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Measuring the effect of business profile, financial challenges, and sustainability practices of the coffee shops on their profitability

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A B S T R A C T

This study examined the sustainability practices of local coffee shops in Laoag City, Ilocos Norte, and their effect on profitability. A descriptive-correlational research design was used, involving 17 coffee shops that had operated for at least 2 years. Data were collected through a structured questionnaire capturing business profile characteristics, the extent of sustainability practices across economic, social, and environmental dimensions, challenges encountered, and profitability indicators, including return on assets (ROA), return on equity (ROE), and return on sales (ROS). Statistical tools included frequency, percentage, weighted mean, Pearson's r, and Spearman's rho.

The business profile revealed that local coffee shops are primarily micro businesses, relatively new, minimally staffed, and modestly capitalized, with most generating low monthly sales and limited income. Findings showed a great extent of sustainability practices across economic, social, and environmental dimensions, indicating consistent integration of responsible business operations. Coffee shops face significant challenges, particularly cost and financial constraints, and market competition, with moderate concerns regarding revenue, customer willingness to pay, return on investment, and business growth.

Profitability remained high across ROA, ROE, and ROS. Results showed that the number of employees and average monthly sales were significantly associated with sustainability practices, while years in operation and number of employees were significantly related to profitability. Other profile variables, including ownership form, location, and capitalization, showed no significant effect. Economic and social sustainability practices were associated with greater financial challenges, yet profitability remained resilient.

In conclusion, local coffee shops demonstrate that sustainability can coexist with financial efficiency, with workforce size and sales capacity driving adoption more than structural factors. Owners should focus on workforce development, operational efficiency, and leveraging sales for sustainability, while the LGU can provide training, incentives, and knowledge-sharing. Future research should explore long-term impacts on growth, customer loyalty, and resilience, and compare practices across regions.

Introduction

The local coffee shop industry in the Philippines has experienced remarkable growth in recent years, driven by increasing

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coffee consumption and the evolving urban coffee culture. According to Luna (2024), the Philippines ranks second among Asian coffee consumers, with 80% of Filipinos drinking an average of 2.5 cups per day. Rising disposable incomes and growing appreciation for artisanal offerings have fueled increased spending on premium and specialty coffee products, especially among middle-income households (More, 2025). These developments highlight the sector's potential to thrive as a key part of the country's food service industry while promoting local coffee production and sustainability.

Laoag City's rapid growth in local coffee shops, driven by demand from students, professionals, and tourists, underscores the sector's economic significance (Doming, 2023). Furthermore, local initiatives such as the development of "Kapeng Ilokano" and coffee plantations highlight opportunities to integrate sustainability into business operations (Adriano, 2021). Despite this growth, the local coffee shop sector faces challenges, including high rental costs, competition from established brands, and operational constraints (Gamundoy, 2020). Environmental accountability remains a concern due to reliance on non-biodegradable materials driven by cost limitations (Moshood et al., 2022).

Philippine studies highlight the growing impact of consumer experiences on sustainability in coffee shops. Tenedero et al. (2024) found that customers in Metro Manila consider environmental consciousness and green products when choosing cafés, while Hinlayagan et al. (2022) reported strong pro-environmental intentions among consumers in Davao City toward eco-friendly establishments. The industry's sustainability practices likewise encompass social initiatives, as evidenced by Calunod et al. (2025), who reported the positive outcomes of coffee shop food donation programs in Makati City. The Philippine coffee sector further emphasizes the need for economic and environmental sustainability, particularly in local production and farmer resilience (Luat et al., 2022).

Using the Triple Bottom Line framework—economic, social, and environmental practices—this study evaluates how sustainability initiatives influence profitability and operational efficiency among local coffee shops in Laoag City (Luat, 2022). Motivated by a commitment to sustainable development in the local business sector, the researchers recognize the pivotal role coffee shops play as economic drivers and community spaces. This motivation is also rooted in personal interest: exploring how businesses can earn profit while also caring for the environment and the community, and acknowledging the importance of business models that balance financial stability with social and environmental responsibility.

While sustainability has been associated with benefits such as cost savings, customer satisfaction, and operational efficiencies, evidence on how sustainability practices directly affect profitability, particularly return on assets, return on equity, and return on sales, remains limited among local coffee shops in developing economies like the Philippines (Madriaga et al., 2024; Rastogi et al., 2024). This study addressed this gap by assessing the profitability of sustainability practices among local coffee shops in Laoag City.

Literature review

Coffee shops

Coffee shops function as social and community spaces in modern cities. More (2025) found that these establishments foster social interactions that help reduce urban isolation and strengthen local connections. Today, coffee shops are also used as informal workplaces, or "coffices," that support freelancers and remote workers in flexible environments (Doming, 2023). Moreover, many independent cafés engage with their communities through sustainable sourcing, partnerships with local suppliers, and social initiatives such as suspended coffee programs (Madriaga et al., 2024).

A business's ownership structure directly shapes its stability and capacity to grow; it naturally relates to how long the business can operate and sustain itself over time. The form of ownership determines the legal frameworks, liability exposure, and decision-making authority (Schilling, 2017). Sole proprietorships provide operational simplicity but expose owners to personal risk, whereas corporations offer limited liability protection and promote greater investment opportunities. This structure influences liability, taxes, control, and governance. Experts such as Drucker (2017) emphasized its impact on financial risk, competition, and scalability.

This relationship between structure and sustainability is closely tied to the number of years a business has been in operation,

which often reflects its stability, experience, and resilience. Established businesses often demonstrate resilience and refined strategies but may struggle to adapt to rapidly changing markets (Kotler & Keller, 2016). The number of years in operation indicates a company's resilience, adaptability, and long-term success. Experts like Welch (2018) and Godin (2019) highlight its role in signaling longevity, innovation, and the ability to maintain a competitive edge.

Geographic location, therefore, plays a crucial role in determining customer access and market dynamics that influence longevity. Urban areas attract high foot traffic but face intense competition, while rural areas benefit from proximity to agriculture despite infrastructure challenges (Peteros et al., 2022). Location influences market access, costs, talent, competition, efficiency, innovation, and scalability (Nurani et al., 2022).

As market conditions shape operational demands, the number of employees becomes essential for defining a business's capacity, productivity, and service quality. The number of employees affects operational capacity, productivity, and service quality. (Robbins and Coulter, 2018). While larger workforces may signal growth potential, they can also lead to inefficiencies without effective management (Dessler, 2019). This metric is crucial for understanding organizational size, structure, and performance (Kotler & Keller, 2016).

Capital—both initial and current—therefore forms the financial backbone that enables a business to sustain its workforce, operations, and strategic initiatives. According to studies on SMEs in the Philippines and abroad, initial capital is a key determinant of business survival and growth (Pagaddut, 2021; Malesios et al., 2018). However, in the context of coffee shops, higher initial capital often enables better equipment, decor, and marketing, which can lead to higher initial sales (Malesios et al., 2018). Current capital is influenced by the business's ability to generate profits and manage expenses. Businesses with higher current capital can better withstand market shocks and invest in growth (Pagaddut, 2021).

These financial foundations directly influence average monthly sales, a key performance indicator that reflects market response to a business's strategies and service quality. Average monthly sales are influenced by location, marketing strategies, and quality of service (Malesios et al., 2018; Alfaro & Diaz, 2021). However, for coffee shops, monthly sales can be seasonal, peaking during colder months or holiday periods (e.g., industry reports from IBISWorld). Sustainability practices (e.g., eco-friendly packaging) can attract more customers and increase sales (Alfaro & Diaz, 2021).

Because sales performance is closely tied to profitability, recent scholarship highlights how responsible business practices and financial indicators shape income outcomes. Pham et al. (2021) identified a positive relationship between sustainability practices and net income among Swedish SMEs, indicating that responsible management can contribute to improved profitability. However, Pagaddut (2021) investigated financial factors affecting MSMEs in the Philippines, focusing on variables such as current ratio, debt ratio, asset turnover, and gross profit margin, with return on investment as the dependent variable.

Sustainability practices

Sustainability encompasses a coffee shop's ability to operate long-term while balancing economic, social, and environmental considerations. The "triple bottom line" approach - Economic Sustainability, Social Sustainability, and Environmental Sustainability- provides a framework for measuring success beyond financial performance by integrating contributions to social well-being and environmental health (Cubillo, 2016).

Economic practices. The economic sustainability of coffee businesses is crucial for their survival and growth. Cardoso et al. (2022) highlighted the importance of operational income in supporting economic sustainability, especially among small coffee shops. However, these businesses often face challenges in optimizing resource allocation due to limited financial resources and market competition (Nguyen & Vo, 2021).

Social practices. Social sustainability in the coffee industry involves improving the well-being of communities and workforces. Klave and Bruksle (2025) emphasized that integrating social sustainability into business strategies is essential for ensuring long-term success. Moreover, Muñoz-Pascual et al. (2019) highlight education, equity, health, and social capital as key components. Despite these initiatives, small coffee shops face challenges in adopting social sustainability practices

due to resource constraints and limited access to training programs (Filho et al., 2023). Thus, an ethically and socially sustainable society ensures social equity for the most disadvantaged, promotes poverty reduction, upholds human and labor rights, supports well-being and quality of life for present and future generations, preserves cultural heritage, encourages community engagement and development, and fosters social responsibility (Barreto et al., 2022). For instance, Suriyankietkaew (2016) found that social sustainability practices in small businesses are significantly and positively related to financial performance, customer satisfaction, and employee satisfaction, indicating that these initiatives are more likely to enhance rather than hinder a firm's financial outcomes.

Environmental practices. Environmental sustainability in coffee production is vital due to its significant ecological impacts, including deforestation and biodiversity loss. Sustainable practices, such as shade-grown coffee cultivation and agroforestry systems, are recommended to mitigate these impacts. However, small coffee shops often face financial constraints that hinder the adoption of sustainability measures like energy-efficient equipment and biodegradable materials (Sargani et al., 2020). Additionally, greenwashing remains a concern, with some companies making unsubstantiated eco-friendly claims. Lee et al. (2016) highlight that firms that systematically manage environmental responsibilities alongside economic objectives tend to achieve superior financial performance by incorporating environmental management into their strategic planning.

