

Sustainability in Franchised Food Business

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Abstract:

Sustainability in the franchised food business sector is a matter of adopting green practices, sourcing materials ethically, and promoting community engagement to ensure that the core business is profitable and makes a positive impact in the local community. This research tested the sustainability practices implemented by franchised food businesses in a highly urbanized city in Central Visayas during the first quarter of 2025. The study focused on critical areas of sustainability. Namely, reducing water usage, minimizing food waste, using sustainable packaging, and introducing healthy menu options. A descriptive-comparative research study was used, and data were collected using a validated self-constructed questionnaire from 50 respondents, including franchise owners and employees. Overall, the level of sustainability practices was found to be high. Food waste management and water conservation scored the best, while rainwater collection scored the least practiced. Differences were found when the results were grouped according to variables: number of employees, type of business, ownership, capitalization, and number of years in the business. The study found that although many franchised food businesses already implement sustainable practices, they require more effort in areas like showing nutrition information and encouraging customers to use eco-friendly packaging. These findings can help franchise owners, policymakers, and advocates make better decisions and promote environmental and social responsibility in the food business.

Keywords: Sustainability, Franchise, Food Businesses

Introduction:

Nature of the Problem

Sustainability has become a significant concern across various sectors, notably the food industry. Franchised food enterprises are the ones that have to face the most challenges while trying to adopt sustainable practices for their business, as they have standardized operations, are heavily dependent on the supply chain, and have cost issues. On the other hand, rising consumer awareness, more severe government regulations, and global sustainability programs are forcing these businesses to adopt green and socially responsible practices.

Apart from food, a sustainable food business comprises waste reduction, energy conservation, responsible sourcing, eco-friendly packaging, and ethical labor standards. Many franchise food companies purposely include these practices to lower their environmental footprint, raise profitability, and improve brand recognition.

Despite this growing trend, the extent to which sustainability is implemented and its resulting impact within the franchising business model remains an under-researched area.

The core of this research was exploring sustainability in implementing various practices, focusing on obstacles in adopting sustainability, the influence of sustainability on performance, and consumer perception and response in the market. It is important to note that the United Nations (2015) views sustainability as a commitment to economic growth while protecting the natural environment and promoting social equity. The International Institute for Sustainable Development (IISD, 2021) has a broader take, stating that sustainability carves out a space where environmental, economic, and social systems can co-exist harmoniously, thus satisfying human needs and aspirations for the future.

As such, this research is quite valuable because it deeply investigates the various employable sustainability options in the food franchise industry so that the businesses not only gain in terms of being competitive but also become more environmentally and socially responsible. The research highlights possible sustainable measures that franchisees can implement with profitability in mind and allows them to draw a sustainability roadmap that suits their business. Besides, the study helps the franchisees form a new business concept that is environmentally friendly as

it pinpoints the suitable ways of managing waste, using energy efficiently, sourcing responsibly, and utilizing eco-packaging. Understanding consumer preferences regarding sustainability will also help businesses develop marketing techniques that align with shifting customer expectations toward environmentally responsible brands.

The researcher is motivated by the potential of sustainable practices to foster long-term business growth, improve brand reputation, and support the local economy. This study aimed to lay a strong base of strategies that guarantee the success of enterprises and, at the same time, maintain the environment by exploring the problems and prospects of the sustainable franchised food business. Ultimately, the results will be the compass that points the way for the franchisees, policymakers, and stakeholders in driving sustainability in the food sector.

Theoretical Underpinnings

This study is anchored to the Sustainable Business Model (SBM) Theory, drawing upon the insights of Bocken et al. (2014). It lays out an extensive plan for grasping how enterprises may develop new ideas and continue employing practices that satisfy their needs and are harmonious with the environmental, social, and economic sectors. The models of sustainable businesses deal with global problems, including a lack of resources, pollution of the environment, and social injustice, through changing how businesses produce, distribute, and obtain value.

Emphasize that sustainability is not an add-on to traditional business models but a transformative approach that integrates sustainable practices into core operations. The theory identifies several archetypes for sustainable business models, including maximizing material and energy efficiency, creating value from waste, substituting renewable resources, and encouraging sustainable consumer behavior. These archetypes are especially pertinent to franchised food businesses that want to use sustainable packaging, reduce food waste, use less water, and offer healthier menu options. To achieve sustainability, the theory strongly emphasizes innovation and stakeholder involvement. It makes the case that companies must match stakeholder expectations and operational strategies with their sustainability goals. This entails implementing sustainable practices for franchised food businesses that satisfy franchise requirements and the values of consumers who care about the environment.

