

Going Green: Sustainable Operations of Fast-Food Chains in Dumaguete City

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Abstract. Due to significant waste generation, fast-food chains in Dumaguete City faced growing pressure to adopt sustainable waste management practices. This research investigated current waste management techniques, including eco-friendly materials, recycling, composting, and waste reduction, to assess their effectiveness and suggest improvements. The findings aimed to provide insights for enhancing sustainability efforts and meeting the expectations of environmentally conscious consumers. The study used the descriptive method to gather information from customers and employees in fast-food chains in Dumaguete City. There were 50 customer respondents and 50 employee respondents. This balanced sample size allowed researchers to gather customer and employee insights. Questionnaires were the primary tool for data collection, and descriptive statistics such as weighted mean and standard deviation summarized the data. Correlation analysis examined the relationships between customers' and employees' perceptions of green practices and the challenges fast-food chains face. The results showed that while some green practices were implemented successfully in fast-food chains in Dumaguete City, there was room for improvement in customer awareness, broader green practices, and employee training. The research outlined key recommendations to enhance the environmental practices of fast-food chains in Dumaguete City. These included running customer education campaigns to promote green practices, regularly monitoring and improving existing initiatives based on feedback, providing training for employees to tackle challenges, supportive management, investing in cost-effective technologies, and fostering innovation, which can significantly contribute to more environmentally responsible fast-food chains in the city. Solving these problems with learning, manager support, and long-term investments can help fast-food chains in Dumaguete City improve their environmental efforts.

Keywords: Fast-food chains; Customer awareness; Sustainability; Waste management.

1.0 Introduction

Sustainability has become a critical focus in many sectors, including the food industry, where waste generation is a significant environmental concern. Fast-food chains, known for their blend of convenience, quality, and affordability, are proliferating but face increasing pressure to adopt eco-friendly practices. However, their rapid expansion raises concerns about sustainability, particularly waste management. This study examines the waste management practices of fast-food establishments in Dumaguete City, assessing their effectiveness and proposing improvements. By exploring eco-friendly materials, recycling, composting, and waste reduction strategies, the research aims to identify the current green practices and the challenges these businesses face.

Previous research has indicated the necessity for sustainable waste handling in the hospitality sector. Principato et al. (2021) created the Restaurant Food Waste Map (RFWM), identifying food waste prevention, reduction, and redistribution strategies. Likewise, Papargyropoulou et al. (2016) supported the food waste hierarchy, prioritizing prevention and redistribution before disposal. The National Restaurant Association (2021) indicated that waste reduction can increase environmental and financial performance. Moreover, Martin-Rios et al. (2022) laid down a strategy for waste avoidance and stakeholder participation in the food service industry. In fast-food chains, Rosenberg et al. (2020) investigated quick-service restaurants' strategies regarding sustainable packaging, focusing on using biodegradable materials to limit environmental damage.

Even though there is exhaustive research on restaurant sustainability, studies target fine dining or overall food service categories without filling the knowledge gap of specific waste management strategies of fast-food chains in Dumaguete City. Although earlier research has covered sustainability in lodging facilities, few studies address how fast-food operations adopt green programs. Laspiñas and Tayco (2025) investigated sustainability practices in Dumaguete City's hospitality sector, where major obstacles in regulatory compliance, cost control, and stakeholder awareness were found – barriers that could also apply to fast food chains. Gunders (2017) indicated that restaurant food waste depends on consumer behavior, which can enhance sustainability in fast-food chains with proper education and engagement strategies.

This research will assess the waste management efforts of Dumaguete City's fast-food restaurants in terms of their existing waste management practices and the areas for improvement. By closing the gap between existing studies, the results will offer essential recommendations to policymakers and restaurant operators in adopting better waste management strategies. Jones and Pimbert (2024) highlighted policy support as a vital element for effective waste management programs, enforcing the importance of cooperation between entrepreneurs and government entities. In conclusion, the study aims to coordinate fast-food operations with changing sustainability expectations, cultivating environmentally friendly activities that benefit the industry and society.