Challenges encountered by coffee shops

Costs and financial constraints. Financial constraints are a significant challenge for small coffee businesses. Hu and Zeng (2024) and Nguyen and Vo (2021) explored the challenges to achieving sustainable operations, such as limited financial resources. Their study indicates that financial constraints impede investment in sustainable practices. Moreover, Maspul (2024) highlights the impact of rising costs and limited access to capital.

Revenue and customer willingness to pay. Customers' willingness to pay is influenced by quality, branding, and sustainability. Furthermore, pricing consistency in coffee business management has been recognized as important in a competitive market (Maspul, 2024). The study concluded that maintaining consistent pricing policies positively impacts factors that directly shape customer perceptions of value and their willingness to pay. However, Lingnau et al. (2019) found that increasing sustainability initiatives does not necessarily lead to higher willingness to pay, and that it is challenging for smaller businesses (Alfaro & Diaz, 2021).

Return on investment (ROI) and business growth. ROI is critical for measuring investment efficiency and supporting growth. Saalmuller (2022) specifies that maintaining operations and promoting expansion require capitalization. Pagaddut (2021) indicates that sustainable initiatives often require initial investments, potentially increasing debt and impacting short-term profitability. This article aligns with Hu and Zeng's (2024) research, which implies that rapid corporate development generally necessitates significant upfront expenditures with extended payback periods, particularly for sustainable initiatives.

Market competition. Market competition poses challenges for customer retention and differentiation. Drucker (2017) indicates that market initiatives are critical for optimizing revenue. While Siddiqui (2023) emphasizes the importance of adaptability and market trend analysis for survival. Moreover, Maspul (2024) highlights that price fluctuations, often driven by competitive pressures, undermine consumer trust and brand loyalty.

Profitability of coffee shops

Assessing a company's profitability remains a key concern for both scholars and practitioners, as organizations strive to achieve optimal results. Martinez and Lee (2019) note that profitability is commonly assessed using accounting-based measures, such as net income, or market-based indicators, such as a firm's market capitalization at the close of the fiscal year.

Profitability. Profitability indicates a coffee shop's ability to generate earnings while managing costs, influenced by high-margin products and diversified revenue streams (Choiriyah et al., 2020). However, Ambrocio (2025) highlights that foundational business characteristics such as cash flow management and capital availability alone do not guarantee profitability without effective financial planning and managerial decisions. Malesios et al. (2018) also linked business growth to the adoption of sustainability practices in SMEs.

Return on Assets (ROA). Return on Assets (ROA) assesses a company's efficiency in utilizing its assets to generate profits, with higher ROA values reflecting stronger management performance (Husna & Satria, 2019; Fauzan et al., 2019). It evaluates whether management achieves reasonable returns from asset investments. A high debt ratio can reduce return on assets by increasing financial burden (Rarang, 2023). Studies indicate that integrating environmental management with economic considerations often enhances financial performance, showing a positive correlation with both return on assets and return on equity (Lee et al., 2016).

Return on Equity (ROE). Return on Equity (ROE) evaluates a company's capacity to generate profits from shareholders' equity, serving as an indicator of management effectiveness (Hertina & Saudi, 2019). A higher return on equity signifies stronger profitability and tends to attract investors (Purnamasari, 2015), whereas a lower return on equity indicates limited returns on invested capital.

Return on Sales (ROS). Return on Sales (ROS) measures profit margins and reflects operational efficiency and cost management. It calculates the profit generated per sales, with a higher return on sales indicating greater profitability and attractiveness for business projects (Kim & Thanh, 2021).

Relationship between business profile and adoption of sustainability practices

The size and operational characteristics of coffee shops influence their ability to adopt sustainability practices. Schilling (2017) noted that ownership structure shapes the legal framework, liability exposure, decision-making authority, and access to investment, all of which can affect the adoption of sustainability. Similarly, Robbins and Coulter (2018) highlight that the number of employees serves as an indicator of a company's operational capacity and its capability to manage larger initiatives effectively. Kotler and Keller (2016) further explained that although operational years and location may enhance stability and market access, sustainable practices depend on leadership commitment and strategic direction.

Relationship between business profile and profitability

The operational experience and structural characteristics of coffee shops influence their financial performance and capacity for sustainable growth. Malesios et al. (2018) found that firms with longer operational histories and stronger financial management experience tend to achieve more consistent financial outcomes due to accumulated business knowledge and market adaptability. Similarly, Pagaddut (2021) highlighted that a larger workforce and effective human resource allocation enhance productivity and profitability among SMEs. Consistent with these findings, Alfaro and Diaz (2021) observed that firm structure alone has a limited direct impact on profitability unless supported by efficient operational and financial strategies.

Relationship between sustainability practices and challenges encountered by coffee shops

The relationship between sustainability practices and the challenges faced by coffee shops is complex and context-dependent. While sustainability initiatives can enhance reputation and long-term competitiveness, they also introduce operational and financial challenges that smaller enterprises often struggle to manage. Suriyankietkaew (2016) found that social sustainability practices are positively associated with improved financial outcomes, suggesting that responsible business initiatives can strengthen performance. However, Malesios et al. (2018) reported that the effects of sustainability adoption vary considerably, with some practices showing non-significant or even negative impacts on business growth and turnover.

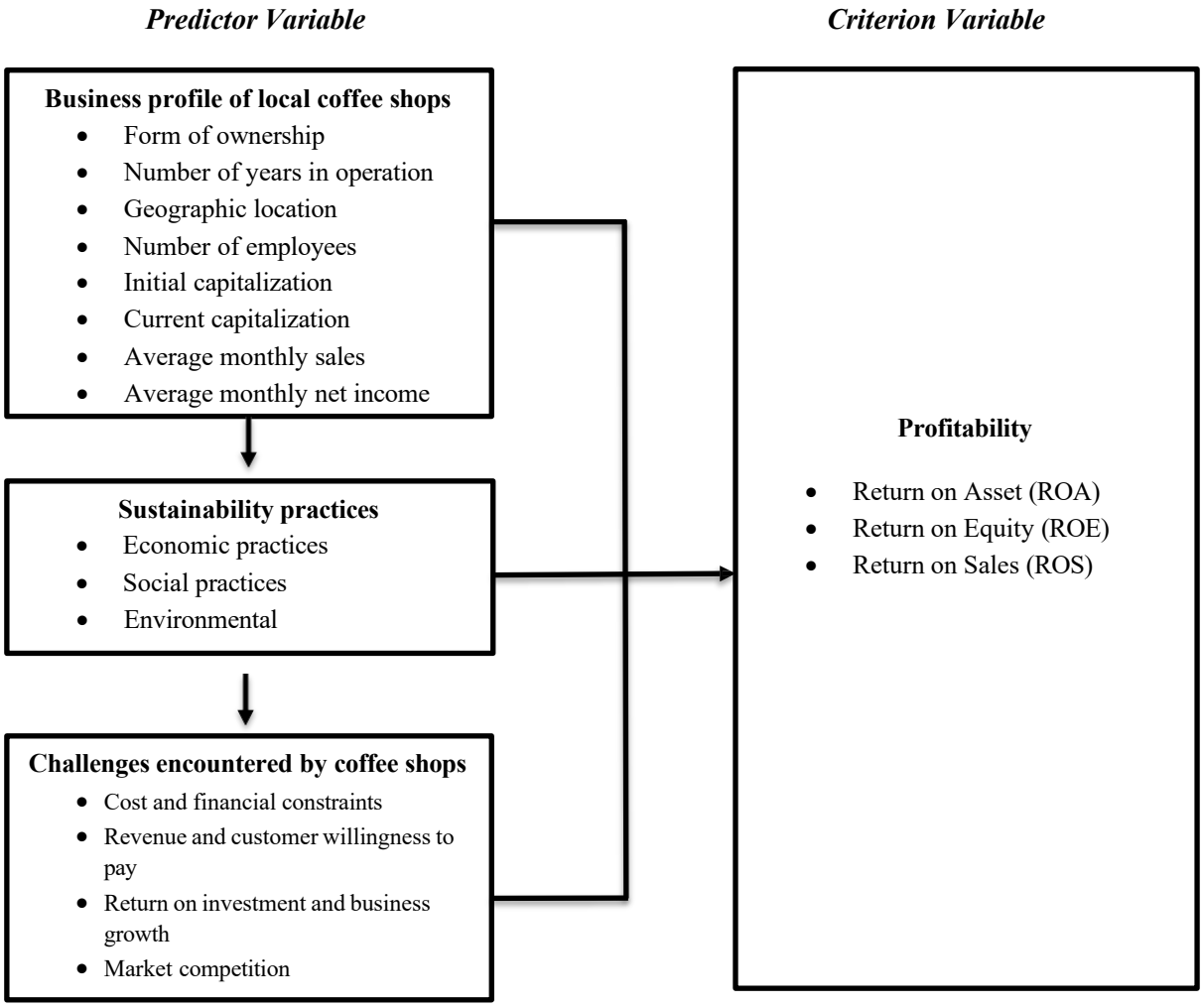
Relationship between sustainability practices and profitability

Pham et al. (2021) revealed that economic sustainability reporting positively influences firms' return on assets and earnings per share, demonstrating that sound financial management and responsible business practices contribute to profitability and long-term stability. Similarly, Alfaro and Diaz (2021) found that green initiatives among SMEs enhance profitability and equity by reducing operating costs and improving efficiency. However, Pham et al. (2021) also noted that social sustainability practices tend to have minimal immediate impact on financial performance, suggesting that socially driven initiatives primarily yield long-term reputational and relational benefits rather than short-term financial gains.

