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PREFACE

In every aspect of our life, including technology, social policy, healthcare, and education, research is essential. It is an investigative process with the goals of extending knowledge, solving issues, and improving our comprehension of the world. The advancement of civilization and the creation of novel concepts, inventions, and technologies depend on research. This is enhanced, if not threatened by the advent of Artificial Intelligence.

AI has made it feasible to computationally evaluate enormous data volumes and spot intricate relationships and patterns. AI, which increases human intellect, has the potential to transform scientific inquiry and, in the years to come, bring in a new age of scientific discovery. Large volumes of data can be swiftly analyzed by AI algorithms, which can also spot trends that you would miss. This makes it possible for you to comprehend complicated data sets more fully, identify correlations between variables more quickly, and make crucial judgments and suggestions that you would have overlooked otherwise.

Furthermore, all research-related learning, with or without the aid of AI, promotes both professional and personal development by enabling researchers to deepen their areas of competence and broaden their knowledge. For researchers and students, learning new research techniques may help you take on more challenging projects, do excellent work, and become recognized in your profession. Hence, on going development in the field of research and innovation will continue to serve an essential part of national development while promoting personal and professional growth, inside and outside of the academe.

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Abstract — Minalungao National Park, a 2,018-hectare natural reserve in Nueva Ecija established in 1977, is known for its limestone formations, emerald river waters, and diverse biodiversity. This study evaluated the park's sustainability practices and their effectiveness in maintaining ecological integrity while supporting surrounding communities.

Guided by the Triple Bottom Line (TBL) framework, the research examined the environmental, social, and economic dimensions of sustainability, aligning its assessment with the relevant Sustainable Development Goals (SDGs). These include SDG 6 and SDG 14 through initiatives related to Peñaranda River management; SDG 8 and SDG 11 through local economic and community development; SDG 12 through visitor and waste-management efforts; SDG 13 through climate-responsive activities; and SDG 17 through partnerships among local government units. A descriptive quantitative research design was employed, utilizing survey questionnaires administered to 25 respondents: 9 personnel from the Department of Tourism (DOT) and 16 members of the Samahang Makakalikasan ng Minalungao (SUMAMI). Data were analyzed through frequency, percentage, weighted mean, and ANOVA to determine significant differences between groups. Results showed that the social dimension yielded the highest mean ratings, reflecting strong cultural preservation, community participation, and stakeholder collaboration. Conversely, the economic dimension obtained the lowest ratings, indicating the need for enhanced livelihood opportunities and better reinvestment of tourism revenues. The study concludes that while social sustainability practices are relatively strong, economic initiatives require further improvement.

It recommends strengthening livelihood programs, promoting local products, and enhancing interagency and community partnerships to ensure long-term sustainable development in Minalungao National Park.

Keywords* — *Sustainability Practices, Environmental Aspect, Social Aspect, Economic Aspect, Governance and Management

I. Introduction

National parks in the Philippines are designated protected areas established to conserve the country's rich biodiversity, maintain natural landscapes, and support sustainable tourism across diverse ecosystems. These parks are part of the country's National Integrated Protected Areas

System (NIPAS) and are managed under the Department of Environment and Natural Resources (DENR) to balance ecological protection with responsible public access and livelihood opportunities for local communities (Mole, 2025).

Minalungao National Park in Nueva Ecija, Philippines, is a 2,018-hectare natural reserve known for its stunning limestone formations, clear blue rivers, and rich biodiversity (Wikipedia, n.d.). Established in 1977, it offers various outdoor activities, including trekking, kayaking, and rock climbing (Chescadventures, 2024). The Peñaranda River, renowned for its emerald waters, is a popular recreational spot for visitors (Lakbay Pinas, 2024). The Park also holds cultural significance for local communities, as it is rich in history and folklore (The Outcast Journey, 2024). With its accessible location and breathtaking landscapes, Minalungao National Park is an ideal destination for those seeking to immerse themselves in the natural beauty of the Philippines (Lakbay Pinas, 2024).

The Minalungao National Park is jointly managed by the municipalities of Gapan and General Tinio in Nueva Ecija. This shared governance reflects the park's unique geographical location, straddling the boundaries of these two localities. The collaborative management approach presents both opportunities and challenges, requiring effective coordination and resource sharing between the municipalities to ensure the sustainable preservation and responsible tourism development of this significant natural area. Further research is needed to assess the efficacy of this shared governance model in balancing environmental protection with the economic benefits derived from tourism.

Sustainability practices encompass the responsible utilization and preservation of resources to ensure their availability for future generations while meeting present needs. These practices involve strategic initiatives aimed at long-term environmental, social, and economic stability. Effective implementation requires a forward-looking approach that integrates resource conservation, ecological stewardship, and sustainable development. Key examples include participation in environmental conservation programs, advocacy for renewable energy adoption, waste reduction strategies, and support for local economies. Ultimately, sustainability practices prioritize intergenerational equity by fostering responsible resource management and the preservation of ecosystems.

Minalungao National Park in General Tinio, Nueva Ecija, is committed to sustainability and supports multiple Sustainable Development Goals. It contributes to SDG 6: Clean Water and Sanitation by implementing sustainable water management practices, SDG 8: Decent Work and Economic Growth by fostering sustainable tourism, SDG 11: Sustainable Cities and Communities by preserving cultural and natural heritage, and SDG 12: Responsible Consumption and Production through eco-friendly initiatives.

The Park also supports SDG 13: Climate Action, which aims to combat climate change and its impacts. Additionally, it contributes to SDG 14: Life Below Water, which focuses on conserving and sustainably using the oceans, seas, and marine resources. The Park also supports SDG 17: Partnerships for the Goals through partnerships enhancing conservation and sustainable tourism. By integrating these sustainability efforts, Minalungao National Park strengthens its role in environmental protection, economic development, and tourism enhancement, securing long-term benefits for both nature and the community.

Sustainable tourism is designed to minimize environmental degradation while maximizing social and economic benefits. However, many national parks face significant challenges, including overcrowding, inadequate infrastructure, and ineffective policies, all of which threaten ecological sustainability. Killen (2023) noted that in Yellowstone National Park (USA), visitor education and controlled access are crucial to reducing environmental damage. Similarly, Brett (2022) highlighted the issue of overtourism at Kruger National Park (South Africa), were excessive visitation places immense pressure on local ecosystems and infrastructure, underscoring the need for effective tourism. policies.

Another challenge faced by national parks globally is the coexistence of visitors and wildlife. Geng (2021) addressed the need for strategic management in Banff National Park (Canada) to balance ecological protection with tourism demand. Similarly, Maestro et al. (2024) examined the management practices at Galápagos National Park (Ecuador), where maintaining biodiversity while supporting tourism-related activities is key to sustainable tourism development.

The importance of strong policies and enforcement mechanisms is also seen in studies on national parks in countries like Pakistan and Kazakhstan. Javeed et al. (2024) argued that robust policy enforcement is necessary for ensuring biodiversity conservation, a sentiment echoed by Aktymbayeva et al. (2023) in their study of KatonKaragay National Park (Kazakhstan), where tourism carrying capacity assessments are vital for maintaining ecological balance. Guo et al. (2021) in China's Qingzang National Park Cluster emphasized the role of spatial planning in fostering sustainable development, which also impacts local communities.

Similarly, research in the Czech Republic national parks shows that well-managed tourism can directly contribute to biodiversity conservation (Dvořáková, 2020). Furthermore, Ainebyona et al. (2025) examined Kibale National Park (Uganda), noting that understanding local communities' motivations and barriers is crucial for fostering sustainable practices.

Literature Review

National parks are large, mostly untouched areas that are set aside to protect unique natural and scenic landscapes that are important on a national or international level. Their primary purpose is to serve scientific, educational, and recreational needs. The establishment and management of these protected areas are governed by two key legislative acts: Republic Act No. 7586, the National Integrated Protected Areas System.

(NIPAS) Act of 1992, and its expansion, Republic Act No. 11038, the Expanded NIPAS (E-NIPAS) Act of 2018. Both NIPAS and E-NIPAS define protected areas as land and water parcels reserved due to their unique physical and biological importance, managed to promote biodiversity and safeguard against destructive human exploitation.

Additionally, Republic Act No. 5100 (1967) officially declared Minalungao National Park as a protected area to preserve its unique limestone formations, the Peñaranda River, and its rich biodiversity. This law aimed to safeguard the park from destructive activities while promoting its potential as a site for nature-based tourism and recreation. Today, Minalungao remains a vital natural attraction in Nueva Ecija, balancing conservation efforts with sustainable tourism development. This study examined the sustainable practices of Minalungao National Park in General Tinio, Nueva Ecija, by analyzing both dependent and independent variables.

The independent variables comprised the park's profile, including its location, land area, climate and season, and terrain and landscape features.

Statement of the Problem

This study aimed to determine the current Sustainability Practices implemented by the Minalungao National Park in General Tinio, Nueva Ecija as a tourist spot.

Specifically, it sought to answer the following questions:

1. What is the profile of the park in terms of:

   a. Location;

   b. Land Area;

   c. Climate and Seasonal; and

   d. Terrain and Landscape Feature?

2. What is the sustainability of Minalungao National Park by the Government of Gapan and General Tinio in terms of:

   a. Environmental Aspect;

   b. Social Aspect;

   c. Economic Aspect; and

   d. Governance and Management?

3. What are the problems encountered in Minalungao National Part in terms of

    a. Governance and Management; and

    b. Resources?

4. Is there a significant relationship between the sustainable practices implemented by the Minalungao National Park across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the research design and strategy, population and locale of the study, data-gathering tool, data-gathering procedures, validation of the instrument, statistical treatment of data, and ethical consideration.

Research Design and Strategy

The researchers employed a descriptive research design using a survey questionnaire. This method was selected as the most appropriate approach for gathering data to assess the sustainability of Minalungao National Park in General Tinio, Nueva Ecija.

Descriptive research examined the sustainability of Minalungao National Park, focusing on environmental preservation, social impact, and economic benefits. Data were collected through a structured questionnaire. Quantitative research was utilized as a systematic method to analyze numerical data from a specific population sample in order to investigate opinions, behaviors, and attitudes (Mohajan, 2020).

Population and Locale of the Study

The research respondents consisted of Department of Tourism (DOT) employees in General Tinio, Nueva Ecija, and all members of SuMaMi (Samahang Makakalikasan Minalungao) in Minalungao National Park. The total number of respondents was determined by the combined population of DOT employees and SuMaMi members. Selection was based on complete enumeration, ensuring the inclusion of all individuals due to their knowledge, experience, and involvement with Minalungao National Park.

Data Gathering Tool

The researchers employed a survey questionnaire as the primary tool for collecting data on the study variables. The instrument was required to be both reliable and valid. The questionnaire was divided into three sections: the first focused on the park's profile, the second addressed the sustainable practices implemented by Minalungao National Park, and the third examined the problems encountered by the park. The survey questionnaire was validated by three experts to ensure its validity.

The survey included descriptive interpretations for sustainable practices, using a Likert scale with the following ratings: (4) "Highly Sustainable," (3) "Moderately Sustainable," (2) "Sustainable," and (1) "Not Sustainable." Similarly, the problem section used descriptive interpretations of severity: (4) "Very Serious," (3) "Serious," (2) "Somewhat Serious," and (1) "Not Serious."

Validation of the Instrument

The questionnaire checklist was administered to the evaluators, and the validation process was conducted by a critic reader and a statistician. To determine the validity of the instrument used in this study, Validator A, Validator B, and Validator C, served as validators due to their expertise in the field. The validators employed a content validation checklist to assess the suitability of the questionnaire for data collection. Upon completion of the validation process, the validators concluded that the questionnaire checklist was appropriate and recommendable for use as a data-gathering instrument.

The results of the validation are presented below:

Validator	Mean	Description
Validator A	4.57	Excellent
Validator B	4.43	Excellent
Validator C	4.57	Excellent
Average Weighted Mean	**4.52**	**Excellent**

Legend:

Statistical Range	Descriptive Equivalent
4.21-5.00	Excellent
3.41-4.20	Very Good
2.61-3.40	Good
1.81-2.60	Fair
1.00-1.80	Poor

Data Gathering Procedure

The researchers formally requested permission from the designated staff of the Department of Environment and Natural Resources (DENR), members of Samahang Makalikasang Minalungao (SuMaMi-an organization related to park conservation), and employees working within Minalungao National Park.

They consulted their adviser regarding the appropriate steps for data collection. The nature of the study was explained to ensure full cooperation from the Department of Tourism (DOT) and SuMaMi.

The researchers distributed questionnaires through face-to-face surveys to the DOT employees and SuMaMi members. The questionnaires were administered directly by the researchers, who meticulously followed the prescribed instructions.

After collecting all completed questionnaires, the researchers compiled and tabulated the data. They then analyzed the responses to assess the sustainable practices of Minalungao National Park in General Tinio, Nueva Ecija.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings derived from the data collected during the research study titled An Assessment on the Sustainability of Minalungao National Park in Nueva Ecija.

Table 1
Profile of Minalungao National Park
n=25

Variable	Indicators	Frequency	Percent
LOCATION			
	14 km. away from General Tinio Municipal Hall	21	84.0
	15 km. away from General Tinio Public Market	1	4.0
	3. 8 km. from Barangay Pias Barangay Hall	3	12.0
LAND AREA			
	1,000-2,000 hectares	25	100.0
CLIMATE AND SEASONAL			
	Dry and hot all year	1	4.0
	Two distinct seasons (dry and rainy)	21	84.0
	Mostly Rainy	3	12.0
PEAK SEASON			
	January	5	20.0
	February	5	20.0
	March	15	60.0
	April	13	52.0
	May	9	36.0
	Jun	8	32.0
	August	1	4.0
	September	3	12.0
	October	5	20.0
	November	3	12.0
	December	6	24.0
TERRAIN AND LANDSCAPE			
	River with limestone formations	24	96.0
	Mountainous	7	28.0
	Forested areas	5	20.0
	Plains/grasslands	4	16.0
	Trails and caves	7	28.0

The profile included location, land area, climate and seasonality, peak season, and terrain and landscape, with the corresponding frequency counts (f) and percentages (%) for each category. Each variable was interpreted and analyzed individually. A total of twenty-five respondents participated, resulting in a total frequency count of 100% for each variable.

Location. In terms of location, the majority of respondents, 21 out of 25 (84.0%), indicated that the site was 14 km away from the General Tinio Municipal Hall.

This was followed by three respondents (12.0%) who reported a distance of 8 km from the Barangay Pias Barangay Hall. Lastly, one respondent (4.0%) stated that the site was 15 km from the General Tinio Public Market. These findings reinforce that most respondents agreed the site was 14 km from the Municipal Hall, indicating a strong consensus on the location. Such agreement among Department of Tourism employees and SUMAMI members is essential for consistent communication and logistical planning related to the park. This shared understanding supports effective promotion and visitor guidance, ensuring accurate expectations and ease of access for tourists.

According to the study conducted by Pilving (2021), agreement among stakeholders on spatial or locational information is crucial to ensure coherent tourism marketing, visitor guidance, and logistical arrangements. A shared understanding of a site's exact distance and accessibility from key landmarks reduces confusion, strengthens place identity, and provides consistency in destination promotion.

Such consensus facilitates smoother planning processes, helps manage visitor expectations, and enhances the overall tourist experience by ensuring clarity and accuracy in information dissemination.

Land Area. The table showed that all 25 (100%) respondents reported Minalungao National Park's land area to be within 1,000–2,000 hectares, consistent with the published estimate of approximately 2,018 hectares. Republic Act No. 5100 (1967) established Minalungao National Park in the Province of Nueva Ecija, covering around 2,018 hectares. The Act withdrew this land from sale, settlement, or other dispositions while respecting existing private rights.

Table 2
Sustainability of Minalungao National Park in terms of Environmental Aspect
n=25

Indicators	**WM**	**DE**
1. Proper waste segregation and disposal are throughout the park	3.21	MS
2. Use of eco-friendly materials and alternatives from single-used plastics is encouraged.	3.11	MS
3. Reforestation or tree-planting activities is being done regularly	2.96	MS
4. Conservation of natural resources are applied in park operations.	2.99	MS
5. Biodiversity is protected through designated zones.	2.99	MS
Total Weighted Mean	**3.05**	**MS**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Sustainable (HS)
2.51 – 3.25	Moderately Sustainable (MS)
1.76 – 2.50	Sustainable (S)
1.00 – 1.75	Not Sustainable (NS)

The sustainability practices of Minalungao National Park in Nueva Ecija, in terms of environmental aspect observed by DOT and SUMAMI respondents, with a total weighted mean of 3.05 and the descriptive equivalent of Moderately Sustainable (MS). The results indicate that the park is doing fairly well in protecting the environment, but it needs stronger, more consistent, and more comprehensive sustainability measures to become highly sustainable.

The first indicator, *"Proper waste segregation and disposal are throughout the park,"* obtained the lowest mean of 3.21, which is described as Moderately Sustainable (MS). This demonstrated that the park is trying to manage waste properly, but the implementation is not strong or consistent, showing the need for improvement in waste segregation and disposal practices.

Table 3
Problems Encountered in Minalungao National Park in terms of Governance and Management
n=25

Indicators	WM	DE
1. Coordination among government agencies managing the park.	2.46	SS
2. Enforcement of rules and regulations.	2.15	SS
3. Training for park staff and personnel.	2.33	SS
4. Long-term sustainable tourism strategy.	2.25	SS
5. Stakeholder involvement in decision-making.	2.21	SS
6. Political interference in park operations and policies.	2.38	SS
7. Communication between management and local communities.	2.26	SS
8. Jurisdiction or authority in park governance.	2.31	SS
9. Visitor management during peak seasons.	2.26	SS
10. Response to park-related issues and concerns.	2.23	SS
Total Weighted Mean	**2.29**	**SS**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Very Serious (VS)
2.51 – 3.25	Serious (S)
1.76 – 2.50	Somewhat Serious (SS)
1.00 – 1.75	Not Serious (NS)

The governance and management issues encountered in Minalungao National Park, as assessed by the Department of Tourism (DOT) and SUMAMI, recorded a total weighted mean of 2.29, corresponding to a descriptive equivalent of "Somewhat Serious" (SS). This suggested that, although structural and operational challenges existed, they were not perceived as severely affecting park functionality. Nevertheless, the results highlighted the need for institutional strengthening to enhance administrative effectiveness.

The most significant concern was identified in indicator 1, *"Coordination among government agencies managing the park,"* which received the highest mean score of 2.46, interpreted as "Somewhat Serious" (SS).

This suggests that administrative efforts are often disconnected and collaboration among agencies remains insufficient, highlighting the need for a more integrated and cohesive management framework to ensure effective park governance (Bonatti et al., 2023).

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions drawn from the study aimed to identify the sustainability of Minalungao National Park in Nueva Ecija. It also offers recommendations for staff management to consider. Minalungao National Park is characterized by its strategic location within the municipality of General Tinio and its extensive land area, which supports diverse natural resources. Its two-season climate and prominent natural features, particularly the Peñaranda River and limestone formations, play a vital role in shaping the park's ecological significance and attractiveness as a tourism destination.

The overall assessment indicates that the park demonstrates stronger sustainability performance in the social and environmental aspects. Active community involvement, cultural preservation, and conservation initiatives contribute positively to sustainable park operations. However, the economic aspect, governance, and management remain less developed, suggesting the need for improved revenue utilization, enhanced livelihood support, and more effective coordination among stakeholders. The sustainability of the park is constrained primarily by financial and resource-related limitations. Insufficient funding, limited facilities, and inadequate monitoring tools hinder maintenance efforts and community-based initiatives.

Governance and management challenges, including weak inter-agency coordination, inconsistent policy enforcement, and limited stakeholder engagement, further affect the effective implementation of sustainability programs. Seasonal variations and climate conditions influence the consistency of sustainability practices in the park. These factors significantly affect environmental protection measures, social programs, and governance activities, indicating the need for adaptive planning and flexible management strategies to sustain performance throughout the year. The research aimed to enhance the understanding of sustainability at Minalungao National Park. To further support this objective, the following recommendations are proposed. To address the lowest-performing environmental indicators, the park management should strengthen waste management practices by increasing the number of waste segregation bins in high-traffic areas, intensifying information campaigns on proper waste disposal, and institutionalizing regular cleanup drives in partnership with local volunteers and organizations. To improve the lowest-rated component under the social aspect, the park should enhance visitor education and community awareness programs. Regular orientations, guided tours emphasizing cultural heritage, and interpretive activities can be conducted to promote responsible visitor behavior and strengthen appreciation of local culture. To strengthen economic sustainability, the park should expand its support for local businesses and income-generating activities. This may include providing skills training for local vendors, creating additional livelihood opportunities, and ensuring transparent and equitable distribution of tourism-related revenues to benefit the surrounding community. To address weaknesses in governance and management, the park should improve coordination among involved agencies and stakeholders. Conducting regular coordination meetings, establishing unified operational guidelines, and clearly defining roles and responsibilities can help ensure consistent implementation of park policies and programs. To improve governance-related performance, it is recommended that the park develop a structured monitoring and evaluation system. This system should include clear performance indicators, scheduled assessments, and feedback mechanisms to enhance accountability and support evidence-based decision-making. To resolve resource-related constraints, the park should prioritize the acquisition of essential environmental monitoring equipment and maintenance resources. Strengthening partnerships with local government units, private institutions, and environmental organizations can help secure funding or donations, while adopting cost-efficient maintenance strategies can ensure long-term sustainability.

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Tourism Challenges and Practices in San Juan Beach

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Abstract — San Juan, La Union, known as the "Surfing Capital of the North," is home to Urbiztondo Beach, a premier destination renowned for its surf culture, scenic coastline, and vibrant tourism industry. Tourism creates income opportunities and boosts the local economy; however, it also brings challenges that affect businesses, residents, and the environment. This study employed a quantitative research design to investigate both the challenges faced and the sustainable practices adopted by harming businesses in San Juan Beach. A total of 100 respondents, comprising business owners and managers, participated in the survey.
Data were analyzed using the Spearman Rank Correlation to identify differences and patterns. Findings revealed that high utility costs represent the most significant economic challenge, while rising property and rental prices moderately affect the social dimension by displacing residents. Environmental challenges persist, particularly tourists' noncompliance with the CLAYGO policy, necessitating stricter enforcement and enhanced awareness campaigns. Conversely, sustainable practices were strongly evident. These include employing residents to strengthen community livelihood, promoting respectful tourist behavior to preserve cultural values, and adhering to environmental regulations to support conservation efforts. The study further found no significant relationship between the challenges encountered and practiced implemented across economic, social, and environmental dimensions. Despite this, the robust application of sustainable practices contributes to long-term growth of tourism. Based on these results, the researchers recommend adopting energy-efficient systems, collaborating on housing initiatives, educating tourists, balancing business interests and investments, and developing community programs to support sustainable tourism development in San Juan, La Union.

Keywords — Economic, Environmental, Social, Tourism Challenges, Tourism Practices

I. Introduction

San Juan, La Union, located in the southwestern part of the Ilocos Region in Luzon, Philippines, is a renowned destination for its beautiful coastline and vibrant surf culture. According to Wikipedia, La Union is bordered by Ilocos Sur to the north, Pangasinan to the south, Benguet to the east, and the South China Sea to the west. It lies 273 kilometers north of Metro Manila and 57 kilometers northwest of Baguio City. Within this province is Urbiztondo Beach, a hidden gem celebrated for its picturesque sunsets, laid-back atmosphere, and adventurous waves. Urbiztondo Beach is the go-to destination for surfers and beachgoers, offering a perfect blend of relaxation and excitement, complemented by its vibrant local culture and friendly locals.

San Juan, known as the "Surfing Capital of the Northern Philippines," is fixed in its consistent intermediate-quality surf and two distinct surfing seasons, from July to October and November to March. Its rise to fame began in the 1970s when Kazuo "Aki" Akinaga discovered its surfing potential, as noted in historical accounts. Akinaga introduced and promoted the sport locally spreading the word among foreigners and building the area's reputation. Urbiztondo Beach in San Juan, La Union, continues to attract surfers and travelers alike, solidifying its status as a premier destination in the Philippine.

Urbiztondo Beach, located in San Juan, La Union, and commonly known as Elyu, has become a prominent coastal destination in the Philippines. Renowned as the surfing capital of the country, it attracts both local and international tourists with its consistent waves, lively surfing culture, and relaxed ambiance.

Urbiztondo Beach is particularly popular among surfers of all experience levels. Aside from surfing, Elyu is also known for its beachfront cafes, accommodations, and easygoing atmosphere, making it a favored weekend destination.

Sustainable beach practices focus on minimizing the environmental and social impacts of tourism and beach activities by preserving ecosystems and supporting communities in long term. These practices promote the responsible use of resources and encourage eco-friendly tourism to maintain the natural beauty and ecological balance of Urbiztondo Beach. Educating visitors and stakeholders about sustainable practices fosters community involvement and long-lasting positive change, helping beaches remain resilient and enjoyable for future generations.

Urbiztondo Beach in San Juan, La Union, promotes sustainable tourism, environmental preservation, and facility improvements in line with SDG 11 (Sustainable Cities and Communities), which aims to create inclusive, safe, resilient, and sustainable cities and communities. It includes providing accessible public areas, responsible waste management, and eco-friendly transit options. The beach also seeks to protect biodiversity and natural resources while promoting sustainable economic growth. Beaches are essential to SDG 06 (Water and Sanitation), ensuring water quality is maintained and sustainable management for all. SDG 13 (Climate Action), which focuses on eco-friendly initiatives that address coastal erosion and rising sea levels. These sustainable practices are closely linked to SDG 14 (Life Below Water), emphasizing responsible waste management and sustainable tourism to protect marine biodiversity and maintain water quality.

Similarly, SDG 15 (Life on Land), highlights the importance of preserving coastal ecosystems by preventing habitat destruction, managing invasive species, and integrating biodiversity conservation into local policies. These sustainable practices also align with SDG 8 (Decent Work and Economic Growth), ensuring that tourism-driven employment supports long-term environmental sustainability. Furthermore, SDG 12 (Responsible Consumption and Production), examines how businesses and tourists contribute to sustainability through waste reduction, eco-friendly accommodations, and the use of sustainable materials, reinforcing the balance between tourism and environmental responsibility.

San Juan, La Union, particularly Urbiztondo Beach, integrates sustainable practices to maintain its appeal as a premier surfing destination while protecting its environment. One key framework influencing water quality management in the area is Republic Act No. 9275, also known as the Philippine Clean Water Act of 2004. This act aims to protect the country's water bodies, including coastal waters, from pollution, ensuring clean and safe water for beaches and other coastal areas.

It emphasizes the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystems. Marine debris, primarily plastics and other non-biodegradable materials, poses significant threats to marine life and human health (Galgani et al., 2022). Microplastics, which are small plastic particles, have gained growing attention because of their presence in the human food chain and their potential role in carrying chemical contaminants. However, most (59 %) published studies on the prevention and control of plastic waste appear to focus on micro plastics already present in the aquatic environment (Schmaltz et al., 2020).

Over the past few decades, dune, beach, and shoreface nourishment have been termed an environmentally friendly alternative or addition to complicated coastal protection structures such as groins, revetments, or breakwaters (Schoonees et al., 2019). In sustainable beach management, the emphasis is on understanding and managing the multidimensional nature of beaches, considering their ecological, social, and economic aspects. This includes taking into account tourists' needs, perceptions, and preferences regarding beach quality and ensuring that these elements are preserved or enhanced through appropriate management interventions (Gounden, 2021). Managing beaches sustainably is essential to preserving the ecological integrity of beach habitats while encouraging travel-related activities (Rodil et al., 2022).

Nevertheless, collecting marine debris remains challenging, which leads to it being left stranded on beaches for long periods and having a negative impact on coastal ecosystems (Kong et al., 2023). As a result, research examining the relationships between perceived beach attractiveness, beach experiences, and revisit intentions at coastal destinations remains limited, particularly in sub-Saharan Africa and Ghana, where beach tourism is experiencing growth (Dzitse et al., 2023). The United Nations (UN) declared 2002 as the International Year of Ecotourism and 2017 as the Year of Sustainable Tourism.

As stated by G. Reddy Kishan et al. (2022) developed a national approach to eco-friendly travel, characterising it as "tourism that takes full a description of its present and future Environmental, social, and economic effects, attending to the requirements of tourists, business, environment, and host community.

Since the livelihoods of coastal communities depend significantly on the involvement of key stakeholders at all decision-making levels and on mitigating coastal vulnerabilities, it is crucial to understand how different stakeholders perceive and respond to the impacts of climate change (Mamun et al., 2024; Sultana & Luetz, 2022). These initiatives not only help address the problem at its source but also contribute to government mitigation and enhance regulation. However, it is important to note that there is a significant lack of capacity in plastic waste management across seas, as well as the transport of marine debris to neighboring countries (Purba et al., 2021), encompassing both the public and private sectors. In this context, this study aims to explore how extractive reserves can serve as a management framework to ensure beachgoers' safety and comfort, allowing beach tourism practices to be properly integrated and managed.

Although many factors in beach management (Merino & Prats, 2020), organizing beach clean-ups is a common action to tackle marine debris (Battisti et al., 2020; Catarino et al., 2023). Its presence in the marine environment affects biodiversity, sheries, tourism, and overall marine health. The degradation of these ecosystems from pollution threatens both environmental sustainability and economic activities that rely on their health, such as tourism and shing (Lazzari et al., 2021).

Indicators of the status of freshwater biodiversity, such as the Living Planet Index, have reported declines of over 70% for both anadromous and potamodromous shes (Deinet et al., 2020). One could argue that any progress for human well-being, including biodiversity and its services, will require functioning and healthy freshwater ecosystems, particularly rivers with natural or near-natural, or environmental as a surrogate of the natural condition (Arthington, 2021).

House Bill No. 3412, introduced by Representative Vini Nola A. Ortega during the 17th Congress of the Republic of the Philippines, aimed to declare the municipality of San Juan in La Union as a tourist destination and officially recognize it as the "Surfing Capital of the North." The bill sought to allocate funds for the development of tourism infrastructure and promote San Juan as a key destination for sur ng and related activities. This measure was seen to boost tourism, improve the economy, and provide support for the area's surfing industry.

The growing popularity of beaches has made a distinct impression on the tourism industry, thus accounting for the surge in tourist arrivals. Tourists' interest by different activities that beaches offer, such as diving, surfing, snorkeling, island hopping, kayaking, and more. Beach tourism contributes significantly to the national income of many nations that offer "sun, sea, and sand" tourism (Zielinski & Botero, 2020). Tourists' behavior and perceptions significantly in tourism's impact on the marine ecosystem. Tourists' lack of awareness of environmental issues and unsustainable practices, such as littering and anchoring on coral reefs, can significantly contribute to the degradation of the marine ecosystem (Gösslinget al., 2020).

Literature Review

The objectives of our study are to examine the tourism challenges and practices in San Juan Beach, specifically in the area of Urbiztondo. This research focuses on understanding the experiences of local business owners as they navigate the growing tourism industry, identifying the key issues they face, and evaluating the practices they implement to sustain their operations. By analyzing both the challenges and current strategies, the study aims to provide insights to improve tourism management and promote sustainable development in the area.

The Triple Bottom Line (TBL) theory, introduced by John Elkington in 1994, evaluates organizational performance based on three components: social, environmental, and economic. This theory emphasizes that businesses should not only aim for economic success but also prioritize social responsibility and environmental sustainability. The social component focuses on fair labor practices, community engagement, and ethical conduct, while the environmental component addresses reducing environmental impact through practices like conserving resources and minimizing pollution. The economic component considers the value created for all stakeholders, not just shareholders. This theory was closely related to the study, as it provided a comprehensive framework for analyzing the tourism challenges and practices in Urbiztondo, San Juan Beach, La Union, by evaluating how these initiatives addressed environmental conservation, community well-being, and economic development within the context of sustainable tourism.

Statement of the Problem

This study aimed to determine the Tourism challenges and practices in Urbiztondo, San Juan Beach, La Union.

Specifically, it sought to answer the following research questions:

1. What is the extent of challenges encountered by the businesses in Urbiztondo, San Juan, La Union in terms of:
   a. Economic;
   b. Social; and
   c. Environmental factors?
2. What is the extent of practices implemented by the businesses in Urbiztondo, San Juan, La Union in terms of:
   a. Economic;
   b. Social; and
   c. Environmental factors?

3. Is there significant relationship between the extent of challenges encountered and extent of practices implemented by the businesses in Urbiztondo, San Juan, La Union?
4. Based on the findings, what tourism practices can be enhanced to improve challenges in the future?

II. Methodology

This section describes the research methodology employed to conduct the study. It discusses the research design and strategy, the population and locale of the study, the data gathering tools, data gathering procedures, validation of the instrument, statistical treatments of the data, and ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design using a survey questionnaire. This method was selected as the most appropriate for gathering Data to determine the tourism challenges and practices in Urbiztondo, San Juan Beach, La Union, with the primary goal of developing a balanced approach that respects both the environment and the needs of the local community. Data were collected through a structured questionnaire. Descriptive research provided information based on observation and described phenomena “as they were” using surveys, questionnaires, rubrics, interviews, or rankings (Jennifer Deckert & Margaret Wilson, 2023).

Population and Locale of the Study

The respondents of this study were 100 business owners and managers operating in Urbiztondo, San Juan, La Union. They were selected through purposive sampling, which involved choosing individuals based on their experience, expertise, and training in managing tourism-related businesses in the area.

Urbiztondo was chosen as the study locale due to its strong tourism presence, diverse businesses, and its role as a central hub for accommodations, dining, and activities. This section was developed with the consideration that the respondents could provide valuable insights into their views on the area’s suitability as a tourist destination.

Data Gathering Tool

The researchers employed a survey questionnaire as the primary tool for collecting information on the variables. The instrument used must be reliable and valid. The questionnaire was divided into three sections. The first section examined the challenges encountered by the businesses in Urbiztondo, San Juan, La Union. The second section focused on the practices implemented by the businesses in Urbiztondo, San Juan, La Union. Two experts validated the survey questionnaire to ensure its validity.

For sub-problem number 1, the survey was detailed with descriptive interpretations such as (4) "Highly Challenged," (3) "Moderately Challenged," (2) "Slightly Challenged," and (1) "Not Challenged."

For sub-problem number 2, the survey included descriptive interpretations such as (4) "Highly Practiced," (3) "Moderately Practiced," (2) "Slightly Practiced," and (1) "Not Practiced."

Validation of the Instrument

The questionnaire checklist was administered to the evaluators, while its validation was carried out by a critical reader and a statistician. To establish the validity of the instrument used in this study, three experts in the relevant field served as validators. The validators employed a content validation checklist to assess whether the questionnaire checklist was suitable for use. Upon validation, the validators concluded that the questionnaire checklist was recommendable to use as an instrument for data gathering.

The results of the validation are shown below:

Validator	Mean	Description
Validator 1	4.42	Highly Validated
Validator 2	4.71	Highly Validated
Validator 3	4.14	Validated
Average Weighted Mean	**4.42**	**Highly Validated**

Legend:

Statistical Range	Descriptive Equivalent
4.21-5.00	Highly Validated
3.41-4.20	Validated
2.61-3.40	Moderately Validated
1.81-2.60	Slightly Validated
1.00-1.80	Not Validated

Data Gathering Procedure

The researchers formally requested permission from the business owners and managers in Urbiztondo, San Juan, La Union. They also consulted their adviser regarding the procedures to follow in collecting the data. The nature of the study was explained to ensure full cooperation from the business owners and managers in Urbiztondo, San Juan, La Union.