Objectives

This study aimed to determine the level of sustainability of practices in franchised food businesses in a highly urbanized city in Central Visayas for the first quarter of 2025. Specifically, this study sought answers to the following: 1.) What is the profile of the respondents in terms of the following: Number of Employees, Type of Business, Ownership, Capitalization, Number of Years in the Business. 2) What is the level of sustainability practices according to the following areas: Reducing water usage, minimizing food waste, using sustainable packaging and introducing healthy menu options; and 3) Is there a significant difference in the level of sustainability practices when grouped and compared according to the aforementioned variables?

Methodology:

This section presents a discussion of research methodology used, locale of the study, respondents, data gathering instrument, validity and reliability of the instrument, data gathering procedure, analytical schemes, and statistical tools.

Research Design

According to Calmorin (2016), descriptive research is valuable in providing facts on which scientific judgment may be based, offering essential knowledge about business practices, environmental impact, and consumer behavior. It enables researchers to observe and document methods, strategies, and trends while assessing their effectiveness and sustainability. Various research tools, such as questionnaires, interviews, checklists, and rating scales, were utilized to gather relevant data. This study focused on the sustainability practices of franchised food businesses. The descriptive research design is suitable as it allows the researcher to gather factual information and analyze real-world applications of sustainability measures.

Study Respondents

The study's respondents were 50 franchise owners, managers, and food business employees implementing sustainability practices. Additionally, customer perspectives were gathered to evaluate the impact of these practices on consumer choices. Purposive sampling is applied in this study to ensure the selection of respondents with firsthand experience with food business sustainability initiatives. This sampling method enables the researcher to focus on individuals who can provide meaningful insights regarding sustainability strategies and their outcomes (Foley, 2018).

Instruments

This study was obtained through a survey questionnaire. A questionnaire is a written instrument containing a series of questions designed to collect information from respondents (Babbie, 2016).

In the study, the researcher sought permission from relevant business authorities before distributing the questionnaire. Upon approval, the survey was administered personally and electronically to respondents.

Moreover, the raw data were transformed into numerical code guided by a coding manual to determine the level of skills and degree of difficulty. The Statistical Package for Social Science (SPSS) software and Microsoft Excel were used to compute encoded data. Also, statistical tables were constructed considering the problems stated in this investigation.

Data Gathering Procedure

The data-gathering instrument used to collect the needed data on the sustainability practices in franchise food businesses was a self-made questionnaire.

The questionnaire was divided into two parts. Part I of the questionnaire contained the respondents' profiles, such as types of business, ownership, capitalization, and number of years in the business.

Part II focused on identifying sustainability initiatives in franchised food businesses, such as reducing water usage, minimizing food waste, using sustainable packaging, and introducing healthy menu options. The obtained scores for the sustainability practices in franchising were rated on a scale of 1 to 5, where 5 is "Always," 4 is "Often," 3 is "Sometimes," 2 is "Rarely," and 1 is "Not at all."

Data Analysis and Statistical Treatment

Objective No. 1 used a descriptive-analytical scheme and frequency count and percentage to determine respondents' profiles according to age, sex, civil status, ownership, capitalization, and number of years in the business.

Objective No. 2 used a descriptive-analytical scheme and mean to evaluate the level of sustainability practices according to the following areas: reducing water usage, minimizing food waste, using sustainable packaging, and introducing healthy menu options.

Objective No. 3 employed a comparative-analytical scheme and Mann-Whitney U Test to determine if there is a significant difference in the level of sustainability practices when grouped and compared according to the aforementioned variables.

Ethical Consideration

The principles that direct the study designs and procedures are known as ethical concerns. When gathering information from individuals, scientists and researchers must always follow the rules (Bhandari, 2022). There was rigorous consideration of confidentiality, informed consent, voluntary involvement, and plagiarism.

There was no coercion or pressure on study participants; they were free to leave at any moment and for any reason. Participants got comprehensive information regarding the nature and goal of the study, as well as its advantages, disadvantages, and potential outcomes. Participants in the research also obtained assurances on the confidentiality of any information about their personal or identifying information.