Relationship between challenges encountered by coffee shops and profitability

Cost and financial constraints appear to have limited direct influence on the financial performance of coffee shops. Nguyen and Vo (2021) reported weak and non-significant correlations between cost and financial constraints and key profitability measures, including return on assets, return on equity, and return on sales. This suggests that even when coffee shops face increased operational costs or challenges in sourcing sustainable materials, these factors do not necessarily diminish overall financial performance. Supporting this, Maspul (2024) noted that although consistent pricing and sound financial management strategies can influence customers' willingness to pay, these effects do not always result in measurable improvements in financial indicators such as return on equity or return on sales, especially among smaller enterprises.

Conceptual framework



Source: *Alfaro et Diaz (2021); Hu et Zeng (2024); Lee et al. (2016); Lingnau et al. (2019); Madriaga et al. (2024); Malesios et al. (2018); Maspul (2024); Pagaddut (2021); Pham et al. (2021).*

Figure 1. Research paradigm

The study adopted the Predictor Variable-Criterion Variable (PV-CV) model to conceptualize the framework. The conceptual framework examined the relationships between Business Profiles, Sustainability Practices, and Challenges Encountered by Coffee Shops, and their effect on the Profitability of Coffee Shops. Specifically, it explores how variables such as Monthly

Sales, Number of Employees, Capitalization, Geographic Location, Form of Ownership, and Years in Operation (Business Profile); Economic, Social, and Environmental Practices (Sustainability Practices); and issues like Cost and Financial Constraints, Revenue and Customer Willingness to pay, Return on Investment and Business Growth, and Market Competition (Challenges Encountered) influence the Level of Profitability, measured by Return on Assets (ROA), Return on Equity (ROE), and Return on Sales (ROS).

Statement of the problem

This study determined the sustainability practices and their effect on the profitability of local coffee shops in Laoag City. Specifically, it sought to address the following research questions:

1. What is the business profile of the local coffee shops in terms of:
    1.1 Form of Ownership;
    1.2 Number of Years in Operation;
    1.3 Geographic Location;
    1.4 Number of Employees
    1.5 Initial Capitalization;
    1.6 Current Capitalization
    1.7 Average Monthly Sales; and
    1.8 Average Monthly Net Income?

2. To what extent are the sustainability practices being implemented by the local coffee shops in terms of:
    2.1 Economic Practices;
    2.2 Social Practices; and
    2.3 Environmental Practices?

3. What are the challenges encountered by local coffee shops in the implementation of sustainability practices in terms of:
    3.1 Costs and Financial Constraints;
    3.2 Revenue and Customer Willingness to Pay;
    3.3 Return on Investment and Business Growth; and
    3.4 Market Competition?

4. What is the level of profitability of local coffee shops along:
    4.1 Return on Asset (ROA);
    4.2 Return on Equity (ROE); and
    4.3 Return on Sales (ROS)?

5. Is there a significant relationship between the business profile of local coffee shops and their extent of adoption of sustainability practices?

6. Is there a significant relationship between the extent of implementation of sustainability practices and the degree of seriousness of the challenges encountered by the local coffee shops?

7. Is there a significant relationship between the business profile of local coffee shops and their level of profitability?

8. Is there a significant relationship between the extent of implementation of sustainability practices and the level of profitability of local coffee shops?

9. Is there a significant relationship between the degree of seriousness of the challenges encountered by the local coffee shops and their level of profitability?

Hypothesis

H_a1There is a significant relationship between the business profile of local coffee shops and their extent of adoption of sustainability practices.

H_a2There is a significant relationship between the extent of sustainability practice implementation and the severity of the challenges encountered by local coffee shops.

H_a3: There is a significant relationship between the business profile of local coffee shops and their level of profitability.

H_a4There is a significant relationship between the extent of sustainability practice implementation and the profitability of local coffee shops.

H_a5There is a significant relationship between the seriousness of the challenges encountered by local coffee shops and their profitability.

Scope and delimitation of the study

This study examined sustainability practices and their effects on profitability. The study aimed to determine the business profile of local coffee shops, the extent of sustainability practices, the challenges encountered, and the level of profitability. Additionally, it examined the relationship between the business profile of local coffee shops and their extent of sustainability adoption, the relationship between the implementation of sustainability practices and the degree of seriousness of challenges encountered, the relationship between the business profile and profitability, the relationship between sustainability practices and profitability, and the relationship between the degree of seriousness of challenges and profitability. The study was conducted from July to September 2025 and focused on local coffee shops established in Ilocos Norte and operating in Laoag City for at least two years. Of the 18 coffee shops that met this criterion, only 17 participated in the study.

Research Methodology

Research design

The study employed a descriptive correlational research design to systematically describe variables and examine their relationships without manipulation. According to Malesios et al. (2018), this design is suitable for exploring the relationship between sustainability practices and financial performance by identifying significant associations between variables. Therefore, it was deemed appropriate to investigate the relationship between sustainability practices and financial performance among local coffee shops in Laoag City.

Locale of the study

This study was conducted in Laoag City, Ilocos Norte, a growing urban center with a vibrant local coffee culture and an increasing number of coffee shops. Laoag City provides a relevant context for examining sustainability practices in small businesses, given its local coffee initiatives, rising demand from students, professionals, and tourists, and the presence of establishments that have operated long enough to implement sustainability measures.

Population

The respondents in this study included all operational local coffee shops in Laoag City, Ilocos Norte, that had operated for at least 2 years. The list of registered local coffee shops was obtained from the Business Permit and Licensing Office (BPLO) of the City Government of Laoag through the proper procedure and request. The BPLO provided a total of 48 coffee shops; however, only 18 met the study's inclusion criteria, as the remaining 30 were either closed, not locally owned, or did not meet the two-year operation criteria. A total enumeration technique was employed to include every coffee shop that met the criteria and was accessible during the data collection period. Of the 18 eligible establishments, 17 participated in the study, while one declined to complete the survey questionnaire.

Data gathering instruments

The researchers utilized a survey questionnaire as the data-gathering tool for the study. The questionnaire consisted of four parts: the first covered the respondents' profile. The second part measured the sustainability practices of local coffee shops, drawing on the research by Madriaga et al. (2024) after obtaining formal permission from the authors. The third and fourth sections of the instrument were developed and refined based on existing literature and validated studies. The third part asked respondents to rate the seriousness of the challenges encountered in implementing sustainability practices. The fourth part contained items assessing the perceived financial impacts of these sustainability practices on key financial indicators—namely, Return on Assets (ROA), Return on Equity (ROE), and Return on Sales (ROS)—using a Likert scale.

Data gathering procedure

To uphold the integrity of the research, data collection commenced only after obtaining permission from the management of each local coffee shop. Using total enumeration, the researchers visited all operational local coffee shops that met the inclusion criteria, requested consent, and, once granted, administered the questionnaires on-site. Respondents were given ample time to complete the questionnaires, which were then immediately collected by the researchers for subsequent analysis.

Ethical considerations

The study observed all necessary ethical standards to protect participants and uphold research integrity. All gathered data were handled with strict confidentiality. Participation was entirely voluntary, with no direct personal benefits or significant risks expected, and any potential inconvenience was minimized.

Tools for data analysis

Frequency and percentage were used to analyze the business profile of the local coffee shops. The weighted mean was used to assess the extent of implementation of sustainability practices, the severity of the challenges encountered, and the level of profitability.

The following ranges of values with their descriptive interpretations were used:

For the extent of sustainability practices:

Scale	***Range of Mean Values***	***Descriptor***	***Descriptive Interpretation***
5	4.51 - 5.00	Strongly Agree	Very great extent (VHE)
4	3.51 - 4.50	Agree	High extent (HE)
3	2.51 - 3.50	Somewhat Agree	Moderate Extent (ME)
2	1.51 - 2.50	Disagree	Low Extent (L)
1	1.00 - 1.50	Disagree	Very Low Extent (VLE)

For the degree of seriousness in challenges encountered:

Scale	***Range of Mean Values***	***Descriptor***	***Descriptive Interpretation***
5	4.51 - 5.00	Strongly Agree	Very serious (VS)
4	3.51 - 4.50	Agree	Serious (S)
3	2.51 - 3.50	Somewhat Agree	Moderately Serious (MS)
2	1.51 - 2.50	Disagree	Slightly serious (SS)
1	1.00 - 1.50	Strongly Disagree	Not a problem(NAP)

For the level of profitability:

Scale	*Range of Values*	*Descriptor*	*Descriptive Interpretation*
5	4.51 - 5.00	Strongly Agree	Very high (VH)
4	3.51 - 4.50	Agree	High (H)
3	2.51 - 3.50	Somewhat Agree	Moderate (M)
2	1.51 - 2.50	Disagree	Low (L)
1	1.00 - 1.50	Disagree	Very Low (VL)

The relationships between the study variables were analyzed using appropriate statistical tests. (1) The relationship between business profile and adoption of sustainability practices, and (2) the relationship between business profile and level of profitability were examined using both the Chi-square test and Spearman's rho correlation. (3) The relationship between sustainability practices and challenges encountered, (4) the relationship between sustainability practices and level of profitability, and (5) the relationship between challenges encountered and level of profitability were analyzed using Pearson's correlation coefficient.

Data presentation and analysis

The data are presented in accordance with the statement of the problem. The study answered the following questions:

1. What is the business profile of the local coffee shops in terms of:

1.1 form of ownership;
1.2 number of years in operation;
1.3 geographic location;
1.4 number of employees;
1.5 initial capitalization;
1.6 current capitalization;
1.7 average monthly sales; and
1.8 average monthly net income?