The researchers administered the questionnaires through face-to-face surveys with the business owners and managers in Urbiztondo, San Juan, La Union. The questions were administered directly by the researchers, who carefully followed the prescribed instructions.

The researchers analyzed the completed questionnaires to achieve the goal of understanding the tourism challenges and practices in Urbiztondo, San Juan Beach, La Union. After collecting all the completed questionnaires, the researchers compiled and tabulated the data.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings derived from the data collected throughout the research on Tourism Challenges and Practices in San Juan, La Union.

Tourism Challenges and Practices in San Juan Beach

The study examines the challenges faced by tourism businesses in Urbiztondo Beach, La Union. These challenges represent the key economic, social, and environmental concerns that influence the daily operations of tourism businesses. By identifying the most common difficulties reported by business owners and managers, the study aims to provide a clearer picture of the factors that hinder sustainable growth within the tourism industry. The results presented in the following tables serve as the foundation for understanding the areas where support, improvement, and intervention may be needed.

Table 1

Extent of challenges encountered by the businesses in Urbiztondo, San Juan, La Union in terms of Economic

n=100

The extent of economic challenges encountered by businesses yielded a total weighted average mean of 2.91, corresponding to the descriptive equivalent of "Moderately Challenged" (MC). This suggests that businesses were generally able to manage these challenges effectively but may have needed additional support or resources to strengthen their resilience and economic performance.

Indicators	WM	DE
1. Fluctuating income due to seasonality (peak vs. off-peak months).	3.24	MC
2. Rising prices of goods and supplies affecting operational costs.	3.13	MC
3. Language barriers make it challenging to communicate effectively with tourist.	2.20	SC
4. High Competition among local businesses (price undercutting, over-saturation).	2.97	MC
5. Insufficient government financial support or subsidies for tourism business.	2.71	MC
6. Expensive (Electricity, water, internet) impacting business operations	3.35	HC
7. Unaffordable regulatory cost for small tourism businesses.	2.76	MC
Average Weighted Mean	**2.91**	**MC**

Legend:

Statitical Range	Descriptive Equivalent
3.26 - 4.00	Highly Challenged (HC)
2.51 - 3.25	Moderately Challenged (MC)
1.76 - 2.50	Slightly Challenged (SC)
1.00 - 1.75	Not at All (NA)

The sixth indicator *"Expensive (electricity, water, internet) impacting business operations"* received the highest mean of 3.35 with the descriptive equivalent of "Highly Challenged" (HC). This indicates that the cost of essential utilities was not merely a minor inconvenience but a critical issue affecting businesses. Addressing this challenge through a combination of policy reforms, infrastructure investments, and business innovation was essential for creating a more resilient, profitable, and competitive local economy.

Malacapay and Tababa (2020) examined how six beach resorts implemented green technology and managed energy and water resources, identifying inefficiencies and areas for improvement in resource usage.

The third indicator, *"language barriers make it challenging to communicate effectively with tourist"* scored the lowest mean of 2.20 and was characterized as "Slightly Challenging" (SC). This implied that language barriers were not considered a significant concern between locals and tourists and were generally manageable.

However, it indicated room for improvement in enhancing communication strategies, particularly for tourists who did not speak widely used languages.

Table 2

Extent of practices implemented by the businesses at Urbiztondo, San Juan, La Union in terms of Economic

n=100

Indicators	WM	DE
1. Offering seasonal discounts and promotions to attract tourists during off-peak months	3.10	MP
2. Partnering with local suppliers and vendors to boost the local sales	3.01	MP
3. Investing in marketing and digital promotions to reach broader tourist markets	3.07	MP
4. Hiring local residents to support employment in the community	3.43	HP
5. Diversifying services (e.g., food, tours, merchandise) to increase revenue streams	3.13	MP
6. Adjusting pricing strategies based on tourist demand and spending capabilities	3.02	MP
7. Reinvesting profits for facility upgrades or community development initiatives	2.93	MP
Average Weighted Mean	**3.10**	**MP**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Practice (HP)
2.51 - 3.25	Moderately Practice (MP)
1.76 - 2.50	Slightly Practice (SP)
1.00 - 1.75	Not Practice (NP)

The extent of practices implemented by businesses regarding economic factors had a total average weighted mean of 3.10, corresponding to the descriptive equivalent of "Moderately Practiced" (MP). The results demonstrated that businesses moderately implemented economic practices. This implied that while some efforts are applied, consistency and stronger initiatives are needed to fully support economic sustainability.

The fourth indicator, *"Hiring local residents to support employment in the community,"* obtained the highest mean of 3.43, with the descriptive equivalent of "Highly Practiced" (HP). The results demonstrated that businesses highly practiced hiring residents.

This implied strong support for community employment, contributing to economic growth and fostering positive relationships between businesses and the community.

Communities can be involved in tourism through entrepreneurship, employment in the tourism sector, collaborations with tourism operators, and participation in tourism-related decisions (Nugroho & Numata, 2020).

The seventh indicator, *"Reinvesting profits for facility upgrades or community development initiatives,"* scored the lowest mean of 2.93 and was characterized as "Moderately Practiced" (MP). The results indicated that reinvesting profits for facility upgrades or community development was only moderately practiced. This implies that businesses gave limited priority to reinvestment, potentially hindering long-term improvements and broader community benefits.

Table 3

Significant relationship between the extent of challenges encountered and extent of practices implemented by the businesses in Urbiztondo, San Juan, La Union

n=100

			Practice Implemented ECONOMIC	**Practice Implemented SOCIAL**	**Practice Implemented ENVIRONMENTAL**
Spearman's rho	**Challenges Encountered ECONOMIC**	**Correlation Coefficient**	.123	.035	-.073
		Sig. (2-tailed)	**.223**	**.729**	**.471**
	Challenges Encountered SOCIAL	**Correlation Coefficient**	.084	-.055	-.146
		Sig. (2-tailed)	**.409**	**.587**	**.146**
	Challenges Encountered ENVIRONMENTAL	**Correlation Coefficient**	.194	.021	.022
		Sig. (2-tailed)	**.053**	**.838**	**.826**

Legend:

R	Strength of Relationship
≤0.20	Slight Relationship
0.21-0.40	Low Correlation, Definite but small
0.41-0.70	Moderate Correlation, Substantial Relationship
0.71-0.90	High Correlation, Marked Relationship
>0 - 1.75	Very High Correlation, Very Dependable Relationship

Table 3 shows the significant relationship between the extent of challenges encountered and the extent of practices implemented by the businesses. The correlation values for the extent of challenges encountered by businesses were economic ($p = .223$), environmental ($p = .053$), and social ($p = .409$).

Since their significance values were greater than 0.05, this indicated that there was no significant relationship between the extent of challenges encountered and the practices implemented by businesses. This suggested that despite facing economic, environmental, or social challenges, businesses maintained and implemented sustainable practices consistently, and these challenges did not significantly affect how the practices were applied.

Similarly, the correlation values for practices implemented by businesses were economic ($p = .223$), environmental ($p = .471$), and social ($p = .429$). Given that these significance values exceeded 0.05, it further indicated no significant relationship between the extent of practices implemented and the challenges encountered by businesses. This demonstrated that businesses in Urbiztondo, San Juan, La Union, were able to sustain their sustainable tourism practices even when confronted with economic, social, and environmental challenges, reflecting resilience and a strong commitment to maintaining these practices.

IV. Conclusion and Recommendations

This chapter summarizes the findings and conclusions drawn from the study aimed at identifying the marketing practices employed in addressing tourism challenges and practices at Urbiztondo, San Juan Beach. It also provides recommendations for staff management to consider. Businesses in Urbiztondo, San Juan, La Union experienced moderate challenges, with economic concerns, particularly high utility costs, emerging as the most pressing issue. The extent of tourism practices implemented was generally strong, with social and environmental practices highly practiced, while economic practices were only moderately applied and require further improvement. The study found no significant relationship between the challenges encountered and the practices implemented, indicating that the level of challenges did not influence how businesses applied their tourism practices. Based on the results, enhancing economic practices is essential to achieve more balanced and sustainable tourism development in Urbiztondo, San Juan, La Union. Based on the results, the researchers made the following recommendations: Businesses in Urbiztondo, San Juan, La Union should address the high cost of utilities by adopting cost-efficient systems or alternative solutions to reduce operational expenses. Businesses in Urbiztondo, San Juan La Union are encouraged to increase reinvestment of profits to strengthen economic practices and support long-term sustainability.

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Understanding the Role of Etag in Cultural Preservation in the Cordillera Administrative Region

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Abstract — Etag, a traditional smoked and salted pork delicacy of the Cordillera region, embodied the deep cultural identity, ancestral heritage, and culinary traditions of the Igorot people. This study aimed to determine the level of customer preferences for Etag cuisine in the Cordillera Administrative Region, particularly at Kasakm'owl or Etag TV Restaurant in La Trinidad, Benguet.
A descriptive research design was employed, utilizing a validated survey questionnaire distributed to 123 respondents, comprising both residents and tourists alike. Data were analyzed using frequency, percentage, weighted mean, t-test, and ANOVA to identify significant differences in preferences over various demographic profiles. Results revealed that most respondents were young adult, educated males from Benguet with stable employment and strong participation in local food culture. Results showed that the highest preference indicator was cultural heritage (3.47), followed by local identity (3.41) and community cohesion (3.36), classified as "Strongly Agree". These results indicated that Etag was highly valued not only for its distinctive flavor but also as a cultural emblem symbolizing pride, unity, and authenticity among the people of the region. Moreover, no significant differences were observed when responses were grouped by age, sex, educational attainment, residency, and source of income, suggesting that appreciation for Etag transcended demographic boundaries. The study concluded that Etag contributed to the preservation of regional identity and social harmony. It recommended collaboration among restaurants, local farmers, producers, cultural agencies, and tourism offices to promote awareness, preserve traditional preparation methods, and sustain Etag as a heritage-based culinary tourism product that reflects and reinforces local pride and cultural significance.

Keywords* — *Etag, Community-based tourism, culinary evolution, Cordillera culture, Culinary Heritage, Cultural Identity, Cultural Preservation Cordillera, Sustainable Development, Traditional Food Practices

I. Introduction

Local food traditions play a central role in society, as they represent a valuable part of people's culture, firmly rooted in their memories. Preserving them by transferring knowledge from older to younger generations is crucial for sustaining the cultural community's identity and local culture (D’Andrea & D’Ulizia; 2023). Furthermore, Traditional foods, often rooted in centuries-old culinary traditions, are deeply embedded in the customs, rituals, and histories of communities, which pass down their knowledge from one generation to the next. Also, Traditional foods are often characterized by their diversity, locally adapted ingredients, and unique preparation methods, making them a treasure trove of culinary heritage (Ghosh et, al; 2023).

Etag, a traditional method of preserving meat, particularly pork, holds profound cultural significance in the Cordillera region of the northern Philippines. This technique, which commonly involves salting and smoking, extends the shelf life of meat for months or even years, which reflects the longstanding traditions of indigenous communities in the region (Dito Sa Pilipinas; 2024). Historically, as exemplified in traditional feasts such as “cañao”, the preservation of surplus meat through smoking was a vital practice deeply ingrained in Cordilleran culture (Bartolome, Ryan Roy; 2024).

Etag is not merely a food source; it functions as a symbol of cultural identity and resilience within the region (Seng-Guan Yeoh; 2024).

Understanding cultural preservation, especially for culturally significant items like Etag, is essential for several reasons. As the culinary landscape evolves and interacts with global influences, consumption patterns of traditional foods may shift. Identifying the aspects of Etag and its preparation that resonate with consumers can inform initiatives aimed at preserving and promoting this culinary heritage (Nyarota, M. et al; 2022). Moreover, for local food establishments and emerging culinary ventures within the Cordillera Administrative Region, insights into customer preferences for Etag cuisine can guide menu development, marketing strategies, and overall business practices (Sebullen et al; 2024).

The study of food history plays a crucial role in conserving cultural traditions and sustaining local and international culinary practices. Numerous international studies have investigated the influence of traditional meal preparation on cultural identity.

D’Andrea and D’Ulizia (2023) emphasized that Local food traditions play a central role in society, as they represent a valuable part of people’s culture, firmly rooted in their memories. Preserving these by transferring knowledge from older to younger generations is important in maintaining community identity and local culture. Meanwhile, Kapelari et al. (2020) emphasized the value of cultural knowledge in strengthening education for sustainable food choices, highlighting that understanding food history increases appreciation and preservation efforts. This concept is highly essential to the study of Etag, as understanding its historical and cultural relevance assists in its preservation and appreciation by both residents and tourists.

Hansen et al. (2022) investigated traditional Sámi knowledge of reindeer meat smoking in Norway, highlighting the role of indigenous groups in conserving traditional meat preparation processes. Similarly, Nyarota et al. (2022) investigated indigenous cuisine practices in Zimbabwe and their impact on the preservation of cultural heritage. Heritage food is increasingly being acknowledged as a strategy for promoting tourism and cultural identity.

Partarakis et al. (2021) evaluated how culinary traditions are portrayed as cultural legacy in Greece, validating the notion that traditional meals function as cultural emblems. In Italy, Zocchi et al. (2021) discussed the challenges and strategies involved in recognizing, safeguarding, and promoting food heritage, aligning with the imperative to ensure the continuity of traditional foods such as Etag within Cordilleran culture.

The development of traditional cuisine and its role in cultural identity preservation have also received considerable scholarly attention. Wardana and Bimo (2024) examined the cultural significance and evolution of “Wajik”, a traditional Javanese food, illustrating how traditional delicacies adapt to contemporary influences while retaining their heritage. This concept is relevant to Etag’s adaptation to modern cuisine while preserving its indigenous identity.

Britwum and Demont (2022) highlighted the relationship between food security and cultural heritage in Ghana, asserting that traditional food systems contribute to economic sustainability.

The transformation of preserved meats into contemporary gourmet dishes is a common subject in food studies. Lima et al. (2024) investigated the increasing popularity and perceived quality of smoked beef in Brazil, detailing how smoking techniques influence product market potential. Pu et al. (2020) analyzed the fragrant compounds of traditional Hunan smoke-cured pork in China, providing insights into sensory characteristics that affect consumer preferences.

Additionally, Niedbala et al. (2020) studied the interrelations between traditional cuisine and tourism in Poland, using a pork-based culinary trail as a case study. Their findings suggest that Etag could be positioned as a key attraction within La Trinidad, Benguet’s culinary tourism sector. Heritage foods are increasingly recognized as effective strategies for promoting tourism and strengthening cultural identity. Khoshkam et al. (2022) investigated the impact of culinary culture on visitor satisfaction in Iran, emphasizing the role of traditional cuisine in enhancing tourist experiences.

Almansouri et al. (2021) examined heritage food concepts in the Netherlands, developing a framework relevant to understanding Etag’s place in global discourse on traditional food preservation and promotion. Putra et al. (2023) compared Southeast Asian traditional cuisines, providing insights to increase Etag’s visibility to both local and international audiences.

Modern preservation techniques and socio-cultural factors significantly influence the evolution of traditional foods. Talib et al. (2024) reviewed contemporary food preservation trends in South Korea, offering insights into modernizing traditional smoking and curing while maintaining authenticity. Etag’s smoking and curing methods may benefit from such advancements without compromising cultural integrity.

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Soyombo et al. (2024) studied the dynamics of African food cultures, illustrating how traditional foods adapt to contemporary consumer demands while preserving cultural significance. The organoleptic and physicochemical properties of Kinuday, a smoked pork delicacy produced by the Ibaloy indigenous people (Garambas et al, 2022), bear similarities to Etag. While differences in preparation exist, comparable preservation methods provide valuable insights into traditional smoked pork products.

Azarias et al. (2022) conducted a literature review on Etag, underscoring its cultural relevance beyond a mere food item, highlighting its role as a symbol of identity and its use in indigenous customs. Their analysis confirms that Etag serves as an emblem of cultural identity and plays a significant role in indigenous rituals. Similarly, Bartolome (2024) examined traditional food practices in ASEAN weddings, focusing on “Cañao” wedding ceremonies in the Philippines, where Etag is frequently served, emphasizing its contribution to sustaining cultural identity. This study strengthens the importance of food in preserving cultural identity through ceremonial practices.

The City Ordinance No. 81 of Baguio City institutionalized the "Mangan Taku" food festival, which features Cordilleran cuisine, including Etag, as part of summer vacation activities. Calayan (2025) documented the 12th Etag Festival in Sagada, highlighting its role in fostering cultural heritage and tourism. Similarly, Gasingan (2025) investigated how Sagada’s Etag combines culture and flavor to attract both residents and tourists. This research underscores the significance of marketing Etag beyond traditional contexts by integrating it into modern culinary and tourism enterprises.

Literature Review

The Foodways Theory, introduced by Counihan (1999), examines the social, cultural, and economic aspects of food production, distribution, and consumption, and provides a robust framework for understanding the study. “Understanding the Role of Etag in Cultural Preservation in the Cordillera Administrative Region”.

This theory emphasizes how food practices are embedded within broader social structures and reflect cultural values, making it pertinent to analyze Etag’s role as a cultural marker and economic commodity in La Trinidad, Benguet.

Additionally, the Cultural Heritage Theory, introduced by Salvador Muñoz-Viñas (2023), examines the preservation and transformation of culture, rooted in food and rituals, which provides a valuable lens for the study of “Understanding the Role of Etag in Cultural Preservation in the Cordillera Administrative Region”.

This theory will deepen understanding of how Etag, as a traditional food, embodies and communicates Cordilleran cultural heritage, and how its evolution reflects broader cultural shifts and adaptations.

In line with this, the National Tourism Development Act (Republic Act 11035) strengthens the promotion of tourism. It supports local industries, including the food industry, making the study of Etag's culinary evolution especially relevant. Additionally, An Act to Revitalize and Strengthen the Bureau of Customs, amending for the purpose certain sections of the Tariff and customs code of the Philippines (Republic act 7651) and General Appropriations Act Fiscal Year 2015 (Republic act 10651), these laws provide legal framework for food safety and sanitation standards in the Philippines, which is relevant to the handling and preparation of Etag.

This study applied the Foodways theory to explore how Etag production and consumption were influenced by social traditions, economic factors such as tourism, and cultural shifts within the Cordilleran community. By examining the evolution of Etag from a traditional preservation method to a culinary attraction, the research revealed how foodways adapted and transformed over time, reflecting changes in social dynamics and economic landscapes, not merely as a food item but as a cultural product that both shaped and was shaped by the social and economic fabric of La Trinidad, Benguet.

Statement of the Problem

This study aimed to determine the role of Etag in cultural preservation in the Cordillera Administrative Region.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:

    a. Age;

    b. Sex;

    c. Highest Educational Attainment;

    d. Source of income; and

    e. Residency?

2. What is the level of Customers' preferences on Etag cuisine in terms of:

a. Local identity;

b. Community cohesion; and

c. Cultural heritage?

3. Is there a significant difference between the level of customers' preferences on Etag cuisine across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the research design and strategy, the population and locale of the study, the data-gathering tools and procedures, validation of the instruments, statistical treatment of data, and ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design utilizing a survey questionnaire. This method was chosen as the most suitable approach for gathering data to determine customer preferences for Etag in the Cordillera Administrative Region, specifically in La Trinidad, Benguet.

Descriptive research designs were used to describe individuals' events or conditions by studying them as they naturally occurred. The design also examined the characteristics of a population, identified problems existing within a unit, organization, or population, and explored variations in characteristics or practices between institutions or even countries (Siedlecki, 2020).

Population and Locale of the Study

The research respondents were residents of La Trinidad, Benguet, including local communities, as well as tourists who had experienced smoked pork Etag in La Trinidad, Benguet, specifically at Kasakm'owl Restaurant, also known as "Etag TV Restaurant".

The study employed convenience sampling, which involved selecting individuals based on their characteristics, knowledge, and experiences related to Cordilleran smoked pork Etag, as they were able to provide relevant information about its cultural significance and culinary evolution.

Data Gathering Tool

The researchers employed a survey questionnaire as the primary instrument for collecting information on the variables. This instrument was required to be reliable and valid. The questionnaire was divided into three sections. The first section gathered information on the respondents' profiles. The second section investigated the level of customer preferences regarding Etag cuisine. To ensure validity, three validators reviewed and validated the survey questionnaire.

The second section employed descriptive interpretations using a Likert scale: (4) "Strongly Agree," (3) "Agree," (2) "Disagree," and (1) "Strongly Disagree."

The questionnaire checklist was administered to the evaluators, and the critical reader and statistician conducted the validation process.

To determine the validity of the instrument used in this study, Validator A, Validator B, and Validator C served as validators of the questionnaire due to their expertise in the relevant field.

The validators employed a content validation checklist to assess whether the questionnaire checklist was recommendable for use.

Upon validation, the validators concluded that the questionnaire checklist was suitable to be used as an instrument for data gathering.

The results of the validation are presented below:

Validator	Mean	Description
Validator A	3.86	Very Good
Validator B	4.71	Excellent
Validator C	3.71	Very Good
Average Weighted Mean	**4.09**	**Very Good**

Legend:

Statistical Range	**Descriptive Equivalent**
4.21-5.00	Excellent
3.41-4.20	Very Good
2.61-3.40	Good
1.81-2.60	Fair
1.00-1.80	Poor

Data Gathering Procedure

The researchers formally requested permission from the Local Government Unit (LGU) in La Trinidad, Benguet. They also consulted their adviser regarding the procedures to follow for data collection. The nature of the study was explained to ensure full cooperation from the participants.

The researchers distributed questionnaires through face-to-face surveys to the producers and stakeholders. The questions were administered directly by the researchers, who strictly adhered to the instructions.

The researchers analyzed the collected questionnaires to achieve the objective of understanding the role of Etag in Cultural Preservation in the Cordillera Administrative Region. After gathering all the completed questionnaires, the researchers compiled and tabulated the data.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings of the data collected throughout the research on Understanding the Role of Etag in Cultural Preservation in the Cordillera Administrative Region.

Profile of the respondents of Understanding the Role of Etag in Cultural Preservation in the Cordillera Administrative Region

Table 1
Profile of the Respondents
n=123

Variables		F	%
A. Age			
	18-25	35	28.46
	26-33	29	23.58
	34-41	33	26.83
	42-49	16	13.01
	50-57	7	5.69
	58& above	3	2.44
B. Sex			
	Male	77	62.60
	Female	46	37.40
C. Highest Educational Attainment			
	Elementary Graduate	1	0.81
	High School Undergraduate	5	4.07
	High School Graduate	2	23.58
	College Undergraduate	38	30.89
	College Graduate	47	38.21
	With Master's Unit	1	0.81
	Master's Graduate	2	1.63
D. Residency			
	Abra	7	5.69
	Apayao	9	7.32
	Benguet	77	62.60
	Ifugao	20	16.26
	Kalinga	5	4.07
	Mountain Province	5	4.07
E. Source of Income			
	Employment	45	36.59
	Self-Employment	16	13.01
	Farming/Agriculture	17	13.82
	Remittances	4	3.25
	Pension/Retirement	1	0.18
	Unemployed	16	13.01
	Student Allowance	20	16.26
	Mining	3	2.44
	Others	1	0.81

Age. The data indicated that 35 out of 123 respondents, or 28.46% total, were between the ages of 18 and 25. A minority of respondents, or 2.44%, were aged 58 or older. The preference of younger respondents to dine at Kasakm'owl or *Etag* TV restaurants at a young age may have been influenced by several factors.

Younger generations were more exposed to global trends and influences through the media and the internet, which may have shaped their preferences toward specific types of cuisine or dining experiences, as they tended to be more open to new experiences. This exposure yielded highly comparable results. The results of the study suggested that although the features of "price/quality/location" and "food" differed according to unique types of food, they remained important considerations.

Kovács (2022) discussed that young consumers' purchasing or consumption of local food was attributed to their growing willingness to explore new tastes, curiosity, tradition, and experiential factors. Additionally, young consumers sought to understand where and how the food was produced to ascertain the quality of the products.

Sex. Regarding the sex of respondents among *Etag* customers at Kasakm'owl Restaurant, 77 out of 123 were male, representing 62.60%, while 46 out of 123 were female, or 37.40%, indicating that more males dined at the establishment.

This suggested that men had a stronger inclination toward consuming *Etag*, possibly due to traditional practices where smoked and preserved meats were often associated with male-dominated rituals and gatherings. However, the notable percentage of female consumers demonstrated that *Etag* was widely accepted and enjoyed across genders, highlighting its role as a unifying dish within the community.

Table 2

Level of Customer Preferences on Etag Cuisine in terms of Local Identity

n=123

Indicators	AWM	DE
1. Represents the unique identity of the cordilleran region	3.57	SA
2. Should be preserved as part of cultural heritage	3.4	SA
3. Reflects traditional values passed down from ancestors	3.32	SA
4. Represents the identity of the ethnic group or tribe	3.37	SA
5. Plays a key role in local festivals and traditions	3.41	SA
Average Weighted Mean	**3.41**	**SA**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Strongly Agree (SA)
2.51 - 3.25	Agree (A)
1.76 - 2.50	Disagree (D)
1.00 - 1.75	Strongly Disagree (SD)

The level of customer preferences for *Etag* cuisine in terms of local identity had a total average weighted mean of 3.41, with a descriptive equivalent of "Strongly Agree" (SA). The results indicated that customers generally exhibited a strong preference for *Etag* cuisine regarding its reflection of local identity. This suggested that *Etag* was highly valued not only as a food item but also as a cultural symbol representing the community's heritage and identity.

The first indicator, *"Represents the unique identity of the Cordilleran region,"* received the highest mean of 3.57, with the descriptive equivalent of "Strongly Agree" (SA). The high mean score suggested that respondents firmly associated *Etag* with the Cordilleran identity. This perception aligned with the region's rich cultural tapestry, where food played a pivotal role in social gatherings, rituals, and the preservation of traditions. *Etag*, therefore, was not merely a dish but a symbol of the Cordillera's unique cultural landscape.

Table 3
Significant Difference between the Level of Customers' Preferences on *Etag* Cuisine across profile variables
n=123

Profile	**Local Identity**	**Community Cohesion**	**Cultural Heritage**
	Sig.	Sig.	Sig.
Age	.589	.333	.980
Sex	.926	.64	.248
Highest Educational Attainment	.386	.413	.556
Residency	.149	.360	.869
Source of Income	.090	.296	.105

Table 3 presents the absence of significant differences in the level of customers' preferences for *Etag* cuisine in terms of age, with the following values: local identity (0.589), community cohesion (0.333), and cultural heritage 0.980. Since these significance values were greater than 0.05, it showed that no significant difference existed between customers of different ages regarding their preferences for *Etag* cuisine. People across age groups did not exhibit meaningful differences in the importance they placed on local identity, community cohesion, or cultural heritage related to *Etag* cuisine. Younger and older customers expressed comparable preferences.

Furthermore, the analysis revealed no significant differences in customers' preferences concerning sex, with the following values: local identity (0.926), community cohesion (0.64), and cultural heritage (0.248). As these values exceeded 0.05, it indicated that sex did not significantly influence how customers perceived or valued *Etag* cuisine. Regardless of gender classification, preferences related to *Etag's* role in representing local identity, fostering community cohesion, or preserving cultural heritage remained largely consistent.

IV. Conclusion and Recommendations

This chapter summarizes the findings and conclusions drawn from the study that aimed to identify the level of customer preferences for Etag cuisine. It also offers recommendations to strengthen the preservation, promotion, and appreciation of Etag cuisine. It is reported that a significant majority of respondents were male individuals within the young adulthood who had obtained a college-level education. This indicated that young, educated males constituted the majority of Etag consumers at Kasakm'owl or Etag TV Restaurant. The participation of young adults reflected the growing role of younger generations in sustaining traditional Cordilleran cuisine, which aligned with cultural trends highlighting youth improvement in preserving and promoting indigenous food heritage. Additionally, most respondents resided in the province where the restaurant was located and maintained their livelihood through stable employment. This indicated that the primary market for Etag cuisine at Kasakm'owl or Etag TV restaurant consisted of socio-economically stable residents who were young, educated, and actively engaged in local food culture. The results revealed that the respondents' preferences for Etag cuisine at Kasakm'owl or Etag TV Restaurant indicated a strong consumer preference toward the traditional delicacy, particularly regarding its socio-cultural dimensions. The aspect of cultural heritage was identified as the strongest determinant of customer preference. This finding strongly suggested that the appeal of Etag transcended its basic culinary qualities; consumers primarily viewed the product as a tangible symbol of the unique indigenous culture that embodied and represented the traditions, identity, and history of the Cordilleran people. Additionally, the high preference for cultural heritage affirmed Etag's deep connection with consumers, as it embodied ancestral customs, indigenous knowledge, and traditional preparation practices. Furthermore, the results emphasized that the restaurant's consumers were deeply culturally invested in consuming Etag as a means to maintain and celebrate their shared identity. High ratings for both local identity and community cohesion signified that consumer strongly agreed that consuming Etag reinforced their sense of belonging and contributed to fostering social bonds and shared experiences among patrons. The results thus highlighted the restaurant's critical role in preserving and promoting this culinary legacy. The results of the analysis of differences in the level of customers' preferences for Etag cuisine across profile variables at Kasakm'owl or Etag TV Restaurant revealed that no significant differences existed in terms of age, sex, highest educational attainment, residency, and source of income regarding preferences for Etag cuisine. Additionally, the findings showed that people shared a common perception and value toward Etag, recognizing it not only as a local delicacy but also as a meaningful symbol of Cordilleran heritage and identity that fostered unity within the community. Furthermore, the findings implied that individual profiles did not influence how people perceived or valued Etag. These suggestions were grounded in the research findings and aimed to provide practical guidance for stakeholders seeking to implement improvements or conduct further investigations. By translating research outcomes into concrete actions, this section bridged the gap between theoretical analysis and practical application, ensuring that the study provided meaningful advancements in the field. Restaurant owners can collaborate with local food influencers or bloggers by offering a complimentary tasting of the Etag dish to promote these dishes to a wider audience and to create authentic, engaging content like food reviews that highlight the curing method, history, and tradition. Restaurant owners may join or organize events that can team up with other restaurants that serve Etag. Local community and organizers can host an event that highlights the variety of Etag dishes, such as the traditional pinikpikan, modern dishes, or the usually cured Etag slice, to showcase the Etag dishes and celebrate the unique local delicacies. Restaurant owners are encouraged to set up a small gallery or mini museum inside or beside their restaurants to highlight the story of their dishes, like Etag and the restaurant's journey in preserving these traditional foods. The restaurant may also display gifts, artworks, and research shared by visitors, cultural advocates, and supporters to show their appreciation for Etag and its heritage. By doing this, customers can learn more about the history, culture, and importance of Etag, making their dining experience more meaningful and helping strengthen its cultural identity.

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Challenges Faced by Strawberry Farmers in La Trinidad, Benguet: Basis for Intervention Measures

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Abstract — La Trinidad, Benguet, is known as the "Strawberry Capital of the Philippines" due to its extensive strawberry farms. These farms provide income for locals and attract tourists, contributing to the economy. However, strawberry farmers face problems that affect productivity and revenue. This study employed a quantitative design to examine the challenges faced by farmers in Barangay Betag, La Trinidad, with 106 participants selected through convenience sampling.
Data were analyzed using the Kruskal-Wallis Test to identify differences based on age, sex, and years of farming experience. Among the respondents, 43% were aged 41 or older, with most being middle-aged. Males accounted for 63% of respondents and reported better access to farming services than females. One-third had ten or more years of experience. Results showed that flooding and heavy rains damaged crops, market prices affected income stability, labor costs were high, and poor storage caused spoilage after harvest. To address these challenges, the study recommends proper waste disposal and improved drainage to prevent flooding in strawberry farms. Farmers should partner with cafes, hotels, processors, and shops to access steady premium markets. Simple tools and machines can speed up work and cut labor costs, supported by training and funding from agricultural offices. Requesting cold storage from DA, sharing transport, and processing excess strawberries into jams will preserve quality and minimize losses. Local government units are encouraged to provide price updates, subsidized cold storage, market linkages, and coordination with DA-DTI to enhance productivity, income stability, and sustainability for strawberry farmers and the broader community.

Keywords* — *Challenges, Strawberry Farmers, Intervention Measures, Farm, Farming, Sustainability, Sustainable Practices

I. Introduction

La Trinidad, Benguet, is one of the municipal districts established in the Cordillera Administrative Region. This mountainous valley is an ideal location for strawberry farming, situated at an elevation of 1,300 meters above sea level. It enjoys a cool, highland climate with temperatures ranging from 16 to 24°C, creating optimal conditions for strawberry growth. The area experiences distinct dry (November–April) and wet seasons (May–October), with minimal extreme weather, allowing consistent production.

The soil in La Trinidad is loamy, well-draining, and rich in organic matter, with a pH range of 5.5–6.5, which is ideal for nutrient absorption. The valley's natural slopes aid drainage, preventing waterlogging and root diseases, while irrigation systems help maintain soil moisture. Surrounded by mountains and forests, the region benefits from a clean water supply and minimal pollution, further enhancing its suitability for sustainable, high-quality strawberry farming.

The strawberry farm in Benguet, particularly in La Trinidad, has popularized the town as the "Strawberry Capital of the Philippines." This recognition is further supported by Senate Bill No. 1899, which declares the province of Benguet as the official strawberry capital of the Philippines. These farms not only serve as a significant source of income for many locals, but are also among the most popular tourist destinations in the province, attracting visitors both locally and internationally.

The region's booming economy, supported by strawberry-picking activities and opportunities to learn about farming practices, has contributed significantly to its growth.

The province also hosts the Strawberry Festival every year to recognize strawberry farming as one of the province's primary economic drivers and to inspire more farmers to enter the sector.

Strawberry farming in La Trinidad significantly contributes to achieving several Sustainable Development Goals (SDGs). This illustrates the critical role sustainable agriculture plays in promoting a more equitable and environmentally friendly future. Benguet's strawberry farming aligns with:

- SDG 8: Decent Work and Economic Growth, by providing jobs to local Communities through agriculture-related tourism, contributes to the region's economy.
- SDG 12: Responsible Consumption and Production, by adopting sustainable practices, reducing waste, using natural resources responsibly, implementing organic farming methods, and encouraging mindful consumption among tourists.
- SDG 13: Climate Action, by helping farmers adapt to environmental challenges while sustaining production.
- SDG 15: Life on Land, by promoting sustainable land use and conservation practices. Using raised beds, protected growing areas, and climate-resilient strawberry varieties, farmers protect soil health, reduce pest impacts, and preserve the environment for future generations.

By fulfilling these Sustainable Development Goals (SDGs), Benguet's strawberry farming demonstrates how sustainable agriculture can support the economy, protect the environment, and improve the lives of local people.

This study on Challenges Faced by Strawberry Farmers in La Trinidad, Benguet:

The basis for Intervention Measures aligns with various agricultural laws.

For instance, the High-Value Crops Development Act of 1995 (Republic Act No. 7900) promotes the production, processing, marketing, and distribution of high-value crops, including strawberries. It provides support mechanisms such as funding, cooperative farming models, and tax exemptions to help farmers overcome challenges. The Anti-Agricultural Economic Sabotage Act (RA No. 12022) is also relevant, as it addresses hoarding, profiteering, and cartel practices that can affect strawberry farmers' market conditions and prices.

Furthermore, the Department of Agriculture Administrative Order (DA AO) No. 2008-08 promotes and encourages Good Agricultural Practices (GAP) that prioritize food safety, environmental protection, and farmer well-being.

These laws provide a framework for interventions to support strawberry farmers in La Trinidad by addressing production, marketing, and economic challenges.