Results and Discussion

This section presents, analyzes, and interprets the data that were gathered consistent with its predetermined objectives

Table 1
Profile of Respondents

Variables	Categories	Frequency	Percentage
Type of Business	Fast Food	9	18.00
	Café Restaurant	23	46.00
	Snack Kiosk	18	36.00
	Total	50	100
Number of Years in Business	Shorter (less than 27 years)	28	56.00
	Longer (27 years and above)	22	44.00
	Total	50	100
Capitalization	Lower	24	48.00

	Higher	26	52.00
	Total	50	100
Ownership	Corporation	16	32.00
	Partnership	18	36.00
	Single Proprietorship	16	32.00
	Total	50	100
Number of Employees	Few (less than 11)	27	54.00
	Many (11 and above)	23	46.00
	Total	50	100

Table 1 shows that out of 50 respondents, 9 (18%) belong to the fast-food category, 23 (46%) belong to the café-restaurant category, and 18 (36%) belong to the snack kiosk category. For the number of years in business, 28 respondents (56%) belong to the shorter category, while 22 (44%) belong to the longer category. Regarding capitalization, 24 (48%) belong to the lower category, while 26 (52%) belong to the higher category. On ownership, 16 respondents (32%) belong to the corporation category, 18 (36%) belong to the partnership category, and 16 (32%) belong to the single proprietorship category. Regarding the number of employees, 27 respondents (54%) belong to the few categories while 23 (46%) belong to the many categories.

These results indicate that most respondents operate cafe restaurants, with a slight majority having been in business for a shorter period. There is a near-even split in capitalization. Partnerships are the most common form of ownership. Additionally, the survey had a slightly higher representation of businesses with fewer employees than those with many.

Table 2

Level of Sustainability Practices in Reducing Water Usage

Area		
A. On Reducing Water Usage		
As a food franchisee, I practice sustainability by...	Mean	Interpretation
1. using water-saving devices or equipment in daily operations.	4.10	High Level
2. training staff to conserve water during food preparation and cleaning.	4.04	High Level
3. regularly checking for and repairing water leaks.	3.43	Moderate Level
4. reusing water where appropriate.	2.58	Moderate Level
5. monitoring and evaluating water consumption regularly.	4.26	High Level
6. limiting the use of running water during cleaning tasks.	4.38	High Level
7. using dishwashers and equipment with high water efficiency ratings.	4.32	High Level
8. posting reminders for employees to conserve water.	3.08	Moderate Level
9. scheduling regular maintenance to prevent water wastage.	3.86	High Level
10. collecting rainwater for non-potable uses where applicable.	1.00	Very Low Level
Overall Mean	3.50	High Level

Table 2 shows the level of sustainability practices in reducing water usage. The overall mean for sustainability practices in reducing water usage is 3.50, which is interpreted as a "high level." The highest mean score of 4.38, interpreted as "high level," is on item 6, "limiting the use of running water during cleaning tasks." The lowest mean score is 1.00, interpreted as "very low level," is on item 10, "collecting rainwater for non-potable uses where applicable."

This result aligns with the study by Akuffobe et al. (2019), which identified several barriers to adopting rainwater harvesting systems, including limited information, high initial costs, and lack of institutional support. These challenges hinder the widespread implementation of such sustainable practices.

Table 3

Level of Sustainability Practices in Minimizing Food Waste

Area		
B. On Minimizing Food Wastes		
As a food franchisee, I practice sustainability by...	Mean	Interpretation
1. donating surplus edible food to local charities.	3.72	High Level
2. implementing inventory controls to reduce spoilage.	4.44	High Level
3. repurposing excess food ingredients into new menu items.	3.98	High Level
4. educating staff on proper food handling and portion control.	4.58	Very High Level
5. tracking food waste to identify and improve on wasteful practices.	4.16	High Level
6. offering variable portion sizes to reduce plate waste.	4.46	High Level

7. storing food at the correct temperatures to extend shelf life.	4.64	Very High Level
8. encouraging customers to take leftovers home.	4.46	High Level
9. using a first-in, first-out system in food storage.	4.76	Very High Level
10. reviewing sales data to forecast demand and reduce overproduction.	4.62	Very High Level
Overall Mean	4.38	High Level

Table 3 shows the level of sustainability practices in minimizing food waste. The overall mean of sustainability practices in reducing food waste is 4.38, interpreted as a "high level." The highest mean score of 4.76, interpreted as "very high level," is on item 9, "using a first-in, first-out system in food storage." The lowest mean score is 3.72, interpreted as "high level," is on item 1, "donating surplus edible food to local charities."

