financial incentives could help offset the upfront costs and perceived financial burden of implementing sustainable practices.

3) Offering hands-on training and support

SME restaurants lack the necessary knowledge, resources, and expertise to conduct an in-depth analysis of their activities and identify areas for improvement regarding environmental impact, working practices, and corporate governance. Providing hands-on training and implementation support would help them overcome the knowledge and resource barriers they face when adopting ESG practices.

4) Fostering peer-to-peer learning and knowledge-sharing

Successful implementation of ESG practices by some SME restaurants can serve as valuable case studies and best practices for the industry. Policymakers and industry associations should facilitate peer-to-peer learning and knowledge-sharing networks, such as workshops and seminars, where SME restaurants can showcase their achievements and learn from each other's experiences and the new trends in ESG. This would help the broader industry overcome the knowledge gap and inspire more widespread adoption of ESG practices.

B. Limitations

This research aimed to understand the ESG implementation status and constraints facing SME restaurants in Macau. However, several limitations need to be acknowledged:

Potential Response Bias: Interviewees, primarily owners and managers, may not fully represent the broader perspectives of the SME restaurant industry. Their responses might reflect socially desirable answers, particularly given their limited understanding of ESG. Future research should involve other stakeholders, including employees and customers, for a more comprehensive view.

Limited Sample Size: The research initially aimed to interview at least 15 SME restaurants. However, the researcher found that by the 5th interview, the responses started becoming repetitive, and no significant new information was being gathered. While this may suggest that data saturation was reached, the limited sample size of 8 interviews could affect the generalizability of the findings. It may not fully capture the diversity of ESG practices in SME restaurants in Macau.

External Factors: The research timeframe coincided with the ongoing effects of the COVID-19 pandemic, which has significantly altered consumer habits and increased operational challenges for SME restaurants in Macau. High operating costs and labor shortages could also influence the observed ESG practices, limiting comparisons to other regions.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

WMF conducted the research, analysed the data, and

co-wrote; JOLP edited the findings and structured and co-wrote the paper; all authors had approved the final version.

REFERENCES

- Braun, V., & Clarke, V. 2021. To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative research in sport, exercise and health*, 13(2): 201–216.
- Camelo, G., & Nogueira, M. 2024. The ESG menu: Integrating sustainable practices in the Portuguese agri-food sector. *Sustainability*, 16(11): 4377.
- Chandrasekhar U. May 2023. ESG and SMEs: Why sustainability matters for small businesses. Available: <https://www.linkedin.com/pulse/esg-smes-why-sustainability-matters-small-businesses-ujjini>
- Coley, D., Howard, M., & Winter, M. 2009. Local food, food miles and carbon emissions: A comparison of farm shop and mass distribution approaches. *Food policy*, 34(2): 150–155.
- Craig S. April 2023. ESG strategy and management: Complete guide for businesses. Available: <https://www.techtarget.com/sustainability/feature/ESG-strategy-and-management-Complete-guide-for-businesses>
- Dallago, B. 2000. The organisational and productive impact of the economic system. The case of SMEs. *Small Business Economics*, 15: 303–319.
- Don D. February 2024. How to foster a collaborative work environment for greater efficiency. Available: <https://www.linkedin.com/pulse/how-foster-collaborative-work-environment-greater-don-davis-phd-mba-918cc>
- EBA Report. 2021. EBA Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms (EBA/REP/2021/18). *European Banking Authority*. Available: https://extranet.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20supervision.pdf?retry=1
- Environmental Protection Bureau (known by its Portuguese abbreviation DSPA). 2024. *An overview of food waste reduction and recycling initiatives*. Government of Macao Special Administrative Region. (in Chinese). Available: https://www.dspa.gov.mo/richtext.aspx?a_id=1533635494
- Esposito D. F. S., Scandurra, G., & Thomas, A. 2021. How stakeholders affect the pursuit of the environmental, social, and governance. evidence from innovative small and medium enterprises. *Corporate Social Responsibility and Environmental Management*, 28(5): 1528–1539.
- FoodDrinkEurope. 2020. Data & trends of the European food and drink industry 2020: 1–31. Available: <https://www.fooddrinkeurope.eu/wp-content/uploads/2021/02/FoodDrinkEurope-Data-Trends-2020-digital.pdf>
- Gorman, G. E., Clayton, P. R., Shep, S. J., & Clayton, A. 2005. *Qualitative research for the information professional: A practical handbook*. Facet Publishing.
- Guillet, B. D., & Mattila, A. S. 2010. A descriptive examination of corporate governance in the hospitality industry. *International Journal of Hospitality Management*, 29(4): 677–684.
- Habon, M. E., Enriquez, C. D. M., Dinglasan, A. P. L., Habon, R. A. C., Punzalan, P. M. G., & Pulhin, J. C. B. 2019. Impact of training and development program to employees performance and productivity. *Asian Pacific Journal of Education, Arts and Sciences*, 6(4): 74–83.
- Herring, C. 2009. Does diversity pay?: Race, gender, and the business case for diversity. *American sociological review*, 74(2): 208–224.
- Homebase Team. July 2024. Restaurant compliance: Rules, regulations, and laws explained. *HomeBase*. Available: <https://joinhomebase.com/blog/restaurant-compliance-2/>
- Jaime A. August 2023. 10 effective strategies for SMEs to boost their ESG metrics. *The ESG Institute*. Available: <https://www.the-esg-institute.org/blog/10-effective-strategies-for-smes-to-boost-their-esg-metrics>