2.0 Methodology

2.1 Research Design

This study utilized a descriptive-correlational research design to elicit information from customers and employees in Dumaguete City's fast-food chains. Permission was requested from respondents to gather the necessary information. A questionnaire checklist served as the main data-gathering instrument. Researchers personally distributed and retrieved questionnaires from respondents. Descriptive statistics were used to describe the data's basic features. Weighted means and standard deviations provided simple summaries of the sample and measures. Correlation analysis examined the relationships between customers' and employees' perceptions of green practices and the challenges fast-food chains face in Dumaguete City.

2.2 Research Locale

The study was conducted in Dumaguete City, a lively urban center in Negros Oriental, Philippines, renowned for its rich cultural heritage and flourishing tourism industry. Often called the "City of Gentle People," Dumaguete is home to 40 urban barangays and a diverse population of 134,103, as recorded in the 2020 census. Its stunning beaches, historical landmarks, and vibrant nightlife make it a magnet for local and international tourists, driving the growth of fast-food restaurants catering to varied tastes. The research targeted customers and employees of fast-food chains in Dumaguete City, offering a unique lens to examine the adoption of green practices and the challenges faced in this rapidly evolving urban environment.

2.3 Research Participants

The study's respondents were customers and employees from various fast-food chains in Dumaguete City. Purposive sampling was used to select the fast-food chains. Researchers used convenience random sampling to identify respondents (customers and employees). Convenience sampling was used because it allowed researchers to efficiently gather insights from available customers and employees without needing a fully representative sample of fast-food chains in Dumaguete City. Researchers chose respondents based on proximity without considering whether they represented the entire population. In total, there were 50 customer respondents and 50 employee respondents. This balanced sample size allowed researchers to gather customer and employee insights. However, the convenience sampling method means the results may not fully represent the entire population of fast-food customers and employees in Dumaguete City.

2.4 Research Instrument

The study survey questionnaire was patterned after the study of Lou et al. (2021) on green practices and Si et al. (2020) on the challenges fast-food chains face in implementing green practices. Slight modifications were made to reflect the exact situation of the study. Two experts in the hospitality sector meticulously reviewed the questionnaire's content to ensure its validity. Their reviews confirmed that the questionnaire reflected the green practices constructs relevant to fast-food chains.

This study consisted of Part I, Part II, and Part III. Two types of questionnaires were made, one for the customers and the other for the fast-food chain employees. Part I of the questionnaire acquired personal information from the respondents' profiles. Part II consisted of indicators related to green practices, and Part III involved the challenges fast-food chains face in implementing green practices.

2.5 Data Gathering Procedure

Researchers surveyed 50 customers and 50 employees of fast-food chains in Dumaguete City, using questionnaires to explore adopting green practices, such as environmental and social sustainability, and the challenges these businesses face. The results of the data gathered were tabulated and analyzed. The study used statistical tools like frequency, percentage, weighted mean, and Spearman rho to analyze respondent data, determine demographic profiles and sustainability efforts, and identify relationships between green practices and socio-demographic factors.

2.6 Ethical Considerations

In carrying out this research, the investigators adhered to ethical standards, as required by the Data Privacy Act of 2012, to protect the participants and maintain the confidentiality of their data. This extends from the initial data collection to the final disposal of data, ensuring the rights and well-being of all participating respondents are protected.

3.0 Results and Discussion

This section presents, analyzes, and interprets data from the respondents' background responses to survey forms. It describes the data analysis and discusses the study's findings on the green practices of fast-food chains in Dumaguete City.

3.1 Customer's Demographic Profile

Table 1 shows the customer's demographic Profile. The data includes age, sex, number of visits, and civil status. The data collected from the socio-demographic Profile of the customers visiting fast food chains in Dumaguete City reveals that most respondents fall within the age group of 18-25, with 36 (72%). It means that younger individuals are more likely to choose fast-food chains as their primary eating place, which suggests that they are the primary consumers of these fast-food chains. This finding is supported by Majabadi et al. (2016), who studied the factors influencing fast-food consumption among adolescents, highlighting the convenience and affordability of fast food for this age group.