Sustainable tourism refers to practices within and by the tourism industry that aim to minimize negative impacts while maximizing positive effects. The United Nations Environment Programme (UNEP) and the United Nations World Tourism Organization (UNWTO) define sustainable tourism as:

"Tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities."

Fresh strawberries are rich in vitamins, minerals, and phytochemicals. The polyphenolic compounds in strawberries, particularly anthocyanins such as pelargonidin and cyanidin, contribute to their red color and offer potential health benefits. This nutritional profile supports human health and disease prevention (Chen et al., 2023). The quality attributes of strawberries are influenced by a combination of environmental factors and the cultivar's genetic characteristics (Simkova et al., 2023).

According to the Food and Agriculture Organization of the United Nations (2022), strawberry planting positively impacts the environment, economy, and individual health. The global cultivated area of strawberries is 389,665 hectares, with production exceeding 9 million tons. Asia accounts for 49.4% of global production. In Iran, greenhouse strawberry production in 2020 totaled 28,880 tons across 527 hectares (Mousavi et al., 2023).

Different strawberry cultivars and genotypes exhibit unique characteristics and performance levels (Ahn et al., 2021). The choice of cultivar and cultivation system affects yield, quality, and nutrient content (Richardson et al., 2022). Optimal fertilization also influences fruit quality and yield (Wu et al., 2020).

Open-field farming is traditional and relies on large tracts of land, where crops are grown horizontally and exposed to weather, pests, and variable soil quality. While it supports large-scale production, it is dependent on seasonal cycles, limiting year-round supply (Baumont de Oliveira et al., 2023).

One of the standout benefits of vertical farming is its ability to sustain year-round crop production. Controlled environments equipped with artificial lighting, temperature regulation, and humidity control allow crops to thrive regardless of external weather conditions, ensuring steady production cycles and a reliable supply of fresh produce (Singh et al., 2024).

This is particularly beneficial for urban centers with high demand for locally grown fruits like strawberries and blueberries. Vertical farming also minimizes environmental impact through water-efficient systems that recycle up to 98% of water and reduce chemical use by operating under controlled conditions (Abdelfatah et al., 2024).

Soil-based vertical farming adapts traditional farming methods to vertical systems. In this approach, soil is used as the growth medium, typically in trays or containers arranged in stacked layers. Fertigation systems deliver water and nutrients directly to the soil, ensuring consistent plant nutrition. Artificial or natural lighting, such as LED systems or sunlight in greenhouses, provides the necessary light for photosynthesis. In contrast, drainage systems are crucial for maintaining optimal moisture levels and preventing waterlogging. Soil-based vertical farming uses soil in stacked trays or containers, supported by fertigation systems and drainage to manage moisture. While accessible for traditional farmers and useful in low-cost setups, it uses more water and is prone to soil-borne diseases (Teo et al., 2024).

Research by Kumar et al. (2020) emphasizes the sustainability of vertical farming. Localizing food production reduces transport emissions and conserves water through closed-loop systems. Reduced pesticide use supports healthier, chemical-free crops. (Kumar et al., 2024).

Despite its benefits, vertical farming faces challenges, including high startup costs and technical skill requirements. Addressing these through innovation and policy is essential for broader adoption (Nwosisi & Nandwani, 2024).

Organic farming benefits environmental and human health. To ensure the "organic" label, farmers must comply with government standards (Marsh, 2023). They are encouraged to use eco-friendly practices that preserve natural resources and enhance tourism experiences (Johnson, 2023). Agritourism sustainability depends on maintaining a healthy, productive environment (Doval, 2023).

Like other fresh fruits, strawberries are highly susceptible to bruising during harvest and post-harvest handling (Hussein et al., 2020). Factors such as temperature and humidity influence the likelihood of fungal infections. Postharvest losses due to fungal diseases range from 30–50%

(Qadri et al., 2020). Physical, chemical, and biological treatments are used to manage postharvest diseases and maintain fruit quality until consumption (Gachango et al., 2012; Qadri et al., 2020).

The fruits spoil several days after harvest due to their perishable, delicate nature. Therefore, suitable storage and packaging for post-harvest handling are required, considering the relatively short shelf life of 5 to 7 days after the harvest (Bugawisan, 2021).

Da Silva Simão et al. (2022) noted that color change in fruit products during storage significantly affects shelf life. Mold growth, especially in strawberries, indicates shelf life due to their susceptibility to fungal infections, which can lead to rapid declines in appearance and texture (Nakata & Izumi, 2020). Climate change is currently affecting crop yield, water availability, and farm economies in La Trinidad.

To adapt, farmers have developed local strategies (Alfonso & Laruan, 2020). Reyes et al. (2020) emphasized the need for government-provided low-cost credit to enable Benguet farmers to access equipment, materials, and manpower to mitigate climate-related impacts.

According to the La Trinidad Municipality (2020), strawberry farming is one of the major agricultural livelihoods in La Trinidad, Benguet. It was introduced in the 1900s by Americans as an experimental crop and later cultivated by local farmers. By the 1990s, La Trinidad became known as the “Strawberry Fields of the Philippines.”

With promising economic value, strawberry production expanded to other municipalities, including Kibungan, Mankayan, Tuba, Tublay, Buguias, and Atok—making them the top seven strawberry producers from 2016 to 2020 (Kisim, 2022). Several cultivars are grown in the region, including U.S. varieties (‘Sweet Charlie,’ ‘Chandler,’ and ‘Whitney’) and Japanese varieties (‘Toyonoka’ and ‘Nyoho’) (Ledesma et al., 2020).

This study aims to identify the challenges faced by strawberry farmers in La Trinidad, particularly related to climate change factors, market constraints, labor issues, and post-harvest inefficiencies, to develop actionable intervention measures that enhance productivity, sustainability, and farmer livelihoods.

Literature Review

The Triple Bottom Line (TBL) theory, introduced by John Elkington in 1997, is a concept that broadens the usual focus on financial success to include social and environmental factors. It implies that organizations should be held accountable not only for their economic earnings but also for their social and ecological impacts.

The key elements of the Triple Bottom Line relate to Economic Performance, which measures the organization's financial performance. The second element is Social Performance, which emphasizes tackling social concerns and promoting community well-being. The last key element is Environmental Performance; this TBL theory highlights the necessity for organizations to reduce their environmental impact and encourage the ecological sustainability of strawberry farms.

In exploring the application of the Triple Bottom Line (TBL) theory to the study of strawberry farms, a holistic approach emerges that is essential for cultivating not only profitable businesses but also responsible environmental stewards.

By integrating economic performance with social and environmental considerations, one can assess how strawberry farms can thrive while minimizing their carbon footprint and fostering positive relationships with local communities.

Statement of the Problem

This study aimed to identify the challenges faced by strawberry farmers in La Trinidad, Benguet as the basis for intervention measures.

Specifically, it sought to answer the following questions:

1. What is the profile of the strawberry farmers in terms of:
   a. Age;
   b. Sex; and
   c. Numbers of years in strawberry farming?
2. What are the challenges faced by the strawberry farmers in terms of:
   a. Climate Change;
   b. Market Economy;
   c. Labor-related; and
   d. Post-harvest by supply chain?
3. Is there a significant difference between the challenges faced by the strawberry farmers across profile variables?
4. Based on the findings, what program can be proposed to mitigate the identified challenges in strawberry farming for farmers?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the Research Design and Strategy, the Population and Locale of the Study, the Data Gathering Tool, the Data Gathering Procedures, the Validation of the Instrument, the Statistical Treatment of Data, and Ethical Considerations.

Research Design and Strategy

The researchers employed a descriptive research design that utilized a survey questionnaire. This method was selected as the most suitable approach for gathering data to determine the challenges faced by strawberry farmers in La Trinidad, Benguet. Descriptive research was conducted to examine the challenges strawberry farmers face in La Trinidad, Benguet. The primary goal was to implement targeted intervention measures that addressed these challenges, promoted sustainable practices, and enhanced the farmers' livelihoods. The data were collected through a structured questionnaire. Descriptive research characterized the attributes of objects, individuals, groups, organizations, or environments, and addressed questions related to who, what, where, and how. Additionally, Shinija (2024) highlighted descriptive research as an effort to identify the characteristics of a particular population or phenomenon.

Population and Locale of the Study

The research was conducted among strawberry farmers in Barangay Betag, La Trinidad, Benguet. Using convenience sampling, the exact number of research respondents was not known and depended on the availability and willingness of the strawberry farmers to participate during the data collection phase. The target respondents were strawberry farmers selected based on their knowledge and experience in strawberry farming operations. Their insights provided in-depth, relevant information on the challenges and sustainable practices in strawberry cultivation.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting information on the variables. This instrument was required to be reliable and valid. The questionnaires were divided into three sections. The first section focused on the profile of the strawberry farmers. The second section investigated the challenges faced by strawberry farmers. Three experts validated the survey questionnaire to ensure its validity. The survey included a detailed descriptive interpretation scale: (4) "Always Encountered," (3) "Often Encountered," (2) "Sometimes Encountered," and (1) "Never Encountered."

Data Gathering Procedure

The researchers formally sought permission from the farmers. They also consulted their adviser regarding the appropriate steps to take in collecting the data. The study's nature was explained to ensure full cooperation from the farmers.

The researchers distributed the questionnaires through a face-to-face survey. The questions were administered directly by the researchers, who scrupulously adhered to the instructions. The researchers analyzed the retrieved questionnaires to achieve the goal of identifying the challenges faced by the strawberry farmers. After collecting all the completed questionnaires, the researchers compiled and tabulated the data.

III. Results and Discussion

This chapter presented, interpreted, and discussed the findings of the data collected throughout the research on Challenges Faced by Strawberry Farmers in La Trinidad Benguet: Basis for Intervention Measures.

Table 1
Profile of Respondents
n=106

Variables		F	%
Age			
	21-25	8	8
	26-30	10	9
	31-35	16	15
	36-40	27	25
	41 & above	45	43
Sex			
	Male	67	63
	Female	39	37
Number of years in strawberry farming			
	Below 1 year	4	4
	1-3 years	20	20
	4-6 years	28	26
	7-9 years	19	18
	10 years and above	35	32

The profile included age, sex, and years involvement in strawberry farming, with the corresponding frequency count (f) and percentage (%). Each variable was accompanied by its interpretation and analysis. One hundred six respondents were surveyed, meaning the total frequency count for each variable was 106.

Age. The data indicated that 45 out of 106 respondents (43% of the total) were 41 years or older. Only 8% of respondents were between the ages of 21 and 25. The findings suggested that older respondents preferred working on the strawberry farm regardless of age. Older generations, such as Gen X and Boomer II, have traditionally engaged in subsistence farming, focusing on self-sufficiency and local food security. These farmers often relied on established practices and were less inclined to adopt new technologies or commercial strategies (Woh et al., 2025).

Sex. More men worked on the strawberry farm, as evidenced by the fact that 67 out of 106 respondents were men (63%), while 39 out of 106 were female (37%). Male farmers also reported greater access to almost all services, suggesting that extension delivery methods were intentionally biased in their favor.

This supports the findings of Akinwalere and Bayedo (2024), who found that social and structural barriers frequently prevented female farmers from fully participating in and reaping the benefits of agricultural initiatives. Number of years in strawberry farming. This indicates the number of years respondents had been involved in strawberry farming: 35 out of 106 respondents had been farming for 10 years or more (33%), while the fewest had farmed for 1 year or less (4%).

Farmers with extensive expertise have the potential to exert a lasting influence on their behavior, as they are more knowledgeable than those with less experience (Kendler et al., 2002; Wuyep et al., 2015; Zhou & Li, 2022).

Table 2

Challenges Faced by Strawberry Farmers in La Trinidad, Benguet, in terms of Climate Change

n=106

Indicators	WM	DE
1. Soil degradation that affects strawberry crop productivity	2.51	OE
2. Unpredictable weather patterns	3.50	AE
3. Water supply issues lowering irrigation	3.01	OE
4. Flooding during typhoons and heavy rainfall	3.69	AE
5. Pests and diseases outbreak due to climate change	3.20	OE
6. Increased expenses for farm inputs due to climate adaptation requirements	3.08	OE
7. Increased frequency of droughts	2.23	SE
Average Weighted Mean	**3.03**	**OE**

Legend:

Statistical Range	Descriptive Equivalent
3.26 - 4.00	Always Encountered (AE)
2.51 - 3.25	Often Encountered (OE)
1.76 - 2.50	Sometimes Encountered (SE)
1.00 - 1.75	Never Encountered (NE)

The challenges experienced by strawberry farmers in La Trinidad, Benguet, regarding the Climate Change had an average weighted mean was 3.03, and the descriptive equivalent was "Often Encountered" (OE). The findings revealed that changing weather conditions continued to impact strawberry production.

The fourth indicator, “Flooding during typhoons and heavy rainfall,” had the highest mean of 3.69 and was described as “Always Encountered” (AE). Floods damaged farms, crops, livestock, agricultural infrastructure, and the food supply chain, reducing agricultural productivity and food availability (Atanga and Tankpa, 2021). This hindered the plants’ stability and their nutrient absorption.

The seventh indicator, "Increased frequency of droughts," received the lowest mean score of 2.23 and was categorized as "Sometimes Encountered" (SE). The findings revealed that farmers occasionally experienced dry periods that impacted strawberry growth and productivity. These dry periods led to greater negative effects in areas where crop success or failure depends solely on rainfall, especially in rainfed farming (Bal et al., 2022).

Table 3

Significant Difference Between the Challenges Faced by the Strawberry Farmers Across Profile Variables

n=106

Profile	**Climate Change**	**Market Economy**	**Labor related**	**Post- harvest by supply chain**
	Sig.	Sig.	Sig.	Sig.
Age	.378	.816	.012	.004
Sex	.026	.526	.127	.149
Number of years in strawberry farming	.670	.797	.062	.378

Table 3 indicates the significant differences between respondents' profiles when grouped by age. The p-values for climate change (0.378) and market economy (0.816) are greater than the 0.05 level of significance, indicating that there is no significant difference in age between the groups regarding climate change and market economy. However, the values for labor-related (0.012) and post-harvest supply chain (0.004) challenges are less than the 0.05 level of significance, indicating that there are significant differences in labor-related and post-harvest supply chain challenges when respondents are grouped according to age. The findings suggest that farmers of different age groups experience labor-related and post-harvest issues differently; older farmers may have more difficulty with physical tasks and supply-chain requirements than younger farmers.

IV. Conclusion and Recommendations

This chapter presents the conclusions drawn from the study on the Challenges Faced by Strawberry Farmers: Basis for Intervention Measures. It summarizes the findings based on the respondents' profiles and the challenges they encountered in strawberry farming. It also offers recommendations for farmers to consider. It is concluded that a significant majority of the respondents were male, middle-aged, and had been farming for decades. Strawberry farmers in Benguet faced serious challenges related to climate change, including flooding during typhoons and heavy rainfall, which damaged crops, reduced harvests, and made farming more difficult. In the market economy, fluctuating prices posed the most significant challenge, making it difficult for farmers to earn a stable income from their produce. High labor costs were a significant concern because they increased the overall cost of strawberry production. In the post-harvest and supply chain sector, the primary issue was the lack of cold storage facilities. Without proper storage, strawberries spoiled quickly, resulting in financial losses for the farmers. Based on the findings, the researchers formulated the following recommendations to help address the challenges faced by strawberry farmers: Farmers are encouraged to implement proper waste disposal within the community to prevent flooding caused by climate change, benefiting all farmers. The LGU is recommended to add more drainage near strawberry farms to help water drain faster, regularly clean and maintain existing drainage to prevent clogging, improve canals, build catch basins, and ensure waterways remain clear. Farmers should build partnerships with cafés, restaurants, hotels, processors, and souvenir shops to secure steady buyers and supply premium markets; regularly monitor price advisories to time harvests and sales during high-price periods; and diversify products into jam, wine, puree, or dried strawberries to reduce dependence on fresh market prices. The LGU should provide regular price updates, strengthen market linkages, and coordinate with DA and DTI to ensure fair pricing and stable demand. Farmers are encouraged to use simple tools and small machines to make their work faster and more efficient. The LGU and agricultural offices can assist farmers by providing training, equipment support, and small funding programs to help them obtain these tools, thereby reducing costs and improving productivity. Farmers are advised to request cold storage facilities from the Department of Agriculture (DA) to help preserve strawberry quality, maintain freshness, and reduce spoilage. They are also advised to work together by sharing transportation or delivery services to achieve faster market access and by processing excess strawberries into value-added products, such as jams or preserves, to minimize losses. The LGU can provide subsidized communal cold storage facilities, partner with the Department of Agriculture for postharvest equipment and training, and establish direct market outlets like Kadiwa ng Pangulo to minimize supply chain losses.

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Betel Nut Chewing as a Cultural Practice: Intergenerational Perspective in Benguet, Cordillera

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Abstract — This research offers an intergenerational perspective on the betel nut chewing tradition, Nga Nga, emphasizing its significance in the Cordillera region of the Philippines. It aligns with Sustainable Development Goals (SDGs), notably SDG 3 (Good Health and Well-Being),
SDG 11 (Sustainable Cities and Communities), and SDG 17 (Partnerships for the Goals), highlighting their importance in enhancing overall quality of life and fostering more inclusive local communities. The study utilizes Clifford Geertz's Cultural Symbolism Theory (1973) to analyze Nga Nga's role in maintaining cultural unity and social cohesion. Data were gathered through a carefully designed survey questionnaire administered to 94 community members. Results show that the practice endures primarily among older indigenous people, with its relevance decreasing among younger generations due to modernization and changing cultural values. However, all age groups maintain generally positive perceptions of its significance. Although the social importance is moderately recognized, the main challenges identified are social issues (mean 3.22), such as public hygiene and stigma, followed by significant cultural erosion (mean 2.62). Consequently, the study advocates for a holistic and inclusive approach to preserve the tradition while addressing its adverse effects. Recommended actions include designing and distributing engaging awareness materials, such as stickers and posters, to promote respect and understanding of Nga Nga's social role. Further recommendations involve partnering with local government units to produce a video showcasing elders to cultivate youth appreciation, implementing market tagging initiatives, launching engaging social media campaigns, installing respectful signage, and developing a sustainable project to convert husks into organic fertilizer.

Keywords* — *Betel Nut (Nga-Nga), Intergenerational Practice, Cultural Significance, Social Significance, Economic Significance, Cultural Problems, Social Problems, Economic Significance

I. Introduction

The act of chewing Nga-Nga, or betel nut, is a cultural and social identity in the Cordillera region of the Philippines. Additionally, it plays an integral role in the life, rituals, and communities of the Cordilleran people. Also, betel nuts are typically chewed with slaked lime and wrapped in a leafy cover, symbolizing both hospitality and respect. On the other hand, it is commonly shared among people at social gatherings, feasts, and ceremonies, such as weddings and funerals, and they believe it has spiritual and healing properties. Thus, as a ceremonial practice, chewing betel nut is believed to have medicinal benefits, including stimulating digestion and providing mental stimulation. Certainly, this tradition will also reflect how strong and resilient the Cordilleran are and show a tie with their ancestors, culture, and traditions (Mangali, 2023; Bulwayan, 2023).

Modernity and increasing health concerns have changed the habit of chewing Nga-Nga (Betel Nut) in many regions, particularly among the younger generation. However, Nga-Nga continues to hold cultural significance in the Cordillera region, serving as a living connection between historical customs and contemporary cultural expressions (Bruno, 2023). Singh et al. (2020) and Rahman et al. (2024) stated that the historical tradition of chewing betel quid and areca nuts in societies of South Asian and Indonesian origin is connected with social acceptability, religious beliefs, and community bonding.

Moss (2022) and Jamil et al. (2024) describe how betel nut consumption fosters social interaction in the Asia-Pacific region, particularly in Malaysia, where it is an integral part of local customs. In light of Zhang et al.'s (2022) work exploring the history of betel nut chewing in China, these studies are particularly significant. As a result, it reveals how betel nut evolved from a medicinal use to becoming an enjoyable social commodity and a symbol of harmony in marriage.

In contrast, two studies (Sotto et al., 2020; Zaman et al., 2020) investigated the health concerns and risks associated with betel nut chewing in Bangladesh's gender-sensitive population, with a primary focus on men. Additionally, Kawabata et al. (2024) demonstrate how cultural connotations, acceptance, and accessibility influence betel nut use among adolescents in Micronesia, asserting that these traditions significantly enhance its acceptance. Alaydrus et al. (2023) and Wisdomlib (2025) highlighted the significance of the betel nut in Hinduism and Buddhism, where it is regarded as sacred and offered to deities, at weddings, and to ancestors. In fact, he definition of betel nuts in Pramana (2023) relates to Balinese marriage, symbolising love, commitment, and the renewal of vows. This aligns with Pinatuli's (2021) study, which highlighted the continuing importance of betel nut chewing in both traditional settings and modern ceremonial contexts. Therefore, this connection enhances its symbolism and spiritual significance.

Moss (2022) and Alaydrus et al. (2023) discussed the economic development that betel nut cultivation and trade have brought to the people, particularly farmers and vendors. Sari et al. (2020) and Zhu et al. (2023) also highlight the chemical properties of betel quid, noting regional differences across Indonesia.

The sociopolitical significance articulated by Eky (2020) has historically been marginalized in economic considerations. Eky introduced the medium called "At Oko' Mama," which serves as a means for negotiation, conflict resolution, and hospitality among villagers.

Therefore, this practice bears similarities to the communal use of betel nut chewing in group settings.

The practice of chewing betel nut has persisted despite modern influences. In Vietnam, memories of performances linked to traditions and family connections still linger, as noted by Vinpearl (2024). According to Zhang et al. (2022), note that this practice will still find its way into Chinese marriage customs. Alaydrus et al. (2023) emphasize that betel nut chewing remains a symbol of hospitality and solidarity among Indonesians, demonstrating its ability to resilience amid societal transformations. Chewing the Betel Nut, also known as Nga-Nga or momma, is a distinct cultural practice deeply rooted in the Cordillera region of the Philippines, regarded as more than just a habit. Camaraderie in hospitality venues is deeply rooted in tradition among various tribal and local groups, particularly the Kalinga, Igorot, and Benguet communities. Future generations that practice still serve as a marker of identity, masculinity, and comradeship (Bruno, 2023). Commonly, betel nut chewing was the mark of valour and fraternity among the warriors of the Kalinga community. The people of the Kalinga epic Ullalim mention the chewing of betel nut as a symbol of unity and friendship (Bulwayan et al. 2023).

Young farmers in the province of Benguet, especially in Bashoy, continue to practice this culture for recreation and to test their endurance. Stimulating effects of chewing betel nut provide these farmers with energy for hours of working time and in adverse weather conditions while reinforcing their cultural identity and solidarity (Mangali, 2023; Bay-an, 2023). Nga-Nga culture, known for betel nut chewing, holds significant importance in shaping community social identity and heritage. Fundamentally, it is an individual event with ceremonial aspects, but some of its impacts can be viewed as cultural, economic, and social, thus connecting to various

Sustainable Development Goals (SDGs). SDG 11: Sustainable Cities and Communities, Nga-Nga aims to preserve the cultural heritage of the Cordillera, thereby fostering a sense of belonging and identity within the community. In doing so, members of the community engage in cultural sustainability by celebrating and passing on traditions to future generations (Gaia Education, 2025). Nga-Nga or betel nut chewing aligns with SDG 3: Good Health and Well-Being, as it promotes the sustainable consumption of natural resources. Despite its considerable cultural importance, betel nut chewing is associated with diverse and significant health-related risks that warrant close examination. The knowledge of the locals emphasizes the importance of cautious usage and awareness when consuming it. Additionally, beyond its cultural and ceremonial importance, the practice serves a healthy purpose for sustaining and invigorating social interaction and cultural expression. The answer to managing potential health risks is to use it correctly, adhere to health regulations, and respect informed cultural traditions.

Literature Review

The Cultural Symbolism Theory, as presented in Clifford Geertz's The Interpretation of Cultures (1973), this theory suggests that cultural systems are built on symbolic elements that help people make sense of their surroundings. The symbols, present in social practices and rituals, express meanings about cultural beliefs, social organization, and values. Clifford Geertz's theory is significant in the context of Nga-Nga (betel nut chewing) in Benguet, Cordillera, as it serves as a cultural symbol that connects to personal identity, social relationships, health status, and religious beliefs. Furthermore, Nga-Nga is a ceremonial practice that reinforces cultural heritage, signifies physical well-being, and strengthens community bonds.

Geertz's theoretical framework positions Nga-Nga as a central symbolic practice in Benguet society, serving to manifest shared identity, uphold cultural traditions, and reinforce religious and social coherence. Studying Nga-Nga through its cultural framework helps identify how it develops community values and strengthens communal ties. The research explores Nga-Nga as a cultural symbol, illustrating its role in fostering cultural unity, social harmony, and preserving traditional practices in Benguet Cordillera.

Statement of the Problem

This study aimed to examine Betel Nut Chewing (Nga-Nga) as a cultural practice through an intergenerational perspective in Benguet, Cordillera.

Specifically, it sought to answer the following questions.

1. What is the profile of the respondents will be determined in terms of:

    a. Age;

    b. Sex;

    c. Cultural Affiliation;

    d. Highest Educational Attainment; and

    e. Chewing Status.

2. What is the level of perception of the respondents on the Betel Nut Chewing in terms of:

    a. Cultural;

    b. Social; and

    c. Economic?

3. What are the problems encountered by the respondents in Betel Nut Chewing in terms of:

    a. Cultural;

b. Social; and

c. Economic?

4. Is there a significant difference in the respondents' level of perception toward betel nut chewing when grouped according to the profile variables?

5. Is there a significant difference between the problems encountered by the respondents in Betel Nut Chewing across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. Outlines the research design, strategy, population, and setting of the study, data collection tools, procedures for data collection, instrument validation, statistical analysis, and ethical considerations.

Research Design and Strategy

The researchers used a descriptive research design utilizing a survey questionnaire. Following the chosen method was deemed the most suitable for gathering data to explore the Intergenerational Perspective on Betel Nut Chewing as a cultural practice in Benguet, Cordillera.

Meanwhile, descriptive research examines the Intergenerational Perspective in Betel Nut Chewing as a Cultural Practice. Therefore, the main objective was to contribute to the cultural discourse in the Philippines by emphasizing the importance of Nga-Nga in the social structure of Baguio City. Moreover, data were collected through a structured questionnaire. The descriptive research designs seek to characterize individuals, situations, or phenomena by examining them in their natural state and addressing questions related to what, where, when, and how. (Siedlecki, 2020).

Population and Locale of the Study

The research participants included local elders and cultural practitioners of Nga-Nga. Researchers used convenience sampling to select respondents highly knowledgeable about and experienced in the practice. In addition, the first account is very vital as it is required to support the cultural relevance and intergenerational transmission of Nga-Nga within the Benguet, Cordillera community.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting data on the variable, resulting in the instrument being tested for its reliability. Certainly, the questionnaire had two sections: respondent profiles and their perceptions of the profiles of the respondents. Next, the second section, respondents' perceptions towards Nga-Nga (Betel Nut Chewing) in Cordillera. Three (3) experts ensured the questionnaire's validity.

The survey's findings included detailed, descriptive interpretations of the level of perception of the respondents on the Betel Nut Chewing, such as (4) "Strongly Agree", (3) "Moderate Agree", (2) "Agree", (1) "Disagree". Consequently, the survey was detailed with descriptive equivalents of the problem encountered, such as (4) "Very Serious", (3) "Serious", (2) "Somewhat Serious", (1) "Not Serious."

Data Gathering Procedure

The researchers obtained the formal approval of the relevant authorities. Furthermore, clearances will be obtained from related institutions, including local government units (LGUs), cultural organizations, and ethics review boards, to ensure ethical research conduct.

To ensure proper data collection procedures, the researchers obtained consent from the respondents and consulted their research adviser.

Additionally, the text clearly explained the study's purpose and scope to the participants to obtain their informed consent and encourage full cooperation.

The researchers conducted a face-to-face survey by distributing questionnaires to the respondents. Questions were administered directly by the researchers, who would scrupulously adhere to the instructions.

The researchers interpreted the retrieved questionnaires and aimed to determine the Intergenerational Perspective in Betel Nut Chewing as a Cultural Practice in Benguet, Cordillera. Afterwards, the researchers collected all the complete questionnaires, compiling and tabulating the data.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings from the data collected during the research on Betel Nut Chewing as a Cultural Practice: Intergenerational in Benguet, Cordillera.

Profile of the respondents of Betel Nut Chewing

The collected data included the respondents' age, sex, cultural affiliation, highest educational attainment, and chewing status. These variables are presented with their respective frequency counts (f) and percentages (%). Each of the variables has its own interpretation and analysis. A total of 94 respondents were surveyed, which serves as the 100% base for calculating the percentage distribution of each variable.

Table 1
Profile of Respondents
n=94

Age. Indicating that 30 out of 94 respondents, or 32% of the total, were between the ages of 46 and 55. Only 19% of the respondents were in the 56 to 65 age brackets, indicating a relatively low prevalence of use among this older group. Conversely, the high usage rates are concentrated among Generation Z, Millennials, and Generation X respondents.

Variables		F	%
A. Age			
	26-35	25	27
	36-45	21	22
	46-55	30	32
	56-65	18	19
Sex			
	Male	58	62
	Female	36	38
Cultural Affiliation			
	Ifugao	25	27
	Bontoc	10	11
	Kankanaey	20	21
	Ibaloi	18	19
	Kalinga	13	14
	Tinguian	1	1
	Isneg	1	1
	Gadang	3	3
	Ilongot	2	2
	Negrito	0	0
	Other (Please Specify)	1	1
C. Highest Educational Attainment			
	No Formal Education	3	3
	Elementary Undergraduate	7	7
	Elementary Graduate	12	13
	High School Undergraduate	34	36
	High School Graduate	14	15
	College Undergraduate	15	16
	College Graduate	8	9
	PostGraduate	1	1
Chewing Status			
	Regular Chewer (daily or almost daily)	21	22
	Occasionally Chewer (only during events or gatherings)	37	39
	Former Chewer (used to chew but stopped)	30	32
	Never Chewed	6	7

According to the Philippine Cultural Education Program (PCEP, 2023), cultural practices such as traditional rituals, crafts, and communal activities are essential in sustaining community life; creating opportunities for skill-sharing, leadership, and cultural continuity, ensuring traditions are passed down to younger generations. Reflecting how betel nut chewing in Benguet continues to be practiced as part of their way of life, promoting social bonding and cultural preservation.

Sex. Study on Betel Nut Chewing as a Cultural Practice: Intergenerational Perspectives in Benguet, Cordillera, it was found that out of 94 respondents, 58 were male (62%) and 36 were female (38%). Indicating that a higher proportion of males engage in the practice of using Nga-Nga.

Study on Betel Nut Chewing as a Cultural Practice: Intergenerational Perspectives in Benguet, Cordillera, it was found that out of 94 respondents, 58 were male (62%) and 36 were female (38%). Indicating that a higher proportion of males engage in the practice of using Nga-Nga.

Cultural Affiliation. Out of 94 respondents, 25 (27%) identified as Ifugao, making them the most represented group. Conversely, the Tinguian, Isneg, and 'others' groups were the least represented, each accounting for only 1% of the total.

Recent research by Jocson (2024) on the Ifugao highlights that cultural heritage mapping and community-based heritage programs remain strong in Ifugao municipalities, which may explain why Ifugaos are more likely to continue traditional practices like betel nut chewing. This finding suggests that cultural affiliation matters: groups with active heritage efforts are more likely to preserve Nga-Nga as part of their identity.

Table 2
Level of Perception on Betel Nut Chewing as a Cultural Practice in terms of Social
n=94

Indicators	WM	DE
1. Was considered a normal part of social interactions in the area.	3.00	MA
2. Was a common gesture of hospitality and friendliness.	3.06	MA
3. Brings people together during gatherings or community events.	3.01	MA
4. Was often shared among friends and family as a form of bonding.	3.00	MA
5. Was a way for people to build or strengthen social relationships.	2.93	MA
Average Weighted Mean	**3.00**	**MA**

Legend:

Statistical Range	Descriptive Equivalent
3.26 - 4.00	Strongly Agree (SA)
2.51 - 3.25	Moderately Agree (MA)
1.76 - 2.50	Agree (A)
1.00 - 1.75	Disagree (D)

The social significance of betel nut chewing as an intergenerational practice in Benguet, Cordillera. With an average weighted mean of 3.00, the results correspond to a descriptive rating of Moderately Agree (MA). Indicating that the respondents moderately agree that betel nut chewing still holds social value in the community. Based on the report "Chewing on History: Betel Nut's Health and Cultural Impact" (UP Manila, 2025), betel nut chewing in the Philippines plays significant communal and ritual roles, strengthening its presence in social events and across different generations.

The second indicator, which represented a typical gesture of hospitality and friendliness, received the highest mean score of 3.06, corresponding to a descriptive equivalent of Moderately Agree (MA). The results indicate that respondents associate betel nut chewing with showing warmth and friendliness, reinforcing its role as part of social etiquette in the community.

Table 3
Problems Encountered in Betel Nut Chewing as a Cultural Practice in terms of Cultural
n=94

Indicators	WM	DE
1. Cultural traditions involving betel nuts are being forgotten by the younger generation.	2.12	SS
2. The cultural importance of betel nut chewing is no longer respected by many community members.	2.36	SS
3. Modern lifestyle changes are weakening betel nut-related traditions.	2.50	SS
4. Betel nuts are sometimes viewed negatively by outsiders, affecting our cultural identity.	3.30	VS
5. Younger people often feel embarrassed to continue the betel nut chewing practices of their elders.	2.83	VS
Average Weighted Mean	**2.62**	**S**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Very Serious (VS)
2.51 - 3.25	Serious (S)
1.76 - 2.50	Somewhat Serious (SS)
1.00 - 1.75	Not Serious (N)

This section examines the cultural problems reported by respondents concerning the practice of betel nut chewing in Benguet, Cordillera. The following results revealed an average weighted mean of 2.62, with a descriptive equivalent of Serious (S).

The result also indicates that respondents moderately agree that there are several cultural challenges affecting the continuity of betel nut chewing traditions

Findings from Bashoy, Kabayan (Bay-an, 2023) show that young farmers perceive a growing threat to traditional practices, such as betel nut chewing, as they are increasingly disputed due to changing societal views and lowered participation rates among newer generations.

The indicator "Betel nuts are sometimes viewed negatively by outsiders, affecting our cultural identity" obtained the highest weighted mean of 3.30, with a descriptive equivalent of

Very Serious (VS). This result suggests that respondents strongly feel that negative perceptions from outsiders have a significant effect on how their cultural practice is viewed and preserved.