Table 1. Business profile of local coffee shops in Laoag City, Ilocos Norte. (n=17)

Business Profile	**Frequency (f)**	**Percentage (%)**
Form of ownership		
Sole Proprietorship	15	88.24
Partnership	2	11.76
Corporation	0	0.00
Others	0	0.00
Total	**17**	**100.00**
Number of years in operation		
2-3 years	13	76.48
4-6 years	2	11.76
More than 6 years	2	11.76
Total	**17**	**100.00**
Geographic location		
Urban	13	76.47
Rural	4	23.53
Total	**17**	**100.00**
Number of employees		
1-3 employees	9	52.95
4-6 employees	6	35.29

7-10 employees	1	5.88
Business Profile	**Frequency (f)**	**Percentage (%)**
More than 10 employees	1	5.88
Total	**17**	**100.00**
Initial capitalization		
Less than Php 50,000	4	23.53
Php 50,001-Php 100,000	6	35.30
Php 100,001-Php 200,000	1	5.88
Php 200,001-Php 500,000	4	23.53
More than Php 500,000	2	11.76
Total	**17**	**100.00**
Current capitalization		
Less than Php 50,000	2	11.76
Php 50,001-Php 100,000	4	23.53
Php 100,001-Php 200,000	5	29.41
Php 200,001-Php 500,000	4	23.54
More than Php 500,000	2	11.76
Total	**17**	**100.00**
Average monthly sales		
Less than Php 50,000	7	41.18
Php 50,001-Php 100,000	5	29.41
Php 100,001-Php 200,000	4	23.53
Php 200,001-Php 500,000	0	0.00
More than Php 500,000	1	5.88
Total	**17**	**100.00**
Average monthly net income		
Less than Php 100,000	13	76.47
Php 100,001-Php 500,000	3	17.65
Php 500,001-Php 1,000,000	1	5.88
Total	**17**	**100.00**

Source: Authors' own table (2025)

Table 1 presents the business profiles of local coffee shops in Laoag City.

The form of ownership shows that the majority of coffee shops (88.24%, 15) operate as sole proprietorships. This indicates a preference among coffee shop owners for the sole proprietorship business structure. This aligns with previous studies emphasizing that sole proprietorships offer ease of establishment and flexibility but simultaneously expose owners to higher personal financial risk (Schilling, 2017).

Given the number of years in operation, most coffee shops (76.48%) have been in business for 2 to 3 years, indicating a relatively young sector with many new establishments entering the market. Kotler and Keller (2016) highlight the significance of years in operation as a measure of business stability, experience, and resilience. Their study emphasizes that established businesses often benefit from refined strategies and accumulated knowledge, yet may face challenges in adapting to rapidly evolving market conditions.

Geographic location shows that 76.47% of shops are in urban areas, while 23.53% operate in rural areas, suggesting a concentration in more densely populated markets. The result supports the study by Peteros et al. (2022), which emphasizes the critical role of geographic location in shaping customer access and market dynamics. Urban areas typically offer higher foot traffic and greater exposure to potential customers, yet are also characterized by more intense competition. In contrast, rural locations may benefit from proximity to agricultural resources but often face infrastructure limitations.

Over half (52.95%) have between 1 and 3 employees, indicative of small-scale business operations. This finding corresponds with Robbins and Coulter (2018), who emphasize that workforce size directly affects operational capacity, productivity, and service quality. While a larger workforce suggests growth potential, it can also lead to inefficiencies if not well managed, as noted by Dessler (2019).

Among the respondents, 35.30% reported starting with an initial capital ranging from Php 50,000.00 to Php 100,000.00. Current capital levels indicate growth, with 29.41% of coffee shops now operating with Php 100,001.00 to Php 200,000.00, although 11.76% still report maintaining less than Php 50,000.00. Maintaining strong current capital through profits and effective cost control enables businesses to withstand market challenges and supports further growth (Pagaddut, 2021).

Average monthly sales vary across coffee shops, with 41.18% earning less than Php 50,000.00, while only 5.88% exceed Php 500,000.00. Average monthly sales are influenced by multiple factors, including geographic location, marketing strategies, product differentiation, and quality of customer service (Malesios et al., 2018). For coffee shops, strategies such as offering specialty beverages, creating a unique ambiance, and establishing local partnerships can enhance sales performance. However, success also depends on the ability to adapt to shifting consumer preferences and leverage technological advancements (Smith, 2017).

The majority of coffee shops (76.47%) reported an average monthly net income of less than Php 100,000.00, with none exceeding Php 1,000,000.00. This observation is consistent with Pagaddut (2021), who highlights the variability of profitability among small and medium enterprises, influenced by financial management practices, operational efficiency, and market conditions. Additionally, Pham et al. (2021) suggest that sustainability initiatives can positively impact net income, as demonstrated in Swedish SMEs where responsible management practices were linked to increased profitability.

The figures suggest that the coffee shop industry in Laoag City is primarily composed of relatively new, minimally staffed, and modestly capitalized micro businesses. With a majority generating low monthly sales and limited net income.

2. To what extent are the sustainability practices being implemented by the local coffee shops in terms of:

2.1 Economic Practices;

2.2 Social Practices; and

2.3 Environmental Practices?

Table 2. Extent of sustainability practices of local coffee shops in Laoag City, Ilocos Norte (n=17)

Indicators	Mean	Interpretation
A. Economic practices		
1. The coffee producers have a channel to increase the number of clients.	4.12	HE
2. The coffee production business has increased in the average customer purchase.	4.06	HE
3. The coffee shop is properly managed, making it profitable	4.35	HE
4. The coffee shop complies with all legal labor obligations regarding the payment of salaries and benefits by law.	4.71	VHE
5. The coffee shop is recognized for the service given to its customers and for caring for the quality of its products and services	4.53	VHE
6. The coffee shop has a channel to meet customer/consumer demands.	4.41	HE
7. The coffee shop has a financial accounting balance at the final results date.	4.41	HE
8. The coffee shop hires more employees.	3.65	HE
9. The coffee shop has local labor.	4.12	HE
10. The employees are well-paid compared to the competition.	4.18	HE
11. There is provision for employee benefits.	4.41	HE

Indicators	Mean	Interpretation
Composite mean	**4.27**	**HE**
Social Practices		
1. It participates in the development of public policies that seek the elimination of forced labor.	3.94	HE
2. The coffee shop participates in the community.	4.24	HE
3. It complies with current local legislation related to dismissals and retirement processes.	3.94	HE
4. It is concerned about its employees' professional and personal development and equality of opportunities	4.18	HE
5. It has a process of dialogue and participation of the internal and external public in defining the issues that must be addressed in its vision of sustainability.	4.18	HE
6. The coffee shop has relationship initiatives with its employees that allow them to be heard.	4.41	HE
7. The coffee shop regularly conducts training in employee health and safety.	4.47	HE
8. It has formal practices of relationship with its employees, to listen, evaluate, and accompany them in order to incorporate new learnings and knowledge	4.41	HE
9. It includes references to sustainability in the statement of vision, mission, and values.	4.41	HE
10. It provides its employees with a safe and healthy environment to work.	4.65	VHE
Composite mean	**4.28**	**HE**
Environmental practices		
1. The coffee shop cares for and protects the environment.	4.65	VHE
2. It seeks to know the possible impacts of climate change on its coffee shop.	4.53	VHE
3. It is recognized for excellence in cleaner production and in pollution prevention management	4.29	HE
4. The coffee shop carries out specific initiatives to reduce materials.	4.24	HE
5. It carries out specific initiatives to reduce water consumption.	4.18	HE
6. It carries out specific initiatives to reduce energy consumption.	4.35	HE
Composite mean	**4.37**	**HE**
Overall mean	**4.31**	**HE**

Legend: 4.51 – 5.00 = Very high extent (VHE); 3.51 – 4.50 = High extent (HE); 2.51 – 3.50= Moderate extent (ME); 1.51 – 2.50 = Low extent (LE); 1.00 – 1.50=Very low extent (VLE)

Source: Madriaga et al., (2024)

The results in Table 2 present the extent of sustainability practices of local coffee shops in Laoag City, Ilocos Norte. Overall, the coffee shops had a mean of 4.31, which falls under *High extent (HE)*. This indicates that, in general, local coffee shops consistently practice sustainability principles across economic, social, and environmental aspects, demonstrating a strong commitment to responsible business operations.

Among the three dimensions, environmental practices recorded the highest composite mean of 4.37, indicating *a high extent* (HE). This suggests that coffee shops place slightly greater emphasis on environmental responsibility than on the other areas.

On the other hand, the economic practices dimension posted the lowest composite mean of 4.27, described as *High extent* (HE). This shows that while coffee shops are performing well economically, this dimension is slightly less developed compared to social and environmental practices.

This aligns with Cubillo (2016), who emphasized that integrating sustainability into business operations enhances growth and financial performance, suggesting that such high levels of sustainable practice can contribute to improved business outcomes.

Economic practices. The *economic practices* of local coffee shops in Laoag City show a composite mean of 4.27, interpreted as *High Extent (HE)*. This indicates that, overall, the coffee shops consistently implement economic practices that support business stability, profitability, and responsible financial management. The findings suggest that these establishments generally operate in a financially sound manner, comply with standard business practices, and sustain operations with a reasonable degree of economic responsibility.

Among the indicators, the highest mean is 4.71, which corresponds to the statement "*The coffee shop complies with all legal labor obligations regarding the payment of salaries and benefits by law,"* interpreted as *Very High Extent (VHE)*. This means that coffee shops demonstrate strong adherence to labor laws and ethical compensation practices. The implication is that these businesses prioritize lawful and fair labor practices, ensuring that employees receive proper salaries and benefits, which may contribute to good employer-employee relationships and reduced labor disputes.

Conversely, the lowest mean is 3.65, referring to the indicator "*The coffee shop hires more employees,"* which still falls under *High Extent (HE)* but is comparatively the weakest area. This suggests that while coffee shops recognize the importance of staffing, they are limited in their ability to hire additional employees—likely due to financial constraints, business size, or operational needs. The implication is that many coffee shops operate as small or microenterprises with lean staffing, which may affect service capacity, employee workload, and opportunities for business expansion.

This aligns with Cardoso et al. (2022), who emphasized that operational income is crucial for strengthening economic sustainability, particularly for small businesses.

Social practices. The social practices of local coffee shops in Laoag City obtained a composite mean of 4.28, interpreted *as High Extent (HE)*. This indicates that, overall, the coffee shops actively uphold socially responsible practices, particularly in areas involving community participation, employee relations, and workplace conditions. The high level of social engagement shows that these establishments recognize the importance of fostering positive relationships both within their workforce and with the broader community, contributing to a work culture that supports fairness, communication, and employee well-being.