Table 1. Socio-Demographic Profile of the Customer			
	Variables	Frequency	Percentage
Age	18-25	36	72.00
	26-35	13	26.00
	36-45	1	2.00
Sex	Female	32	64.00
	Male	18	36.00
Civil Status	Single	47	94.00
	Married	3	6.00
Number of Visits	Once	9	18.00
	Twice	18	36.00
	Thrice	17	34.00
	More than twice a month	6	12.00

N=50

In terms of sex, females constitute the majority of respondents, which indicates a higher frequency of visits compared to males, with 32 (64%). It is considering the high proportion of females found by the survey researchers. In many cultures, women are often seen as the primary decision-makers for food choices. It has

naturally led them to take the lead in deciding what to buy, cook, and serve.

Regarding the number of visits, the most common frequency was twice a month, with 18(36%). It highlights certain demographic groups, particularly younger adults and single individuals, who are more likely to be frequent visitors due to their lifestyle and convenience preferences. This finding was supported by Lalnunthara & Kumar (2018), who identified that younger adults and single individuals, due to their lifestyle and convenience preferences, tend to visit fast food chains more frequently. Their fast-paced lifestyles and need for convenience make fast-food chains popular for regular meals.

Lastly, civil status revealed that single individuals with 47(94%), dominate the customer base; this suggests that single people are more inclined to dine at fast food chains compared to married individuals; it found that individuals are less likely to visit venues in neighborhoods demographically different from their own, which can be linked to civil status. For example, single individuals might prefer dining out more frequently in areas where they feel comfortable, compared to married individuals who might have different social preferences. This finding was supported by Davis et al. (2019), which provides evidence that social factors, such as civil status, can influence restaurant choices and that single individuals are more frequent visitors to fast food chains.

3.2 Employees Demographic Profile

Table 2 reveals the demographic Profile of the fast-food chain employees involved in their green practices in Dumaguete City. The data includes age, sex, civil status, job position, and years of service.

Table 2. Socio-Demographic Profile of the Employee

	Variables	Frequency	Percentage
Age	18-25	27	54.00
	26-35	20	40.00
	36-45	3	6.00
Sex	Female	31	62.00
	Male	19	38.00
Civil Status	Single	40	80.00
	Married	10	20.00
Job Position	Manager	12	24.00
	Supervisor	2	4.00
	Others	36	72.00
Year of Visit	Less than 1 year	22	44.00
	1-3	22	44.00
	7-9	3	6.00
	10 years above	3	6.00

N=50

The data collected from the socio-demographic Profile of the employees in the fast-food chains in Dumaguete City reveals that most of the respondents fall within the age group of 18-25 years old, with 27(54%), suggesting that younger individuals, often students or recent graduates, seek flexible part-time jobs to balance work with studies or other commitments. Fast food chains typically offer flexible hours that can accommodate their needs. The research highlighted that these younger individuals often sought flexible part-time jobs to balance work with their studies or other commitments.

Regarding sex, females are the majority of the respondents, with 31(62%); this is because the flexible working hours and part-time opportunities offered by fast-food chains are often attractive to women, especially those balancing work with family responsibilities. Additionally, the customer service-oriented nature of fast-food jobs may appeal more to women, who are often socialized to excel in interpersonal roles. This finding is supported by Pulhin (2022), who highlighted that women in fast food chains usually seek flexible work arrangements to balance their professional and personal lives.

Regarding civil status, a significant majority of the respondents are single, and the high percentage of single employees could be due to the flexible working hours and the nature of the job, which appeals more to individuals without familial responsibilities. Tayco et al. (2023) supported this finding; single employees are more focused on work and are more likely to comply when management requests overtime or complex shift schedules. When looking at the job position, it revealed that a significant majority was 72%, with 36 respondents falling into the "others" category, likely including cashiers, cooks, and servers. This indicates that most of the workforce consists

of front-line staff essential for daily operations. This finding was supported by Nillos et al. (2022), who determined fast-food chain employees' job positions and work performance in Iloilo City. It found that a significant portion of the workforce consisted of front-line staff; it also highlighted that the nature of the job and flexible working hours appeal to individuals without familial responsibilities.