IV. Conclusion and Recommendations

This chapter presents the summary of findings and conclusions derived from the study, "Betel Nut Chewing as a Cultural Practice: Intergenerational in Benguet, Cordillera," which aimed to identify its cultural, social, and economic significance. Furthermore, offers recommendations for the community, local government, and policymakers to consider. Betel nut chewing remains significant among middle-aged and older indigenous people in Benguet, Cordillera, but is gradually declining among the youth due to modernization. Despite this generational difference in practice, respondents across all demographic groups share similar perceptions of its cultural, social, and economic significance. The study betel nut chewing is recognized as a culturally important practice, with respondents moderately agreeing (mean 3.10) on its significance. It contributes to the preservation of cultural identity and plays meaningful roles in rituals, social gatherings, and expressions of respect within the community. However, the declining participation of younger generations due to modernization and shifting cultural preferences indicates a potential challenge to the continuity of this tradition. The study concludes that betel nut chewing holds moderate social importance as an intergenerational custom in Benguet, Cordillera, with an average weighted mean of 3.00. This indicates that the practice continues to maintain clear social and cultural value and remains socially relevant, even as its broader societal significance undergoes a transitional phase. The economic significance of betel nut chewing in Benguet, Cordillera is perceived as moderate, with a mean weighted average of 2.76. While the practice contributes to local economic activities and income generation, its overall impact is limited, representing a steady but modest economic role within the community. The study concludes that cultural problems affecting the continuity of betel nut chewing in Benguet, Cordillera are perceived as serious, with a weighted mean of 2.62. Factors such as declining intergenerational interest, modernization, and changing social norms pose significant challenges to passing the tradition down in its original form. These findings highlight the urgent need to address cultural erosion to ensure the sustainability of betel nut chewing in the community. The study concludes that social problems related to betel nut chewing in Benguet, Cordillera are the most pressing concern, with a mean of 3.22. Issues such as public hygiene, cleanliness, and social stigma are recognized by respondents, who remain aware of the practice's negative effects on public spaces and social acceptance. Addressing these concerns is essential to balance cultural preservation with community health and social order. The result on the economic challenges related to betel nut chewing in Benguet, Cordillera are perceived as somewhat serious, with a weighted mean of 2.35. While respondents acknowledge these issues, they are considered less severe than social and cultural barriers, indicating that economic factors pose a moderate but manageable concern for the continuity of the practice.

Based on the results, the researchers made the following recommendations: The researchers, in collaboration with the Barangay Councils, SK Officials, and the LGU of Benguet, should develop and disseminate short video clips. The clips should feature local elders explaining the cultural importance of betel nut in rituals and gatherings to promote intergenerational awareness. The videos must include a clear disclaimer stating they are intended for educational purposes only and that all ethical considerations, including informed consent from the elders, have been carefully addressed. These videos can then be posted on community Facebook pages to encourage the youth to appreciate and continue this cultural tradition. A partnership between the research team and local governing bodies (Barangay Councils and SK) is recommended to develop and disseminate simple, creative public awareness materials (stickers and posters) across barangay halls, markets, and public terminals. These materials can contain short messages that promote respect and awareness of the social and cultural role of betel nut chewing in the community, perhaps using captivating phrases like "EVERY RED-STAINED SMILE TELLS A STORY" As a central theme on the stickers and posters. The researchers, in partnership with the LGU of Benguet and local market vendors, can initiate a "market tagging" activity by placing minor laminated signs near betel nut products with messages such as "Locally Sourced: Supporting Benguet Families." This simple step helps promote community pride and support local livelihood. The researchers, in coordination with the Tourism Office of Benguet and SK councils, can start a social media project called "Artifact Close-Up." The activity involves digital documentation and dissemination of the practice. High-resolution close-ups of traditional betel nut implements (cutters, lime pots) should be posted on social media, using captions that briefly explain their specific cultural and ritualistic significance. This joint effort can help preserve and share Cordilleran heritage online. The researchers and the LGU of Benguet can collaborate in creating polite and educational reminder signs to be placed in public areas such as markets, terminals, and parks. These signs can encourage proper disposal of betel nut waste to maintain cleanliness and respect in public spaces. The researchers, along with the Provincial Agriculture Office of Benguet and local farmers, can work together to turn discarded betel nut husks and leaves into organic fertilizer. This low-cost, sustainable project can reduce waste, support eco-friendly farming, and provide additional income for local communities.

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Unlocking Hidden Gems: A Study on the Tourism Potential of Malico, San Nicolas, Pangasinan

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Abstract — Malico, San Nicolas, Pangasinan, is a highland community recognized for its rich natural and cultural tourism resources, offering significant opportunities for sustainable tourism development that can enhance the local economy while preserving cultural heritage.
Tourism growth in Malico aligns with several Sustainable Development Goals (SDGs), including Decent Work and Economic Growth (SDG 8), Sustainable Cities and Communities (SDG 11), Responsible Consumption and Production (SDG 12), Climate Action (SDG 13), and Life on Land (SDG 15). Understanding the factors that influence tourism development, as well as the challenges hindering its progress, is essential for realizing these benefits. The study surveyed 75 respondents, including local government unit officials (LGU) and business owners, selected through purposive sampling for their knowledge and experience in tourism. Findings showed that the natural and cultural attractions had the strongest influence on tourism growth, followed by sustainability efforts and the economic and social aspects of tourism. Infrastructure and accessibility were identified as critical areas requiring improvement, while governance and boundary issues, inadequate promotion, and limited community participation emerged as major challenges. The study concluded that Malico has high potential for sustainable tourism development if key issues are addressed. Recommendations include improving utilities, roads, and basic amenities; strengthening marketing strategies; establishing a formal tourism council to enhance coordination; promoting community involvement in planning; and providing training and incentives to support sustainable business practices. Implementing these measures can foster inclusive and environmentally responsible tourism, enabling Malico to maximize its natural and cultural assets while supporting local livelihoods and community well-being.

Keywords* — *Tourism Potential, Sustainable Tourism, Community-Based Tourism (CBT), Natural and Cultural Attractions, Infrastructure and accessibility, Promotion Strategies, Governance and Boundary

I. Introduction

Tourism has long been recognized as a key driver of economic growth, cultural preservation, and environmental conservation. However, as destinations develop, ensuring sustainability becomes essential to balancing economic benefits with environmental and cultural protection. Sustainable tourism emphasizes the responsible use of tourism resources, ensuring that attractions remain viable for future generations.

Malico, a highland barangay in the Municipality of San Nicolas, Pangasinan, is situated within the Caraballo Mountain Range at an elevation of approximately 1,675 meters above sea level, making it one of the highest points in the province. The area enjoys a cool, temperate climate, often covered in mist and fog, similar to that of Baguio City. Its pine forests, tiger grass plantations, and endemic flora distinguish it from the lowlands, contributing to its unique ecological and tourism appeal. Additionally, Malico holds significant historical value, having been a key battleground during World War II, particularly in the Battle of Villa Verde Trail. The recent completion of the Villa Verde Trail has significantly improved accessibility to Malico, attracting more visitors to its pristine landscapes and cultural sites, including the traditional 'A'-frame houses of the Kalanguya Indigenous People. However, the growing interest in Malico as a tourist destination presents a challenge: How can Malico sustain its attractions while ensuring that tourism growth does not compromise its natural and cultural integrity? Addressing this question is crucial in developing a sustainable tourism model that benefits both the environment and the local community.

Despite its growing tourism potential, Malico is at the center of a long-standing boundary dispute between Pangasinan and Nueva Vizcaya. Both provinces claim jurisdiction over the barangay, leading to governance complexities that may impact sustainable tourism development. Nueva Vizcaya officials, including Governor Jose Gambito, argue that Malico is part of Santa Fe, Nueva Vizcaya, citing historical and legal documentation. Conversely, Pangasinan officials, particularly from the municipality of San Nicolas, assert that Malico belongs to their province, based on administrative records and geographic ties (Inquirer, 2023). This dispute has implications for infrastructure development, tourism policies, and resource management, potentially affecting how Malico sustains its attractions. In addition to jurisdictional challenges, legislative measures also play a role in shaping Malico's tourism landscape. Senate Bill No. 1592, introduced in the 19th Congress, seeks to declare Barangay Malico in Santa Fe, Nueva Vizcaya, as an ecotourism zone with allocated funding for development (Marcos, 2022). While the bill underscores the recognition of Malico's natural and cultural significance, it further complicates governance matters by reinforcing Nueva Vizcaya's claim over the area. The outcome of this legislative initiative could influence tourism policies, funding allocations, and sustainable development strategies for Malico. Given these governance concerns, addressing jurisdictional ambiguities and ensuring collaborative tourism management between the two provinces are crucial steps in developing a sustainable tourism framework for Malico. As sustainable tourism emphasizes the responsible use of tourism resources, ensuring that attractions remain viable for future generations, it is imperative to consider the implications of governance disputes in Malico's tourism planning.

Tourism is recognized as one of the world's largest economic sectors, contributing 10.4% of global Gross Domestic Product (GDP) and supporting 1 out of 10 jobs worldwide (World Travel and Tourism Council, 2020). It plays a vital role in economic development by generating employment, increasing tax revenue, and fostering local investment (Cheng & Zhang, 2020; Shi et al.2020). However, without well-planned tourism policies, challenges such as infrastructure deficiencies, governance issues, and environmental degradation may arise, threatening long-term sustainability (Nguyen et al., 2020; Pulido-Fernández & Cárdenas-García, 2021). To address these challenges, infrastructure development is essential in unlocking a destination's tourism potential. Investments in roads, accommodations, and tourism services have been shown to significantly influence the growth of tourism destinations (Gharleghi & Jahanshahi, 2020; Kostetska et al., 2020). The World Tourism Organization (2021) emphasized that infrastructure projects help reduce travel time and improve visitor convenience, making destinations more accessible and attractive. Accessibility, in particular, is a crucial factor in tourism development, as it not only enhances visitor experiences but also drives innovation in the sector (Gillovic & McIntosh, 2020). Given Malico's location and developing tourism potential, investing in infrastructure, such as the completion of the Villa Verde Trail, can significantly boost its accessibility, draw more visitors and increasing its viability as a tourism hub.

Furthermore, sustainable tourism models like Community-Based Tourism (CBT) have proven to be effective in ensuring that tourism contributes to both local community development and cultural preservation. However, its success largely depends on well-established policy frameworks and governance structures, especially in remote areas that face challenges such as limited market access, funding constraints, and infrastructure deficiencies (Zielinski et al., 2020). Additionally, community participation is fundamental in ensuring that tourism remains beneficial for local populations, as it enables them to have a direct stake in its development and sustainability (Reindrawati, 2023). These principles align well with Malico's tourism potential, as engaging the local community in tourism-related decision-making can ensure long-term sustainability and equitable distribution of benefits. Rural tourism has gained increasing recognition as a significant strategy for regional development, particularly in both developed and developing countries (Ayhan et al., 2020). Recent studies highlight that rural tourism fosters economic diversification by empowering local communities, preserving cultural landscapes, and promoting sustainable tourism initiatives (Dolezal & Novelli, 2022; Ismanto et al., 2023; Zakaria, 2024). Moreover, Polukhina et al., (2021) emphasized that rural tourism has become an essential component of regional economies, offering new opportunities for local businesses and employment while fostering long-term sustainability. Laksmi et al., (2024) highlighted that sustainable tourism significantly contributes to economic growth by creating employment, supporting local enterprises, and increasing revenue generation. This aligns with the principles of CBT, where community involvement ensures that economic gains are equitably distributed among residents.

The United Nations World Tourism Organization (UNWTO, 2023) further stressed that rural tourism not only generates economic benefits but also plays a crucial role in preserving social and cultural traditions, making it a vital strategy for regional development. In the case of Malico, these global trends in rural and community-based tourism present valuable insights into its potential as a sustainable tourism destination. By leveraging its rich natural landscapes, indigenous traditions, and agricultural products, Malico can align itself with the CBT model to foster local economic growth while ensuring environmental and cultural conservation. Through well-planned infrastructure development, enhanced accessibility, and active community participation, Malico can achieve long-term sustainability, benefiting both residents and visitors alike. Applying these global perspectives to the Philippines, Community-Based Tourism (CBT) has been increasingly recognized as a sustainable model for tourism development in rural areas of the country. Susada (2022) examined the community-based tourism management practices in Boloc-Boloc, Barili, Cebu, using the 5 As of tourism (Attraction, Accommodation, Accessibility, Activities, and Amenities). The study underscored the crucial role of local government intervention and sustainable policies in enhancing tourism offerings. This finding is highly relevant to Malico's tourism potential, as effective governance and strategic policies are fundamental in ensuring long-term sustainability. Furthermore, Andalecio et al., (2022) assessed the potential of community-based tourism in Romblon, emphasizing the importance of community participation, policy frameworks, and socio-cultural engagement in achieving sustainability. Malico's success in tourism development may largely depend on how well the local community is involved in planning, decision-making, and preservation efforts. Engaging local stakeholders through training, policy support, and infrastructure enhancement can strengthen Malico's position as a viable community-based tourism destination.

Literature Review

This study was guided by Murphy's (1985) Community-Based Tourism (CBT) Theory, which underscored the importance of community involvement in tourism development. The theory emphasized sustainable tourism practices that integrated community participation in decision-making and resource management. Communities in tourism destinations also played a crucial role in promoting tourism destination products, as local communities were the main contributors to forming tourism images (Pike, 2004).

Applying this theory, the study examined how active community participation, sustainable practices, and socio-economic benefits could enhance Malico's tourism potential. By using Murphy's CBT Theory as a foundation, the research aimed to provide insights into how Malico could develop as a sustainable and community-driven tourism destination, ensuring that tourism growth aligned with the needs and aspirations of its residents while improving visitor experiences.

Republic Act No. 9593, or the Tourism Act of 2009, recognized tourism as a key driver of economic growth, cultural preservation, and sustainable development in the Philippines. It mandated the advancement and promotion of new tourist locations, ensuring that tourism delivered benefits to local communities while safeguarding natural and cultural assets. The legislation also emphasized the necessity for infrastructure improvements to enhance accessibility and the overall visitor experience.

Furthermore, Provincial Ordinance No. 296-2023 officially designated Barangay Malico, San Nicolas, Pangasinan, as the "Summer Capital of Pangasinan." This ordinance highlighted Malico's cool climate, natural beauty, and tourism potential, while acknowledging the importance of sustainable development and cultural preservation, especially for the Kalanguya Indigenous Tribe. Additionally, the ordinance aligned with ongoing efforts to rehabilitate the historic Villa Verde Trail, aiming to improve accessibility and promote tourism in the area.

This study assessed the tourism potential of Malico using the Independent Variable–Dependent Variable (IV-DV) framework to determine its viability as a sustainable tourist destination.

The independent variables included the profile of respondents, comprising local government unit (LGU) officials in terms of age, sex, civil status, highest educational attainment, and position, as well as business owners in terms of age, sex, civil status, monthly income, and nature of business.

Statement of the Problem

This study aimed to explore The Tourism Potential of Malico.

Specifically, it sought to answer the following questions:

1. What is the profile of the Local Government Unit Officials in terms of:
    a. Age;
    b. Sex;
    c. Civil Status;
    d. Highest Educational Attainment; and
    e. Position?
2. What is the profile of the business owners in terms of:
    a. Age;
    b. Sex;
    c. Civil Status;
    d. Monthly Income; and
    e. Nature of business?

3. What are the factors influencing tourism development in Malico, San Nicolas Pangasinan in terms of:

   a. Natural and cultural attractions;

   b. Infrastructure and accessibility;

   c. Economic and social aspects; and

   d. Sustainability?

4. What are the problems that hinder the growth of tourism in Malico, San Nicolas Pangasinan?

   a. Infrastructure Development;

   b. Promotion and Marketing Strategies; and

   c. Governance and Boundary?

5. Is there a significant relationship between the factors influencing tourism development in Malico, San Nicolas Pangasinan across profile variables?

6. Is there a significant relationship between problems that hinder the growth of tourism in Malico, San Nicolas Pangasinan across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the Research Design and Strategy, Population and Locale of the Study, Data Gathering Tool, Data Gathering Procedures, Validation of the Instrument, Statistical Treatment of Data and Ethical Consideration.

Research Design and Strategy

The researchers employed a descriptive research design utilizing a survey questionnaire. This method was chosen because it was considered the most suitable approach for gathering data to determine the tourism potential of Malico.

The study examined the tourism potential of Malico, San Nicolas, Pangasinan, and how it sustained its existing attractions while ensuring environmental, cultural, and economic sustainability. The primary objective was to enhance Malico's tourism potential, contributing to the area's economic development while preserving its cultural and environmental integrity. Data were collected through a structured questionnaire.

Descriptive research aimed to systematically describe a population, situation, or phenomenon by addressing what, where, when, and how questions, without focusing on why an event occurred. This approach involved observing and documenting various aspects of the subject to provide a detailed and accurate representation (Sirisilla, 2023).

Population and Locale of the Study

This study was conducted in Malico, San Nicolas, Pangasinan, a highland community recognized for its tourism potential. To gather relevant data, purposive sampling was employed to select respondents directly involved in tourism development and sustainability efforts. The respondents comprised local business owners, local government unit officials, and barangay representatives, who possessed firsthand knowledge and experience in managing and sustaining Malico's tourism industry.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting information on the variables. This instrument was designed to be reliable and valid to ensure the accuracy of the data.

The questionnaire was divided into three sections. The first section focused on the profile of the respondents, the second examined the factors influencing tourism development in Malico, San Nicolas, Pangasinan, and the third addressed the problems that hindered tourism growth in the area. Three experts validated the survey questionnaire to ensure its content validity.

The survey utilized descriptive interpretations with ratings such as (4) "Highly Potential," (3) "Potential," (2) "Moderately Potential," and (1) "Not Potential." For items identifying specific tourism-related problems, a frequency-based scale was used: (4) "Very Serious," (3) "Serious," (2) "Somewhat Serious," and (1) "Not Serious."

Data Gathering Procedure

The researchers formally sought permission from local business owners, local government units, and barangay officials. They consulted their adviser regarding the appropriate steps for data collection. The nature of the study was explained to secure full cooperation from the local business owners, local government offices, and barangay officials.

The researchers distributed questionnaires through face-to-face surveys, administering the questions directly while strictly adhering to the instructions. Upon retrieval, the researchers interpreted the completed questionnaires and accomplished the objective of assessing the tourism potential of Malico, San Nicolas, Pangasinan. After collecting all completed questionnaires, the researchers compiled and tabulated the data.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings of the data collected throughout the research of Unlocking Hidden Gems: A Study on the Tourism Potential of Malico, San Nicolas, Pangasinan.

Profile of the LGU and Business Owners in San Nicolas, Pangasinan

The profile comprised age, sex, civil status, highest educational attainment, and office assigned for Local Government Units (LGUs) in San Nicolas, Pangasinan, as well as age, sex, civil status, monthly income, and nature of business for business owners in Malico, San Nicolas, Pangasinan. The corresponding frequency counts (f) and percentages for each category were presented. Each variable was interpreted and analyzed separately. A total of 49 local government units and 26 business owners were surveyed; therefore, each variable had a total frequency count of 100.

Table 1
Profile of Respondents (LGU)
n= 49

Variables		F	%
A. Age			
	21-25	5	10
	26-30	10	21
	31-35	8	16
	36-40	11	23
	41-45	5	10
	46-50	6	12
	51-55	1	2
	56-60	1	2
	60 & above	2	4
B. Sex			
	Male	27	55
	Female	22	45
C. Civil Status			
	Single	21	43
	Married	27	55
	Widowed/Separated/Divorced	1	2
D. Highest Educational Attainment			
	Elementary Undergraduate		
	Elementary Graduate		
	High School Undergraduate		
	High School Graduate	6	12
	College undergraduate	3	6
	College Graduate	39	80
	With Master's Unit	1	2
	Master's Graduate		

	With Doctoral Units		
	Doctoral Graduate		
	Post-graduate		
E. Office Assigned			
	Tourism Office	5	10
	MEO/ Municipal Engineering Office	7	15
	MPDC Office		
	MENRO Office	2	4
	MDRRM Office	2	4
	Office of the Mayor	10	20
	Barangay Officials	13	27
		10	20

Age. The largest group among the LGU respondents was aged 36–40 years, comprising 23% of the total, followed by those aged 26–30 years at 21%, and 31–35 years at 16%. The smallest groups were those aged 51–60 years and above, each constituting less than 5% of the sample. These findings indicated that middle-aged adults (approximately 26–45 years) formed the majority of LGU personnel or participants, aligning with global labor force trends. As noted by the United Nations (2022), the working-age population, especially those aged 25 to 54, was the most economically active and significantly involved in community engagement and national development.

Sex. The sex distribution of the LGU in San Nicolas showed that 27 out of 49 respondents were male, representing 55%, while 22 were female, accounting for 45%. This indicated a slight male predominance within the LGU respondents. According to the International Labour Organization (2025), gender disparities in employment persisted globally, particularly in public service and administrative roles where men often held more senior or field-based positions.

Civil status. The civil status of the LGU respondents indicated that 27 out of 49 were married, representing 55%, while 21 were single, accounting for 43%, and the least number of respondents, 2%, were widowed, separated, or divorced. The United Nations Economic Commission for Europe (2021) reported that marriage remained a common status among the working population in both developed and developing countries. These findings were consistent with civil service demographics in many regions, where married individuals typically dominated full-time employment sectors.

Table 2

Profile of Respondents (Business Owners)

n= 26

Variables		F	%
A. Age			
	21-25	1	4
	26-30	0	0
	31-35	1	4
	36-40	6	22
	41-45	5	19
	46-50	2	8
	51-55	5	19
	56-60	3	12
	60 & above	3	12
B. Sex			
	Male	7	27
	Female	19	73
C. Civil Status			
	Single	2	8
	Married	23	88
	Widowed/Separated/Divorced	1	4
D. Monthly Income			
	₱5,000 - ₱ 15,000	19	73
	₱15,001 – ₱25,000	5	19
	₱25,001 – ₱35,000	1	4
	₱35,001 – ₱45,000	1	4
	₱45,001 – ₱55,000	0	0
	Others (Please Specify):	0	0
C. Nature of Business			
	Homestay	3	12
	Sari-sari store	10	38
	Cafe	4	15
	Vegetable Vendor	3	12
	Campsite	2	8
	Others (Please Specify)	4	15

Profile of the Business Owners in Malico, San Nicolas, Pangasinan

Age. Regarding the age of business owners, the age group with the highest number of respondents was 36–40 years old, representing 22%, followed by 41–45 years and 51–55 years, each comprising 19%. The youngest group, aged 21–25, and the 31–35 bracket were each represented by only one respondent, or 4%.

This suggested that middle-aged adults from 36 to 60 years old comprised the majority of business owners in San Nicolas, indicating a stable and mature entrepreneurial group.

As highlighted by the United Nations (2022), the working-age population, particularly those between 25 and 54 years old, was the most economically active and played a vital role in national development and local enterprise.

Sex. The result showed that, among the 26 business owners in Malico, 19 were female, comprising 73%, and 7 were male, representing 27%. This suggested that women constituted the majority of small-scale business owners in San Nicolas. This trend may have resulted from women's greater involvement in community-based businesses, which offered flexibility to balance work and family responsibilities.

Table 3

Factors Influencing Tourism Development in Malico in terms of Natural and Cultural Attractions

n=75

Indicators	WM	DE
1. Malico's climate and weather conditions are highly suitable for tourism activities.	3.69	HP
2. The natural features in Malico (e.g., mountains, waterfalls, forests) are well-preserved and attractive.	3.68	HP
3. Cultural attractions in Malico are effectively promoted to both local and international tourists.	3.48	HP
4. The scenic natural landscapes in Malico are appealing and capable of drawing tourists.	3.51	HP
5. Malico possesses a rich cultural heritage that enhances its tourism appeal.	3.64	HP
Average Weighted Mean	**3.60**	**HP**

Legend:

Statistical Range	Descriptive Equivalent
3.26 - 4.00	Highly Potential (HP)
2.51 - 3.25	Potential (P)
1.76 - 2.50	Moderately Potential (MP)
1.00 - 1.75	Not Potential (NP)

The factors influencing tourism development in Malico, San Nicolas, Pangasinan, in terms of natural and cultural attractions, yielded a total average weighted mean of 3.60, with a descriptive equivalent of "Highly Potential" (HP). The results indicated that Malico holds strong potential for tourism development due to its rich natural and cultural resources.

The first indicator, *"Malico's climate and weather conditions are highly suitable for tourism activities,"* received the highest mean score of 3.69, with the descriptive equivalent of "Highly Potential" (HP).

IV. Conclusion and Recommendations

This chapter summarized the findings and conclusions drawn from the study aimed at identifying the factors influencing tourism development in Malico, San Nicolas, Pangasinan, as well as the problems hindering its growth. Additionally, it provides recommendations for the Local Government Unit (LGU) to consider.

Local Government Unit The majority of LGU respondents were in the early to middle adulthood stage, with most having completed a college degree. There was a slight male predominance, particularly in decision-making or executive positions, which is commonly observed in rural government offices. Additionally, most respondents were married. This profile aligns with trends typically seen in public service roles, where employees tend to be educated, within the working-age group, and often married. Business Owners

Among business owners, middle-aged adults constituted the largest group, with women comprising most respondents. The majority were married, and their reported earnings were classified within the low-income bracket, with most businesses generating between ₱5,000 and ₱15,000 monthly, an amount generally considered subsistence-level or livelihood income in rural communities. Typical business types included sari-sari stores, cafés, and homestays, indicating that small-scale, community-based enterprises were prevalent in the area. Based on the findings in Table 1, tourism development in Malico, San Nicolas, Pangasinan, is strongly supported by its natural and cultural attractions, which obtained an overall weighted mean of 3.60 or “Highly Potential.” The results show that Malico’s favorable climate, well-preserved natural features, scenic landscapes, and rich cultural heritage form a strong foundation for attracting visitors and sustaining its identity. Although the promotion of cultural attractions received the lowest mean, it still reflected high potential, indicating only the need for stronger marketing efforts. Overall, respondents clearly recognized Malico’s natural and cultural strengths, suggesting that these assets can effectively guide future strategies to further develop and promote Malico as a sustainable and competitive tourist destination. The results presented in Table 2 show that infrastructure and accessibility in Malico obtained an overall weighted mean of 3.02, classified as “Potential,” indicating that these aspects are moderately supporting tourism but still require further development. Directional signage and tourist maps received the highest rating, suggesting that visitors can generally navigate the area with ease. In contrast, essential utilities such as power, water, and internet connectivity scored the lowest, emphasizing the need to strengthen basic services to meet tourism demands. Overall, while Malico possesses the foundational infrastructure needed for tourism, improvements in utilities, road conditions, food services, and support facilities are necessary to enhance accessibility and provide a better and more reliable visitor experience. The findings in Table 3 reveal that the economic and social aspects of tourism in Malico obtained an overall weighted mean of 3.31, interpreted as “Highly Potential,” indicating that tourism provides significant positive contributions to both the local economy and community well-being. The highest-rated indicator showed that tourism growth aligns well with the preservation of social harmony, reflecting a community environment that remains stable and cohesive despite increasing tourism activities. Meanwhile, the lowest-rated indicator—community participation in tourism planning, suggests the need for stronger involvement of residents in decision-making processes. Overall, the results demonstrate that tourism in Malico enhances income opportunities, supports local businesses, and improves quality of life, while also highlighting the importance of expanding community engagement to sustain these benefits. The results in Table 4 indicate that sustainability efforts in Malico achieved an overall weighted mean of 3.46, classified as "Highly Potential," showing that sustainable practices are strongly embedded in the area's tourism development. The highest-rated indicator emphasized the integration and respect for local cultural traditions, reflecting a tourism environment that values heritage and community identity. Although the encouragement for tourism operators to adopt sustainable business practices received the lowest mean, it still fell under "Highly Potential," suggesting that while current efforts are promising, stronger support and implementation strategies are still needed. Overall, the findings highlight that Malico places considerable importance on environmental protection, cultural preservation, and responsible tourism, positioning sustainability as a key pillar in its ongoing tourism development. Based on the results in Table 6, infrastructure development issues in Malico were rated with an overall weighted mean of 2.73, interpreted as "Serious," indicating that these concerns significantly hinder tourism growth. The lack of public transportation emerged as the most serious problem, reflecting major accessibility challenges for visitors. Other issues such as poor road conditions, unclear signage, and limited emergency services further contribute to travel difficulties and reduced tourist confidence. Although the absence of basic amenities received the lowest rating, it was still considered a concern affecting visitor comfort. Overall, the findings show that infrastructure-related problems remain major obstacles to Malico's tourism development, underscoring the need for improved transportation, road upgrades, better facilities, and strengthened support services to enhance the overall visitor experience.

The results in Table 7 indicate that shortcomings in promotion and marketing strategies in Malico obtained an overall weighted mean of 2.56, classified as "Serious," suggesting that these issues significantly hinder tourism development. Ineffective advertising of local events and attractions emerged as the most pressing concern, limiting the area's visibility to potential visitors. The absence of a clear marketing strategy received the lowest rating, reflecting the need for a more structured and coordinated approach. Other issues, such as limited collaboration with travel agencies, low involvement of local businesses, and insufficient community awareness, further constrain promotional efforts. Overall, the findings highlight that strengthening marketing initiatives, improving digital presence, and engaging stakeholders are essential to enhance Malico's appeal as a competitive tourist destination. The results in Table 8 show that governance and boundary issues in Malico received an overall weighted mean of 2.84, interpreted as "Serious," indicating that policy, coordination, and leadership challenges significantly hinder tourism development. Political disagreements among local leaders emerged as the most critical problem, reflecting the impact of fragmented decision-making on tourism projects. Overlapping responsibilities among local government units received the lowest rating, highlighting the need for clearer roles and stronger inter-agency coordination. Other issues, such as poor coordination between national and local agencies and conflicts over land ownership, further limit tourism growth. Overall, the findings suggest that establishing unified governance, improving collaboration, and resolving territorial disputes are essential to foster sustainable and effective tourism development in Malico. Based on the results, the researchers respectfully offer the following recommendations for the consideration of the Local Government Unit (LGU) and relevant stakeholders. These recommendations aimed to support and enhance the sustainable development of tourism potential in Malico, San Nicolas, Pangasinan: The Tourism Office may consider coordinating with the MPDC Office, barangay officials, and travel agencies to enhance promotional campaigns for Malico's cultural attractions. Utilizing social media, tourism websites, and local events could help reach both local and international tourists more effectively. The LGU may consider collaborating with utility providers (e.g., water, electricity, internet) and agencies such as the Department of Information and Communications Technology (DICT) to improve the reliability of power, water services, and internet connectivity in key tourist areas. This collaboration could enhance tourist satisfaction and support local businesses.

The Tourism Office, together with the MPDC Office, may work with local restaurants and the Municipal Health Office to diversify menus and promote tourist-friendly dishes. The Municipal Engineering Office, in collaboration with the Tourism Office and barangay officials, may improve signage and update tourist maps for easier navigation. The Tourism Office, with the MPDC Office and barangay officials, may add information centers, train guides, and use QR codes or apps to help tourists. The Municipal Engineering Office, with the Office of the Mayor and DPWH, may improve roads and implement safety measures for travelers. To enhance community participation, the LGU may consider partnering with barangay officials and local organizations to increase residents' involvement in tourism planning and decision-making. Holding community workshops or consultations could help align tourism projects with local needs. Strengthening the promotion of sustainable business practices could be achieved by working with the Department of Trade and Industry (DTI), local cooperatives, or NGOs to provide training and incentives for tourism operators in Malico. The Municipal Engineering Office, with the Tourism Office and barangay officials, may coordinate with private transport providers or cooperatives to improve access to key tourist sites and address the lack of public transportation. The Municipal Engineering Office, in coordination with the DPWH District Office, may implement regular maintenance and safety improvements on key roads to ensure safer and easier travel for tourists. The Municipal Health Office and MDRRMO, together with the Tourism Office, may establish strategically located first-aid stations or emergency response units near major tourist areas to enhance visitor safety. The Municipal Engineering Office, together with the Tourism Office and barangay officials, may install clear and standardized directional signage and provide updated tourist maps for easier navigation. Coordinating with private investors, cooperatives, or NGOs to explore the installation of basic amenities, such as restrooms and food stalls at major tourist sites, might improve visitor comfort and enhance Malico's overall appeal. The LGU might explore improving tourism marketing strategies by partnering with the Department of Tourism (DOT), Philippine Information Agency (PIA), local schools, and content creators to raise awareness and actively promote Malico through social media and local campaigns. The Tourism Office may establish partnerships with travel agencies, tour operators, and private transport providers to create tour packages and promote Malico as a destination, improving accessibility and visitor engagement. The Tourism Office, together with barangay officials and local organizations, may conduct workshops or orientation programs to educate residents on their role in promoting tourism and supporting local attractions. The Tourism Office, in coordination with local business associations and cooperatives, may encourage businesses to participate in promotional activities, such as offering tourist deals, showcasing local products, or collaborating on marketing campaigns. The Tourism Office, together with DOT and PIA, may develop a structured and comprehensive tourism marketing plan, integrating online and offline platforms, to increase visibility and attract both local and international visitors. The Office of the Mayor and LGUs may hold regular coordination meetings and create a tourism council to unify leadership and resolve conflicts in tourism projects. The MEO and MPDC Office may coordinate with barangay officials and legal authorities to clarify land ownership and resolve disputes to attract tourism investments. The MPDC Office and Tourism Office may work with DOT to establish clear local tourism policies and guidelines to support sustainable tourism development. The Tourism Office may strengthen partnerships with DOT, DENR, and other agencies to improve collaboration and implement tourism programs efficiently. Encouraging stronger collaboration among the LGUs involved in Malico could help address overlapping responsibilities. Establishing a formal tourism council or task force with representatives from each LGU, coordinated through the Office of the Mayor and MPDC, may improve governance and tourism project implementation.

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Perceived Significance of Sign Language Literacy among Tourism Professionals: A Bridge in Communication Gaps

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Abstract — Sign language is a vital communication tool for the Deaf and hard-of-hearing community, enabling their full participation in society. Despite the recognition of Filipino Sign Language (FSL) through Republic Act 11106, sign language literacy remains underutilized, particularly in the tourism sector, where effective communication is essential. The lack of proficiency among tourism professionals creates communication barriers, resulting in the exclusion and limited access of Deaf tourists.
This study employed a quantitative research design to investigate the perceived significance of sign language literacy among tourism professionals, aiming to address these communication gaps and promote inclusive tourism. A total of 36 tourism professionals serves as respondents gathered through convenience sampling. The statistical analysis conducted in the study, the null hypothesis stating that there is no significant difference in sign language literacy among tourism professionals, is accepted. Providing sign language help also increases competitiveness by satisfying accessibility demands, increasing company image, and growing the market through inclusivity. Findings demonstrated that sign language literacy is perceived as highly significant for customer service (mean = 3,46), guest retention (mean = 3.50), and competitive advantage (mean = 3.54). Key challenges identified include limited formal training opportunities. Accordingly, the study recommends the use of sign language in the tourism sector, specifically in tour guiding, which strengthens the promotion of inclusivity and fills the communication gap between tourism professionals and non-hearing groups. By enhancing basic sign language skills, the frontliners and service providers can create a welcoming environment and improve the overall experience for individuals with special needs.

Keywords — Sign Language Literacy, (SLL), Tourism Professionals, Inclusive Tourism, Communication Barriers, Customer Service, Deaf Community, Accessibility, Professional Development

I. Introduction

Sign language is a non-verbal form of communication that conveys vital information and facilitates the exchange of messages within the Deaf community, as well as among hard-of-hearing individuals and those with hearing impairments. It allows members of these groups to engage, express themselves, fully participate in societal activities, and access equal or specialized services.

Nevertheless, the Deaf community continues to struggle with connecting to the hearing society, often resulting in social isolation. The underrepresentation of individuals with special needs is pervasive across all sectors of society, and persistent communication barriers hinder their ability to thrive in an increasingly dynamic world (Absolor, 2023).

Despite its documented potential to bridge communication gaps between tourism professionals and the Deaf and hard-of-hearing community, the integration of sign language literacy remains overlooked in conventional training systems. This omission limits efforts to promote effective interaction with the Deaf and hard-of-hearing community, which remains marginalized in a context where spoken and written language dominate communication practices among tourism service providers. Consequently, access to information remains insufficient for many. For persons with special needs, nonverbal communication, such as body movements, hand gestures, and facial expressions, is an indispensable tool for societal connection. Marginalized, disadvantaged, and incapacitated individuals, in particular, often rely heavily on these cues during interactions.