The highest mean of 4.65, which is interpreted as *Very High Extent (VHE)*, corresponds to the indicator "*It provides its employees with a safe and healthy environment to work."* This finding indicates that coffee shops prioritize occupational health and safety, ensuring employees work in environments that protect their physical and mental well-being.

Meanwhile, the lowest mean of 3.94, interpreted as *High Extent (HE)*, appears in two indicators: "It participates in the development of public policies that seek the elimination of forced labor," and *"It is concerned about its employees' professional and personal development and equality of opportunities."* Although still rated high, these are comparatively weaker areas of social sustainability. This suggests that while coffee shops generally follow labor laws, their engagement in broader public policy initiatives or deeper compliance with formal labor processes may be limited, possibly due to the small size of the businesses or limited administrative capacity.

The result supports the study by Klave and Bruksle (2025), which observed that businesses that incorporate social sustainability into their strategies tend to build stronger relationships with stakeholders, enhance their reputation, and achieve long-term goals.

Environmental practices. The environmental sustainability practices of local coffee shops in Laoag City yielded a composite mean of 4.37, interpreted as *High Extent (HE),* indicating that coffee shops consistently observe environmentally responsible

behaviors, with strong awareness of their role in environmental protection and resource management. The high overall rating suggests that environmental concerns are increasingly integrated into their operations, reflecting both business responsibility and responsiveness to eco-conscious consumer preferences.

The highest mean of 4.65, rated as *Very High Extent (VHE)*, corresponds to the indicator "*The coffee shop cares for and protects the environment."* This reflects a strong commitment to general environmental stewardship, indicating that the shops are highly mindful of their ecological footprint and make deliberate efforts to protect the environment.

On the other hand, the lowest mean of 4.18, interpreted as *High Extent (HE)*, is associated with the indicator *"It carries out specific initiatives to reduce water consumption."* While still rated high, this score suggests that water conservation practices are comparatively less emphasized or less consistently implemented than other environmental efforts.

Lee et al. (2016) emphasize that firms that systematically manage environmental responsibilities alongside economic goals tend to achieve superior financial performance by integrating environmental management into their strategic planning.

3. What are the challenges encountered by local coffee shops in the implementation of sustainability practices in terms of:

3.1 costs and financial constraints;
3.2 revenue and customer willingness to pay
3.3 return on investment and business growth; and
3.4 Market competition?

Table 3. Challenges encountered by local coffee shops in the implementation of sustainability practices in Laoag City, Ilocos Norte. (n=17)

Indicators	Mean	Interpretation
Costs and financial constraints		
1. Implementing sustainability practices increases operational expenses.	4.18	S
2. The high cost of eco-friendly materials affects profitability.	4.29	S
3. Investing in energy-efficient equipment and technology is financially burdensome.	3.88	S
4. Operating expenses are difficult to manage.	3.65	S
5. Sustainable sourcing of raw materials leads to higher expenses.	3.94	S
Composite mean	**3.99**	**S**
Revenue and customer willingness to pay		
1. Customers are not willing to pay higher prices for sustainably produced coffee.	3.29	MS
2. The coffee shop struggles with fluctuating customer demand throughout the year.	3.35	MS
3. Frequent promotional discounts reduce overall profit margins.	3.41	MS
4. Limited marketing awareness of sustainability reduces its financial benefits.	3.53	S
5. Sustainability-focused promotions and branding have not significantly improved sales.	3.18	MS
Composite mean	**3.35**	**MS**
Return on investment and business growth		
1. The return on investment (ROI) for sustainability initiatives is slow and uncertain.	3.24	MS

Indicators	Mean	Interpretation
2. Limited financial resources prevent the expansion of business operations.	3.71	S
3. Long-term financial benefits of sustainability are not immediately noticeable.	3.53	S
4. Sustainable practices improve brand reputation but have minimal financial impact.	3.41	MS
Composite mean	**3.47**	**MS**
Market competition		
1. Competition from emerging coffee shops and new market entrants affects business growth.	4.18	S
2. The coffee shop faces difficulty in attracting and retaining loyal customers.	3.29	MS
3. Changing customer preferences and trends affect sales consistency.	3.41	MS
4. Financial planning for sustainability is difficult due to market uncertainty.	3.29	MS
5. Finding cost-effective sustainability solutions is a major challenge.	3.88	S
Composite mean	**3.61**	**S**
Overall mean	**3.61**	**S**

Legend: 4.51 – 5.00 = Very serious (VS); 3.51 – 4.50= Serious (S); 2.51 – 3.50 = Moderately serious (MS); 1.51 – 2.50 = Slightly serious (SS); 1.00 – 1.50 = Not a problem(NAP)

Source: Alfaro and Diaz (2021); Malesios et al. (2018); Pagaddut (2021), Hu and Zeng (2024); and Maspul (2024)

Table 3 presents the challenges local coffee shops in Laoag City encountered in implementing sustainability practices. The results reveal an overall mean of 3.61, interpreted as *Serious (S).* This indicates that, collectively, the challenges faced by coffee shops are significant and have a considerable impact on their ability to adopt and sustain environmentally and socially responsible business practices. The findings suggest that while coffee shops aim to operate sustainably, financial, operational, and market-related obstacles hinder the full and consistent integration of sustainability initiatives.

Among the four challenge areas, the highest composite mean is 3.99, belonging to *Costs and Financial Constraints*, which is interpreted as *Serious (S).* This shows that financial burdens—such as higher costs of eco-friendly materials, increased operational expenses, and the expense of investing in energy-efficient technologies—pose the greatest barrier to implementing sustainability practices.

Conversely, the lowest composite mean is 3.35, belonging to *Revenue and Customer Willingness to Pay*, interpreted as *Moderately Serious (MS)*. This suggests that while customer behavior and sales fluctuations pose challenges, they are relatively less severe than financial burdens.

This finding aligns with Alfaro and Diaz (2021), who found that while sustainability practices can strengthen some financial indicators, they also introduce difficulties in balancing profitability with sustainability initiatives.

Costs and financial constraints. The challenges related to Costs and Financial Constraints obtained a composite mean of 3.99, interpreted as *Serious (S).* This indicates that financial pressures are a major barrier to local coffee shops' implementation of sustainability practices. The consistently high scores across indicators suggest that the economic burden of sustainable operations significantly affects their decision-making. This implies that while coffee shops may be willing to adopt sustainability initiatives, their financial capacity limits the extent to which they can invest in eco-friendly materials, technologies, and sourcing practices.

The highest mean of 4.29, interpreted as *Serious (S)*, corresponds to the statement *"The high cost of eco-friendly materials affects profitability."* This means that among all financial issues, the elevated price of sustainable or environmentally safe materials is the most critical challenge. The implication is that the premium pricing of eco-friendly packaging, ingredients, or supplies makes it difficult for coffee shops—especially small and micro enterprises—to maintain competitive prices without sacrificing profit margins. This could discourage continued or expanded use of sustainable materials.

Meanwhile, the lowest mean of 3.65, also interpreted as *Serious (S)*, refers to *"Operating expenses are difficult to manage."* Although still a serious concern, this item indicates that general expense management is slightly less problematic than the cost of specific sustainability inputs. The implication is that while overall operational costs pose a challenge, coffee shops experience greater strain from sustainability-related expenditures than from routine operating expenses.

This implies that the increase in operational expenses, the high cost of eco-friendly materials, and the difficulty in managing expenses are uniformly serious challenges. Similarly, Hu and Zeng (2024) identified financial constraints as a major hurdle to achieving sustainable operations, especially for smaller businesses. The implication is that there is an urgent need for cost-effective solutions to help coffee shops overcome financial challenges.

Revenue and customer willingness to pay. The composite mean of 3.35, interpreted as *Moderately Serious (MS),* indicates that challenges related to revenue generation and customer willingness to pay for sustainability initiatives are present but not highly critical for local coffee shops in Laoag City. Shop owners face difficulties in maximizing revenue from sustainability-related efforts, but these concerns remain moderate, suggesting that sustainability is valued but not yet a strong driver of customer behavior or sales performance.

The highest mean is 3.53, associated with *"Limited marketing awareness of sustainability reduces its financial benefits,"* interpreted as *Serious (S).* This indicates that the most pressing issue facing coffee shops is a lack of effective marketing and consumer understanding of sustainable practices. Customers may not fully recognize the value of sustainability, which prevents coffee shops from leveraging it as a competitive advantage or revenue driver.

The lowest mean is 3.18, referring to *"Sustainability-focused promotions and branding have not significantly improved sales,"* interpreted as *Moderately Serious (MS).* This indicates that while sustainability branding efforts have some effect, they do not strongly influence sales performance at present. Customers may still prioritize price, taste, or convenience over sustainability attributes.

This finding is consistent with Lingnau et al. (2019), who reported that consumers often express environmental concerns but are reluctant to pay extra for certified sustainable coffee.

Return on investment and business growth. The composite mean of 3.47, interpreted as *Moderately Serious (MS),* indicates that local coffee shops in Laoag City perceive challenges related to return on investment (ROI) and business growth as present but not overwhelmingly critical. While sustainability initiatives are generally seen as beneficial, coffee shop owners remain cautious because the financial gains are not immediately felt.

The highest mean is 3.71, corresponding to the statement that *"Limited financial resources prevent the expansion of business operations",* interpreted as *Serious (S)*. This reveals that the most pressing challenge for local coffee shops is the lack of adequate capital to grow or improve their business while adopting sustainability initiatives. Limited resources restrict their ability to invest in eco-friendly technology, expand operations, or scale sustainable innovations.

The lowest mean is 3.24, referring to the statement that *"The return on investment (ROI) for sustainability initiatives is slow and uncertain,"* interpreted as *Moderately Serious (MS).* Although owners acknowledge that ROI for sustainability efforts is not immediate, they do not view this concern as highly critical compared to other financial issues.

This supports the findings of Hu and Zeng (2024), which suggest that rapid corporate growth typically requires substantial initial investments and entails long payback periods, especially for sustainable initiatives.