This study implies that food franchisees show high sustainability practices in minimizing food waste, and there is room for improvement or enhancement. Practices such as using a first-in, first-out (FIFO) system in food storage are prioritized. Practices like storing food at the correct temperatures and educating staff on food handling indicate a proactive waste approach. However, donating surplus edible food to local charities received the lowest implementation levels, showing a high level of practice in food donation. This implies that, however practiced, it may be seldom applied due to logistical challenges, lack of partnerships with local charities, or concerns over food safety regulations. Suggesting that food donation, although practiced at a high level, has the potential for further improvement through better coordination and awareness among franchisees.

The prioritization of practices such as first-in, first-out (FIFO) food storage systems, proper food storage temperatures, and staff education in minimizing food waste aligns with the study by Filimonau et al. (2020), which identified that structured waste management activities that include rigorous stock management, menu engineering to repurpose surplus food and staff training—are effective strategies for restaurants and food service operations to reduce food waste significantly.

Table 4
Level of Sustainability Practices in Using Sustainable Packaging

Area	Mean	Interpretation
C. On Using Sustainable Packaging		
As a food franchisee, I practice sustainability by...		
1. choosing biodegradable or compostable packaging materials.	4.34	High Level
2. encouraging customers to bring reusable containers.	3.06	Moderate Level
3. reducing the use of single-use plastics.	4.20	High Level
4. sourcing packaging from eco-friendly suppliers.	4.32	High Level
5. providing recyclable packaging options.	4.44	High Level
6. avoiding over-packaging of products.	4.20	High Level
7. partnering with suppliers who use minimal or recyclable packaging.	4.12	High Level
8. informing customers about the sustainability of packaging materials.	3.60	High Level
9. offering incentives for customers using reusable bags or containers.	3.84	High Level
10. using packaging materials made from recycled content.	4.50	Very High Level
Overall Mean	4.06	High Level

Table 4 shows the level of sustainability practices. The overall mean of sustainability practices in using sustainable packaging is 4.06, interpreted as "high level." The highest mean score of 4.50, interpreted as "very high level," on item 10, "using packaging materials made from recycled content." The lowest mean score of 3.06, interpreted as "moderate level," is on item 2, "encouraging customers to bring reusable containers."

This study implies that food franchisees show high sustainability practices in sustainable packaging, and there is room for improvement. However, encouraging customers to bring reusable containers indicates an area requiring greater focus and effort, suggesting the need to strengthen customer engagement in sustainability initiatives.

According to Poças et al. (2020), while many food businesses adopt sustainable packaging practices by using materials made from recycled content, choosing biodegradable options, and reducing single-use plastics, engaging customers to participate—such as by bringing reusable containers—remains a challenge, highlighting the need for strengthened customer involvement in sustainability initiatives.

Table 5
Level of Sustainability Practices in Introducing Healthy Menu Options

Area	Mean	Interpretation
D. On Introducing Healthy Menu Options		
As a food franchisee, I practice sustainability by...		
1. offering plant-based or vegetarian meals.	3.36	Moderate Level
2. using locally sourced and organic ingredients.	3.80	High Level

3. providing calorie and nutrition information for menu items.	2.74	Moderate Level
4. regularly updating the menu to include healthier options.	4.50	Very High Level
5. promoting low-fat, low-sugar, and low-sodium choices.	4.36	High Level
6. using fresh rather than processed ingredients.	4.36	High Level
7. offering allergen-free or gluten-free alternatives.	4.66	Very High Level
8. limiting the use of artificial additives and preservatives.	4.18	High Level
9. engaging customers in feedback to improve healthy offerings.	4.04	High Level
10. Collaborating with nutritionists or dietitians on menu planning.	3.70	High Level
Overall Mean	3.97	High Level

Table 5 shows the level of sustainability practices. The overall mean of sustainability practices in introducing healthy menu options is 3.97, interpreted as "high level." The highest mean score of 4.66, interpreted as "very high level," is on item 7, "offering allergen-free or gluten-free alternatives." The lowest mean score of 2.74, interpreted as "moderate level," is on item 3, "providing calorie nutrition information for menu items."

This study shows high sustainability practices are achieved when introducing healthy menu options. Practices such as offering allergen-free or gluten-free alternatives and regularly updating the menu to include healthier options are prioritized; however, practices like providing calorie and nutrition information for menu items that require more attention suggest enhancing transparency and supporting informed customer choices.