Republic Act 11106, known as the Filipino Sign Language Act, recognizes Filipino Sign Language (FSL) as the national sign language of the Filipino Deaf community. The law mandates the use of FSL in all government transactions involving the Deaf, as well as in schools, broadcast media, and workplaces. Prior to the enactment of this law, sign language was not consistently accepted or implemented across various contexts. Its official recognition now underscores the vital role of sign language in transmitting information and facilitating outstanding service delivery to individuals with special needs.

The study, "Perceived Significance of Sign Language Literacy among Tourism

Professionals: A Bridge in Communication Gaps," aligns with several Sustainable Development Goals (SDGs). It supports SDG 3: Good Health and Well-being, by fostering practices that seek to improve the quality of life for individuals with special needs. The study also advances SDG 4: Quality Education, by promoting inclusive and equitable lifelong learning opportunities. Further, it relates to SDG 8: Decent Work and

Economic Growth, by encouraging the creation of productive employment opportunities. SDG 10: Reduced Inequality, is addressed through the promotion of inclusivity and equal access to services, while SDG 16: Peace, Justice, and Strong Institutions, is advanced by stimulating social solidarity and reducing disparities faced by Deaf individuals. Finally, SDG 17: Partnerships for the Goals, is supported by advocating for stronger global partnerships for sustainable development.

Research indicates that gestures involving the hands have long been central to human communication. Sign language, characterized by hand motions, constitutes a key nonverbal communication method (Sakshi & Sukhwinder, 2021).

Additionally, Sign Language Recognition (SLR), which is based on hand gestures, serves as an essential avenue for information exchange among both Deaf and hard-of-hearing individuals (Abu et al., 2024). Sign language, as a visual language, enables individuals of all hearing abilities to communicate effectively by using body language rather than speech (National Geographic Society, 2024). Outward signs from the hands, eyes, facial expressions, and body movements are used to convey meaning. Dianito et al. (2021) noted that the most disadvantaged and unrecognized voices often persist among those with impairments, urging society to address unequal rights and opportunities.

As argued by Absolor (2023), discrimination against persons with disabilities remains pervasive, necessitating widespread respect for the rights and dignity of all. An essential aspect of human dignity is acknowledgment of the characteristics and distinctions of people with health conditions or impairments. Increased support is needed from Deaf advocates, role models, and improved access to mental health services, many of which remain inaccessible to Deaf youth (Clark, 2022).

Community inclusion is vital for individuals who are Deaf, as it facilitates participation in economic activities, membership in society, and access to support services (National Deaf Children's Society, 2021). Programs that integrate typical and impaired hearing individuals through sign language instruction have been found effective for enhancing communication skills, fostering collaboration, and supporting attentional and psychological development (Maksiova et al., 2024).

Such inclusion builds connections, nurtures support, and creates environments where all can thrive, especially through the sustained use of sign language. The World Health Organization (2024) projects that at least 700 million people will require hearing rehabilitation by 2050, with over 2.5 billion affected by hearing loss. The adoption of inclusive customer interactions is critical for businesses, as effective communication builds trust and enhances service quality. Traditional methods often fail the Deaf and hard-of-hearing community, resulting in alienation and misunderstanding. In this context, sign language provides a vital means to bridge communication gaps and foster inclusive customer service (Smith, 2023).

Rawrf et al. (2024) observed that the Deaf community values SLR as it enhances socialization, education, and communication skills. Grutta (2023) highlighted that sign language, beyond mere imitation, is a secure and expressive mode of interaction. This underscores the importance of sign language literacy and its impact on marginalized populations and industry advancement.

Santos et al. (2025) defined deafness as a decreased capacity to perceive sounds, resulting in significant challenges for those affected. These include unemployment, financial constraints, social prejudice, low awareness of specialized programs, educational disadvantages, geographic inaccessibility, cultural concerns, insufficient sign language skills, stigma, and dissatisfaction with available programs (Ikwara, 2024). Alaghband et al. (2023) further emphasized that individuals with special needs face complex and wide-ranging challenges, necessitating increased assistance.

Literature Review

Symbolic Interactionism Theory aligns closely with the researcher's study on sign language literacy because the theory emphasizes how individuals construct meaning through social interaction using shared symbols, particularly language and gestures. Since sign language is itself, a symbolic system composed of visual signs, handshapes, and expressions, learning it requires individuals to interpret and negotiate meaning in interaction with others. According to Mead and Blumer, meanings emerge and evolve as people engage socially, and this is evident in how sign language users develop literacy through continuous communication, feedback, and shared understanding within their community. As individuals exchange signs and interpret each other's gestures based on mutually understood symbols, they form a clearer perception of their environment and refine their communicative competence.

Thus, the process of acquiring sign language literacy directly reflects the core principles of Symbolic Interactionism, demonstrating how meaning is created, shared, and transformed through symbolic communication.

By applying symbolic interactionism, researchers gained insight into how people and groups understood and made sense of their social contexts, as well as how these interpretations influenced their actions and behaviors.

The World Federation of the Deaf (WFD) is an international non-governmental organization established in 1952 in Rome, Italy, with the primary objective of advancing the human rights of deaf individuals globally. The organization collaborates with the United Nations, national organizations supporting deaf communities, and various stakeholders to promote and safeguard these rights. The WFD emphasizes the recognition and use of sign languages as the natural and original means of communication for deaf people. It maintains partnerships with United Nations agencies, including the International Labour Organization and the World Health Organization, and is a member of the International Disability Alliance (IDA). The acquisition of sign language is particularly significant for deaf individuals, especially within sectors such as travel and hospitality, to ensure equitable treatment and access to services. The WFD is committed to developing initiatives that foster equal opportunities and full societal participation for deaf individuals in every country.

Republic Act No. 11106, also known as the Filipino Sign Language Act (FSL Act), is a legislative measure enacted in the Philippines that designates Filipino Sign Language (FSL) as the national sign language for the deaf community and as the official sign language for government transactions involving deaf persons. The law mandates the use of FSL in educational institutions, broadcast media, and workplaces, with the overarching goal of ensuring the equal human rights and freedoms of persons with disabilities.

The study examined the perceived significance of sign language literacy among tourism professionals as a bridge in communication gaps. It followed the Input-Process-

Output (IPO) model. The study's input consisted of the respondents' profiles, including age, sex, highest educational attainment, years of work experience, tourism sector affiliation, and position. The next component addressed the perceived significance of sign language literacy among tourism professionals, focusing on its impact on customer service, guest retention, and competitive advantage. The process involved the administration of survey questionnaires, data collection procedures, statistical treatment, data analysis, and interpretation. Upon completion of the study, the researchers proposed the development of sign language skills among tourism professionals across various tourism sectors.

Statement of the Problem

This study aimed to determine the perceived significance of sign language literacy among tourism professionals: a bridge in communication gaps. Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
    a. Age;
    b. Sex;
    c. Highest Educational Attainment;
    d. Number of years working;
    e. Tourism sector working with; and
    f. Position?
2. What is the significance of sign language literacy among tourism professionals, along with:
    a. Customer Service;
    b. Guest retention; and
    c. Competitive advantage?
3. Is there a significant difference on the significance of sign language literacy among tourism professionals across variables?

II. Methodology

This section presents the research methodology employed in the study. It provides a detailed discussion of the research design and strategy, population and locale of the study, data-gathering instruments, data collection procedures, instrument validation, statistical treatment of data, and ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design utilizing a survey questionnaire. This method was chosen because it was considered the most appropriate approach for collecting data to assess the effectiveness of sign language in the tourism and hospitality industry and to implement the proposed action plan.

Descriptive research aimed to explain the characteristics and relationships among entities such as individuals, organizations, groups, or environments. It also addressed the questions of "who," "what," "where," and "how," thereby enhancing data analysis and interpretation. Furthermore, without altering the variables, a descriptive study could provide a detailed depiction of their real-world conditions (Glass & Hopkins, 2022).

Population and Locale of the Study

The target population of the study was selected from tourism professionals in Metro Manila, Pasay City, specifically from the airline, hotel, restaurant, and travel agency sectors. The respondents were categorized into four groups: professionals working in airlines, hotels, restaurants, and travel agencies. Convenience sampling was employed, selecting participants who were easily accessible and willing to participate. This method was deemed appropriate because it allowed the researchers to efficiently and practically gather relevant insights, considering the study's time and resource constraints. It also enabled the inclusion of professionals who could provide valuable perspectives on the significance of sign language literacy as a means to bridge communication gaps in the tourism industry.

Data Gathering Tool

The researchers employed a survey questionnaire as the primary instrument for collecting data on the variables. The instrument was required to be both reliable and valid. The questionnaire was divided into two sections. The first section collected demographic information about the respondents from selected areas of Luzon, specifically within the tourism sectors. The second section investigated the perceived significance of sign language literacy. The researchers developed the questionnaire and ensured its validation by experts.

The survey employed a four-point Likert scale with descriptive interpretations: (4) "Highly Significant," (3) "Significant," (2) "Moderately Significant," and (1) "Least Significant."

Validation of the Instrument

The questionnaire checklist was administered to the evaluators, while the critical reader and statistician conducted the validation process. To determine the validity of the instrument used in this study, **Validator A, Validator B, and Validator C** served as the validators due to their expertise in the field. The validators employed a content validation checklist to assess whether the questionnaire was suitable for use. Upon validation, they determined that the questionnaire checklist was recommended as an instrument for data gathering.

The results of the validation are presented below.

Validator	**Mean**	**Description**
Validator A	4.71	Excellent
Validator B	4.57	Excellent
Validator C	4.29	Excellent
Average Weighted Mean	**4.52**	Excellent

Legend:

Statistical Range	**Descriptive Equivalent**
4.21-5.00	Excellent
3.41-4.20	Very Good
2.61-3.40	Good Fair
1.81-2.60	Poor
1.00-1.80	

Data Gathering Procedure

The researchers formally sought permission from tourism professionals and consulted their advisers regarding the appropriate procedures for data collection. The nature and purpose of the study were clearly explained to ensure the full cooperation of tourism professionals working in the tourism sector.

The researchers distributed the questionnaires through face-to-face surveys administered directly by them, adhering strictly to the provided instructions.

The retrieved questionnaires were then analyzed and interpreted to determine the perceived significance of sign language literacy among tourism professionals in selected areas of Luzon. After collecting all the completed questionnaires, the researchers compiled and tabulated the data for further analysis.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings derived from the data collected during the research on the perceived significance of sign language literacy among tourism professionals: a bridge in communication.

Table 1
Profile of Tourism Professional
n=36

Variables		F	%
A. Age			
	20-29	25	69
	30-39	7	19
	40-49	3	8
	50 & above	1	3
B. Sex			
	Male	13	36
	Female	23	64
C. Highest Educational Attainment			
	Bachelor's Degree	28	78
	Other: specified (ALS), (TESDA)	8	22
D. Number of Years Working			
	Less than 1 year	4	11
	1-3 years	17	47
	4-6 years	5	14
	More than 6 years	10	28
E. Tourism Sector Working With			
	Airline Industry	10	28
	Hotel and Accommodation Services	8	22
	Food and Beverage Services	9	25
	Travel Agency or Tour Operators	9	25
F. Position			
	Frontline Staff	11	31
	Customer Service/Support Staff	10	28
	Supervisor/Team Leader	4	11
	Managerial Position	2	6
	Executive/Senior Management	1	3
	Other	8	22

Age. The data indicated that 25 out of 36 respondents, or 69% of the total, were between the ages of 20 and 29. Relatively few respondents, or 3%, were aged 50 or older. Given that most respondents were younger, the perceived significance of sign language literacy was likely influenced predominantly by the attitudes of younger workers. This suggested that the overall level of awareness might have been higher or more optimistic than if a larger proportion of older workers had been included. The low response rate from older age groups implied a possible generational gap, wherein older hospitality workers exhibited lower awareness or engagement with sign language literacy, potentially posing a barrier to inclusive service for Deaf or hard-of-hearing clients.

According to Nueda (2021), young adulthood is characterized as a period of good health, during which individuals possess the physical strength and energy required to perform demanding jobs, particularly in the hospitality and tourism industries.

This age group often gravitated toward the tourism industry, as it offered opportunities for rapid career advancement, enabling them to acquire significant work experience and relevant qualifications quickly.

Sex. Out of thirty-six respondents, twenty-three (64%) were female, and thirteen (36%) were male, indicating that more females were employed in the tourism profession. This reflected a common trend in the tourism and hospitality industry, where women were more frequently employed because many positions required strong communication skills, patience, and a service-oriented disposition.

Table 2

Significance of sign language literacy among tourism professionals in terms of Customer service

n=36

Indicators	WM	DE
Sign language is essential in delivering inclusive customer service in the tourism industry.	3.36	HS
Sign language literacy enhances communication with hearing- impaired tourists.	3.58	HS
Sign language skills reduce misunderstandings and service complaints.	3.25	S
Staff trained in sign language are more confident and effective in serving diverse guests.	3.53	HS
Sign language improves guest satisfaction for deaf or hard-of hearing customers.	3.58	HS
Average Weighted Mean	**3.46**	**HS**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Significant (HS)
2.51 - 3.25	Significant (S)
1.76 - 2.50	Moderately Significant (MS)
1.00 - 1.75	Least Significant (LS)

The fifth indicator, *"Sign language improves guest satisfaction for Deaf or hardof-hearing customers,"* received the highest weighted mean of 3.58, with the descriptive equivalent of "Highly Significant" (HS). This was significant because it directly linked sign language literacy to a core business goal, validated inclusivity efforts, and justified investment. It demonstrated that tourism professionals believed that knowing sign language led to happier customers by enabling effective communication, increasing independence, fostering a sense of belonging, and allowing for personalized service.

Seldean Smith (2023) highlighted that incorporating sign language in customer service went beyond enabling basic communication. It empowered Deaf and hard-ofhearing individuals to express their needs, ask questions, and receive assistance directly and independently. This reduced frustration, fostered a sense of inclusion, ensured equal access to information and services, and allowed for personalized and attentive service, ultimately transforming the customer experience and significantly improving guest satisfaction.

The third indicator, *"Sign language skills reduce misunderstandings and service complaints,"* recorded the lowest weighted mean of 3.25, corresponding to "Significant" (S). While still indicating agreement, it suggested a slightly lower perception of its direct impact on reducing complaints compared to other benefits.

Table 6
Significant difference on the significance of sign language literacy among tourism professionals across variables
n=36

Profile	Customer Service	Guest Retention	Competitive Advantage
	Sig.	Sig.	Sig.
Age	.069	.125	.182
Sex	.901	.740	.696
Highest Educational Attainment	.363	.114	.181
No. of years working	.667	.519	.435
Tourism Sector Working with	.922	.451	.089
Position	.936	.919	.595

Since all p-values (Sig.) were greater than 0.05, the null hypothesis was not rejected. The analysis revealed that sign language literacy among tourism professionals does not significantly influence customer service, guest retention, or competitive advantage across the demographic characteristics of age, sex, education, experience, sector, and position. This means that regardless of their demographic background, respondents share similar views on its role in customer service, guest retention, and competitive advantage. Overall, sign language literacy is valued consistently across all groups.

IV. Conclusion and Recommendations

This chapter presented the summary of findings and conclusions derived from the study, which aimed to determine the significance of sign language literacy among tourism professionals. It also provided recommendations for tourism professionals within the tourism sector to consider.

Conclusions. Sign language literacy is essential for providing inclusive customer service in the tourism industry. Tourism professionals see their important role in improving communication with hearing-impaired tourists, which leads to greater guest satisfaction. Tourism professionals strongly believe that deaf or hard-of-hearing guests are more likely to return if they feel understood and respected. Offering sign language support creates a positive impression that builds loyalty and improves personalized service, which helps with guest retention. Providing services to deaf clients gives the organization a significant edge over competitors. Following accessibility laws, improving brand image, attracting a wider market, and offering inclusive services all contribute to this advantage. Based on the results, the researchers made the following recommendations: To improve inclusive customer service, tourism sectors should incorporate basic sign language training and provide ongoing workshops for professionals to improve communication with Deaf and hard-of-hearing guests. Additionally, inclusivity should be promoted through seminars, awareness campaigns, and collaboration with Deaf communities to strengthen accessibility, reduce misunderstandings, and enhance the overall customer experience. To directly address guest retention, it is necessary to enhance communication access for Deaf and hard-of-hearing travelers to promote inclusive and high-quality tourism experiences. Additionally, it is necessary to look into how sign language can improve individualized services and create better training programs and policies that support accessible tourism in order to increase guest loyalty. In this respect, an investigation into how sign language skills could provide a competitive advantage to tourism professionals is recommended, including its impact on guest retention, customer loyalty, and overall competitiveness. It is also worth assessing the effectiveness of training programs, organizational policies, and accessibility laws in fostering inclusivity. The aim is to incorporate best practices that enhance customer satisfaction and create a solid brand for long-term success. The researchers encourage future studies to explore how sign language improves communication between tourism professionals and Deaf and hard-of-hearing guests. Research could also focus on its effects on customer loyalty and service quality, as well as the effectiveness of various training programs in fostering inclusivity and enriching guest experiences across all three variables.

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Analyzing the Motivational Factors and Barriers towards Online Shopping of Selected College Students

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Abstract — Online shopping has become a necessity. This is one of the most popular and convenient ways for consumers to purchase goods and services in today's digital age. This study utilized a quantitative design to identify the motivational factors and barriers influencing online shopping among selected college students at Urdaneta City University.
A total of 207 students participated through convenience sampling, and data were analyzed using Kruskal-Wallis and Mann-Whitney U Test to identify differences based on age, sex, year level, monthly allowance, frequency of ordering, and allotted budget. Among respondents, 58.9% were between the ages of 18-20, with most students being young adults. A number of 78.7% makes the female group dominant user of online shopping compared to 21.3% of males. Senior students are 34.8%, showing their highest involvement in online shopping, in contrast to sophomores with 31.9%. Moreover, 42.5% had a monthly allowance of Php 2001-Php 3,000. A total respondent of 32.9% who ordered online twice a week and a 52.7% of respondents with an allocation of less than Php 500 for online shopping. The study found that convenience, product variety, and affordability serve as major motivational factors influencing students to shop online. However, unreliable sellers, deceptive pricing, payment issues, and complicated return policies hinder this engagement. This study recommends promoting transparency across online shopping platforms, improving digital literacy and awareness on online transactions, and encouraging responsible online shopping habits among students. Strengthening these aspects can enhance online shopping experiences, reduce risks, and support sustainable digital consumer behavior among college students.

Keywords* — *Barriers, Digital Shopping, E-commerce, Motivational Factor, Shopaholic, Socialization, Sustainable Industrialization

I. Introduction

Digital shopping, also known as online shopping, has become a necessity for individuals, bringing efficiency and convenience to their daily lives. It offers a broader product range, making it easier for people to find what they want and need. It has provided consumers with options such as payment methods, delivery, and product variety. Convenience and time efficiency play a role in the rapid growth of online shopping, particularly among students with busy schedules who prefer to browse and purchase everything online, from clothing to electronics, groceries, and household items. On the contrary, it has drawbacks such as damaged products, delays, and incorrect items, which can make returning and exchanging products difficult.

The rapid development of information technology and the internet has changed human life across many fields, including the economy. This transition is vital and reinforces the larger theme of how technology modernizes the economy and opens new opportunities for people. Currently, advances in information technology are driving the economy towards a digital economy, for example, through online shopping (Ermawati & Lestari, 2022). In addition, according to Tuner (2024), technology affects almost every aspect of life, from transport efficiency and safety to access to food and healthcare, socialization, and productivity.

In recent times, the Internet has been used to provide us with information and has been vastly exploited for our own convenience. Online shopping is an activity of purchasing goods and services through the internet. It has grown popular in recent years, primarily because people value its ease of use, convenience, and usefulness, and because it can save money, time, and effort. Online shopping has also attracted students' attention in this generation (Chelvarayan et al., 2021).

Petrosyan (2025) observed that, as of February 2025, there were 5.56 billion internet users worldwide, representing 67.9 percent of the global population. A total of 5.24 billion, or 63.9 percent of the world's population, were social media users. Moreover, Ahamad & Kamaraj (2024) stated that in the present era, facilitated by advanced technology and the internet, individuals worldwide have begun making online purchases from the comfort of their homes. It currently plays a crucial role in the lives of individuals, particularly older people and those with hectic schedules.

Online shopping is a form of consumption for most people, including college students. As time passes by, online shopping has become a crucial part of our day-to-day lives. Taobao, Shopee, Lazada, and the like are digital platform applications that have become the common language of college students. Once people shop online, goods are delivered directly to their door, allowing them to shop without leaving home (Chelvarayan et al., 2023).

According to Kasuma et al. (2020), shopping can be done in a minute even when someone is still busy. Consumers do not have to wait in line or until the shop assistant or worker helps with the purchases. It can also avoid crowds, especially when the store is running a discount sale or a clearance sale.

In addition to being able to compare different types of products, the consumer can also get several brands and products from various sellers in one place or on a website. This is where online shopping is becoming increasingly important, as it can save valuable time that can be used for other things.

Furthermore, Sreevidya (2024) stated that customers are attracted to online shopping due to attractive discounts and offers that are not typically found in traditional retail outlets. Online shops also offer a wide range of products, including electronics, consumer goods, apparel, groceries, and household items. Moreover, Slahuddin & Ali (2021) mentioned that affordability highly motivates consumers to shop online.

As Nicoleta (2022) noted, shopper behavior is the culmination of a person's actions and feelings during shopping. Many distinct factors affect consumer behavior, some of which the merchant may exploit. It is vital to consider consumer behavior to determine what drives the best outcomes in a particular store and learn how to leverage these characteristics to maximize them, increase sales, and improve the customer experience.

Agustin & Navilah (2023) stated that the campus is a place where students gain knowledge and sometimes becomes a place for competition to show their fashion style. Students prefer to spend their pocket money on trendy items rather than on college books. Now, online shopping is an increasingly favored trend by the younger generation, including students, because e-commerce makes it easier for them to get the products they want.

With convenience and various promos, students are easily tempted and more inclined to spend; they are willing to spend money on goods or products that are not important (Afrianto & Irwansyah, 2021). Lack of consumer confidence due to the absence of website security and privacy will become one of the disadvantages of online shopping, thereby preventing its development (Kasuma et al., 2020).

Factors that limit consumers' willingness to buy from online sites include fear of online banking, poor service, inexperience, insecurity, insufficient product information, and a lack of trust (Daroch et al. 2021). According to Sharma (2020), factors such as the need to provide a credit card number, fear of receiving a wrong-quality product, unawareness of easy returns, and the need to replace items are barriers to consumer adoption of online shopping.

Hidden or additional charges quoted by shopping sites are a common problem faced by rural & urban consumers. Urban customers face quality issues, while rural customers face difficulties tracking the product (Deshmukh & Chourasia, 2020). As stated by Casimiro et al. (2022), the use of social media in the Philippines over the last few years has become highly prominent, making the country one of the world's most popular social media markets. The Filipino consumers did not escape this scenario and had to rely more on online platform stores to buy their essential and non-essential goods.

Furthermore, as Piad (2022) mentioned, Filipino consumers have doubled the number of digital platforms they use for online shopping, and they do not mind switching apps if other merchants can deliver their products more quickly, according to a study by the social media giant Meta and the management consultancy firm Bain & Co.

Literature Review

Laliberte (2023) stated that online shopping is a particular type of e-commerce that uses a web browser to link buyers and sellers across the internet. At present, it's not unusual to come across internet retailers offering a variety of goods to potential buyers, along with features, images, prices, and specifications. The fundamental goal of online shopping is to make it as quick and straightforward as possible for customers to reach their desired merchant in a few minutes with minimal effort. When consumers engage in online shopping, they unconsciously see that they are saving time as they participate in the process (Bulacan et al, 2022).

In general, various factors affect consumers' decisions when buying an item. Some of these factors may be more specific to buying preferences, such as the exact item you are buying and the occasion (Araujo et al. 2022).

The use of online shopping significantly contributes to and aligns with Sustainable Development Goals (SDGs) 8: Decent Work and Economic Growth. This new method of shopping opens new opportunities for employment and earning a living, such as for students seeking part-time or freelance work. Engaging with this platform enables students to access the global market and purchase products from around the world, thereby promoting economic growth.

It also contributes to SDG 9: Industry, Innovation, and Infrastructure, through reducing the need for physical stores and infrastructure. Online shopping can promote sustainable industrialization, helping reduce carbon emissions and waste. In addition, online shopping platforms allow small businesses and entrepreneurs to be more creative in selling their products and services, thereby encouraging innovation.

Online shopping also aligns with SDG 12: Responsible Consumption and Production in several ways, mainly through sustainable consumption patterns, reduced waste, and eco-friendly products. Customers will be informed about products designed to be reused or recycled, which is a great way to promote sustainability.

The Theory of Planned Behavior (TPB) by Ajzen (1991) stated that behaviors are influenced by intentions, which are determined by attitudes, subjective norms, and perceived behavioral control. Attitudes are positive or negative thoughts that are applied to demonstrate a particular behavior. These kinds of concepts are known as behavioral beliefs.

A person will desire to participate in a behavior if they have a favorable view of it. People's perspectives on the consequences of conveying behavioral beliefs, as evaluated and validated by risk assessment (outcome assessment) findings, influence their attitudes.

The perceived social pressure to engage in a behavior or refrain from it is known as subjective norms. Perceived behavioral control refers to people's perceptions of their ability to perform a given behavior. Based on the theory, beliefs about how important it is to consider others' feelings about Internet purchasing, and the motivation to comply with others' views of importance, should also influence intent to make Internet purchases.

The Theory of Planned Behavior (TPB) will provide a framework for examining how attitudes, subjective norms, and perceived behavioral control influence college students' motivations and barriers to online shopping. By incorporating TPB theory, the researchers aimed to gain a deeper understanding of the factors driving digital shopaholic behavior among college students.

Statement of the Problem

This study aimed to determine the motivational factors and barriers towards online shopping of selected college students.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
    a. age;
    b. sex;
    c. year level;
    d. monthly allowance;
    e. frequency of ordering; and
    f. allotted budget for shopping?
2. What are the motivational factors that affect the motivation of college students in online shopping in terms of:
    a. convenience;
    b. products;
    c. price; and
    d. accessibility?
3. What are the barriers that affect the college students in shopping online along with:
    a. security and privacy;
    b. payment issues;
    c. deceptive pricing; and

d. return policy?

4. Is there a significant difference on the motivational factors and barriers encountered towards online shopping of selected college students across profile variables?

II. Methodology

This chapter explains how the study was conducted. It also presents the research design and strategy, the population and locale of the study, the data gathering tool, the data-gathering procedures, the instrument validation, the statistical treatment of the data, and ethical considerations.

Research Design and Strategy

The researchers used a descriptive research design utilizing a survey questionnaire. This method was used because it is considered the most suitable for gathering data to determine the motivational factors and barriers to online shopping among selected college students.

The primary goal is to highlight the factors that motivate and hinder students from online shopping. The data was collected through a structured questionnaire. Descriptive research designs aim to describe individuals, situations, or phenomena by studying them as they are in nature and providing answers to questions about what, where, when, and how (Siedlecki 2020).

Population and Locale of the Study

The research respondents were students of Tourism Management in the second to fourth years, excluding first-year students, enrolled at Urdaneta City University in the academic year 2024-2025.

A sample of 66 respondents from the second year, 69 respondents from the third year, and 72 respondents from the fourth year, with a total of 207 respondents, were selected using convenience sampling due to its efficiency and practicality, which involves selecting individuals who are most easily and suitably available from a readily available population, such as the tourism students. This sampling method was used to provide a more comprehensive understanding of the factors that influence the selected college students' online shopping.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting information on the variables. The instrument used must be reliable and valid. The questionnaires were divided into three sections. The first section covered the respondents' profiles. The second section investigated the motivational factors influencing college students' online shopping behavior. The third section examined the barriers that affect college students in shopping online. Three experts validated the survey questionnaire to ensure its validity.

The second part was detailed with descriptive interpretations such as *(4) "Strongly Agree," (3) "Agree," (2) "Disagree," and (1) "Strongly Disagree." The third part was detailed with descriptive interpretations such as (4) "Always," (3) "Sometimes," (2) "Rarely," and (1) "Never."*

Validation of the Instrument

The questionnaire checklist was administered to the evaluators, and the critic reader and statistician performed a validation process. To determine the validity of the instrument used in this study, **Validator A**, **Validator B**, and **Validator c**, served as the questionnaire validators, as they are experts in the field. The validators used a content validation checklist to determine whether the questionnaire checklist is recommendable. Upon validation, the validators determined that the questionnaire checklist is recommended to use as an instrument in data gathering. The result of the validation is shown below:

Validator	Mean	Description
Validator A	4.71	Excellent
Validator B	4.43	Excellent
Validator C	4.43	Excellent
Average Weighted Mean	**4.52**	**Excellent**

Legend:

Statistical Range	Descriptive Equivalent
4.21-5.00	Excellent
3.41-4.20	Very Good
2.61-3.40	Good
1.81-2.60	Fair
1.00-1.80	Poor

Data Gathering Procedure

The researchers formally asked the students for permission. The researchers also consulted their adviser on the steps they should take in collecting the data. The study's nature was explained to ensure full student cooperation. The researchers sought participants who met the study's criteria: they must be online shoppers.

The researchers distributed questionnaires to students via face-to-face and online surveys via Google Forms. The questions were administered directly by the researchers, who would scrupulously adhere to the instructions.

The researchers analyzed the retrieved questionnaires and aimed to determine the online shopping attitudes and preferences of the selected college students at Urdaneta City University. After collecting all the completed questionnaires, the researchers compiled and tabulated the data.

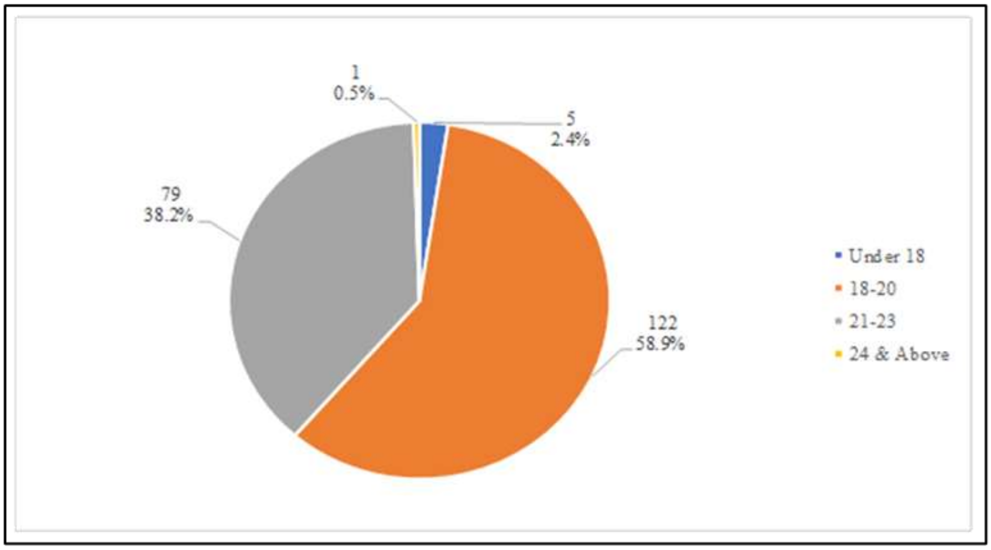
III. Results and Discussion

This chapter presents, interprets, and discusses the findings of the data collected throughout the research on Analyzing the Motivational Factors and Barriers towards online Shopping of Selected College Students.

Profile of the respondents of the Tourism Students

The profile included age, sex, year level, monthly allowance, frequency of ordering, and allotted budget with the corresponding counts (c) and percentages (%) for each bracket. Each variable has its interpretation and analysis. Two hundred seven responders were asked, meaning each variable's total count is 100.

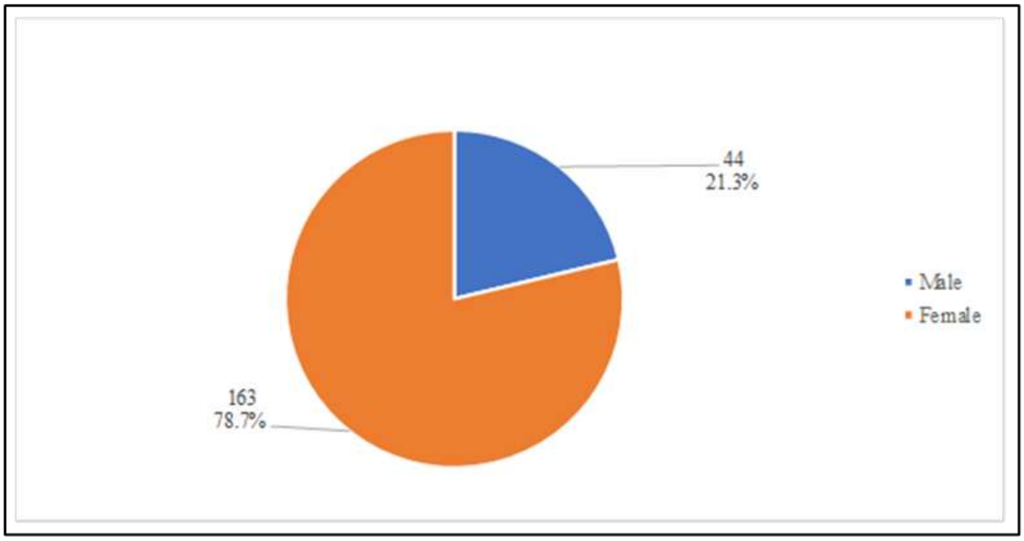
Figure 3
Age
n=207



Age. In age, 122 out of 207 respondents, or 58.9% of the total, were between 18 and 20 years old. Relatively few respondents, or 0.5%, were 24 years old and above. This indicated that the majority of the respondents were young adults, showing that online shopping is widely known and used among people in their late teens and early twenties. In contrast, older adults tend to show less interest in shopping online.

As stated by Sreekanth et al. (2024), online shopping, characterized by its convenience, wide variety of choices, and ease of access, has gained immense popularity across different age groups. Among these, college-going young adults represent a significant demographic that has embraced online shopping as a part of their daily lives.

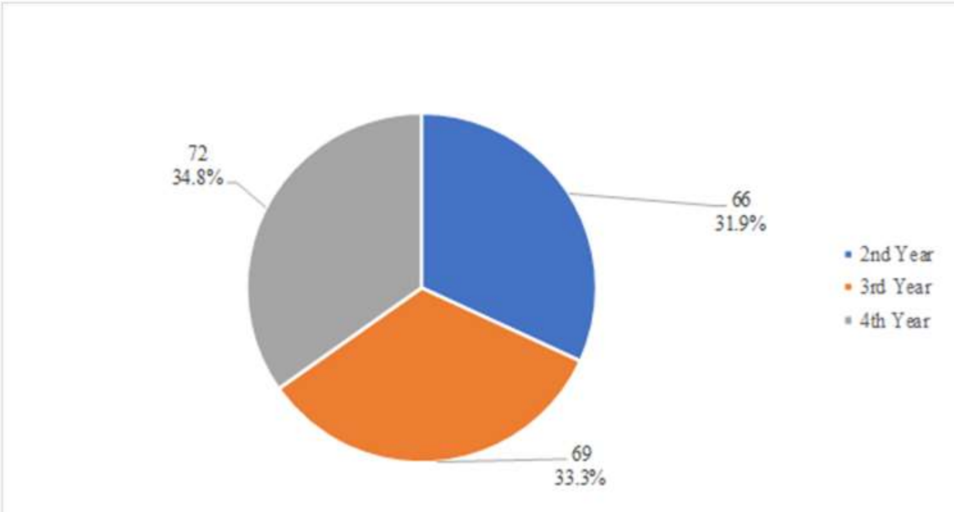
Figure 4
Sex
n=207



Sex. In sex, 163 out of 207 were female, or 78.7%, and 44 out of 207 were male, or 21.3%. This suggests that female students are the dominant group among online shoppers. However, efforts may also be made to explore and engage male students, who, though fewer in number, may still represent a potential growth segment.