Market competition. The composite mean of 3.61, interpreted as *Serious (S)*, indicates that market competition poses a significant challenge for local coffee shops in Laoag City as they implement sustainability practices. This suggests that competition-related issues—such as new market entrants, shifting customer preferences, and financial planning difficulties—substantially hinder business growth and the effective integration of sustainability initiatives.

The highest mean of 4.18, corresponding to "*Competition from emerging coffee shops and new market entrants affects business growth,"* is interpreted as *Serious (S)* and reflects the most pressing competitive challenge. This indicates that the increasing number of coffee shops intensifies competition, making it harder for existing businesses to expand or maintain their market share.

Meanwhile, the lowest mean of 3.29, observed in two indicators—"*The coffee shop faces difficulty in attracting and retaining loyal customers"* and "*Financial planning for sustainability is difficult due to market uncertainty"*—is interpreted as *Moderately Serious (MS).* This level suggests that while these issues exist, they are not as critical as the core problems related to competition and cost-effective sustainability solutions.

This aligns with Maspul (2024), who noted that price fluctuations driven by competition often erode consumer trust and brand loyalty, reinforcing the seriousness of these issues for coffee shops.

4. What is the level of profitability of local coffee shops along:

4.1 Return on Asset (ROA);

4.2 Return on Equity (ROE); and

4.3 Return on Sales (ROS)?

Table 4. Level of profitability of local coffee shops in Laoag City, Ilocos Norte. (n=17)

Indicators	Mean	Interpretation
A. Return on assets (ROA)		
1. Our coffee shop maintains long-term profitability while adopting sustainable practices.	3.59	H
2. Implementing sustainable initiatives has contributed to cost savings improving profit margins.	3.82	H
3. Eco-friendly practices (e.g., reducing waste, conserving energy) have led to increased profitability.	3.82	H
4. Our profitability allows us to continually invest in sustainability efforts.	3.47	M
5. Social responsibility programs (e.g., supporting local farmers and communities) have improved our profitability through customer loyalty.	3.71	H
Composite mean	**3.68**	H
B. Return on equity (ROE)		
1. Our sustainable business model generates consistent returns on owner/shareholder equity.	3.76	H
2. Equity invested in sustainability initiatives (social, environmental, and economic) has resulted in long-term financial benefits.	3.88	H
3. Socially responsible practices (fair wages, employee wellness programs) contribute to improved business performance and return on equity.	3.82	H
4. Our commitment to sustainability strengthens shareholder confidence and equity growth.	3.94	H

Indicators	Mean	Interpretation
5. The returns on equity justify continued investments in sustainability-driven strategies.	3.94	H
Composite mean	**3.87**	H
C. Return on sales (ROS)		
1. Our coffee shop's sales revenue has increased due to customer support for sustainable practices.	4.00	H
2. Offering environmentally and socially responsible products/services has led to better sales profitability.	4.00	H
3. Sustainable sourcing (fair trade coffee, local suppliers) positively affects our sales margins and customer retention.	4.12	H
4. We achieve a satisfactory return on sales by integrating eco-friendly and socially responsible operations.	3.88	H
Composite mean	**4.00**	H
Overall mean	**3.85**	**H**

Legend: Very high (VH)=4.51 – 5.00 ; High=3.51 – 4.50; Moderate (M) = 2.51 – 3.50; Low (L)=1.51 – 2.50; Very low (VL)= 1.00 – 1.50

Source: Alfaro and Diaz (2021); Pham et al. (2021); Lee et al. (2016); and Lingnau et al. (2019)

Table 4 presents the profitability levels of local coffee shops in Laoag City, assessed using three key indicators: Return on Assets (ROA), Return on Equity (ROE), and Return on Sales (ROS).

The overall mean of 3.85, interpreted as *High*, indicates that the profitability of the coffee shops is generally strong despite the challenges associated with sustainability implementation. This suggests that sustainability practices, rather than being a burden, are aligned with improved financial outcomes, enabling coffee shops to maintain profitability, generate favorable returns, and sustain healthy sales performance.

Among the indicators, the highest composite mean is 4.00, found in *Return on Sales (ROS)*, also interpreted as *High*. This indicates that sustainability practices have the most visible impact on sales performance, with customers responding positively to environmentally and socially responsible offerings. Increased customer retention, support for sustainable products, and improved sales margins reflect that consumers in Laoag City value responsible business behavior.

On the other hand, the lowest composite mean is 3.68, observed in Return on Assets (ROA), though still interpreted as High. This result suggests that while sustainability contributes to long-term profitability and operational efficiency, its impact on asset utilization is comparatively less pronounced. Some shops may not yet fully realize cost savings or long-term returns from investments in sustainable equipment, technologies, or programs.

This result supports Malesios et al. (2018), who concluded that sustainable practices improve both operational efficiency and business growth among SMEs, proving that integrating sustainability into daily operations can yield tangible financial benefits.

Return on assets (ROA). The *Return on Assets (ROA)* of local coffee shops registered a composite mean of 3.68, interpreted as *High*, indicating that the adoption of sustainability practices generally supports the shops' ability to generate profits from their assets.

The highest mean, both at 3.82, was obtained by the indicators *"Implementing sustainable initiatives has contributed to cost savings, improving profit margins,"* and "Eco-friendly practices (e.g., reducing waste, conserving energy) have led to increased profitability," both of which are interpreted as *High*. This means that sustainability efforts are most effective when they directly reduce operating costs and improve efficiency, demonstrating that sustainability investments yield tangible financial benefits.

Meanwhile, the lowest mean is 3.47, interpreted as *Moderate*, referring to the indicator *"Our coffee shop maintains long-term profitability while adopting sustainable practices."* This suggests that some shops may still face constraints in allocating sufficient financial resources to sustain or expand their sustainability initiatives.

This supports Fauzan et al. (2019), who noted that financial benefits from advanced green investments tend to emerge gradually as firms adjust to sustainability practices.

Return on equity (ROE). The *Return on Equity (ROE)* of local coffee shops achieved a composite mean of 3.87, interpreted as *High*, indicating that sustainability-focused initiatives are contributing positively to generating returns for owners or shareholders.

The highest mean score, shared by two indicators at 3.94 (*High*), corresponds to "*Our commitment to sustainability strengthens shareholder confidence and equity growth"* and "*The returns on equity justify continued investments in sustainability-driven strategies."* These results highlight that sustainability enhances the business's credibility and financial appeal, encouraging owners to maintain or expand their investments.

The lowest mean, at 3.76 (High), is the indicator "*Our sustainable business model generates consistent returns on owner/shareholder equity."* Although still highly rated, it suggests that the consistency of returns is slightly weaker than that of other sustainability-related benefits.

This supports Hertina and Saudi (2019), who found that companies that link profitability to sustainability achieve higher return on equity because investors favor responsible and transparent business practices.

Return on sales (ROS). The Return on Sales (ROS) of local coffee shops in Laoag City reflects strong financial outcomes from sustainability initiatives. The composite mean for this dimension is 4.00, interpreted as High, indicating that integrating sustainable, eco-friendly, and socially responsible practices positively contributes to sales performance.

The highest mean, recorded at 4.12, *High,* corresponds to the indicator *"Sustainable sourcing (fair trade coffee, local suppliers) positively affects our sales margins and customer retention."* This suggests that customers respond favorably to ethically sourced and locally supported products, and these choices directly strengthen sales and customer loyalty.

Meanwhile, the lowest mean, at 3.88, interpreted as *High,* is for the indicator *"We achieve a satisfactory return on sales by integrating eco-friendly and socially responsible operations."* Although still rated High, it shows this area is slightly weaker than others, possibly indicating room for improvement in communicating or optimizing the financial advantages of eco-friendly operations.

5. Is there a significant relationship between the business profile of local coffee shops and their extent of adoption of sustainability practices?

Table 5. Relationship between the business profile of local coffee shops and their implementation of sustainability practices (N=17)

Profile Variable		Sustainability Practices		
		Economic Practices	**Social Practices**	**Environmental Practices**
Form of ownership	r_{pb}	-.312	-.162	-.087
	p-value	.222	.536	.740
Years in operation	ρ	.267	.174	.250
	p-value	.301	.504	.333
Geographic location	r_{pb}	-.157	-.071	.129

	p-value	.548	.785	.622
Number of employees	*ρ*	.380	.463	**0.546***
	p-value	.132	.061	0.023
Initial capitalization	*ρ*	.009	.003	.031
	p-value	.973	.992	.907
Current capitalization	*ρ*	.010	.005	.032
	p-value	.975	.997	.917
Average monthly sales	*ρ*	**.670****	**.576****	**.601***
	p-value	.003	.015	0.011
Average monthly income	*ρ*	.053	.244	.258
	p-value	.839	.346	.318

****. Correlation is significant at the 0.01 level (2-tailed).**

***. Correlation is significant at the 0.05 level (2-tailed).**

Source: Authors' own table (2025)

The analysis of the relationship between local coffee shops' business profiles and their adoption of sustainability practices is presented in Table 5.

First, form of ownership showed no significant relationship with any dimension of sustainability, with correlations and p-values as follows: economic practices ($r_{pb} = –0.312$, $p = 0.222$), social practices ($r_{pb} = –0.162$, $p = 0.536$), and environmental practices ($r_{pb} = –0.087$, $p = 0.740$). This suggests that whether a coffee shop operates as a sole proprietorship or a partnership does not influence its sustainability practices.

This is not consistent with Schilling (2017), which posits that ownership structure affects legal frameworks, liability exposure, decision-making authority, and access to investment.

Similarly, years in operation did not exhibit significant correlations across economic ($\rho = 0.267$, $p = 0.301$), social ($\rho = 0.174$, $p = 0.504$), or environmental practices ($\rho = 0.250$, $p = 0.333$), indicating that both newly established and long-running coffee shops adopt sustainability practices at comparable levels.

Geographic location also displayed no significant relationship with sustainability dimensions: economic ($r_{pb} = –0.157$, $p = 0.548$), social ($r_{pb} = –0.071$, $p = 0.785$), and environmental ($r_{pb} = 0.129$, $p = 0.622$), suggesting that location differences do not influence sustainability adoption.