According to Witzel and Zielke (2017), many food businesses are increasingly adopting sustainable practices by utilizing fresh ingredients and minimizing processed foods; the challenge remains in effectively communicating nutritional information to consumers, highlighting the need for enhanced transparency to support informed dietary choices.

Table 6

Difference in the Level of Sustainability Practices in Reducing Water Usage when grouped and compared according to the aforementioned Variables

Variable	Category	N	Mean Rank	Kruskal-Wallis H	Mann-Whitney U	p-value	Sig. level	Interpretation
Type of Business	Fast Food	9	35.06	20.111		0.000		Significant
	Café Restaurant	23	31.26					
	Snack Kiosk	18	13.36					
Number of Years in Business	Shorter	28	20.39	165.000		0.005		Significant
	Longer	22	32.00					
Capitalization	Lower	24	12.79	7.000		0.000	0.05	Significant
	Higher	26	37.23					
Ownership	Corporation	16	27.41	13.633		0.001		Significant
	Partnership	18	33.14					
	Single Proprietorship	16	15.00					
Number of Employees	Few	27	17.93	106.000		0.000		Significant
	Many	23	34.39					

Table 6 shows the difference in the level of sustainability practices in reducing water usage. Regarding the type of business, the mean rank score for the fast food category is 35.06, with a p-value of 0.000, less than 0.05, while the café-restaurant category is 31.26 with a p-value of 0.000, less than 0.05, and the snack kiosk category is 13.36 with a p-value of 0.000, less than the significance level of 0.05, interpreted as significant. Over several years in business, the mean rank score for the shorter category is 20.39 with a p-value of 0.005 less than 0.05, while the longer category is 32.00 with a p-value of 0.005 less than the significance level of 0.05, interpreted as significant.

On capitalization, the mean rank score for the lower category is 12.79 with a p-value of 0.000 less than 0.05, while the higher category is 37.23 with a p-value of 0.000 less than the significance level of 0.05, interpreted as significant.

On ownership, the mean rank score for the corporation is 27.41 with a p-value of 0.001, less than 0.05, while the partnership category is 33.14 with a p-value of 0.001, less than the significance level of 0.05, interpreted as significant. The sole proprietorship category is 15.00 with a p-value of 0.001, less than the significance level of 0.05.

On the number of employees, the mean rank score for the few categories is 17.93 with a p-value of 0.000, less than 0.05, while the many categories are 34.39 with a p-value of 0.000, less than the significance level of 0.05, interpreted as significant.

The result of the study implies that the type of business, number of years in business, capitalization, ownership, and number of employees significantly influence sustainability practices in reducing water usage. On this premise, the null hypothesis stating that there is no significant difference in the level of sustainability practices in reducing water usage is rejected for all the aforementioned variables.

This implies that practices in reducing water usage significantly vary depending on key business characteristics. Similarly, businesses with longer years of operation practice water sustainability more effectively than newer ones, indicating that experience and operational maturity may contribute to better environmental stewardship.

Balasubramanian et al. (2020) state that combating environmental pollution and climate change mandates strong commitment and participation from all firms across sectors.

Table 7

Difference in the Level of Sustainability Practices in Minimizing Food Waste when grouped and compared according to the aforementioned Variables

Variable	Category	N	Mean Rank	Kruskal-Wallis H	Mann-Whitney U	p-value	Sig. level	Interpretation
Type of Business	Fast Food	9.00	35.280	7.686		0.021		Significant
	Café Restaurant	23.00	26.650					
	Snack Kiosk	18.00	19.140					
Number of Years in Business	Shorter	28	22.98		237.500	0.166	0.05	Not Significant
	Longer	22	28.70					
Capitalization	Lower	24	18.50	8.331	144.000	0.001	0.05	Significant
	Higher	26	31.96					
	Corporation	16	28.78					
Ownership	Partnership	18	30.22	8.331		0.016		Significant
	Single Proprietorship	16	16.91					
Number of Employees	Few	27	20.57		177.500	0.009		Significant
	Many	23	31.28					

Table 7 shows the difference in the sustainability practice level in minimizing food waste. On the type of business, the mean rank score for the fast-food category is 15.94 with a p-value of 0.054, which is greater than the significance level of 0.05. In contrast, the café-restaurant category is 29.670 with a p-value of 0.054, greater than the significance level of 0.05. The snack kiosk category is 29.940 with a p-value of 0.054, which is greater than the significance level of 0.05, interpreted as not significant.