As noted by Abar & Alkan (2021), socioeconomic and demographic factors influencing the purchase or ordering of products or services online in Türkiye indicate that women are more likely than men to shop online for clothing and sports equipment. In addition, Kose & Arslan (2020) stated that women are more likely to engage in e-commerce, but their e-commerce expenditures are lower than those of men.

Figure 5
Year Level
n=207



Year Level. 72 out of 207 respondents were 4th-year students (34.8%), and the fewest were 2nd-year students (66 out of 207, 31.9%). This indicates that 4th-year students show the highest involvement, making them active or frequent online shoppers, while students earlier in their college careers have the lowest engagement or may be less motivated to shop online.

In addition, Yu (2021) stated that college students are a special and vital part of the online consumer group, characterized by strong specificity, initiative, high individuality, and curiosity. They not only know how to process and complete online purchases smoothly, but are also the primary recipients of online products.

Table 2
The Motivational Factors that Affect the Motivation of College Students in Online Shopping in terms of Convenience
n=207

Indicators	WM	DE
1. Prefers online shopping because of the ability to shop anytime (24/7 access).	3.52	SA
2. Saves time compared to going to physical stores.	3.47	SA
3. Ease of checkout and payment motivates to shop online.	3.40	SA
4. Online platforms are more efficient for placing orders.	3.31	SA
5. Can shop from anywhere using mobile device or computer.	3.45	SA
Average Weighted Mean	**3.43**	**SA**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Strongly Agree (SA)
2.51 - 3.25	Agree (A)
1.76 - 2.50	Disagree (D)
1.00 - 1.75	Strongly Disagree (SD)

The motivational factors towards online shopping among selected college students, in terms of convenience, with a total weighted average of 3.43 and a descriptive equivalent of Strongly Agree (SA). The result showed that consumers are drawn to the ability to shop at their own pace and on their own schedule, highlighting the flexibility of online shopping.

The first indicator, "*Prefers online shopping because of the ability to shop any time (24/7 access),"* got the highest mean of 3.52, with the descriptive equivalent of Strongly Agree (SA). The result showed that college students are motivated to shop online due to the convenience it offers, including 24/7 access, time-saving, and ease of checkout.

Table 3
The Barriers that Affect College Students in Shopping Online in terms of Security and Privacy
n=207

Indicators	WM	DE
1. Experience suspicious activity in online transaction.	2.68	S
2. Encountered unreliable and untrustworthy seller and stores.	2.75	S
3. Identity theft concerns when sharing personal information online.	2.44	R
4. Experience account hacking or unauthorized access when shopping online.	1.88	R
5. Received threats from online scams and phishing through email and texts.	1.81	R
Average Weighted Mean	**2.31**	**R**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Always (A)
2.51 - 3.25	Sometimes (S)
1.76 - 2.50	Rarely (R)
1.00 - 1.75	Never (N)

The barriers to online shopping among selected college students, in terms of security and privacy, have an average weighted mean of 2.31, which is equivalent to Rarely (R). This suggests that, for students, other factors such as price, convenience, or product availability likely play a more significant role in limiting or slowing online purchases than fears about privacy or security.

The second indicator, *"Encountered unreliable and untrustworthy seller and stores,"* got the highest mean of 2.75, with the descriptive equivalent of Sometimes (S). This indicates that while this is not among the most frequent barriers for student online shoppers, it remains a meaningful concern. Students occasionally encounter or fear unreliable sellers, suggesting some perceived risk in online shopping.

IV. Conclusion and Recommendations

This chapter summarizes the findings and conclusions from the study aimed at analyzing the Motivational Factors and Barriers towards online shopping among selected college students. It also offers recommendations for sellers to consider. Online shopping has become an integral part of college students' routine, particularly those who are technologically adept and value convenience in managing their academic and daily activities. A combination of familiarity with digital platforms, financial capability, and practical spending behavior influences students' engagement in online shopping. While students generally have limited financial resources, they demonstrate budget-consciousness by prioritizing affordable, essential purchases. Overall, online shopping is a convenient, accessible option that aligns with students' lifestyles, financial constraints, and growing reliance on digital platforms. The ability to purchase at any time, 24/7 access, and unlimited browsing without restriction make online shopping highly convenient. Furthermore, the availability of a diverse range of products, including new and trending products, can be explored through videos and reviews, allowing product discovery and informed decision-making. In encouraging smart purchasing decisions, price plays a crucial role in factors like free shipping and promotional offers, making online purchases more cost-effective. Lastly, the ability to access unique and hard-to-find products through online platforms provides consumers with options beyond their local market, further contributing to the appeal and growth of online shopping. College students are rarely concerned about security and privacy when shopping online. It indicates that they typically have confidence in the security protocols established by online shops. Additionally, there are a few payment issues, suggesting that students find online payment procedures easy to use and convenient, with minimal interruptions during transactions. Return guidelines are also not a significant obstacle, as students rarely have trouble returning items; therefore, there is evidence of organized, transparent return policies. However, students occasionally encounter misleading pricing, with unexpected or hidden fees leading to hesitancy or dissatisfaction. There were no significant differences in the barriers and motivating factors between the profiles of respondents in terms of age, sex, and year level regarding their online shopping habits. In this regard, students' difficulties did not significantly impact how frequently they placed orders. However, there were significant differences in the motivating factors according to monthly allowance, ordering frequency, and allocated budget, indicating that students' financial ability and shopping patterns play an essential role in encouraging them to purchase online. The allocated budget also significantly influenced barriers, suggesting that students' financial capabilities can affect the challenges they face when buying online.

Based on the findings of this study, several recommendations are proposed to improve the online shopping experience and to address the motivational and barrier-related factors identified. Therefore, the suggestions below were intended to help stakeholders such as online retailers, policy makers, and consumer rights organizations to enhance strategies that support motivational drivers like ease of use, trust, and convenience while minimizing barriers such as shipping cost, security concerns, and website navigation. Online retailers can improve the efficiency of order placement by simplifying checkout, minimizing unnecessary steps, and integrating features such as auto-filled fields, one-tap checkout, and real-time order tracking. Improving platform reliability, system responsiveness, and transaction speed can further reduce delays and effort during the ordering process, thereby increasing overall convenience for online shoppers. Online sellers should strengthen their provision of detailed, easy-to understand, and accurate information to inform consumers. Providing comprehensive, easily understandable product information can help people make informed decisions and build unbreakable trust. This also includes high-quality product images, specifications, and customer reviews and ratings, which can reduce uncertainty and improve customer confidence. Online sellers can encourage online buying by offering price-matching guarantees, flash deals, and loyalty rewards. Implementing price decrease alerts increases satisfaction and sales, fosters consumer loyalty, and improves online engagement. Online shopping platforms can improve accessibility by optimizing for mobile devices and ensuring user-friendly interfaces that are easy to navigate across different screen sizes and internet speeds. It is recommended that online shopping platforms incorporate educational ads and videos to educate all users, especially students, about recognizing and avoiding dangerous and believable online scams. It is also essential to implement stronger security measures, such as two-factor authentication, to prevent exposure to scams. To reduce payment issues, online retailers may consider expanding various payment methods and streamlining the checkout process to make transactions easier and faster for customers. This includes offering multiple payment options and streamlined checkout steps to reduce time and complexity, helping customers complete purchases more smoothly. The DSS (Data Security Standard) is a widely accepted set of security policies and procedures designed to protect credit, debit, and other payment card data during transactions. The DSS-compliant payment gateways offer fraud detection and secure processing, and enable multi-factor authentication for payment authorization to protect customers' financial information. Maintaining a high level of trust requires online sellers to make sure that all promotional offers are accurate and transparent. Clearly displaying the original pricing alongside the discount rates can increase customer confidence, avoid perceptions of deceptive advertising, strengthen customer trust, and enhance the credibility of online shopping platforms. To improve customer satisfaction and build trust, online retailers should implement a transparent, flexible return policy. This could include offering free returns, providing a reasonable return window, and making the return process as seamless as possible. In addition, retailers should ensure that customers are aware of the return policy and any associated costs upfront.

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Customers Perception in the Marketability of Handcrafted bags made by Persons Deprived of Liberty

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Abstract — The livelihood program implemented by the Bureau of Jail Management and Penology (BJMP) through the Bags of Hope project serves as a vital rehabilitation initiative for Persons Deprived of Liberty (PDL) in the Urdaneta District Jail Female Dormitory. This study aimed to determine consumers' perception of the marketability of handmade bags created by PDL.
It addressed four areas: the respondents' profiles, customer perceptions across the 4Ps of marketing (product, price, place, and promotion), the relationship between marketability and demographic variables, and the development of a proposed program to support the handcrafted bags. The research employed a descriptive research methodology to look at perceptions of customers cautiously. The data was gathered from a total of 378 respondents using convenience sampling. The researchers employed the Kruskal-Wallis and Mann-Whitney U tests to examine whether perceptions significantly differed across respondent characteristics, including Age, Sex, Source of income, monthly income, and educational attainment. Findings revealed that most respondents were young adult females with stable income sources, suggesting a strong interest in local craftsmanship. Results indicate highly favorable perceptions of product quality and price, with mean scores of 3.80 and 3.57, respectively. However, accessibility and promotional visibility were rated lower, highlighting the need for improved distribution channels and marketing efforts. The researchers also observed a relationship between perception and selected demographic variables, except for educational attainment. Based on the results, the study recommends continuous product innovation, flexible pricing strategies, improved distribution through pop-up stores and online platforms, and enhanced digital marketing efforts. Strengthening institutional support and promoting the social value of PDL-made products are essential to improving market reach and supporting long-term rehabilitation outcomes.

Keywords* — *Persons Deprived of Liberty (PDL), Handcrafted bags, Customers Perception, Livelihood program, Marketability, Correctional facilities, Rehabilitation

I. Introduction

The livelihood program within the correctional facility offers Persons Deprived of Liberty (PDL) structured opportunities to engage in income-generating activities during their period of confinement. These initiatives not only facilitate the development of practical skills but also empower PDL to contribute financially toward their personal welfare and support for their families. Funding for these projects is primarily sourced from the Bureau of Jail Management and Penology (BJMP) when the initiatives are officially sanctioned. In cases where institutional support is unavailable, the projects are financed through a collective budget voluntarily pooled by the Persons Deprived of Liberty (PDL). Among the most established and financially productive enterprises within the program are the creation of hand-crafted items such as bags, purses, and beaded bonsai, alongside the production of pastries, carpets, paper crafts, and woodcrafts. These livelihood activities represent both sustainable economic ventures and vital avenues for the social rehabilitation of incarcerated individuals (Bureau of Jail Management and Penology, n.d.).

The livelihood program constitutes a pivotal component in the reformative framework for Persons Deprived of Liberty (PDL) within correctional facilities. Not only does this program allow inmates to earn supplementary income during incarceration, but it also equips them with practical vocational skills that can be applied after their release.

In turn, these opportunities strengthen their ability to reintegrate into society and pursue sustainable livelihoods. This dual function of the program fosters the application of acquired competencies while motivating PDL, stimulating their enthusiasm and productivity.

However, it is important to highlight that some PDL might think that their goods in production goods sufficient income. This concern highlights the need for continuous evaluation of the program’s effectiveness and the overall market perception of the products.

The Bureau of Jail Management and Penology (BJMP) implements livelihood programs that involve Persons Deprived of Liberty (PDL) in productive economic activities, supporting their personal development while advancing broader welfare and rehabilitation objectives. These initiatives are designed not merely to occupy inmates constructively but also to equip them with skills and opportunities for sustainable income generation, thus underpinning their responsible reentry into society. By providing diverse income-generating avenues such as the production of bags, purses, beaded bonsai, pastries, carpets, paper crafts, and woodcrafts, the BJMP fosters both economic empowerment and personal development among incarcerated individuals (Bureau of Jail Management and Penology, n.d.).

Funding for these livelihood projects is primarily sourced from the BJMP’s designated budget or, as an alternative, from pooled contributions by PDL groups for initiatives not directly supported by the facility’s allocated funds.

To boost market visibility and drive sales, the Jail Unit's Welfare and Development Officer implements strategic distribution initiatives, utilizing display centers, livelihood caravans organized by local government units, and online marketing platforms.

These efforts are bolstered by several legal frameworks designed to uphold the rehabilitation and reintegration processes, including Republic Act No. 6975, which established the

BJMPs mandate for PDL welfare; Republic Act No. 10575 (the Bureau of Corrections Act of 2013); and Republic Act No. 11261, known as the First Time Job Seekers Assistance Act.

Furthermore, Republic Act No. 11313, the Safe Spaces Act, emphasizes the importance of creating safe and inclusive environments within the workplace, including correctional settings.

Specifically, at the Urdaneta District Jail Female Dormitory, persons deprived of liberty actively participate in livelihood projects, including the "Bags of Hope" initiative, a sustainable bag-making program launched in October 2022. The project aims to empower female PDL through skill development and income generation, exemplified by the continued involvement of six women demonstrating resilience and dedication despite adverse circumstances. The success of this program illustrates the broader impact of similar initiatives across Philippine district jails, emphasizing their role in fostering rehabilitation and sustainability.

Through such programs, the BJMP not only provides financial support to PDL but also instills a sense of purpose, dignity, and hope, which are essential for successful societal reintegration. Initiatives like Bags of Hope exemplify the transformative potential of sustainable, skill-based livelihoods, promoting environmental responsibility and social equity. As these programs expand, they underscore the vital role of rehabilitation, demonstrating that with appropriate support and opportunities, individuals can rejuvenate their lives and make meaningful contributions to their communities.

The perception of marketability surrounding handcrafted bags produced by PDL in Urdaneta City aligns with several Sustainable Development Goals (SDGs). Specifically, SDG 1 (No Poverty) is addressed by providing PDL with skills training and fair job opportunities, helping them reestablish themselves with dignity. SDG 8 (Decent Work and Economic Growth) is supported through livelihood initiatives that promote responsible employment and economic activity.

Additionally, SDG 10 (Reduced Inequalities) is addressed by challenging social stigma against persons deprived of liberty (PDL). By showing their craftsmanship through the Bags of Hope project, they foster positive societal attitudes towards rehabilitation and highlight the potential of PDL to contribute meaningfully to the communities. SDG 12 (Responsible Consumption and Production) is reflected in the sustainable nature of the handcrafted bags, often produced from recycled materials, thereby reducing environmental impact. Furthermore, SDG 17 (Partnerships for the Goals) is realized through collaborations that promote social responsibility and sustainable tourism, leveraging community engagement and marketing efforts to elevate the program's reach.

Research by Aithal (2023) indicates that consumers are more inclined to purchase eco-friendly products when they recognize environmental benefits and social impact, emphasizing the importance of raising awareness regarding sustainable practices. Studies by Alteneiji et al. (2024) reveal a positive correlation between consumers' knowledge, attitudes, and practices toward sustainable products, such as reusable bags, highlighting the potential for behavioral change through increased environmental consciousness. Factors influencing purchasing decisions include environmental awareness, perceived benefits, social influence, and convenience (V. & Aithal, 2023; Tan & Ota, 2024).

Moreover, Halim et al. (2022) found that heightened environmental knowledge positively influences consumers' perceived value of sustainable products, fostering a greater intention to purchase.

In the context of handcrafted products from PDL initiatives, the perceived value directly correlates with customer satisfaction and marketability (Liu et al., 2024). Enhancing accessibility, packaging, and branding strategies further influence consumer perceptions and loyalty, as demonstrated by studies on local handcrafted enterprises such as Fabindia (Sundaresan et al., 2023). Innovative marketing approaches, including digital outreach and social media campaigns, are essential for sustaining competitiveness and expanding market penetration (Hanisa et al., 2024). Locally-made handicrafts, imbued with cultural significance, tend to generate higher customer affinity and repurchase intentions (Malinao et al., 2022).

Literature Review

The study employed the Four Ps of the Marketing Mix Theory by Philip Kotler (2016), which has been widely utilized in sustainable marketing to ensure that eco-friendly products, such as handcrafted bags, are effectively positioned in the market.

The handcrafted bag was thoughtfully designed to be environmentally friendly and highly durable, using materials that are both sustainable and eco-conscious. The price reflected the value of sustainability while remaining competitive and accessible to customers.

Distribution (place) occurred through ethical supply chains, including eco-conscious retailers, online marketplaces, and community-based sales platforms. Promotional efforts focused on raising awareness about the environmental benefits, ethical sourcing, and community impact of these bags. These initiatives were carried out through digital marketing campaigns, eco-labeling strategies, and collaborations with sustainability advocates, effectively communicating the bags' value and social responsibility to the target audience.

The study utilized the Four Ps of the Marketing Mix Theory as its theoretical framework to evaluate the promotional strategies employed for handcrafted bags in Urdaneta City, Pangasinan. Specifically, the research examined how the product, price, place, and promotion contributed to enhancing the marketing efforts of the Urdaneta District Jail Female Dormitory.

By analyzing these variables, the study aimed to identify effective strategies to improve the visibility and market reach of hand-crafted bags through strategic promotional initiatives.

Statement of the Problem

This study aimed to examine customers' perceptions regarding the marketability of handcrafted bags produced by persons deprived of liberty (PDL) in Urdaneta City. Specifically, it sought to assess customers' views regarding the following features:

1. What is the profile of the respondent in terms of:

    a. Age;

    b. Sex;

    c. Source of income;

    d. Average monthly income; and

    e. Highest educational attainment?

2. What is the level of perception of the customers on the marketability of handcrafted bag along:

    a. Product;

    b. Price;

    c. Place; and

    d. Promotion?

3. Is there significant relationship on the marketability of handcrafted bags made by PDL in Urdaneta City across profile variables?

4. What program can be proposed to help the PDL to market their product?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discussed the research design, strategy, population, and locale of the study; data collection techniques; validation of the instrument and statistical treatment of data; and ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design utilizing a survey questionnaire. This method was chosen because it was considered the most suitable approach for gathering data to assess the sustainable bags made by persons deprived of liberty in the Urdaneta District Jail Female Dormitory.

Meanwhile, descriptive research examined sustainable efforts in customers' perceptions of the marketability of hand-crafted bags made by PDL in Urdaneta City. The primary goal aimed to support both social and environmental causes. Data were collected through a structured questionnaire. Descriptive research describes the characteristics of objects, people, groups, organizations, or environments. It also addressed questions of who, what, where, and how. Additionally, descriptive studies included surveys, case studies, and cross-sectional research, which helped understand the distribution of phenomena (Mao and Huo, 2023).

Population and Locale of the Study

The research respondents consisted of 378 customers who had or had not purchased handcrafted bags in Urdaneta City. Convenience sampling was employed, which involved selecting individuals based on relevant characteristics, knowledge, and experiences, particularly those unfamiliar with the hand-crafted bags produced by persons deprived of liberty at Urdaneta District Jail Female Dormitory. Their insights contributed to assessing the market potential and community impact of these eco-friendly products.

Data Gathering Tool

The researchers employed a survey questionnaire as the primary tool for collecting information on the variables. The instrument used had to be reliable and valid. The questionnaires were divided into two sections. The first section addressed the respondents' profiles.

The second section investigated the level of customers' perceptions regarding the marketability of handcrafted bags. The survey included detailed descriptive interpretations such as (4) "Very High Marketable," (3) "Highly Marketable," (2) "Marketable," and (1) "Not Marketable."

Validation of the Instrument

The checklist for the questionnaire was given to the validators; the statistician, a critical reader, conducted a validation procedure. To determine the validity of the instrument used in this study, **the first validato**r was an instructor from the College of Business Management and Accountancy, the assistant professor came in **second, and lastly,** an administrative assistant. These individuals were selected for their expertise and familiarity with the subject matter, ensuring that the questionnaire accurately measured the intended constructs. The validators used a content validation checklist to assess whether the questionnaire checklist was recommended for use. After verification, the validators concluded that the survey questionnaires were appropriate for use as a tool for collecting data.

The results of the validation are shown below:

Validator	Mean	Description
Validator 1	5.00	Excellent
Validator 2	4.57	Excellent
Validator 3	4.57	Excellent
Average Weighted Mean	**4.71**	**Excellent**

Legend:

Statistical Range	**Descriptive Equivalent**
4.21-5.00	Excellent
3.41-4.20	Very Good
2.61-3.40	Good
1.81-2.60	Fair
1.00-1.80	Poor

Data Gathering Procedure

The researchers formally requested permission from customers in Urdaneta City, Pangasinan. They also consulted their adviser regarding the steps to be taken for data collection. The study's nature was explained to ensure full customer cooperation.

Researchers conducted a face-to-face survey among customers in Urdaneta City. The researchers interpreted the retrieved questionnaires to achieve the goal of promoting sustainable bags by understanding customers' preferences. After collecting all the completed questionnaires, the researchers compiled and tabulated the data.

III. Results and Discussion

This chapter presents, interprets, and examines its findings. Data was collected throughout the research on customer perception of the marketability of handcrafted bags made by PDL in Urdaneta City.

Table 1
Profile of Respondents
n=378

Variables		F	%
A. Age			
	20 years old and below	29	7.7%
	21-29 years old	165	43.7%
	30-39 years old	100	26.5%
	40-49 years old	48	12.7%
	50 years old and above	36	9.5%
B. Sex			
	Male	113	29.9%
	Female	265	70.1%
C. Source of Income			
	Employed (Private)	73	19.3%

	Employed (Government)	106	28.0%
	Self-employed	98	25.9%
	Remittance	101	26.7%
D. Monthly Income			
	More than PHP 20,000	72	19.0%
	PHP 15,001- PHP 20,000	37	9.8%
	PHP 10,001 - PHP 15,000	138	36.5%
	Less than PHP 10,000	131	34.7%
E. Highest Educational Attainment			
	Doctorate Degree	4	1.1%
	With Doctoral Units	2	0.5%
	Master's Degree	5	1.3%
	With master's unit	4	1.1%
	College graduate	191	50.5%
	College undergraduate	108	28.6%
	High school graduate	47	12.4%
	High school undergraduate	16	4.2%
	Elementary graduate	1	0.3%

Profile of the respondents of Customers in Urdaneta City

The profile included age, sex, source of income, monthly income, and highest educational attainment, along with the corresponding frequency count (f) and percentage for each category. Each variable was interpreted and analyzed. A total of 378 people were surveyed. This indicated that the total frequency count for each variable was 100%.

Age. 165 out of 378 respondents, or 43.7%, were between the ages of 21 and 29. A relatively small portion, or 7.7%, were 20 years old or younger. This suggests that the primary market for handcrafted bags made by persons deprived of liberty (PDL) was dominated by younger adults, particularly those in their twenties. At the same time, older age groups were underrepresented.

According to Flores et al. (2024), young consumers increasingly valued local craftsmanship, seeking products that expressed their cultural heritage and personal values. Their awareness of the social and environmental benefits of handcrafted products deepened their appreciation, leading them as symbols of artistry and cultural preservation.

Sex. 265 out of 378 respondents were female, representing 70.1%, while 113 out of 378 were male, representing 29.9%. This indicated that women were significantly more represented than men in terms of buying or showing interest in handcrafted bags made by persons deprived of liberty (PDL).

Based on Yusa (2023), female customers, particularly from Generation Z, demonstrated a strong preference for local bags due to their pleasure-driven nature and utilitarian-driven values. This demographic showed a positive correlation between these values and their intention to purchase local bags.

Table 2

The Level of Perception of the Customers on The Marketability of Handcrafted Bag in terms of Product

n=378

Indicators	WM	DI
1. The bags look strong and well-made.	3.80	VHM
2. The bags look different from other bags in store.	3.52	VHM
3. The bags have a nice and modern design.	3.60	VHM
4. The bags look good overall.	3.66	VHM
5. The bags are made with great skills.	3.69	VHM
6. The bags match today's fashion style.	3.48	VHM
7. The bags are useful for daily use.	3.57	VHM
Average Weighted Mean	**3.62**	**VHM**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Very High Marketable (VHM)
2.51 - 3.25	High Marketable (HM)
1.76 - 2.50	Not Marketable (NM)
1.00 - 1.75	Marketable (M)

The level of customers' perceptions of the marketability of handcrafted bags made by PDL was evaluated, yielding a total average weighted mean of 3.62, with a descriptive equivalent of "Very Highly Marketable" (VHM).

The results indicated that customers were dedicated to purchasing hand-crafted bags, demonstrating significant appreciation for their quality and distinctiveness. This suggested that the products possessed strong market appeal in terms of design, quality, uniqueness, and overall value.

The first indicator, *"The bags look strong and well-made,"* received the highest mean of 3.80, with a descriptive equivalent of "Very Highly Marketable" (VHM). This suggested that respondents believed the handcrafted bags to be high-quality and durable, which significantly increased their marketability.

Table 3
Significant Relationship on the Marketability of Handcrafted Bags made by PDL in Urdaneta City Across Profile Variables
n=378

Profile	Level of Perception
	Sig.
Age	<.001
Sex	0.006
Source of Income	<.001
Monthly Income	<.001
Highest Educational Attainment	0.206

Table 3 presents the relationship between the marketability of handcrafted bags made by persons deprived of liberty (PDL). Age had a corresponding p-value of <.001. Since the p-value was less than 0.05, the null hypothesis was rejected. Therefore, there was an association between the marketability of PDL's handcrafted bags and age. This suggested that consumer preferences varied across different age groups.

The statistical significance implied that age influenced how consumers perceived and valued the handmade items.

Moreover, the findings revealed a significant relationship between the marketability of PDL's handcrafted bags and sex. The corresponding p-value was 0.006, which was less than the significance level of 0.05. This indicated that the null hypothesis was rejected, which implies that the relationship between the marketability of handcrafted PDL bags and sex created this. On the other hand, male and female respondents differed in how they perceived the marketability of handcrafted bags, indicating that sex may have influenced the customers' buying attitudes and preferences while purchasing these handcrafted goods.

On the other hand, a significant relationship was found between the marketability of handcrafted bags made by PDL and the respondents' source of income, as indicated by a p-value of <0.001. Because the p-value was less than 0.05, the null hypothesis was rejected. Therefore, the findings show that the respondents' source of income was associated wit h their perceptions of the marketability of handcrafted bags made by the PDL. This implied that consumers with different income sources had varying perceptions of value, quality, and social impact, which affected their purchasing decisions.

IV. Conclusion and Recommendations

This chapter summarizes the findings and conclusions from the study aimed at determining the Customers' perception of the Marketability of handcrafted bags made by PDL in Urdaneta City. It also offers recommendations for the Urdaneta District Jail Female Dormitory. The study revealed that the majority of respondents were young adult females with undergraduate college degrees, suggesting a strong appreciation for handcrafted products and local craftsmanship. These young women were employed in government institutions, earning a monthly income of ₱10,000–₱15,000, which enabled them to make informed decisions regarding product quality, design, and overall value. They were also likely to have stable employment, such as government or self-employment, enabling them to purchase and value locally made items. This indicated strong support for local craftsmanship and creativity among young women. The study found that customers generally perceive PDL's handcrafted bags positively, primarily because of product quality, fair pricing, accessibility, and effective promotion. The bags achieved a high mean score of 3.80, indicating they are viewed as "very highly marketable," reflecting their durability and high quality. The price scored 3.57, suggesting a favorable perception of their value for money. Accessibility, represented by a mean score of 3.15, underscores the need for visible placement, while promotional visibility scored exceptionally high at 3.95, showing customers believe information about the bags is readily available. Overall, the findings suggest that handcrafted bags hold strong market potential and competitiveness.

3. The study identified a significant correlation between the marketability of handcrafted bags made by persons deprived of liberty and variables such as age, sex, income source, and monthly income. Younger female respondents preferred the bags' modern design, while lower-income individuals were more price-sensitive. Younger customers favored online shopping, whereas older buyers preferred traditional methods. Promotional strategies were notably effective for younger females through digital channels. However, no significant relationship was found between educational attainment and their perceptions of the handcrafted bags, indicating that customers shared similar views on quality, pricing, accessibility, and promotion of the product. Based on the study's results, the researchers made the following recommendations for the Urdaneta District Jail Female Dormitory. These four key elements-product, price, place, and promotion-served as the primary basis for evaluating the marketability of the handcrafted bags and provided meaningful insights into how customers perceived the overall value of the products. It is recommended that the producers continuously innovate the styles and designs of handcrafted bags to align with current fashion trends. Collaborating with local fashion students, designers, or social media influencers may assist in updating the designs and enhancing their appeal to younger and style-conscious consumers. The researchers recommended using metal locks and chain-straps, including leather straps. These parts will make the product look much better. This strategy aims to capture consumers' attention and encourage them to purchase the product. The researchers recommend adopting a flexible pricing strategy, such as offering various sizes or designs at different price points, to cater to a broader range of customers. Providing discounts, loyalty programs, or special sales promotions could also make the products more attractive and accessible to budget-conscious buyers. It is recommended that the products be made available in more visible and accessible locations, such as local trade fairs, souvenir shops, shopping centers, and online marketplaces (e.g., Shopee, Lazada, or Facebook Marketplace). Establishing partnerships with

local government units (LGUs) and tourism offices may further enhance product distribution and exposure, particularly in souvenir shops.

The researchers recommended that the products be made more visible by setting up a “pop-up” store within shopping malls. This makes it much easier for customers to find and buy the products. In this way, more customers can easily see and buy them. To strengthen promotional efforts, the researchers recommend employing digital marketing strategies, including maintaining official social media pages, posting regular updates about new designs, sharing customer testimonials, and collaborating with online influencers. Utilizing engaging visuals and storytelling can effectively emphasize the products’ uniqueness and social impact, thereby increasing online visibility and public awareness. The researchers recommend improving the product packaging by using more appealing options, such as paper bags or eco-bags, to enhance presentation and attract customers. Excellent packaging will likely appeal to young consumers and make them want to buy the products.

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Exploring Sustainable Practices in Flower Cultivation of the Local Growers in La Trinidad, Benguet

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Abstract —La Trinidad, Benguet, particularly Barangay Bahong, is known as the "Rose Capital of the Philippines" because of its flourishing cut-flower industry. This industry provides livelihood, supports the economy, and upholds cultural identity. However, it faces challenges in sustaining growth, making it necessary to assess the sustainable farming practices of local growers.
This study employed a quantitative design to examine the practices and challenges of farmers in Barangay Bahong, Bineng, Alapang, and Alno. A total of 225 farmers were selected through convenience sampling, and data were analyzed using the Kruskal-Wallis Test to identify differences by age, sex, farm size, years of service, and educational attainment. Among respondents, 20% were early middle-aged (34–41). Males made up 56% and were more engaged in farming than 44% of females. Thirty-five percent had 16 or more years of experience, and nearly 96% were smallholders cultivating less than one hectare. Regarding education, 33% were high school graduates. Findings showed that farmers practice sustainability by prioritizing waste segregation, fostering customer relationships, and purchasing inputs from local vendors to support businesses. The main challenge identified was the rising cost of farming inputs, which reduces profit margins. To address this, the study recommends reinforcing waste segregation and proper disposal, continuing the use of appropriate fertilizers, strengthening relationships with local customers through consistent supply, incentives, discounts, promoting products locally and via social media, continuing to source inputs, prioritizing local suppliers, negotiating long-term supplier partnerships, purchasing inputs in bulk, and collaborating with nearby farmers to secure better prices.

Keywords — Sustainable Practices, Flower Farmers, Farming, Sustainable Farming, Sustainability, Challenges, Flower Cultivation

I. Introduction

La Trinidad, the capital town of Benguet province, is widely known as the "Rose Capital of the Philippines" for its thriving cut-flower industry, particularly in Barangay Bahong, which is famous for its expansive rose gardens and flower farms. Located in the Cordillera Administrative Region, the area's diverse soil types and favorable climatic conditions make it particularly suitable for floriculture. According to Bengwayan (2025), Benguet produces over 1.59 million dozen flowers annually, with the province capable of yielding more than 1.28 million metric tons of cut-flower chrysanthemums per hectare. In addition to chrysanthemums, Benguet also cultivates a wide variety of flowers, such as gladiolas, calla lilies, anthuriums, roses, asters, sunflowers, and carnations. The availability of natural water sources, such as mountain springs and rivers, along with the protection provided by surrounding mountains, supports and enables year-round flower production.

Flower farming plays a vital role in the socio-economic development of La Trinidad, providing livelihoods for many local families and generating income for growers. Flowers produced in La Trinidad are distributed to major markets in Metro Manila and other areas of Luzon, especially during peak seasons such as Valentine's Day and All Saints' Day. Flower farming is not only a source of income for residents but also an important cultural tradition, with knowledge and practices passed down through generations. This strengthens family bonds and fosters a strong sense of community identity.

To sustain the industry's growth, farmers must remain committed to improving their practices, maintaining high-quality standards, and adopting sustainable methods. These efforts are crucial to ensuring the industry's viability and resilience, benefiting both the local economy and the environment. Despite its strengths, the flower farming sector still faces challenges that must be addressed to ensure its long-term sustainability and continued benefits for both current and future generations.

Beyond its economic importance, La Trinidad's floriculture industry symbolizes cultural pride. The municipality's flowers are prominently featured in the annual Panagbenga Festival (Baguio Flower Festival), where they are showcased in vibrant parades and exhibitions. This highlights the strong connection between the town's rich tradition of flower farming and its community identity. Additionally, La Trinidad has emerged as a flower tourism destination, attracting visitors who come to enjoy its stunning landscapes, filled with bright, well-cultivated flowers. With their perseverance and dedication, the flower farmers of La Trinidad are committed to maintaining the town's identity as one of the Philippines' leading floricultural hubs.

The study on sustainable flower farming practices in La Trinidad, Benguet, aligns with various agricultural laws and policies aimed at environmental protection. For instance, Republic Act No. 3983, enacted in 1932, aims to protect the Philippines' wildflowers and plants by prohibiting their collection, destruction, or commercial exploitation. Flower farms in La Trinidad play a vital role in achieving the goals of this law by embracing organic alternatives, reducing chemical pesticide use, and maintaining soil fertility. These efforts are crucial in preventing biodiversity loss, minimizing land degradation, and fostering sustainable floriculture.

Similarly, the Magna Carta of Small Farmers (RA 7607) highlights the significance of empowering small farmers by providing them with access to resources, financial assistance, and sustainable agricultural practices. This law promotes ecological balance, fair income distribution, and the use of technology to boost productivity and rural development. Flower farms in La

Trinidad embody these principles by practicing eco-friendly farming, using organic fertilizers, creating jobs for local farmers, and integrating agri-tourism to strengthen the local economy.

Furthermore, Department of Agriculture Administrative Order (DA AO) No. 2008-08 promotes and encourages Good Agricultural Practices (GAP) that prioritize food safety, environmental protection, and farmer well-being. Flower farms in La Trinidad adhere to these standards by adopting responsible land use, minimizing chemical inputs, and adopting sustainable agricultural practices to protect natural resources.