Lastly, the data on years of service revealed that most respondents had accumulated service within less than one year and one to three years, with 22 (44%), highlighting a concentration of employees in the early stages of their careers. It suggests a dynamic environment driven by recent expansion or a focus on recruiting entry-level talent. It presents opportunities for fostering innovation and adaptability, but also requires attention to employee development and retention to build a strong foundation for future success. This finding was supported by Ahmed and Arif (2021), who identified critical factors influencing employee retention in the fast food chain, such as job satisfaction, brand image, and job security. It also explores the impact of career development and supervisor support on employee retention, which suggests that enriching job roles and providing regular transfers to other areas can enhance retention.

3.3 Organizational Profile of the Fast-Food Chain

Table 3 presents the organizational Profile of the fast food chains on the green practices of the fast food chains in Dumaguete City. The data includes the number of employees, ownership structure, and years of operation. The data gathered under the organizational Profile of fast food chains reveals that the number of employees in most fast food chains is between 21 and 30 workers, with 17(34%). It suggests that medium-sized operations are prevalent in Dumaguete City. Medium-sized establishments can balance efficiency with personalized service, making them well-suited to adopt and maintain green practices. Medium-sized operations are daily in urban areas, supporting the observed employee distribution, Smith & Brown (2019).

Table 3. Organizational Profile of the Fast-Food Chain

Variables	Frequency	Percentage
No. of Employees	1-10	10
	11-20	11
	21-30	17
	Others	12
Ownership Structure	Corporate	24
	Franchise	25
	Others	1
Years of Operation	1-3	20
	4-6	12
	7-9	4
	10 and above	14

N=50

Regarding the ownership structure, the majority are franchise operations, with 25 (50%). Franchises often have standardized practices and brand recognition, which reduces the risk for franchisees compared to starting an independent business from scratch. Franchises are known for their ability to implement green practices efficiently due to corporate policies and guidelines (Perrigot et al., 2021). In terms of years of operations, most fast food chains have been in business for 1-3 years, with 20(40%). It suggests a dynamic market where newer businesses might quickly adopt eco-friendly practices to stand out. Research shows that younger companies are often more innovative and willing to invest in sustainability (Yasemin, 2016).

3.4 Green Practices of the Employees in Fast Food Chains in Dumaguete City

Table 4 shows the green practices of fast food chains' customers and employees. The data includes different green practices, such as energy management, waste management, water conservation, and environmental management practices. It also presents the perspective of both respondents (customers and employees) on the green practices of fast food chains. Table 4 suggests that employees and customers rated implementing innovative heating, ventilation, and air conditioning systems as the highest energy management practice, with mean scores of 3.60 for employees and 3.40 for customers. This substantial agreement indicates the effectiveness and recognition of innovative heating, ventilation, and air conditioning systems that can significantly reduce energy consumption in commercial buildings. This finding was supported by Gunasegaran et al. (2022), who demonstrated the effectiveness of energy management strategies of innovative heating, ventilation, and air conditioning in reducing energy consumption in fast-food chains.