Over some years in business, the mean rank score for the shorter category is 27.09 with a p-value of 0.382, which is greater than the significance level of 0.05, while the longer category is 23.48 with a p-value of 0.382, which is greater than the significance level of 0.05, interpreted as not significant.

On capitalization, the mean rank score for the lower category is 25.48 with a p-value of 0.992, which is greater than the significance level of 0.05, while the higher category is 25.52 with a p-value of 0.992, which is greater than the significance level of 0.05, interpreted as not significant.

On ownership, the mean rank score for the corporation category is 21.56 with a p-value of 0.176, which is greater than the significance level of 0.05, while the partnership category is 30.44 with a p-value of 0.176, which is greater than the significance level of 0.05. For sole proprietorship, the category is 23.88 with a p-value of 0.176, which is greater than the significance level of 0.05, interpreted as not significant.

On the number of employees, the mean rank score for the few categories is 27.33 with a p-value of 0.332, which is greater than the significance level of 0.05, while the many categories are 23.35 with a p-value of 0.332, which is greater than the significance level of 0.05, interpreted as insignificant.

The result of the study implies that the type of business, capitalization, ownership, and the number of employees significantly influence sustainability practices in minimizing food waste. However, the number of years in business

does not show a significant effect. On this premise, the null hypothesis that no significant difference in sustainability practices in minimizing food waste exists is rejected for the variable's type of business, capitalization, ownership, and number of employees, and retained for the number of years in business. This shows that sustainable food waste management is more likely affected by business type, available capital, organizational structure, and workforce size rather than how long the business has been operating.

This implies that sustainability practices in minimizing food waste significantly differ across various business characteristics, except for the number of years in operation. Fast food businesses show the highest waste minimization efforts compared to café restaurants and snack kiosks, indicating that more standardized operations may have better waste management protocols.

Table 8

Difference in the Level of Sustainability Practices in Using Sustainable Packaging when grouped and compared according to the aforementioned Variables

Variable	Category	N	Mean Rank	Kruskal-Wallis H	Mann-Whitney U	p-value	Sig. level	Interpretation
Type of Business	Fast Food	9.00	20.560	1.306		0.520	0.05	Not Significant
	Café Restaurant	23.00	26.260					
	Snack Kiosk	18.00	27.000					
Number of Years in Business	Shorter	28	27.27		258.500	0.330	0.05	Not Significant
	Longer	22	23.25					
Capitalization	Lower	24	29.27		221.500	0.077	0.05	Not Significant
	Higher	26	22.02					
Ownership	Corporation	16	22.06	2.123		0.346	0.05	Not Significant
	Partnership	18	25.03					
	Single Proprietorship	16	29.47					
Number of Employees	Few	27	28.59		227.000	0.102	0.05	Not Significant
	Many	23	21.87					

Table 8 shows the difference in the level of sustainability practices using sustainable packaging.

On the type of business, the mean rank score for the fast food category is 20.560 with a p-value of 0.520, which is greater than the significance level of 0.05, while the café-restaurant category is 26.260 with a p-value of 0.520, which is greater than the significance level of 0.05. The snack kiosk category is 27.000 with a p-value of 0.520, which is greater than the significance level of 0.05, interpreted as not significant.

Over several years in business, the mean rank score for the shorter category is 27.27 with a p-value of 0.330, which is greater than the significance level of 0.05, while the longer category is 23.25 with a p-value of 0.330, which is greater than the significance level of 0.05, interpreted as not significant.

On capitalization, the mean rank score for the lower category is 29.27 with a p-value of 0.77, which is greater than the significance level of 0.05, while the higher category is 22.02 with a p-value of 0.77, which is greater than the significance level of 0.05, interpreted as insignificant.

On ownership, the mean rank score for the corporation category is 22.06 with a p-value of 0.346, greater than the significance level of 0.05. In contrast, the partnership category is 25.03 with a p-value of 0.346, greater than the significance level of 0.05. The sole proprietorship category is 29.47 with a p-value of 0.346, which is greater than the significance level of 0.05, interpreted as insignificant.

On the number of employees, the mean rank score for the few categories is 28.59 with a p-value of 0.102, which is greater than the significance level of 0.05, while the many categories are 21.87 with a p-value of 0.102, which is greater than the significance level of 0.05, interpreted as not significant.