Sustainable tourism emphasizes methods that protect the environment, support local communities, and promote long-term economic growth. According to the United Nations World Tourism Organization (UNWTO), it considers both the present and future impacts on the economy, society, and the environment. Addressing the needs of tourists, the tourism industry, and host communities helps preserve natural and cultural resources for future generations.

According to Mollenkamp (2023), sustainability refers to the ability to maintain or support a process over time. Staff (2025) emphasizes that the three pillars of sustainability—environmental, economic, and social—serve as the foundation for long-term development.

In the context of tourism, Yang et al. (2023) explain that sustainability ensures both tourists and host communities benefit while preserving natural resources for future generations. This balance integrates economic progress, social well-being, and environmental conservation.

Petal Republic (2024) highlights the significant role of floriculture in global agriculture, with the Netherlands leading the international production of cut flowers. Thursd (2024) reports that the Netherlands accounts for 52% of the global flower trade, generating over $4 billion annually in exports. Among the most widely cultivated specialty cut flowers, Darras (2021) identifies tulips as the Netherlands' national flower and a key export product.

Meanwhile, Eisa et al. (2022) note that chrysanthemums, another major ornamental plant, are primarily cultivated in East Asia, with China and Japan leading in production.

Hosny et al. (2024) state that sustainable floriculture relies on greenhouse farming, which improves precision agriculture and increases crop yields. Jones (2025) explains that irrigation and drainage systems are essential for maximizing crop productivity. Given that flower crops require significant amounts of water and nutrients, Zhang et al. (2024) state that proper irrigation and fertilization are crucial for ensuring optimal plant growth and quality.

To enhance sustainability, Darras (2021) reports that many flower growers adopt Integrated Nutrition Management (INM) and Integrated Pest and Disease Management (IPDM) programs to reduce environmental impact while maintaining efficiency. Sharma (2023) emphasizes the effectiveness of Integrated Pest Management (IPM) in controlling agricultural pests while minimizing pesticide use and preserving biodiversity. Similarly, M. et al. (2024) argue that IPM practices are essential for maintaining soil health and promoting sustainable floriculture. In addition, Hasty et al. (2022) highlight the importance of organic fertilization and natural pest control methods, which contribute to environmentally friendly agricultural practices. Darras (2021) further asserts that floriculture follows strict environmental and social sustainability protocols, ensuring that production aligns with international sustainability standards.

In the Philippines, Agoot (2024) states that flower farming is a major source of livelihood in Benguet, particularly in the municipalities of La Trinidad, Tublay, and Atok, which serve as key producers of ornamental flowers. Bengwayan (2025) notes that chrysanthemum farming is widespread in Atok and La Trinidad, with farmers cultivating approximately 1.5 dozen plants per square meter. To promote sustainability, Danao (2024) highlights the adoption of climate-smart practices, such as plant diversification, which strengthens crop resilience and minimizes risks. Herald Express (2020) reports that greenhouse farming supports floriculture by providing a controlled environment for flowers and seedlings, resulting in higher yields and better-quality plants.

Furthermore, Dupuis (2024) suggests that hydroponic and organic farming offer energy-efficient alternatives to conventional methods, contributing to resource conservation and long-term sustainability.

This study aligns with multiple Sustainable Development Goals through sustainable flower farming practices in La Trinidad, Benguet. In line with SDG 8 (Decent Work and Economic Growth), agritourism and flower farms create livelihoods and jobs for local farmers and workers, attracting tourists who support small businesses and strengthen La Trinidad's economy. The flower industry promotes many other economic activities, from farming and selling to tourism and exports. In line with SDG 12 (Responsible Consumption and Production), sustainable farming practices are essential in flower production, and La Trinidad's farms adopt methods that promote environmental responsibility, reducing waste through responsible resource management, such as using organic fertilizers and composting plant material. Reducing the use of chemical pesticides improves soil health and protects local water sources and ecosystems. In line with SDG13 (Climate Action), climate change poses a threat to agriculture, yet these farms mitigate its impacts through organic farming practices, greenhouse technologies, and irrigation practices that conserve water. Greenhouses help regulate temperature and protect flowers from extreme weather conditions, while sustainable irrigation systems ensure efficient water use. By reducing synthetic chemical inputs and fossil fuel-based fertilizers, they effectively reduce their carbon footprint and help ensure climate change resilience. In line with SDG 15 (Life on Land), conservation of land and biodiversity is a key component of sustainable flower farming practices. Farmers in La Trinidad practice crop rotation and limit chemical fertilizer applications to avoid soil degradation. Sustainable flower farms also support local biodiversity by maintaining healthy ecosystems that support pollinators and wildlife. Responsible land management protects fertile soil while ensuring that agriculture continues for future generations.

Literature Review

The Triple Bottom Line (TBL) theory, introduced by John Elkington in 1997, expanded the traditional focus on financial performance to include social and environmental dimensions. The theory suggested that organizations should be held accountable not only for their economic outcomes (the "bottom line") but also for the social and ecological consequences of their operations. The key elements of the Triple Bottom Line include economic, social, and environmental performance. Economic performance measured the organization's financial results, while social performance emphasized addressing societal concerns and promoting community well-being. Environmental performance highlighted the need to minimize the ecological footprint and enhance sustainability. When applied to the analysis of local flower farms, the TBL framework demonstrated a comprehensive approach to business management, balancing profitability with social responsibility and environmental stewardship.

For flower farms in La Trinidad, Benguet, adopting the Triple Bottom Line enabled enterprises to thrive economically while simultaneously reducing environmental impacts and fostering positive relationships with local communities. This approach underscored the importance of integrating sustainable practices into farm operations, ensuring that business success coexisted with ecological preservation and social development. Consequently, the TBL framework served as a vital guide in creating flower-farming enterprises that are not only financially viable but also socially responsible and environmentally sustainable.

Statement of the Problem

This study aimed to determine sustainable flower-farming practices in La Trinidad, Benguet.

Specifically, it sought to answer the following research questions:

1. What is the profile of the farmers in terms of:

   a. age;

   b. sex;

   c. hectares of land cultivated;

   d. years of service in flower farming; and

   e. highest educational attainment?

2. What are the sustainable farming practices implemented by the farmers in terms of:

   a. environmental;

b. social; and

c. economic aspects?

3. What are the challenges faced by the farmers in implementing sustainable practices?

4. Is there a significant difference between the sustainable farming practices implemented by the farmers across profile variables?

5. Is there a significant difference between the challenges faced by the farmers in implementing sustainable practices across profile variables?

6. Based on the findings, what program can be proposed to ensure and improve the sustainable cultivation of flowers for future flower farmers?

II. Methodology

This section describes the research methodology employed to conduct the study. It included the research design and strategy, the population and locale, the data gathering instruments, procedures for data collection, validation of the instruments, statistical treatment of data, and ethical considerations.

Research Design and Strategy

The study employed a descriptive research design, utilizing a survey questionnaire as the primary data collection instrument. This method was selected as the most suitable approach for obtaining comprehensive information on sustainable practices in flower cultivation among local growers in La Trinidad, Benguet. The design enabled the researchers to systematically describe the farming practices adopted by the respondents and the challenges they encountered in implementing these practices.

The primary objective of the study was to examine the sustainable practices and farming methods employed by the farmers, focusing on environmental, social, and economic dimensions of sustainability. Data were collected using a structured questionnaire designed to elicit information on farmer profiles, the specific sustainable practices they adopted, and the difficulties encountered during implementation.

Descriptive research is defined as an investigative method that enables researchers to characterize a population, situation, or phenomenon. It facilitates the answering of questions such as “what,” “where,” “when,” and “how,” but is not intended to address “why” questions (Singh, 2024).

This design provided an appropriate framework for capturing a detailed snapshot of current sustainable flower farming practices in the study locale.

Population and Locale of the Study

The population of this study comprised flower farmers actively engaged in cultivation within La Trinidad, Benguet, a municipality recognized for its prominence in floriculture production. The respondents were selected from four barangays: Barangay Bahong, Barangay Bineng, Barangay Alapang, and Barangay Alno. According to the records of the Business Permit and Licensing Office BPLO of La Trinidad, there were 1,391 registered flower farmers in the area. However, the study employed convenience sampling, in which respondents were selected based on their availability and willingness to participate during the distribution of questionnaires. Only flower farmers who were accessible at the time of data collection and consented to take part in the study were included. The use of this approach enabled the researchers to efficiently gather data while capturing diverse perspectives on current sustainable practices, the challenges farmers face, and their overall farming operations. Consequently, the study captured a comprehensive view of experiences within the local floriculture industry, reflecting both the diversity and commonalities of sustainable practices among the farmers.

Data Gathering Tool

The researchers used a survey questionnaire as the primary instrument to collect data on the study's variables. This instrument was reliable and valid. The questionnaire was divided into three sections. The first section collected data on the farmers' profiles. The second section investigated the sustainable farming practices implemented by the farmers. The third section examined the challenges farmers face in implementing sustainable practices. To ensure validity, three experts reviewed and validated the survey questionnaire.

For sub-problem number 2, which focused on the sustainable practices adopted by the farmers, a descriptive interpretation was applied, using the following scale: (4) “Highly Practiced,” (3) “Moderately Practiced,” (2) “Slightly Practiced,” and (1) “Not Practiced.” For sub-problem number 3, which focused on the challenges encountered by the farmers in implementing sustainable practices, a descriptive interpretation was applied, using the following scale: (4) “Strongly Agree,” (3) “Agree,” (2) “Disagree,” and (1) “Strongly Disagree.”

Data Gathering Procedure

The researchers formally requested permission from the farmers prior to data collection. They also consulted their adviser on the appropriate procedures for administering the study. The nature and objectives of the research were explained to the farmers to ensure their full cooperation and understanding.

The study employed a survey questionnaire as its primary data collection instrument. This instrument was deemed reliable and valid, having undergone expert validation prior to administration. The questionnaire was divided into three sections. The first section collected information on the farmers' profiles, including age, sex, hectares of land cultivated, years of service in flower farming, and highest educational attainment. The second section investigated the sustainable practices adopted by the farmers, focusing on environmental, social, and economic dimensions of sustainability. The third section examined the challenges farmers face in implementing sustainable practices. Three experts in sustainable agriculture and research methodology reviewed and validated the instrument to ensure content accuracy, clarity, and relevance.

The respondents were selected through convenience sampling from registered flower growers in Barangay Bahong, Barangay Bineng, Barangay Alapang, and Barangay Alno. This sampling method was employed due to the accessibility and availability of respondents during the data collection period, enabling the researchers to efficiently gather relevant and reliable data while considering time, resource, and logistical constraints. The questionnaires were distributed through face-to-face surveys. The researchers administered the questions directly and carefully adhered to the prescribed instructions. Upon retrieval, the completed questionnaires were analyzed to determine the farmers' current sustainable practices.

After collecting all completed questionnaires, the researchers compiled and tabulated the data and prepared them for statistical analysis to facilitate interpretation.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings from the data collected throughout the research titled "Exploring Sustainable Practices in Flower Cultivation of the Local Growers in La Trinidad, Benguet."

Table 1
Profile of Respondents
n=225

Variables		F	%
A. Age	18-25	16	7%
	26-33	22	10%
	34-41	46	20%
	42-49	36	16%
	50-57	33	15%
	58-65	40	18%
	66-73	20	9%
	74 and above	12	5%
B. Sex	Male	127	56%
	Female	98	44%
C. Hectares of Land Cultivated	<1hectare	216	96%
	1 hectare	8	4%
	3 hectares	1	0%

D. Years of Service in Flower Farming	Less than 1 year	4	2%
	1-5 years	48	21%
	6-10 years	56	25%
	11-15 years	39	17%
	16 years and above	78	35%
E. Highest Educational Attainment	Elementary Undergraduate	12	5%
	Elementary Graduate	46	21%
	High School Undergraduate	33	15%
	High School Graduate	75	33%
	College Graduate	41	18%
	College Undergraduate	17	8%
	Other	1	0%

Profile of the respondents of Flower farmers in La Trinidad, Benguet

The profile included age, sex, hectares of land cultivated, years of service in flower farming, and highest educational attainment, along with the corresponding frequency count (f) and percentage (%) for each category. Each variable was interpreted and analyzed individually. A total of 225 respondents were surveyed, meaning that the total frequency count for each variable was 225.

Age. The results indicated that 46 out of 225 respondents, or 20% of the total, were between the ages of 34 and 41. Relatively few respondents, or 5%, were aged 74 or older. These findings suggested that early middle-aged farmers in La Trinidad, Benguet, were actively engaged in flower cultivation, as they were in their productive years and more likely to adopt innovative practices.

Zhou and Li (2022) noted that middle-aged individuals were more likely to have developed substantial practical farming knowledge and experience, thereby strengthening their influence on agricultural economic activities.

Sex. Regarding the sex of the respondents, 127 out of 225, or 56%, were male, and 98 out of 225, or 44%, were female, indicating that male farmers were more engaged in flower farming in La Trinidad, Benguet. These findings suggested that men were more involved in this livelihood, which may reflect the fact that the nature of farm tasks and access to resources tended to favor male farmers.

Mwalyagile et al. (2024) highlighted that, in farming, male farmers dominated key agricultural activities and maintained significant control over farm resources, holding primary authority over income management and decision-making processes.

Table 2
Sustainable Farming Practices Implemented by the farmers in terms of Environmental
n=225

The sustainable farming practices implemented by the farmers in terms of environmental sustainability had a weighted average of 2.72, with a descriptive equivalent of “Moderately Practiced” (MP). This result indicated that the farmers were moderately engaged in applying environmentally sustainable methods in their farming activities, implementing some practices inconsistently, which affected the overall sustainability of their operations. Based on the findings, these practices needed to be strengthened to ensure long-term environmental sustainability and farm productivity.

Indicators	**WM**	**DE**
1. Using organic compost and natural fertilizers instead of chemical alternatives.	2.35	SP
2. Managing farm waste through composting transforms organic materials into useful soil fertilizer.	2.50	SP
3. Conserving water using techniques such as drip irrigation helps preserve local water resources.	2.20	SP
4. Practicing the 3Rs (Reduce, Reuse, Recycle) in daily farm operations supports sustainable resource use.	2.96	MP
5. Reducing the use of harmful chemicals helps maintain soil and water quality.	2.72	MP
6. Practicing proper waste segregation keeps the farm clean and organized.	3.29	HP
7. Promoting biodiversity by planting a variety of flower species and maintaining natural vegetation enhances ecological balance.	2.99	MP
Average Weighted Mean	**2.72**	**MP**

Legend:

Statistical Range	**Descriptive** Equivalent
3.26 - 4.00	Highly Practiced (HP)
2.51 - 3.2	Moderately Practiced (MP)
1.76-2.50	Slightly Practiced (SP)
1.00-1.75	Not Practiced (NP)

The sixth indicator, "Practicing proper waste segregation keeps the farm clean and organized," obtained the highest mean of 3.29, with a descriptive equivalent of “Highly Practiced” (HP). This suggested that farmers paid considerable attention to waste management to maintain cleanliness and organization on their farms.

In line with Srivastav and Kumar (2020), efficient waste disposal and management are essential in flower farming to minimize environmental pollution and support sustainable development initiatives.

The third indicator, "Conserving water using techniques such as drip irrigation helps preserve local water resources," obtained the lowest mean of 2.20 and was characterized as “Slightly Practiced” (SP).

This indicated that most farmers had not yet fully adopted water-conservation practices in their operations, as drip irrigation was not widely used due to high installation costs, limited technical knowledge, and maintenance requirements.

Table 3
Challenges Faced by the Farmers in Implementing Sustainable Practices
n=225

Indicators	WM	DE
1. Strong competition from other growers results in lower selling prices.	3.16	A
2. Seasonal demand for flowers causes unstable or inconsistent income.	3.30	SA
3. Limited support from the local community or government programs affects farm development.	2.66	A
4. Pest outbreaks damage crops and lower flower quality.	3.46	SA
5. Unpredictable climate patterns negatively affect planting and harvest schedules.	3.30	SA
6. Rising costs of fertilizers, pesticides, and other inputs reduce profit margins.	3.60	SA
7. There is an insufficient or inconsistent supply of water available for farming purposes.	2.39	D
8. Damaged or poorly maintained farm-to- market roads cause difficulties in transporting flowers, leading to product damage and reduced income.	2.54	A
Average Weighted Mean	**3.05**	**A**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Strongly Agree (SA)
2.51 - 3.25	Agree (A)
1.76-2.50	Disagree (D)
1.00-1.75	Strongly Disagree (SD)

The challenges farmers face in implementing sustainable practices had a weighted average of 3.05, with a descriptive equivalent of “Agree” (A). The results indicated that farmers generally acknowledged encountering various challenges in their efforts to adopt and maintain sustainable farming methods.

The sixth challenge, "Rising costs of fertilizers, pesticides, and other inputs reduce profit margins," obtained the highest mean of 3.60, indicating “Strongly Agree” (SA). As stated by Léon et al. (2025), changes in fertilizer prices had a significant impact on farmer profitability worldwide, as higher costs reduced profit margins and posed risks to agricultural sustainability. The seventh challenge, "There is an insufficient or inconsistent supply of water available for farming purposes," obtained the lowest mean score of 2.39 and was classified as “Disagree” (D). These results revealed that most farmers did not consider water supply a key obstacle to implementing sustainable practices.

IV. Conclusion and Recommendations

This chapter summarizes the findings and conclusions from the study aimed at identifying the sustainable farming practices implemented by farmers in La Trinidad, Benguet. It also offers recommendations for farmers to consider.

A significant majority of the respondents were male, early-middle-aged farmers, likely because they are in their most productive years or because they earn higher incomes from flower farming, which may explain their continued involvement over time. Based on the findings, the flower farmers in La Trinidad exemplified the integration of sustainability in agricultural practice. Their adherence to farm and waste discipline demonstrated a deliberate effort to balance productivity with ecological care. The practice of sourcing inputs locally emerged as a vital means of sustaining the community economy and reinforcing interdependence among stakeholders. They also maintained strong customer relations, which served as the most utilized strategy in maintaining a stable and trusted market base. These results suggested that the respondents were aware of and applied sustainable practices, thereby enhancing La Trinidad's flower industry's standing in promoting responsible agriculture. Based on the findings, the respondents encountered many challenges in sustaining their farming practices. They faced financial constraints that reduced profit and limited farm growth, while environmental factors introduced uncertainty to production. Support from local communities and the government was limited, and the poor condition of farm-to-market roads made transporting flowers difficult, often resulting in losses. Lastly, the respondents acknowledged these barriers, reflecting the continuing struggles that affected the stability of La Trinidad's flower industry. The findings revealed no significant differences in sustainable farming practices across environmental, social, and economic dimensions, regardless of age, number of hectares cultivated, years of service in flower farming, or highest educational attainment. However, a significant difference by sex was found in the economic aspects of sustainable farming practices. Additionally, there were no significant differences by sex, hectares cultivated, years of service, or educational attainment in the challenges farmers faced. On the other hand, a significant age difference was found in the challenges flower farmers face in implementing sustainable practices. Based on the study's results, the identified sustainability practices in flower farming were widely implemented across environmental, social, and economic aspects, alongside the challenges they faced. Building upon these well-established practices and addressing the identified challenges, the researchers propose the following recommendations to further strengthen sustainability and support the long-term development of the floriculture industry. Concerning the environmental aspect, it is recommended that flower farmers consistently practice proper waste segregation to minimize pollution, preserve soil quality, and support environmental sustainability. Farmers are also encouraged to continue using fertilizers responsibly to promote healthy plant growth and improve flower quality while reducing potential negative environmental impacts. Sustaining these practices will further strengthen the balance between productivity and ecological care demonstrated by the flower farmers in La Trinidad, Benguet. Concerning the social sustainability aspect, it is recommended that flower farmers continue strengthening their relationships with local customers, since strong customer relations help maintain a stable and trusted market base. This can be achieved through consistent flower supply, effective communication on availability and seasonal blooms, providing simple incentives such as free extra stems or small discounts, and using social media to sustain communication with local consumers. These efforts will help maintain customer trust and loyalty, as well as long-term market stability. Concerning economic sustainability, farmers are encouraged to continue sourcing essential farming inputs from local suppliers, as this practice contributes to sustaining the local economy and reinforcing interdependence among community stakeholders. Prioritizing local suppliers, negotiating long-term supplier partnerships, and maintaining strong business relationships can help ensure reliable, stable access to inputs while supporting sustained local economic activity. To address the rising cost of farm inputs, farmers are recommended to purchase inputs in bulk whenever feasible, as bulk purchasing allows access to price discounts, reduces production costs, and improves overall profitability. They are also encouraged to collaborate with nearby growers by forming small groups or cooperatives to jointly purchase inputs, share transportation expenses, and negotiate better prices with agro-dealers. Implementing these strategies will help farmers manage rising input costs and sustain the economic viability of flower farming in La Trinidad.

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Traditional Salt Farming: A Pathway to Cultural and Sustainable Livelihood

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Abstract — This study investigates sustainability and the key challenges faced by traditional salt farmers in Dasol, Pangasinan. It focuses on Sustainable Development Goals (SDGs) 2: Zero Hunger, 8: Decent Work and Economic Growth, and 13: Climate Action. The assessment covers environmental impact, economic resilience, and cultural preservation. It also outlines threats to the long-term viability of local livelihoods.
This study used John Elkington's Triple Bottom Line Theory (1994), which sees sustainability as integrating people, planet, and profit. The research is motivated by the economic instability of small-scale salt producers and declining interest from young people. It aims to examine how traditional practices persist amid modern challenges. Descriptive research design was utilized, involving 78 salt farmers selected by complete enumeration. Data were collected via structured surveys and analyzed using the Kruskal-Wallis test. The findings show that salt farming in Dasol is mostly sustainable, primarily due to strong cultural preservation. Cultural preservation received the highest sustainability score, reflecting the strength of traditional practices. However, economic sustainability is limited by competition from larger producers, high production costs, and limited access to credit. Notably, only one significant difference emerged: years of farming experience are linked to perceptions of economic sustainability. This suggests experienced farmers are better able to meet economic challenges. Overall, traditional salt farming in Dasol is environmentally adaptive and culturally strong, but economically vulnerable. To ensure long-term viability and engage younger generations, the study recommends adopting climate-adaptive practices, developing local branding and value-added products, organizing festivals, creating youth programs, and promoting environmental protection.

Keywords — Traditional Salt Farming, Sustainability, Livelihood, Cultural Preservation, Economic Challenge, Dasol Pangasinan

I. Introduction

Pangasinan is a top salt-producing region in the Philippines. Dasol, located in the western part, supports about 400 salt-farming households. The community takes part in mangrove reforestation, which naturally filters seawater and helps keep production pollution-free (https://seepangasinan.com).

Dasol is known for its commercial table salt production, which uses traditional solar evaporation. Workers direct seawater from Dasol Bay into evaporation ponds for harvesting. In 1878, Dasol was considered part of San Isidro de Potot, a jurisdiction that included areas now called Mabini and Burgos, which are in Zambales (https://www.pangasinan.gov.ph/).

Primary sources are scarce, but oral tradition claims salt farming here started in pre-colonial times. For centuries, farmers have kept traditional methods: seawater is poured into brick-lined pools, left to evaporate, and the salt is collected with a harrow. The salt is put in baskets, drains overnight, and is transported in the morning. Vendors sell each basket for about 40–50 pesos, depending on quality, while commercial markets sell it for over 3 times that amount (https://www.lantaw.com).

Dasol's identity is integrally linked to its coastline and enduring salt-making traditions. The etymology of the town's name is possibly derived from "Dosol," a locally known medicinal herb (https://pangasinanhistory.weebly.com).

On March 11, 2024, President Ferdinand R. Marcos Jr. signed Republic Act No. 11985, the Philippine Salt Industry Development Act. This law aims to revitalize salt farming through new technology, research projects, and expanded financial, production, and marketing support. It also establishes a Salt Council to implement industry strategies and ensure their alignment with Republic Act No. 8172 (ASIN) on salt iodization.

Sustainable salt farming in Dasol advances several Sustainable Development Goals, including enhanced food security (SDG 2), stable employment and income (SDG 8), and a proactive response to climate-related agricultural risks (SDG 13).

Salt has more than 14,000 uses for people and animals (Khonghun, 2021). Some countries, such as Australia, make salt by pumping seawater into shallow ponds for solar drying (McLean, 2024). Salt is essential in chemical manufacturing, food processing, pharmaceuticals, petroleum, seasoning, and preservation.

Despite its importance, Philippine salt production has not met national demand (Abdullah & Susandini, 2018; Peni et al., 2023). The industry peaked in the 1990s and has declined since then (Ventayan et al., 2023). Most coastal producers in Pangasinan, Ilocos, and Mindoro run small-scale operations that make less than 10 metric tons daily (Tan et al., 2022). Most use solar evaporation methods. However, some have adopted newer technologies such as vacuum evaporation and membrane filtration (Delos Reyes et al., 2021a; Muyot & Asuncion, 2022).

International studies show that salt and salinity present both challenges and opportunities. Some salt-tolerant crops struggle during reproduction. High salinity and water shortages limit dry-season rice farming (Islam et al., 2020).

Research on salt-tolerant crops takes place in Texel (Netherlands) (Wang, 2022), Bangladesh (Salt Solution Project, De Vos et al., 2021), and Indonesia, where salt production is widespread (Kurniawan et al., 2021). These projects promote sustainable farming, better management, and improved environmental planning (Ben Hamed et al., 2021).

Soil salinization and land degradation are major environmental problems. In Uzbekistan, poor land and water management have left much of the South Aral Sea region moderately or slightly saline (Duan et al., 2022; Eswar et al., 2021; War et al., 2021). Salinity harms plant growth, worsens soil health, and lowers livestock productivity. Animals lacking salt grow poorly, exhibit reduced fertility, and perform poorly (Ram Niwas et al., 2021). In the Philippines, salt farming is an important source of income, especially in Misamis Oriental (Delos Reyes et al., 2021). Many small producers face operational problems and close down, leading to increased salt imports (Castañeda, 2003). This threatens key sectors such as food processing, fish preservation, and coconut production (Tan et al., 2022). Farmer income changes with production amounts, season length, market prices, agreements, and other revenue streams (Susandini & Jannah, 2021).

This study examines ways for Dasol salt farmers to continue their work, focusing on environmental and economic factors. It aims to suggest effective plans for long-term salt farming.

Literature Review

John Elkington's Triple Bottom Line (TBL) Theory, introduced in 1994, says real sustainability means balancing three dimensions: People (social impact), Planet (environmental responsibility), and Profit (economic viability). This framework argues that businesses and traditional livelihoods should pursue financial success while also assessing their impacts on communities and the environment.

The Triple Bottom Line (TBL) Theory is relevant to sustainable salt farming in Dasol, Pangasinan. This work is closely tied to natural resources and local livelihoods. Yet, climate change, production inefficiency, and market competition threaten sustainability. By applying the TBL framework, salt farmers can use fair labor practices, adopt sustainable methods, and seek new markets.

Elkington's theory shows salt farming in Dasol can be sustainable by balancing economic, environmental, and social needs. Applying this framework helps protect farmers' incomes and conserve resources for the future. This study explores salt farming as a sustainable business, examining its support for communities, its role in maintaining ecological balance, and its potential for long-term profitability.

Statement of the Problem

This study aimed to determine the sustainability of sustainable salt farming in Dasol, Pangasinan.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:

    a. Age,

    b. Sex,

    c. Years of engagement in salt farming, and

    d. Total Land area owned.

2. What is the extent of sustainability of traditional salt farming in Dasol, Pangasinan, in terms of:

    a. Environmental impact;

    b. Economic resilience/viability; and

    c. Cultural preservation?

3. What are the challenges encountered by salt farmers in attaining their long-term sustainability in terms of:

    a. Economic Aspect,

    b. Social Aspect, and

    c. Environmental Aspect

4. Is there a significant difference in the extent of sustainability of traditional salt farming across profile variables?

5. Is there a significant difference in the challenges encountered by salt farmers in attaining their long-term sustainability across profile variables?

6. Based on the findings, what action plan can be proposed to promote sustainable salt farming?

II. Methodology

This section describes the research methodology used to conduct the study. It discussed the Research Design and Strategy, Population and Locale of the Study, Data Gathering Tool, Data Gathering Procedures, Validation of the instrument, Statistical Treatment of Data, and Ethical Considerations.

Research Design and Strategy

The researchers employed a descriptive research design utilizing a survey questionnaire. We chose this method because it was considered the most suitable approach for gathering data to determine the specific sustainable practices and resource management techniques applied in traditional salt farming in Dasol, Pangasinan.

Descriptive research provided detailed insights into how the traditional methods of the farms contributed to environmental conservation, economic viability, and community resilience, thereby highlighting the interconnectedness of sustainability in this unique setting.

Population and Locale of the Study

The research respondents were one salt farmer from each salt farm in 10 barangays in Dasol, Pangasinan. Complete enumeration was employed, including all salt farmers from each identified farm, to ensure comprehensive and accurate data on the long-term sustainability of salt farming in the region.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting information on the variables. The instruments were reliable and valid. We divided the questionnaires into three sections. The first section addresses the profile of the salt farmers. The second section investigated sustainable salt farming practices in Dasol, Pangasinan. Finally, the third section examined the challenges salt farmers face in adopting sustainable salt farming. Three experts validated the survey questionnaire to ensure its validity.

The survey utilized a detailed descriptive scale with interpretations such as (4) "Highly Sustainable", (3) "Moderately Sustainable ", (2) " Sustainable ", (1) "Not Sustainable ". For Sub-Problem 3, a frequency-based scale was applied: (4) “Highly Encountered”, (3) “Moderately Encountered”, (2) “Encountered”, and (1) “Not Encountered”.

The researchers administered the questionnaire checklist to the evaluators, while the critical reader and statistician validated it. To ensure the instrument’s validity, the study's validators were Validator A, Validator B, and Validator C, all experts in the relevant field. The validators utilized a content validation checklist to determine whether the questionnaire checklist was recommended for use. Upon validation, the validators concluded that the questionnaire checklist was suitable for use as a data-collection instrument.

The results of the validation are presented below:

Validator	Mean	Description
Validator A	3.14	Good
Validator B	4.00	Very Good
Validator C	4.14	Very Good
Average Weighted Mean	**3.75**	**Very Good**

Legend:

Statistical Range	Descriptive Equivalent
4.21-5.00	Excellent
3.41-4.20	Very Good
2.61-3.40	Good
1.81-2.60	Fair
1.00-1.80	Poor

Data Gathering Procedure

The researchers formally requested permission from the farmers. They also consulted their adviser on the appropriate steps to take in collecting the data. The study’s nature was explained to ensure full cooperation from the participants.

The researchers distributed questionnaires through face-to-face surveys to the participants. The questionnaires were administered directly by the researchers, who scrupulously adhered to the instructions.

The researchers analyzed the completed questionnaires to understand how salt farming contributed to local farmers' livelihoods and to the country's economy. After collecting all the completed questionnaires, the researchers compiled and tabulated the data.

III. Results and Discussion

This chapter presented, interpreted, and discussed the findings from the research on Traditional Salt Farming: A Pathway to Cultural and Sustainable Livelihood.

Table 1
Profile of Respondents
n=78

Variables		F	%
Age			
	26-35	9	11
	36-45	14	18
	46-55	27	35
	56 & above	28	36
Sex			
	Male	61	78
	Female	17	22
Years engaged in Salt Farming			
	1 Year	3	4
	3 Years	2	2
	4 Years	3	4
	5 Years and Above	70	90
Total Land Area Owned/ Farming			
	1 Hectare	18	23
	2 Hectares	24	31
	3 Hectares	9	11
	Above 4 Hectares	27	35

The profile included age, sex, years engaged in salt farming, and total land area owned or farmed, with the corresponding frequency (f) and percentage (%) for each category. Each variable had its interpretation and analysis. A total of 78 respondents were surveyed, meaning each variable's total frequency count represented 100%.

Age. It indicated that 28 out of 78 respondents, or 36% of the total, were aged 56 or older. A few respondents, or 11%, were between 26 and 35 years old. Many young people were leaving the farming or traditional livelihood sector, including salt farming, because they saw little future or profitability, or because the work was challenging and low-paying.

According to Montojo (2024), salt production in the Philippines is predominantly labor-intensive, seasonal, and yields relatively low economic returns, leading to growing disinterest among younger generations.

Sex. Regarding sex distribution among salt farmers in Dasol, Pangasinan, 61 of 78 (78%) were male, and 17 (22%) were female, suggesting that more males operated salt farms in Dasol.

As stated by Sagun-De Vera (2020), women were primarily responsible for salt bed preparation, pre-cooking activities (i.e., scraping salt flakes off the bed and carrying them to the cooking location), and post-cooking operations (i.e., packaging and selling salt). Their study found that, while men and women were equally likely to perform various salt-making tasks, men performed them more frequently than women.

Years Engaged in Salt Farming. Regarding years engaged in salt farming, 70 of 78 respondents had 5 or more years of experience, accounting for 90%. In contrast, the fewest respondents had been engaged for less than 3 years, representing 2% of the total.

Farmers perceived the business as traditional and had learned the practice over the years, with fewer new entrants joining the industry.

Table 2
Extent of Sustainability of Traditional Salt Farming in terms of Environmental Impact
n=78

Indicators	WM	DE
1. Traditional salt farming adapts well to environmental changes	3.49	HS
2. The use of traditional knowledge in salt farming supports environmentally responsible practices	3.63	HS
3. Salt farmers adapt sustainable techniques that reduce carbon footprint and pollution	3.59	HS
4. Local communities practice environmental conservation alongside salt farming	3.62	HS
5. Traditional practices help reduce pollution and environmental harm	3.78	HS
Average Weighted Mean	**3.62**	**HS**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Sustainable (HS)
2.51 - 3.25	Moderately Sustainable (MS)
1.76 - 2.50	Sustainable (S)
1.00 - 1.75	Not Sustainable (NS)

The environmental impact of traditional salt farming in Dasol, Pangasinan, was assessed at 3.62, corresponding to the descriptive equivalent of Highly Sustainable (HS). The findings revealed that salt farmers were committed to environmental preservation and sustainability.

The fifth indicator, "Traditional practices help reduce pollution and environmental harm," had the highest mean of 3.78, corresponding to the descriptive equivalent “Highly Sustainable” (HS). The 2022 Report on the State of Ecology and Environment in China (2022) revealed that the country's industrial miscellaneous salt production exceeded 30 million t/year (about 15% of the total hazardous waste).

Meanwhile, salt, as the electrolyte in surface water, plays a vital role in maintaining ecological and biochemical processes and serving as a medium for nutrient transport and carbon emission reduction.

Table 3
Challenges encountered by salt farmers in attaining its long-term sustainability in terms of Economic Aspect
n=78

Indicators	WM	DE
1.Lack of access to financial support or credit.	2.95	ME
2.High cost of production inputs and maintenance.	3.68	HE
3.Inconsistent market demand and low prices.	3.06	ME
4.Limited access to modern tools and technologies.	3.35	HE
5.Difficulty in competing with commercial salt producers.	3.69	HE
Average Weighted Mean	**3.35**	**HE**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Encountered (HE)
2.51 - 3.25	Moderately encountered (ME)
1.76 - 2.50	Encountered (E)
1.00 - 1.75	Not encountered (NE)

The economic challenges faced by salt farmers in attaining long-term sustainability in Dasol, Pangasinan, had a weighted average of 3.35, corresponding to the descriptive equivalent "Highly Encountered" (HE). The findings revealed that farmers faced significant economic challenges, which affected the sustainability of salt farming as a source of income.