Table 4. Green Practices in Fast-food Chains in Dumaguete City

No.	Indicators	Customers		Employees	
		Mean	Interpretation	Mean	Interpretation
	Energy Management Practices	3.28	SA	3.45	SA
1	Fast food uses energy-saving materials and tools, such as energy-saving bulbs.	3.20	A	3.40	SA
2	Fast-food restaurants use sensors and timers to ensure lights are only on when needed, reducing unnecessary energy use.	3.20	A	3.30	SA
3	Fast-food restaurants implement innovative heating, ventilation, and air conditioning systems to optimize energy use and maintain comfort.	3.40	SA	3.60	SA
4	The fast food has energy-efficient equipment to reduce energy consumption.	3.30	SA	3.48	SA
	Waste Management Practices	3.35	SA	3.63	SA
1	Fast-food restaurants are actively involved in waste management efforts.	3.38	SA	3.70	SA
2	The fast food segregated their waste.	3.50	SA	3.66	SA
3	Fast food companies use reusable or biodegradable packaging to minimize waste.	3.30	SA	3.62	SA
4	Fast-food restaurants have implemented green practices such as reducing, reusing, and recycling.	3.22	A	3.54	SA
	Water Conservation Practices	3.19	A	3.41	SA
1	The fast-food implements water-saving strategies.	3.18	A	3.58	SA
2	Fast-food restaurants have installed low-flow faucets, toilets, and urinals to reduce water usage.	3.12	A	3.26	SA
3	The fast-food toilet is equipped with a dual flush system.	3.26	SA	3.40	SA
4	Fast food companies use water pressure regulators to prevent excessive water flow and reduce water wastage.	3.20	A	3.38	SA
	Environmental Management Practices	3.18	A	3.48	SA
1	Fast-food practices are a cause of environmental advocacy.	3.18	A	3.48	SA
2	The fast-food has signs and signage about environmental advocacy.	3.10	A	3.40	SA
3	The management of fast-food chains promotes environmental advocacy to the customer.	3.18	A	3.46	SA
4	Fast-food companies implement comprehensive waste management systems, including recycling programs, composting organic waste, and properly disposing hazardous materials.	3.26	SA	3.56	SA

Legend: 3.26 - 4.00 Strongly Agree (SA), 2.52 - 3.25 Agree (A), 1.76 - 2.50 Disagree (D), 1.00 - 1.75 Strongly Disagree (SD)

Table 4 presents the top two highest-rated waste management practices by customers' waste segregation, with mean scores of 3.50. At the same time, employees rated fast food as actively involved in waste management efforts, with mean scores of 3.70, respectively. This consensus highlights the importance of adequate waste segregation in reducing environmental impact. This finding was supported by Zaman & Lehmann (2011), who state that proper waste segregation enhances recycling rates and reduces landfill waste. Elmedulan et al. (2014) determined the waste management practices adopted by selected fast food chains in Ozamiz City. It found that waste segregation was the most practiced waste management activity, with 98.3% of fast food chains complying with this practice; it also highlighted the importance of proper waste segregation and the challenges faced in implementing efficient waste management procedures.

Table 4 reveals water conservation practices and found that employees rated the implementation of water-saving strategies as the highest, with a mean score of 3.58. It indicates strong internal recognition of these efforts. Customers, however, rated the dual flush system the highest, with a mean score of 3.26, suggesting this specific practice is more noticeable to them. Gleick et al. (2003) have shown that water-saving technologies and practices can significantly reduce water usage in commercial settings. Furthermore, the table shows employees' and customers' highest-rated environmental management practices in implementing comprehensive waste management systems, including recycling programs, composting organic waste, and proper disposal of hazardous materials. Employees rated this practice with a mean score of 3.56, while customers gave it a 3.26. This alignment underscores the importance of a holistic approach to waste management, showing that comprehensive waste management systems can significantly reduce environmental impact (Pires et al., 2011).

Overall, green practices in Dumaguete City's fast-food chains strongly support innovative HVAC systems and waste segregation from employees and customers. However, initiatives like sensor-based lightning, broader reduce, reuse, and recycle programs, and low-flow fixtures need improved implementation and awareness to be more effective. Visible environmental messaging is also crucial for raising awareness and promoting sustainability. In short, targeted, well-implemented, and visible green practices are key to success.

3.5 Challenges Faced by the Employee

Table 5 revealed that the highest-rated challenges faced by employees in fast-food chains are the high implementation and maintenance costs of green initiatives, with a mean score of 2.62, and customer awareness of green practices, with a mean score of 2.74. While employees recognize the financial burden of adopting sustainable practices, they also acknowledge that customers are generally aware of these efforts. Balancing these aspects is crucial for successfully implementing green practices in fast-food chains. This finding is supported by Perrigot et al. (2021), who noted that high implementation and maintenance costs are significant obstacles and underscored the importance of customer awareness in supporting sustainability efforts. Both emphasize balancing financial burdens with effective communication to ensure successful green initiatives in fast-food chains.