The result of the study implies that the type of business, number of years in business, capitalization, ownership, and number of employees do not significantly influence sustainability practices in using sustainable packaging. On this premise, the null hypothesis stating that there is no significant difference in sustainability practices in using sustainable packaging is accepted for all the aforementioned variables. This shows that the use of sustainable packaging may be influenced by other factors not covered in this study, such as supplier availability, government regulations, or consumer demand, rather than internal business characteristics.

This implies that industry-wide trends or legal requirements impact efforts to create sustainable packaging more than internal company traits. Food businesses may be equally aware of or committed to sustainable packaging regardless of their financial capacity, possibly due to outside pressures like consumer expectations or environmental campaigns.

Table 9

Difference in the Level of Sustainability Practices in Introducing Healthy Menu Options when grouped and compared according to the aforementioned Variables

Variable	Category	N	Mean Rank	Kruskal-Wallis H	Mann-Whitney U	p-value	Sig. level	Interpretation
Type of Business	Fast Food	9.00	15.940	5.848		0.054	0.05	Not Significant
	Café	23.00	29.670					
	Restaurant	18.00	24.940					
Number of Years in Business	Shorter	28	27.09	3.478	263.500	0.382	0.05	Not Significant
	Longer	22	23.48					
Capitalization	Lower	24	25.48		311.500	0.992	0.05	Not Significant
	Higher	26	25.52					
Ownership	Corporation	16	21.56	3.478		0.176	0.05	Not Significant
	Partnership	18	30.44					
	Single Proprietorship	16	23.88					
Number of Employees	Few	27	27.33		261.000	0.332	0.05	Not Significant
	Many	23	23.35					

Table 9 shows the difference in the level of sustainability practices in introducing healthy menu options.

On the type of business, the mean rank score for the fast-food category is 15.94 with a p-value of 0.054, which is greater than the significance level of 0.05. In contrast, the café restaurant category is 29.670 with a p-value of 0.054, greater than the significance level of 0.05. The snack kiosk category is 29.940 with a p-value of 0.054, which is greater than the significance level of 0.05, interpreted as not significant.

Over some years in business, the mean rank score for the shorter category is 27.09 with a p-value of 0.382, which is greater than the significance level of 0.05, while the longer category is 23.48 with a p-value of 0.382, which is greater than the significance level of 0.05, interpreted as not significant.

On capitalization, the mean rank score for the lower category is 25.48 with a p-value of 0.992, which is greater than the significance level of 0.05, while the higher category is 25.52 with a p-value of 0.992, which is greater than the significance level of 0.05, interpreted as not significant.

On ownership, the mean rank score for corporation category is 21.56 with p-value of 0.176 which is greater than the significance level of 0.05, while partnership category is 30.44 with p-value of 0.176 which is greater than the significance level of 0.05 and for sole proprietorship category is 23.88 with p-value of 0.176 which is greater than the significance level of 0.05, interpreted as not significant.

On the number of employees, the mean rank score for the few category is 27.33 with a p-value of 0.332, which is greater than the significance level of 0.05, while the many category is 23.35 with a p-value of 0.332, which is greater than the significance level of 0.05, interpreted as insignificant.

The result of the study implies that the type of business, number of years in business, capitalization, ownership, and number of employees do not significantly influence the level of sustainability practices in introducing healthy menu options. On this premise, the null hypothesis that no significant difference in sustainability practices in introducing healthy menu options exists is accepted for all the aforementioned variables.

This implies that there are no significant differences in sustainability practices related to introducing healthy menu options when food businesses are grouped according to type of business, years in operation, capitalization, ownership structure, or number of employees. Regardless of these organizational variables, enterprises adopt healthy menu initiatives at relatively similar levels.

Conclusions:

In reducing water usage, efficient equipment and staff practices such as limiting running water and conducting regular maintenance are well-practiced. However, initiatives like rainwater harvesting and water reuse lag significantly behind infrastructure and awareness gaps that must be addressed. In minimizing food waste, franchisees show powerful performance, especially in stock management and food storage techniques like the FIFO system. Staff training and customer engagement also play key roles, though charitable food donations, while still rated high, could benefit from strengthened logistical or policy support. The addition of healthy menu options highlights the use of fresh ingredients, the availability of allergen-free alternatives, and the regular updating of menus to include more nutrient-dense options.

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