Kotler and Keller (2016) noted that while operational years and location may enhance stability and market access, they do not automatically result in sustainable practices without leadership commitment and strategic direction.

In contrast, the number of employees showed a significant positive relationship with environmental practices ($\rho = 0.546$, $p = 0.023$), though it was not significantly related to economic ($\rho = 0.380$, $p = 0.132$) or social practices ($\rho = 0.463$, $p = 0.061$). This indicates that coffee shops with more employees tend to adopt environmental sustainability practices more readily, likely because these activities require manpower for waste management, recycling, and operational compliance.

Robbins and Coulter (2018) explained that the number of employees reflects a company's operational capacity and ability to manage broader initiatives effectively. However, the results of the study do not align with those of the previous study.

Initial capital did not show significant relationships with any sustainability dimension: economic ($\rho = 0.009$, $p = 0.973$), social ($\rho = 0.003$, $p = 0.992$), and environmental ($\rho = 0.031$, $p = 0.907$), suggesting that starting capital does not determine sustainability adoption.

On the other hand, average monthly sales had strong, positive, and significant correlations with economic (ρ = 0.670, p = 0.003), social (ρ = 0.576, p = 0.015), and environmental practices (ρ = 0.601, p = 0.011), indicating that coffee shops with higher sales are better able to implement sustainability measures, likely due to financial capacity to invest in sustainable resources, staff training, and environmental initiatives.

Lastly, average monthly income showed no significant correlations with any sustainability dimension: economic (ρ = 0.053, p = 0.839), social (ρ = 0.244, p = 0.346), and environmental (ρ = 0.258, p = 0.318), suggesting that profitability alone does not drive sustainability adoption.

Thus, Ha1 is partially accepted since the number of employees has a significant relationship with the environmental dimension, and the average monthly sales has a significant positive relationship with economic, social, and environmental practices.

6. Is there a significant relationship between the extent of implementation of sustainability practices and the degree of seriousness of the challenges encountered by the local coffee shops?

Table 6. Relationship between the extent of sustainability practice implementation and the severity of challenges encountered by local coffee shops. (n=17)

Sustainability practices		**Challenges encountered by the local coffee shops**			
		Cost and financial constraints	**Revenue and customer willingness to pay**	**Investment and business growth challenges**	**Market competition and customer retention**
Economic practices	r	**.511***	.102	.171	.108
	(Sig. 2-tailed)	.036	.698	.511	.680
Social practices	r	**.596***	.297	.259	.229
	(Sig. 2-tailed)	.011	.247	.316	.376
Environmental practices	r	.181	.056	.030	-.011
	(Sig. 2-tailed)	.487	.830	.908	.967

**** Correlation is significant at the 0.01 level (2-tailed).**

*** Correlation is significant at the 0.05 level (2-tailed).**

Source: Authors' own table (2025)

Table 6 shows the relationship between the extent of sustainability practices implemented by local coffee shops and the seriousness of challenges they encounter.

Results reveal that economic sustainability practices have a moderate positive and significant relationship with cost and financial constraints (r = .511, p = .036), indicating that coffee shops that implement more economic sustainability measures tend to experience more serious financial challenges, possibly due to the initial costs associated with sustainable sourcing, cost-efficient technologies, or operational adjustments. However, economic practices do not significantly relate to challenges involving customer willingness to pay (r = .102), investment and business growth (r = .171), or market competition (r = .108), suggesting that economic sustainability efforts neither alleviate nor intensify these specific issues.

Meanwhile, social sustainability practices show a moderate positive and significant correlation with cost and financial constraints (r = .596, p = .011). This implies that coffee shops that engage more in socially responsible practices—such as employee development, community involvement, or fair labor initiatives—also face greater financial pressures, likely

because such efforts require additional investment. However, social practices do not significantly relate to challenges in customer willingness to pay (r = .297), business growth (r = .259), or competition (r = .229).

Lastly, environmental sustainability practices show no significant correlation with any of the challenges measured. Correlation values for cost and financial constraints (r = .181), customer willingness to pay (r = .056), investment and growth (r = .030), and competition (r = –.011) all indicate extremely weak relationships with high p-values (p > .48). This suggests that environmental initiatives—such as waste reduction, recycling, or energy conservation—do not directly intensify or reduce operational challenges faced by the coffee shops.

This contrasts with Suriyankietkaew (2016), who found that social sustainability practices were strongly and positively associated with improved financial outcomes, suggesting that such initiatives are more likely to enhance, rather than hinder, financial performance. Likewise, Malesios et al. (2018) report that while some sustainability practices are associated with financial performance, many show non-significant or even negative relationships with business growth and turnover, and the effects are highly context-dependent.
Therefore, H_a2 is partially accepted, as there is a significant relationship between the economic and social sustainability practices of coffee shops and their cost and financial constraints.

7. Is there a significant relationship between the business profile of local coffee shops and their level of profitability?

Table 7. Relationship between the business profile of local coffee shops and their level of profitability. (n=17)

Profile Variable		Profitability		
		Return on Asset (ROA)	Return on Equity (ROE)	Return on Sales (ROS)
Form of ownership	r_{pb}	.011	-.091	.000
	p-value	.967	.728	1.000
Years in operation	*ρ*	-.005	.062	**.595***
	p-value	.985	.814	.012
Geographic location	r_{pb}	-.016	-.065	-.123
	p-value	.950	.806	.637
Number of employees	*ρ*	.291	**.540***	.275
	p-value	.257	.025	.285
Initial capitalization	*ρ*	-.255	-.193	-.317
	p-value	.323	.457	.216
Current capitalization	*ρ*	.025	-.019	-.294
	p-value	.925	.942	.251
Average monthly sales	*ρ*	.099	.327	.133
	p-value	.706	.201	611
Average monthly income	*ρ*	.174	.293	.465
	p-value	.505	.253	.060

****. Correlation is significant at the 0.01 level (2-tailed).**
***. Correlation is significant at the 0.05 level (2-tailed).**
Source: Authors' own table (2025)

Table 6 presents the relationship between the business profiles of local coffee shops and their profitability.

Form of ownership shows no significant relationship with any measure of profitability—ROA (rpb = .011, p = .967), ROE (rpb = –.091, p = .728), or ROS (rpb = .000, p = 1.000). The correlations are extremely close to zero, indicating that whether the coffee shop is a sole proprietorship, partnership, or corporation has no impact on its financial performance. This implies

that profitability is shaped more by operational practices rather than ownership structure, and that all forms of ownership have equal potential to be profitable as long as operations are managed efficiently.

Years in operation have weak and insignificant relationships with ROA (ρ = –.005, p = .985) and ROE (ρ = .062, p = .814), indicating that longevity does not predict asset- or equity-based profitability. However, it shows a strong and significant positive correlation with ROS (ρ = .595, p = .012). This means that older or more established coffee shops tend to generate higher profit margins relative to their sales.

Geographic location is not significantly related to any profitability indicator—ROA (rpb = –.016, p = .950), ROE (rpb = –.065, p = .806), and ROS (rpb = –.123, p = .637). These weak correlations indicate that being in a central, commercial, or residential area does not automatically lead to higher profitability. The implication is that location alone does not guarantee financial success; rather, service quality, marketing strategy, and customer experience may play more defining roles.

The number of employees shows no significant relationship with ROA (ρ = .291, p = .257) or ROS (ρ = .275, p = .285), but it has a moderate and significant positive correlation with ROE (ρ = .540, p = .025). This suggests that coffee shops with more employees can generate higher returns on equity, possibly because adequate staffing enhances service speed, customer satisfaction, and operational capacity.

Initial capitalization has weak, nonsignificant correlations with ROA (ρ = –.255, p = .323), ROE (ρ = –.193, p = .457), and ROS (ρ = –.317, p = .216). This indicates that the amount of capital used to start the coffee shop does not influence current profitability.

Current capitalization likewise shows no significant association with ROA (ρ = .025, p = .925), ROE (ρ = –.019, p = .942), or ROS (ρ = –.294, p = .251). This again indicates that merely having more financial resources at present does not translate into better financial performance.

Average monthly sales show no significant relationship with ROA (ρ = .099, p = .706), ROE (ρ = .327, p = .201), or ROS (ρ = .133, p = .611). These findings indicate that higher sales volume does not automatically lead to higher profitability.

Average monthly income shows weak, nonsignificant correlations with ROA (ρ = .174, p = .505) and ROE (ρ = .293, p = .253). For ROS, the relationship is moderately positive (ρ = .465, p = .060), but it is not statistically significant, though it is close. This suggests that shops with higher income tend to have better profit margins, but the relationship is not strong enough to be conclusive.

Malesios et al. (2018) found that firms with longer years of operation and greater financial management experience tend to exhibit more consistent financial outcomes due to accumulated business knowledge and market adaptation. Moreover, Pagaddut (2021), who emphasized that workforce size and effective human resource allocation enhance productivity and profitability among SMEs. While Alfaro and Diaz (2021) observed that firm structure has a limited direct effect on profitability unless complemented by efficient operational and financial strategies.

Based on the above results, H_a3 is partially accepted, as there is a significant relationship between years of operations and return on sales (ROS), and between the number of employees and return on equity (ROE).

8. Is there a significant relationship between the extent of implementation of sustainability practices and the level of profitability of local coffee shops?

Table 8. Relationship between the extent of implementation of sustainability practices and the level of profitability of local coffee shops. (n=17)

Sustainability practices		**Profitability**		
		Return on Assets (ROA)	**Return on Equity (ROE)**	**Return on Sale (ROS)**
Economic practices	r	.246	.344	.340
	(Sig. 2-tailed)	.342	.176	.182
Social practices	r	.207	.359	.139
	(Sig. 2-tailed)	.425	.156	.594
Environmental practices	r	.346	.405	.043
	(Sig. 2-tailed)	.173	.107	.871

**** Correlation is significant at the 0.01 level (2-tailed).**

*** Correlation is significant at the 0.05 level (2-tailed).**

Source: Authors' own table (2025)

Table 8 presents correlations between the extent of sustainability practice implementation and profitability levels of local coffee shops, measured by ROA, ROE, and ROS.