Table 5. *Challenges Faced by the Employee*

No.	Indicators	Mean	Interpretation
1	Lack of information in government regulations on environmental management.	1.76	Disagree
2	Lack of information and clarity on environmental legislation.	1.78	Disagree
3	Lack of environmental training for employees.	1.92	Disagree
4	Lack of environmental experts in the organization.	1.94	Disagree
5	Lack of financial, workforce, and equipment resources.	1.92	Disagree
6	Lack of knowledge and guidance about green practices.	1.84	Disagree
7	High implementation and maintenance costs in implementing green initiatives.	2.62	Agree
8	Customer awareness of green practices implemented by fast food.	2.74	Agree
9	Employees have limited environmental awareness.	2.26	Disagree
GWM		2.09	Disagree

Legend: 3.26 - 4.00 Strongly Agree (SA), 2.52 - 3.25 Agree (A), 1.76 - 2.50 Disagree (D), 1.00 - 1.75 Strongly Disagree (SD)

The overall perception of challenges, the Grand Weighted Mean of 2.09, suggests that employees do not strongly perceive these listed challenges as substantial barriers to implementing green practices. It could imply that while there are specific areas needing improvement, employees feel reasonably equipped to handle the implementation of green practices. This positive outlook could be attributed to ongoing training, supportive management, or access to necessary resources (Hillario, 2014).

3.6 Correlation between Green Practices and Challenges Faced by the Respondents

Table 6 presents the relationship between green practices and employees' challenges, revealing a weak but significant negative relationship ($r_s = -0.394$, p -value = 0.005). This statistically significant result at the 0.05 level leads to rejecting the null hypothesis, indicating that as green practices are more widely adopted, the challenges employees encounter tend to decrease. This finding suggests that when employees are trained in green practices, their confidence and capability improve, making tasks like recycling and energy-saving less daunting. Moreover, effective implementation of green practices can streamline processes and reduce logistical challenges, ultimately easing the burden on employees (Elsaied, 2018). By enhancing employee training and support, fast-food chains can create a more sustainable and efficient work environment.

Table 6. *Correlation between Green Practices and Challenges Faced by the Respondents*

Variables Correlated	r_s	Interpretation	P-value	Decision
Challenges Faced	-0.394	Weak Negative	0.005	Reject H_0

Legend: Coefficient of correlation: $\pm$ (0.80 - 1.00) Very Strong Positive/Negative, $\pm$ (0.06 - 0.79) Strong Positive/Negative, $\pm$ (0.4 - 0.59) Moderate Positive/Negative, $\pm$ (0.20 - 0.39) Weak Positive/Negative, $\pm$ (0.00 - 0.19) Very Weak Positive/Negative

3.7 Correlation between the Demographic Profile of the Customers and the Green Practices

Table 7 shows that the correlation between the age of customers and the implementation of green practices in fast food chains in Dumaguete City has a weak positive relationship, indicating a statistically significant < 0.05 level, leading to the rejection of the null hypothesis. It suggests that older customers are more inclined to support and engage in green practices. It could be attributed to increased environmental awareness and responsibility that often comes with age. Older individuals might be more concerned about sustainability and thus more supportive of initiatives that promote environmental protection within fast food chains (Chandel & Gopal, 2019).

On the other hand, the correlation between sex and green practices is the lowest. It was a very weak positive, and the results were not statistically significant > 0.05 . This weak positive relationship suggests no significant difference between male and female customers' support for green practices. Both genders appear equally likely

to engage in and support environmentally friendly initiatives (Chandel & Gopal, 2019). This finding implies that green practices in fast food chains can appeal to and be effective across all genders.