- Karen C. M. 1994. Restaurants—opportunities for energy efficiency. *ACEEE 1994 Summer Study on Energy Efficiency in Buildings*. Available: https://www.aceee.org/files/proceedings/1994/data/papers/SS94_Panel5_Paper17.pdf
- Li, T. T., Wang, K., Sueyoshi, T., & Wang, D. D. 2021. ESG: Research progress and future prospects. *Sustainability*, 13(21): 11663.
- Lin, M. P., Marine-Roig, E. & Llonch-Molina, N. 2022. Special dietary needs: Evidence from high-end restaurants. *Investigaciones actuales en ciencias sociales y en turismo*, pp. 231–242.
- Magida, N. 2021. *Impact of water crisis on the financial performance of fine dining restaurants in the Cape Town Metropole*. Ph.D. dissertation, Cape Peninsula Univ., of Technology.
- Marshall, P. A., Adebamowo, C. A., Adeyemo, A. A., Ogundiran, T. O., Vekich, M., Strenski, T., Zhou, J., Prewitt, T. E., Cooper, R. S., & Rotimi, C. N. 2006. Voluntary participation and informed consent to international genetic research. *American journal of public health*, 96(11): 1989–1995.
- Move for Hunger. 2024. Beyond the menu: Food waste in America's restaurant industry. Available: <https://moveforhunger.org/blog/beyond-menu-food-waste-americas-restaurant-industry-1>
- Mun, S. G., & Jang, S. S. 2018. Restaurant operating expenses and their effects on profitability enhancement. *International Journal of Hospitality Management*, 71: 68–76.
- Namkung, Y., & Jang, S. 2007. Does food quality really matter in restaurants? Its impact on customer satisfaction and behavioral intentions. *Journal of Hospitality & Tourism Research*, 31(3): 387–409.
- Pandey, A. 2021. *Risk management in restaurant business during Covid-19 crisis.: Case study for a small Asian restaurant (X) in a medium-sized town in Uusimaa, Southern Finland*. Bachelor's Thesis, Metropolia Univ., of Applied Sciences
- Park, S. R., & Jang, J. Y. 2021. The impact of ESG management on investment decision: Institutional investors' perceptions of country-specific ESG criteria. *International Journal of Financial Studies*, 9(3): 48.
- Principato, L., Di Leo, A., Mattia, G., & Pratesi, C. A. 2021. The next step in sustainable dining: the restaurant food waste map for the management of food waste. *Italian Journal of Marketing*, 2021: 189–207.
- Schnell, S. M. 2013. Food miles, local eating, and community supported agriculture: Putting local food in its place. *Agriculture and Human Values*, 30: 615–628.
- Schur, L., Nishii, L., Adya, M., Kruse, D., Bruyère, S. M., & Blanck, P. 2014. Accommodating employees with and without disabilities. *Human Resource Management*, 53(4): 593–621.
- Seidman, I. 2006. *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York: Teachers college press.
- Styles, D., Schoenberger, H., & Galvez-Martos, J. L. 2015. Water management in the European hospitality sector: Best practice, performance benchmarks and improvement potential. *Tourism Management*, 46: 187–202.
- Sutton, J., & Austin, Z. 2015. Qualitative research: Data collection, analysis, and management. *The Canadian journal of hospital pharmacy*, 68(3): 226.
- Tan, B. C., Lau, T. C., Yong, G. F., Khan, N., & Nguyen, T. P. L. 2019. A qualitative study of green practices adoption for restaurants in Malaysia. *Social Responsibility Journal*, 15(8): 1087–1099.
- Wellton, L., & Lainpelto, J. 2021. The intertwining of professional knowledge culture, leadership practices and sustainability in the restaurant industry. *Scandinavian Journal of Hospitality and Tourism*, 21(5): 550–566.
- Zhang, X. 2023. How does government support promote the relationship between ESG performance and Innovation? *Journal of Innovation and Development*, 3(2): 89–92.

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