Results showed that economic sustainability practices exhibited weak, non-significant correlations with ROA (r = .246, p = .342), ROE (r = .344, p = .176), and ROS (r = .340, p = .182). Although the direction of the relationships is positive—indicating that coffee shops implementing more economic sustainability measures tend to have slightly higher profitability—the correlations are not statistically significant, suggesting that these practices do not directly influence financial performance.

This finding contrasts with those of Pham et al. (2021), who found that economic sustainability reporting positively influences firms' return on assets and earnings per share, indicating that sound financial management and responsible business practices enhance profitability and long-term stability.

Similarly, social sustainability practices show weak, non-significant correlations with all profitability indicators, with ROA (r = .207, p = .425), ROE (r = .359, p = .156), and ROS (r = .139, p = .594). These results indicate that activities such as community engagement, fair labor practices, and customer-oriented social initiatives do not have a measurable impact on profitability levels.

This is inconsistent with Alfaro and Diaz (2021), who found that green initiatives among SMEs enhanced profitability and equity by reducing operating costs and improving efficiency.

Finally, environmental sustainability practices also demonstrate weak, non-significant correlations with ROA (r = .346, p = .173), ROE (r = .405, p = .107), and ROS (r = .043, p = .871). While ROE shows the strongest positive correlation among the three, it still falls short of significance. This suggests that environmental initiatives, such as waste reduction, recycling, or energy efficiency, do not significantly affect the financial outcomes of the coffee shops.

This is consistent with Pham et al. (2021), who found that social sustainability practices had minimal impact on financial performance among Swedish firms, suggesting that socially driven initiatives may yield long-term reputational benefits rather than immediate financial returns.

Thus, H_a4 is rejected. There is no significant relationship between the extent of sustainability practice implementation and the profitability of local coffee shops.

9. Is there a significant relationship between the degree of seriousness of the challenges encountered by the local coffee shops and their level of profitability?

Table 9. Relationship between the between degree of seriousness of the challenges encountered by the local coffee shops and their level of profitability of local coffee shops. (n=17)

Sustainability practices		Profitability		
		Return on Assets (ROA)	Return on Equity (ROE)	Return on Sale (ROS)
Cost and financial constraints	r	.252	.275	.093
	(Sig. 2-tailed)	.330	.286	.723
Revenue and customer willingness to pay	r	.376	.431	-.248
	(Sig. 2-tailed)	.137	.084	.337
Investment and business growth challenges	r	.278	.268	-.302
	(Sig. 2-tailed)	.279	.298	.239
Market competition and customer retention	r	.159	.215	-.353
	(Sig. 2-tailed)	.542	.408	.165

**** Correlation is significant at the 0.01 level (2-tailed).**

*** Correlation is significant at the 0.05 level (2-tailed).**

Source: Authors' own table (2025)

Table 9 examines the relationship between the degree of seriousness of challenges encountered by local coffee shops and their profitability, as measured by ROA, ROE, and ROS.

The results show that cost and financial constraints exhibit weak, non-significant correlations with ROA (r = .252, p = .330), ROE (r = .275, p = .286), and ROS (r = .093, p = .723). These values suggest that the severity of cost-related problems—such as high operating expenses, overhead, or capital shortages—does not have a measurable effect on profitability levels.

In a similar manner, challenges related to revenue and customer willingness to pay display moderate but nonsignificant correlations with ROA (r = .376, p = .137) and ROE (r = .431, p = .084), and a weak negative but nonsignificant relationship with ROS (r = –.248, p = .337). Although there is a tendency for shops facing more severe customer-related challenges to experience slightly lower sales profitability (negative ROS), these relationships are statistically insignificant.

Likewise, investment and business growth challenges reveal weak, nonsignificant correlations with ROA (r = .278, p = .279), ROE (r = .268, p = .298), and ROS (r = –.302, p = .239). These results indicate that difficulties in securing investments, expanding operations, or managing growth-related demands do not significantly influence profitability outcomes among the local coffee shops.

Finally, market competition and customer retention challenges show weak and nonsignificant relationships with ROA (r = .159, p = .542) and ROE (r = .215, p = .408), and a moderate but nonsignificant negative correlation with ROS (r = –.353, p = .165). This suggests that shops facing stronger competition or customer churn tend to have lower profit margins relative to sales, but again, the relationship is not strong enough to be statistically meaningful.

This finding supports the observations of Maspul (2024), who found that while consistent pricing and financial management strategies can influence customer willingness to pay, such effects may not always translate into improved financial performance metrics, such as return on equity or return on sales, particularly for smaller enterprises.

Therefore, H_a5 is rejected. There is no significant relationship between the seriousness of the challenges encountered by local coffee shops and their profitability.

Results and discussion

The business profile of local coffee shops in Laoag City, Ilocos Norte, revealed that the sector is primarily composed of micro businesses that are relatively new, minimally staffed, and modestly capitalized. With a majority generating low monthly sales and limited net income.

Findings showed a high level of sustainability across economic, social, and environmental domains. This indicates that, in general, local coffee shops consistently practice sustainability principles across economic, social, and environmental aspects, demonstrating a strong commitment to responsible business operations.

This aligns with Cubillo (2016), who emphasized that integrating sustainability into business operations enhances growth and financial performance, suggesting that such high levels of sustainable practice can contribute to improved business outcomes.

Despite this, coffee shops face serious challenges in practicing sustainability, including costs and financial constraints, market competition, and moderate concerns about revenue, customer willingness to pay, return on investment, and business growth. This indicates that, collectively, the challenges faced by coffee shops are significant and have a considerable impact on their ability to adopt and sustain environmentally and socially responsible business practices.

This finding aligns with Alfaro and Diaz (2021), who found that while sustainability practices can strengthen some financial indicators, they also introduce difficulties in balancing profitability with sustainability initiatives.

In terms of profitability, coffee shops showed a high overall level across their three indicators: Return on Assets (ROA), Return on Equity (ROE), and Return on Sales (ROS). This suggests that sustainability practices, rather than being a burden, are aligned with improved financial outcomes, enabling coffee shops to maintain profitability, generate favorable returns, and sustain healthy sales performance.

This result supports Malesios et al. (2018), who concluded that sustainable practices improve both operational efficiency and business growth among SMEs, proving that integrating sustainability into daily operations can yield tangible financial benefits.

Statistical analyses revealed that business form and years of operation do not significantly influence sustainability practices or firm performance. This suggests that commitment to sustainability and performance outcomes depend more on management values, innovation, and operational efficiency than on business structure or longevity.

The analysis revealed that form of ownership, years in operation, geographic location, initial and current capitalization, and average monthly income were not significantly related to the adoption of economic, social, or environmental sustainability practices. However, the number of employees was significantly associated with environmental practices, and average monthly sales were significantly related to economic, social, and environmental practices. Thus, H_a1 is partially accepted.

Robbins and Coulter (2018) explained that the number of employees reflects a company's operational capacity and ability to manage broader initiatives effectively. However, the results of the study do not align with those of the previous study.

Economic and social sustainability practices were significantly correlated with cost and financial constraints, while environmental practices showed no significant relationships with any challenges. H_a2 is partially accepted.

This is consistent with Pham et al. (2021), who found that social sustainability practices had minimal impact on financial performance among Swedish firms, suggesting that socially driven initiatives may yield long-term reputational benefits rather than immediate financial returns.

For profitability, form of ownership, geographic location, capitalization, average monthly sales, and income were not significantly related to ROA, ROE, or ROS. In contrast, years in operation were significantly associated with ROS, and the number of employees was significantly associated with ROE. H_a3 is partially accepted.

This finding is consistent with Alfaro and Diaz (2021), who observed that firm structure has a limited direct effect on profitability unless complemented by efficient operational and financial strategies.

Sustainability practices—economic, social, and environmental—did not show significant relationships with ROA, ROE, or ROS, leading to the rejection of H_a4. Likewise, the degree of seriousness of challenges—cost and financial constraints, revenue and customer willingness to pay, investment and business growth challenges, and market competition and customer retention—were not significantly related to profitability, resulting in the rejection of H_a5.

This finding supports the observations of Maspul (2024), who found that while consistent pricing and financial management strategies can influence customer willingness to pay, such effects may not always translate into improved financial performance metrics, such as return on equity or return on sales, particularly for smaller enterprises.

Conclusion

Despite being small, relatively new, and modestly capitalized, local coffee shops in Laoag City demonstrate that commitment to sustainability does not necessarily depend on traditional measures of business size or longevity. The study revealed that factors such as workforce size and sales capacity, rather than ownership form, location, or capitalization, play a critical role in enabling sustainability adoption, highlighting the importance of operational resource allocation over structural characteristics. Moreover, profitability—measured by ROA, ROE, and ROS—remains resilient even amid financial, market, and growth challenges, suggesting that sustainable practices can coexist with financial efficiency when effectively managed. These findings imply that strategic management, rather than mere financial or structural advantage, is key to simultaneously achieving sustainability and profitability in micro-enterprises.

Coffee shop owners are encouraged to prioritize workforce development and operational capacity, as a well-staffed and trained team enables more effective implementation of sustainability practices, particularly environmental initiatives such as waste management and energy efficiency. Owners should also leverage higher monthly sales to fund economic, social, and environmental initiatives without compromising profitability, ensuring that sustainability efforts are strategically integrated into daily operations to enhance operational efficiency rather than create financial strain.

For the local government unit (LGU), support can include providing training programs, incentives, or grants to encourage the adoption of sustainability among micro-enterprises, as well as facilitating knowledge-sharing platforms to help small coffee shops manage challenges related to costs, market competition, and customer engagement.

Finally, future research is recommended to explore the long-term financial and operational effects of sustainability practices in small enterprises across different sectors, examine how sustainability initiatives influence growth, customer loyalty, and resilience over time, and conduct comparative studies across different cities or regions to identify best practices and contextual factors affecting successful sustainability adoption.

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