Table 7. Correlation between the Demographic Profile of the Customers and the Green Practices Implemented

Variables Correlated	r_s	Interpretation	P-value	Decision
Age and Green Practices	0.283	Weak Positive	0.047	Reject H_0
Sex and Green Practices	0.105	Very Weak Positive	0.469	Fail to reject H_0
Civil Status and Green Practices	0.179	Very Weak Positive	0.213	Fail to reject H_0
Number of visits to fast food in a month and green practices	0.158	Very Weak Positive	0.273	Fail to reject H_0

Legend: Coefficient of correlation: $\pm$ (0.80 – 1.00) Very Strong Positive/Negative, $\pm$ (0.06 – 0.79) Strong Positive/Negative, $\pm$ (0.4 – 0.59) Moderate Positive/Negative, $\pm$ (0.20 – 0.39) Weak Positive/Negative, $\pm$ (0.00 – 0.19) Very Weak Positive/Negative

3.8 Correlation between Demographic Profile of the Customers and Challenges Faced by the Employee

Table 8 presents the correlation between the demographic Profile of the customers and the challenges faced by employees in fast food chains in Dumaguete City; it found that between age and challenges faced by employees in fast food chains shows a very weak negative correlation, this suggests that as customers get older, the challenges faced by employees slightly decrease. Still, the relationship is not statistically significant, > 0.05 , leading to the failure to reject the null hypothesis, suggesting that age does not have a meaningful impact on employees' challenges. Older customers might be more understanding and patient, potentially reducing employee pressure (Bashir et al., 2021).

Table 8. Correlation between the Demographic Profile of the Customers and Challenges Faced by the Employee

Variables Correlated	r_s	Interpretation	P-value	Decision
Age and Challenges Faced	-0.183	Very Weak Negative	0.204	Fail to reject H_0
Sex and Challenges Faced	-0.042	Very Weak Positive	0.771	Fail to reject H_0
Civil Status and Challenges Faced	-0.135	Very Weak Negative	0.349	Fail to reject H_0
Number of visits to fast food in a month and challenges faced	-0.174	Very Weak Negative	0.228	Fail to reject H_0

Legend: Coefficient of correlation: $\pm$ (0.80 – 1.00) Very Strong Positive/Negative, $\pm$ (0.06 – 0.79) Strong Positive/Negative, $\pm$ (0.4 – 0.59) Moderate Positive/Negative, $\pm$ (0.20 – 0.39) Weak Positive/Negative, $\pm$ (0.00 – 0.19) Very Weak Positive/Negative

On the other hand, the correlation between sex and challenges faced by employees shows a very weak positive relationship, indicating that it is not statistically significant > 0.05 , leading to the failure to reject the null hypothesis. It suggests no significant difference between male and female customers regarding the challenges they present to employees, as both genders are equally likely to affect employees' work environment (Johnson & Smith, 2017).

3.9 Correlation between the Demographic Profile and the Green Practices by the Employee

Table 9 shows the correlation between the demographic Profile and green practices by the employees; the data found a very weak positive correlation between sex and green practices. This means that sex has a minimal influence on green practices, and the correlation is not statistically significant. The demographic variables (age, sex, civil status, job position, and years of experience) have a very weak correlation with green practices, whether positive or negative. Additionally, all the p-values are above the commonly used significance level of 0.05, leading to the decision to fail to reject the null hypothesis in each case. It suggests that none of the demographic factors are significantly related to the green practices of the employees in this study. This finding is supported by Chandel & Gopal (2019), as they show that demographic factors are often explored in green consumer behavior; they also reveal that the findings are usually inconsistent and sometimes contradictory; both findings point to the same conclusion that demographics alone are not strong predictors of green behavior.

Table 9. Correlation between the Demographic Profile and the Green Practices by the Employee

Variables Correlated	r_s	Interpretation	P-value	Decision
Age and Green Practices	0.086	Very Weak Positive	0.555	Fail to reject H_0
Sex and Green Practices	0.180	Very Weak Positive	0.212	Fail to reject H_0
Civil Status and Green Practices	-0.073	Very Weak Negative	0.613	Fail to reject H_0
Job Position and Green Practices	0.139	Very Weak Positive	0.337	Fail to reject H_0
Years of Experience and Green Practices	0.155	Very Weak Positive	0.283	Fail to reject H_0

Legend: Coefficient of correlation: $\pm$ (0.80 – 1.00) Very Strong Positive/Negative, $\pm$ (0.06 – 0.79) Strong Positive/Negative, $\pm$ (0.4 – 0.59) Moderate Positive/Negative, $\pm$ (0.20 – 0.39) Weak Positive/Negative, $\pm$ (0.00 – 0.19) Very Weak Positive/Negative

3.10 Correlation between the Demographic Profile and the Challenges Faced by the Employee

Table 10 revealed a correlation between the demographic Profile and the challenges faced by the employees that years of experience have the highest significant correlation with the challenges faced by employees in

implementing green practices in fast food chains in Dumaguete City, showing a weak positive correlation and a statistically significant 0.05 level, leading to the rejection of the null hypothesis. It indicates that employees with more years of experience tend to face more challenges when implementing green practices. This finding is supported by the study of Elsaied (2018), who found that a lack of knowledge among managers and employees was a significant barrier to green practices and that employees with more experience reported facing greater challenges in implementation.

Table 10. *Correlation between the Demographic Profile and the Challenges Faced by the Employee*

Variables Correlated	r_s	Interpretation	P-value	Decision
Age and Challenges Faced	0.208	Very Weak Positive	0.146	Fail to reject H_0
Sex and Challenges Faced	-0.178	Very Weak Positive	0.215	Fail to reject H_0
Civil Status and Challenges Faced	0.2060	Very Weak Positive	0.151	Fail to reject H_0
Job Position and Challenges Faced	-0.074	Very Weak Positive	0.608	Fail to reject H_0
Years of Experience and Challenges Faced	0.332	Weak Positive	0.019	Reject H_0

Legend: Coefficient of correlation: $\pm$ (0.80 – 1.00) Very Strong Positive/Negative, $\pm$ (0.06 – 0.79) Strong Positive/Negative, $\pm$ (0.4 – 0.59) Moderate Positive/Negative, $\pm$ (0.20 – 0.39) Weak Positive/Negative, $\pm$ (0.00 – 0.19) Very Weak Positive/Negative

4.0 Conclusion

The socio-demographic Profile of fast-food customers in Dumaguete City indicates that most are single, female, and young, and visit the store twice a month. The demographics affect the execution of green strategies by fast-food chains. Similarly, employees are mainly young adults, many of whom are students or new graduates looking for part-time jobs. They are female and single, working as cashiers, cooks, and servers. This dynamic labor force offers scope for innovation but also emphasizes the necessity for better employee development and retention policies. Moreover, most fast-food chains in the city are franchise outlets with 21–30 workers and have been operating for 1–3 years, providing a setting conducive to embracing standardized and green practices.

Employees and customers considered innovative heating, ventilation, and air-conditioning (HVAC) systems and waste segregation the most effective green initiatives, with reduce-reuse-recycle schemes, low-flow devices, and sensor-controlled lighting rated lower. This indicates that while some green practices are well executed, others need increased attention and reform. The most significant challenge staff encounter is making customers aware of green practices despite perceiving they are well educated about government environmental laws. Enhancing communication initiatives and informing customers about sustainability would further aid green causes. Also, a negative but weak correlation was found between green practices and challenges for employees, such that when more environmentally friendly practices are implemented, operational challenges are reduced.

Correlation analysis found that older customers are slightly more supportive of green causes, though male customers did not notably differ from female customers. Age also contributed marginally to employees' difficulties, which implies that demographic factors do not strongly influence environmental behavior. Similarly, employees' socio-demographic profiles also presented a weak association with green practice, suggesting that experience and occupation do not reliably predict compliance with sustainability strategies. Nonetheless, staff with longer years of experience indicated more challenges, highlighting the necessity for tenure-specific training and support. Fast-food chains in Dumaguete City must improve green practices by enhancing customer awareness, supporting employee training based on experience, and addressing sustainability gaps in their operations.

5.0 Contribution of Authors

Ryan O. Tayco: conceptualization, writing original draft, writing review and editing, data analysis
Donaliza M. Caingcoy: writing original draft, writing review and editing, data analysis, data gathering
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7.0 Conflict of Interest

Non-Declared

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