The fifth indicator, "Difficulty in competing with commercial salt producers," had the highest mean of 3.69, corresponding to the descriptive equivalent "Highly Encountered" (HE).

According to Mangaluru (2022), salt farmers struggled to compete with large commercial salt producers due to significant disadvantages in technology, capital, and market access.

The first indicator, "Lack of access to financial support or credit," recorded the lowest mean of 2.95 and was characterized as "Moderately Encountered" (ME). Salt farmers often faced limited access to financial support and credit due to several issues, which hindered their ability to modernize, increase productivity, and improve their livelihoods. The resulting lack of capital trapped some farmers in a cycle of debt, forcing them to cease operations. Fatihudin (2022) reported that the capital for producing people's salt in Pati was mainly from personal funds and bank loans, with no contributions from collectors. The productivity of these salt producers was measured by the volume of salt production, expressed in tons per harvest.

IV. Conclusions and Recommendations

This chapter summarizes the study's findings and conclusions, which aimed to identify the marketing practices used by Traditional Salt Farming: A Pathway to Cultural and Sustainable Livelihood. It also offers recommendations for staff management. We conclude that Salt farming in Dasol, Pangasinan, is mainly done by older male farmers who are assumed to have been farming for 5 years, because the work is physically demanding; some farmers inherited the livelihood from their families. Traditional salt farming in Dasol, Pangasinan, is highly sustainable, especially in cultural preservation and environmental impact, because salt farmers continue to follow traditional practices, protect their environment, and maintain long-standing cultural methods that sustain their livelihoods. The Salt farmers in Dasol, Pangasinan, mostly encounter economic challenges, followed by social and environmental issues, because they often face unstable income, limited resources, and external factors like weather changes and a lack of support that affect their production and overall sustainability. We conclude that years of experience in salt farming enhance the economic resilience of traditional salt production because longer experience helps farmers become more stable and effective in their work. Meanwhile, age, sex, and land area owned/farming show no significant differences in sustainability, because these factors do not significantly influence how farmers manage or preserve their salt farming practices. We conclude that the challenges encountered by salt farmers show no significant differences in age, sex, years engaged in salt farming, or land area owned/farmed, as they are common across all salt farmers. Based on the study's result, salt farming in Dasol was identified as a significant component of the community's culture and livelihood. To improve the lives of salt farmers and promote the salt industry, the following recommendations are proposed. These recommendations aim to support farmers, protect the environment, and preserve the tradition of salt-making for future generations. We recommend that the community continue maintaining its strong environmental practices by regularly monitoring resource use, protecting natural habitats, and keeping strict waste-management measures. Even though the area is already highly sustainable, staying consistent and improving small details will help ensure long-term environmental health and resilience. We recommend that the community continue to uphold its strong economic resilience by keeping steady financial management, valuing local businesses, and consistently evaluating their existing income systems. Although the area already shows high sustainability, maintaining these practices will help secure long-term stability and ensure the economy remains flexible to future changes. We recommend that the community continue promoting and preserving traditional salt-making practices. This can be done by documenting techniques, involving the youth through workshops, and integrating salt-making heritage into local events and tourism. Strengthening these efforts will ensure that the cultural value of salt farming remains alive for future generations. We recommend that salt farmers continue their existing economic strategies, as these challenges are already highly encountered. Maintaining these efforts will help them sustain operations while gradually improving their capacity to cope with ongoing economic issues. Strengthening ongoing practices will also support long-term stability and ensure that their economic resilience continues to grow. We recommend that the community continue strengthening its social support for salt farmers by promoting open communication, encouraging teamwork, and ensuring equal access to community programs and assistance. While the encounter of social challenges is rated as moderate, staying proactive and improving small areas of support will surely enhance farmers' well-being and reinforce the long-term social sustainability of the salt farming sector. We recommend that salt farmers continue improving their environmental practices by regularly inspecting their ponds, properly managing waste, and keeping their surroundings clean. Given ongoing environmental challenges, maintaining these habits can help reduce negative impacts and support the long-term sustainability of their salt farms.

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Evaluating the Public Awareness of Baguio City's Smoke Free Policy

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Abstract — The Smoke-Free Policy in Baguio City serves as a crucial initiative aimed at advancing global sustainability goals, particularly aligning with several United Nations Sustainable Development Goals (SDGs) including SDG 3 (Good Health and Well-being), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action).
This research aimed to assess the effectiveness of this policy by examining various aspects such as public awareness, perceived impact, enforcement and compliance, public perception, air quality, behavioral intentions of smokers, and health perceptions. The ordinance was enacted to protect public health, reduce smoking-related illnesses, and create a cleaner urban environment. A structured survey was conducted among 147 randomly selected respondents to gather quantitative data, which was analyzed statistically using the Kruskal–Wallis Test. The results indicated that respondents displayed a high level of awareness regarding the Smoke-Free Policy and generally viewed its impact as highly effective. Positive assessments were reported in areas concerning enforcement, compliance, public perception, and smokers' behavioral intentions. Notably, there was a strong perception of enhanced public health, with respondents acknowledging a heightened awareness of health benefits and a reduced exposure to secondhand smoke. In contrast, improvements in air quality were rated lower, suggesting that while public smoking significantly decreased, other environmental pollutants may still have affected perceptions regarding cleanliness and air purity. The study concluded that the Smoke-Free Policy effectively fostered public health improvements and encouraged positive behavioral changes. Recommendations included enhancing environmental monitoring frameworks and conducting ongoing public awareness campaigns to ensure the policy's sustainability and long-term success.

Keywords — Air Quality, No Smoking Policy Vape, Second Hand Smoke, No Smoking Policy, Public Health

I. Introduction

Baguio City, "Summer Capital of the Philippines," is a highly urbanized, culturally diverse city in Benguet, known for its cool climate, educational institutions, and vibrant business sector (Agoot, 2023). Baguio City has implemented a Smoke Free Policy to promote public health and environmental preservation, aiming to reduce smoking-related diseases, improve air quality, and create a healthier environment. The policy mandates that all public buildings and places accessible to the public be smoke free within 10 meters of entrances, exits, and air intake ducts. The city government passed its first comprehensive smoke-free law in 2008, which was strengthened in 2017. Fines for violations range from P1,000 to P3,000 for individuals caught smoking or vaping in public places, to P2,000 to P5,000 for establishments that violate the ordinance.

Repeat offenses may lead to imprisonment for up to three months, suspension or revocation of business licenses, community service, confiscation of tobacco products, or other penalties at the court's discretion. Baguio City's antismoking policy is based on City Ordinance No. 34, Series of 2017, also known as the Smoke-Free Baguio Ordinance. This ordinance prohibits smoking and vaping in public places, including public utility vehicles, government-owned vehicles, accommodation and entertainment establishments, public buildings, and enclosed areas. It also regulates the use, sale, distribution, and advertisement of cigarettes and tobacco products, including vape products. Smoking is only permitted in establishments with a special permit to operate a designated smoking area.

Baguio City's smoke-free policy aligns with Sustainable Development Goal SDG 3: Good Health and Well-being by ensuring healthy lives and promoting wellbeing. The policy prohibits smoking and vaping in public places, particularly near schools and churches, and imposes fines for violations. It also supports SDG 11: Sustainable Cities and Communities by contributing to a safe and healthy urban environment for both residents and visitors. Furthermore, it aligns with SDG 12: Responsible Consumption and Production by reducing cigarette waste and encouraging sustainable living. While SDG 13: Climate Action primarily focuses on combating climate change, Baguio's smoke-free initiatives contribute to this goal through improved air quality, reduced environmental waste, and promotion of a healthier lifestyle.

Tobacco-related death, disease, and disability remain persistent public health challenges in the United States. Tobacco use continues to be a leading cause of preventable death, contributing significantly to cardiovascular diseases and cancers (Mokdad, 2024). Smoke-free policies have been widely implemented across the globe as a strategy to mitigate the health risks associated with tobacco use and secondhand smoke. According to the World Health Organization (2021), comprehensive smoke-free laws have effectively reduced hospital admissions for heart attacks and respiratory diseases.

Countries such as Ireland, Uruguay, and New Zealand have reported significant declines in smoking prevalence and improvements in air quality in public spaces after implementing smoke–free laws. Tan & Glantz (2012) found that smoke-free laws were associated with a 15% reduction in hospitalizations for heart disease within the first year of implementation. The study emphasized that stronger enforcement leads to greater public health benefits.

In 2004, Ireland became the first country in the world to ban smoking in bars, restaurants, and workplaces, led by civil servant Tom Power. Despite opposition from the tobacco industry, the ban significantly reduced secondhand smoke exposure and became a model for over 70 countries that later adopted similar policies (Carroll, 2024). Sweden's strategy of combining strict tobacco control measures with the promotion of smokeless alternatives, particularly snus, has led to the lowest smoking rates in Europe and a reduction in smoking-related diseases. The widespread adoption of snus has played a crucial role in this success. (Nigeria & Muonso, 2024).

According to the article published by the Action Smoking and Health (2024), Uruguay, a leading country in Latin America, implemented a robust smoke-free air law using the World Health Organization's Framework Convention on Tobacco Control. Public engagement initiatives, such as the "Thanks a Million" campaign, gained widespread support for tobacco control, ensuring the adoption of evidence-based and effective measures. A study at the American University of Beirut found that a tobacco-free policy significantly reduced smoking prevalence among students, from 26% pre-policy to 21% post-policy, and increased support for the policy among smokers, indicating the potential of institutional policies to positively impact public health. (Int J Public Health, 2021).

Since March 2022, Armenia has introduced a comprehensive smoking ban on all types of tobacco products in both indoor and outdoor areas of hospitality venues. Sargsyan & ZaruhiGrigoryan (2023) aimed to rapidly assess the implementation of the ban in the dining areas of the capital, Yerevan, and to explore any differences in compliance and enforcement patterns between indoor and outdoor areas of these venues.

Conversely, according to Duren & Gouda (2024), comprehensive smoke-free laws are an important public health strategy because they reduce tobacco smoke exposure and are associated with a decrease in youth smoking initiation. Furthermore, the Framework Convention on Tobacco Control (FCTC) is one of the most successful global treaties, with 182 Parties having ratified the convention as of July 2023.

Article 8 of the FCTC obligates Parties to implement comprehensive smoke-free laws in all indoor workplaces, public transport, indoor public places, and, where appropriate, other public places, which may include outdoor or quasi-outdoor environments. Farran (2021) stated that smoking is prohibited in all open public places, public transport, workplaces, and outdoor areas of educational, health, and sports facilities in Lebanon. Tobacco-free workplaces, including tobacco free universities, have been effective in reducing exposure to secondhand smoke, decreasing cigarette consumption, increasing smokers' intention to quit, and increasing the likelihood of cessation (Nakkash, 2021).

Over several years, the Philippines has implemented notable policies to control tobacco use. These include laws that prohibit smoking in specific public places, increased excise taxes on tobacco products, adoption of a uniform cigarette tax rate, graphic health warnings on packaging, and the establishment of standards for designated smoking areas. Furthermore, authorities have imposed duties on individuals in charge of public places to ensure adherence to smoking restrictions and enforcement of other sales and advertising restrictions (Kress et al., 2023).

The implementation of these policies is a significant step towards reducing the adverse health effects of tobacco use among the population. Baguio City has implemented one of the most recognized smoke-free ordinances in the country. The Smoke-Free Baguio Ordinance (Ordinance No. 34, Series of 2017) prohibits smoking in public areas, including streets, parks, and government facilities. The city was awarded by the Department of Health and the WHO for its strong advocacy, enforcement, and community-based approaches to maintaining a smoke-free environment.

A local study conducted by the Baguio Smoke-Free Task Force (2020) reported a notable decrease in the number of individuals smoking in public areas, along with an increase in public awareness about the harms of tobacco use. Compliance improved significantly due to the implementation of visible signage, media campaigns, and community patrols. Despite the implementation of Baguio City's Smoke-Free Ordinance, which aims to protect public health and promote a clean environment, questions remain regarding the actual effectiveness of the policy.

While the local government has taken steps to enforce smoke-free zones, it is important to assess whether these efforts have led to a measurable reduction in smoking-related behavior, improved compliance, and enhanced public awareness. Reports from 2015 showed that seven out of ten (76.7%) Filipino tobacco users were interested in or intended to stop smoking (Domingo, 2022). One advantage of quitting smoking is that the quality of life and death rates for individuals who stop smoking before the age of 35 are similar to those who never smoked.

Literature Review

In the Philippines, smoking is strictly prohibited in most enclosed public places and vehicles, with the exception of designated smoking areas, as mandated by Republic Act No. 9211 (Tobacco Regulation Act of 2003) and Executive Order No. 26 (2017). Building on these national mandates, which also prohibit smoking within 10 meters of entrances, Baguio City has strengthened its commitment local no-smoking ordinance, showcasing stricter enforcement and dedication to a smoke-free environment.

1. EO. 26 Providing for the Establishment of Smoke-Free Environments in Public and Enclosed Places.

2. Philippine Clean Air Act of 1999- RA 8749 Baguio City Smoke- Free Ordinance (Ordinance No. 34, Series of 2017)

This study examined the success of Baguio City's Smoke-Free Policy, which represented the independent and dependent variable model. The independent variables included the profiles of the respondents in terms of age, sex, occupation, and years of residence in Baguio City. The study next assessed the level of public awareness regarding the Smoke-Free Policy, focusing on policy awareness, impact, enforcement, compliance, and public perceptions. Lastly, it evaluated the perceived effectiveness of the policy in reducing smoking in public spaces, considering its impact on air quality, behavioral intentions of smokers, and public health perceptions.

The research process involved survey questionnaires, data gathering procedures, statistical treatments, and the analysis and interpretation of the data.

Statement of the Problem

This study aimed to evaluate the success of Baguio City's Smoke-Free Policy by examining the levels of enforcement, public compliance, changes in smoking behavior, and the perceived impact on public health and the environment. It also aimed to identify any gaps or challenges in the implementation of the ordinance.

Specifically, this study sought to answer the following research questions:

1. What is the profile of the respondents in terms of:
    a. Age;
    b. Sex;
    c. Occupation;
    d. and Years residing in Baguio City?
2. What is the level of public awareness regarding the Smoke-Free Policy in Baguio City in terms of:
    a. Policy Awareness;
    b. Policy Impact;
    c. Enforcement and Compliance;
    d. and Public Perception?
3. What is the perceived effectiveness of the policy in reducing smoking in public spaces in terms of:
    a. Impact on air quality;
    b. Behavioral intentions of smokers;
    c. and Public health perceptions?

4. Is there a significant difference in the level of public awareness regarding the Smoke-Free Policy across profile variables?

5. Is there a significant difference between the perceived effectiveness of the policy in reducing smoking in public spaces across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the research design and strategy, population and locale of the study, data gathering tools, data gathering procedures, validation of the instrument, statistical treatment of data, and ethical considerations.

Research Design and Strategy

The researchers used a descriptive research design utilizing a survey questionnaire. This method was employed because it was considered the most suitable research approach for gathering data to determine the success of Baguio City's Smoke-Free Policy. Descriptive research aimed to describe individuals, events, or conditions by studying them as they existed naturally. The researchers did not manipulate any of the variables; instead,they simply described the sample and/or the variables involved. Although a descriptive study could explore multiple variables, it was the only research design capable of focusing on a single variable. Descriptive studies examined the characteristics of a population, identified problems existing within a unit, organization, or population, or explored variations in characteristics or practices across institutions or even countries (Siedlecki, S. L., 2020).

Population and Locale of the Study

Population and Locale of the Study The research respondents were residents of Baguio City, selected using purposive sampling. This method involved choosing individuals based on their experience and knowledge regarding the success of Baguio City's Smoke-Free Policy, as they could provide relevant information about their experiences with the policy.

Data Gathering Tool

The researchers used a developed survey questionnaire as the primary tool for collecting information on the variables. This instrument was required to be reliable and valid. The questionnaire was divided into three sections. The first section addressed the profile of the respondents. The second section investigated the level of public awareness regarding the Smoke-Free Policy in Baguio City. The third section examined the perceived effectiveness of the policy in reducing smoking in public spaces.

Lastly, it explored the challenges faced by both residents and enforcers in implementing and adhering to the policy. Three experts validated the survey questionnaire to ensure its validity.

Part II of the survey was detailed with descriptive interpretations such as *(4) Strongly Agree, (3) Agree, (2) Disagree, and (1) Strongly Disagree.* **Part III** of the survey was detailed with descriptive interpretations including *(4) Highly Effective, (3) Effective, (2) Slightly Effective, and (1) Not Effective.*

Validation of the Instrument

The questionnaire checklist was administered to the evaluators, and the critical reader and statistician performed a validation process. In order to determine the validity of the instrument used in this study, Validator A, Validator B, and Validator C served as the validators of the questionnaire because they are experts in the said field. The validators used a content validation checklist to determine whether the questionnaire checklist is recommendable to use or not. Upon validation, the validators determined that the questionnaire checklist is recommendable to use as an instrument in data gathering.

The result of the validation is shown below:

Validator	Mean	Descriptive Equivalent
Validator A	2.71	Good
Validator B	3.71	Very Good
Validator C	5.00	Excellent
Average Weighted Mean	**3.80**	**Very Good**

Legend:

Statistical Range	Descriptive Equivalent
4.21-5.00	Excellent
3.41-4.20	Very Good
2.61-3.40	Good
1.81-2.60	Fair
1.00-1.80	Poor

Data Gathering Procedure

The researchers formally requested permission from the residents to participate in the study. They also consulted their adviser regarding the steps for data collection. The nature and purpose of the study were clearly and appropriately explained to ensure full cooperation, particularly from cigarette consumers.

Questionnaires were distributed through face-to-face surveys to the residents. The questions were administered directly by the researchers, who strictly followed the given instructions.

The researchers interpreted the retrieved questionnaires to achieve the goal of assessing the success of Baguio City's Smoke Free Policy. After collecting all the completed questionnaires, the researchers compiled and tabulated the data for analysis.

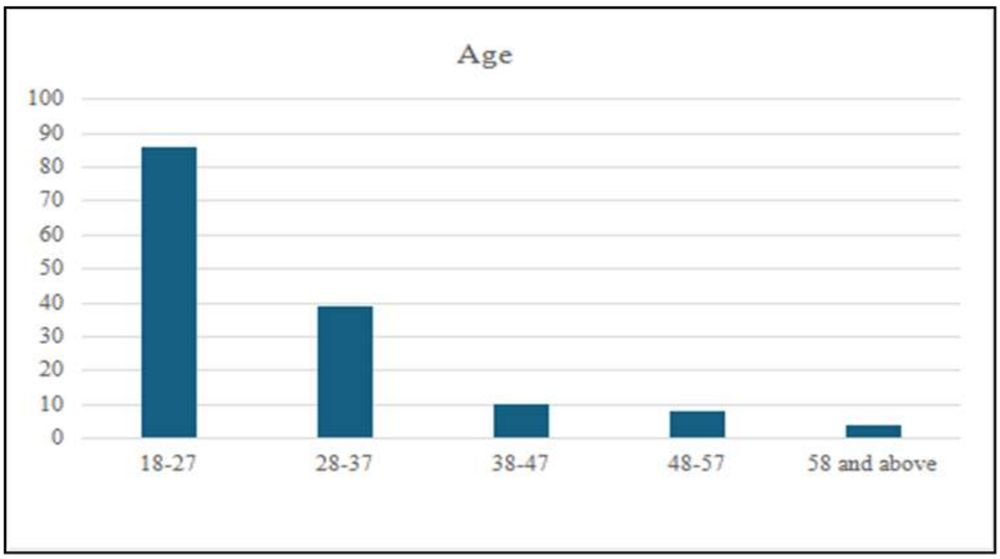
III. Results and Discussion

This chapter presents, interprets, and discusses the findings of the data collected throughout the research of Evaluating the Public Awareness of Baguio City `s Smoke-free policy.

Profile of the respondents of Residents of Baguio City

The profile included age, sex, and highest educational attainment, along with the corresponding frequency count (f) and percentage (%) of each category. Each variable was interpreted and analyzed. A total of one hundred forty-seven respondents were surveyed, meaning that the total frequency count for each variable was 100%

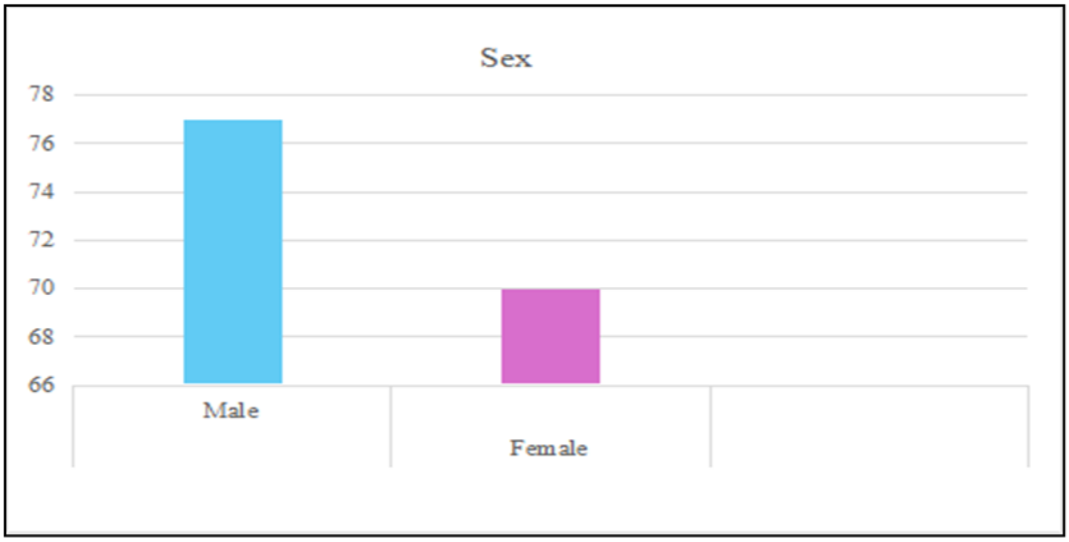
Figure 4
Age
n=147



Age. It indicated that 86 out of 147 respondents, or 58.50% of the total, were between the ages of 18 and 27. In contrast, only a few respondents, 4 out of 147 or 2.72%, were 47 years or older.

This suggested that younger individuals were often drawn to smoking due to a combination of social, psychological, and environmental factors. Young adults (approximately 18–27 years old) often begin smoking as they transition from adolescence, influenced by peer pressure, the desire to appear more "adult," stress or mental health challenges, easy access to tobacco, and exposure within the family. A smoke-free policy could help counter these factors by limiting tobacco availability, reducing social acceptance of smoking, and creating healthier environments that discourage initiation.

Figure 5
Sex
n=147



Sex. 77 out of 147 respondents in Baguio City were male (52.38%), while 70 out of 147 were female (47.62%), indicating that more males than females smoked due to a combination of social, psychological, and environmental factors. These factors included peer pressure and influence, a desire to appear more mature, and the smoking habits of family members.

More men smoked compared to women, influenced by both psychological and environmental factors. Men tended to begin smoking at an earlier age, consumed larger amounts, and were more likely to inhale smoke deeply into the lungs. Differences were also observed among male smokers themselves; those in younger age groups often started before the age of 20 and were more inclined to regularly smoke manufactured cigarettes compared to older men (DPhil, 2022).

Table 2
Level of Public Awareness Regarding the Smoke-free Policy in Baguio City in terms of Policy Awareness
n=147

Indicators	WM	DE
1. Smoke-Free Policy is implemented in community/workplace/school.	3.52	HA
2. Understand what the Smoke-Free Policy aims to achieve.	3.56	HA
3. Informed about the specific locations where smoking is prohibited.	3.50	HA
4. Visual materials (e.g., posters, signs, banners) promoting the Smoke-Free Policy.	3.42	HA
5. Awareness of the rules and regulations stated in the Smoke-Free Policy.	3.43	HA
Average Weighted Mean	**3.49**	**HA**

Legend:

Statitical Range	Descriptive Equivalent
3.26 - 4.00	Highly Aware (HA)
2.51 - 3.25	Moderately Aware (MA)
1.76 - 2.50	Slight Aware (SA)

The level of public awareness regarding the smoke-free policy was assessed based on public awareness, with the overall average weighted mean for the smoke-free policy recorded at 3.49, corresponding to the descriptive equivalent of "Highly Aware" (HA). The findings revealed that the respondents had been aware of the smoke-free regulation due to the comprehensive and strictly enforced municipal regulations. Regular public communication campaigns and enforcement activities had resulted in a thorough public understanding of the regulations.

The second indicator, "Understand what the Smoke-Free Policy aims to achieve," scored a high mean of 3.56, with a descriptive equivalent of "Highly Aware" (HA). Smoke-free policies aimed to protect the public, especially children, from secondhand smoke by eliminating smoking in public places, reducing smoking visibility, and decreasing the social acceptability of tobacco use. Key objectives included protecting non-smokers from secondhand smoke exposure, assisting smokers in quitting, and preventing youth from initiating smoking.

Table 3
Perceived effectiveness of the policy in reducing smoking public spaces in terms of Impact of Air Quality
n=147

Indicators	WM	DE
1. Areas covered by the smoke-free policy have cleaner air.	3.43	HE
2. The presence of cigarette smoke has significantly decreased in public places.	3.37	HE
3. The quality of the air in public spaces like parks and terminals has improved.	3.39	HE
4. The policy has contributed to a noticeable reduction in secondhand smoke exposure.	3.40	HE
5. The smoke-free policy's enforcement is expected to lead to improved air quality monitoring results.	3.47	HE
Average Weighted Mean	3.41	HE

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Effective (HE)
2.51 - 3.25	Moderately Effective (ME)
1.76 - 2.50	Slight Effective (SE)
1.00 - 1.75	Not Effective (NE)

The perceived effectiveness of the policy in reducing smoking in public spaces, based on its impact on air quality, yielded a total average weighted mean of 3.41 and a descriptive equivalent of "Highly Effective" (HE). The results showed that high compliance with the policy, visible enforcement of no-smoking rules in many public places, and reduced public exposure to secondhand smoke had led to improvements in air quality that were not only measurable but also perceptible to residents.

The fifth indicator, "The smoke-free policy's enforcement was expected to lead to improved air quality monitoring results," obtained the highest mean of 3.47, with the descriptive equivalent of "Highly Effective" (HE). Baguio City had achieved high compliance rates with its Smoke-Free Ordinance, with a study showing the highest level of compliance among three LGUs.

IV. Conclusions and Recommendations

This chapter presents a summary of the findings and conclusions derived from the study, which aimed to assess the effectiveness of Baguio City's smoke-free policy. It also provides recommendations for relevant local government units and stakeholders to consider in ensuring the policy's sustained effectiveness and potential improvement. Most respondents in Baguio City were young adults, and the majority were male. Approximately forty-six of the respondents were unemployed and had lived in the city for more than twenty-one years. The notable number of unemployed individuals underscored the importance of considering socioeconomic factors, as previous studies had shown a connection between unemployment and higher smoking rates. This demographic profile helped explain how the Smoke-Free Policy functioned in Baguio City. It reflected the views of groups more at risk of smoking and directly affected by the policy, making their perspectives vital for understanding its effectiveness. The residents of Baguio City understood what the smoke-free policy aimed to achieve and were also aware that the policy included penalties or fines for violators. Consequently, individuals were penalized for violating the smoke-free policy in Baguio City. The policy had a noticeable positive impact on public cleanliness and hygiene. These results highlighted that the residents were highly aware of the smoke-free policy's provisions and enforcement. The strong score in the perceived effectiveness of the policy in reducing smoking in public spaces indicated high compliance. The smoke-free policy's enforcement was expected to lead to improved air quality monitoring results. Additionally, the policy discouraged individuals from smoking in restricted public areas. Lastly,the public had become more aware of the health dangers of smoking. Overall,these outcomes reflected the positive impact of the policy on both public behavior and community health. The study revealed no significant differences in public awareness of the smoke-free policy based on age, sex, or educational attainment. This indicated that awareness campaigns had successfully reached all demographic groups equally. However, years of residence showed varied results; while policy awareness and public perception remained unaffected, differences were observed in policy impact, enforcement, and compliance. Overall, this suggested that, although general awareness was consistent, the level of impact and enforcement varied depending on the duration of residency in Baguio City. The findings showed no significant differences in the perceived effectiveness of the smoke-free policy in reducing smoking in public spaces when grouped by age, sex, and educational attainment. This indicated that people across these groups shared similar views on the policy's impact on air quality, smoking behavior, and public health. However, years of residence revealed significant differences in perceptions of improvements in air quality and smoker behavior. Long-term residents tended to view the policy as more effective because they had experienced the changes over time, while newer residents had less to compare. Despite this, both groups shared similar perceptions of the policy's impact on public health. Based on the results of the study, the researchers formulated the following recommendations to enhance the Smoke-Free Policy. These recommendations aim to strengthen the policy, increase public awareness, and improve its overall effectiveness. Installation of Visible Anti-Smoking Signages. This recommendation is directed toward city officials and the local government, who are responsible for installing and maintaining signage in public areas frequented by the public. The researchers suggest that antismoking signs and warnings be made larger and more noticeable—particularly those containing graphic health messages—to effectively capture public attention and enhance awareness. Coverage of Both Traditional and Electronic Smoking Devices. It is recommended to launch additional awareness campaigns that clearly communicate the health risks associated with both traditional and electronic smoking products. These initiatives will help ensure that the residents of Baguio City fully understand the objectives and rationale of the smoke-free policy. Strengthening and Supporting Designated Authorities. Local government units should continue to strengthen and provide support to designated authorities to ensure the effective and visible enforcement of the smoke-free policy. Furthermore, business owners should be required to display clear and visible "No Smoking" signs within their establishments to reinforce compliance. Enhancing Policy Enforcement. The policy should be continuously improved and strictly enforced through the sustained commitment of local government units. Strong enforcement measures are necessary to maintain public awareness, encourage compliance, and ensure the long-term success of the smoke-free initiative. Sustaining Smoke-Free Public Spaces. Maintaining strict enforcement of the smoke-free policy is essential to sustaining the reduction of cigarette smoke in public areas. Local authorities should conduct regular inspections and install additional compliance measures. These actions will help preserve a cleaner and healthier environment, encourage adherence to the policy, and protect non-smokers from exposure to secondhand smoke. Empowering Individuals to Quit Smoking. The policy should be continuously strengthened and enhanced through consistent enforcement, regular inspections by local government and enforcement officers, and the installation of clear and visible signage. These efforts will promote a healthier, smoke-free environment, encourage smokers to quit, and contribute to the reduction of smoking prevalence in the city. Preventing Secondhand Smoke Exposure. The researchers recommend reinforcing and strictly implementing the smoke-free policy to sustain the reduction of secondhand smoke exposure in public spaces. Consistent enforcement, prominent signage, and regular monitoring should be maintained. Additionally, expanding health education campaigns can increase public understanding of the dangers of secondhand smoke, thereby protecting community health and motivating smokers to quit.m

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Passenger Satisfaction in Modern PUVs: Comfort, Safety, and Accessibility of Commuters in TAPTRANSCO Tayug, Pangasinan

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Abstract — This research study explores the establishment of the Tayug Pangasinan Transport Service Cooperative (TAPTRANSCO) in 2018, which was launched to align with the Philippine government's Public Utility Vehicle (PUV) modernization program. The primary goal of this program was to transition from traditional jeepney fleets to a more sustainable and contemporary transportation system.

Utilizing a descriptive research design, this study assessed passenger satisfaction with TAPTRANSCO's services, focusing on comfort, safety, and accessibility. A total of 356 passengers participated in the study through convenience sampling. The Kruskal-Wallis and Mann-Whitney U tests were used in data analysis to identify differences based on variables such as age, sex, frequency of commuting, purpose of travel, distance to destination, and monthly income. The findings revealed that 46.6% of respondents were aged 20 to 29, indicating a majority of students or young professionals among participants. Additionally, a significant proportion of respondents were female (46.6%), primarily traveling long distances for educational or professional reasons. This demographic also tended to have lower monthly incomes. The study identified cleanliness, the utilization of closed-circuit television (CCTV) cameras, and the provision of priority seating as key strengths of TAPTRANSCO's service. Areas for improvement include additional baggage storage and upgrading low-floor entry points to enhance comfort and accessibility. To ensure safety, all vehicles must have functional and accessible first aid kits and fire extinguishers. To minimize wait times, TAPTRANSCO should implement real-time scheduling. These proposed interventions aim to enhance TAPTRANSCO's service quality, increase passenger satisfaction and loyalty, and promote overall service excellence.

Keywords — Modern PUVs, Passenger Satisfaction, Passenger Comfort, Passenger Safety, Passenger Accessibility

I. Introduction

Transportation has evolved in history and has always been an essential part of human civilization. According to Koorey (2025), the concept of a legal commutation originated in the 1630s. It was not until 1795 that "commute" came to mean "to change one kind of payment into another." The act of commuting became a transaction, and to "commute" came to mean exchanging not just one payment for another but several successive payments.

It revolutionized regular travel and resulted In the first "commutation ticket" in 1848, a season pass on a railroad or streetcar line. Those who had such a ticket were initially referred to as "commuters" by the mid-1860s. Additionally, by 1889, "commute" had become a verb meaning "to go back and forth to work." Since ancient times, people have used various forms of transportation to travel from one place to another (Kostrzewski et al., 2022). Early civilizations relied on natural resources and animals. Walking is the earliest form of transport that does not require tools and infrastructure. Later, donkeys, horses, and camels were domesticated to travel longer distances quickly and efficiently (Jain, 2024).

The development of wheeled vehicles like carts and chariots, as well as the widespread use of waterways for transportation by constructing different kinds of boats and ships for trade and exploration, were both made possible by the creation of the wheel around 5000 BCE (Dobrow, 2022).

Railways changed transportation in the mid-19th century, making travel much faster, and automobiles arrived after World War I at the end of the 19th century (Lambert, 2021). The early 20th century made significant advancements in transportation, driven by rapid technological advancements. Technology and innovation are reshaping how we move people and goods, from electric and autonomous vehicles to infrastructure, hyperloop systems, and enhanced traffic control systems (Sheharyar, 2024). Even now, various innovations and technologies are transforming the transportation industry, making it more sustainable, efficient, and connected than ever before.

Passenger transport encompasses a broad range of activities, such as daily activities, work commutes, business travel, and tourism. Significantly, passengers can choose different transportation modes based on factors such as price, travel time, comfort, and safety (Noussan et al., 2020). Focusing on the effect on behavior, Gelaidan et al. (2023) revealed that service quality significantly influences passenger attitudes, highlighting the importance of fast, secure, reliable, and cost-effective e-transportation services in maintaining a positive attitude among the passengers. Moreover, service quality significantly impacts both attitude and satisfaction.

As stated by Cahigas et al. (2022), factors such as accessibility, safety, economic benefits, and crisis management have a significant and positive impact on passenger trust, which in turn affects passenger attitudes, subjective norms, and perceived behavioral control. According to Mohammadi et al. (2020), the comfort level on public transport vehicles can be broken down to five critical factors: thermal, vibration, noise, lighting, and air quality. Another important factor that passengers consider when making transportation choices is safety (Dunsmore, 2023).

Nowadays, one of the most significant issues of public transport is how to make it inclusive and accessible for people with all levels of abilities. In the study of Hotor (2024), Persons with Disabilities (PWDs) in Ghana experience various forms of discrimination and social exclusion when accessing public transportation. This makes it harder for them to acquire education, healthcare, and work. Hence, an accessible transport system is essential to encourage more people to use public transport (Sweco Group, 2025).

As technology and sustainable innovation advancements emerged throughout the years, several transport agencies and companies have introduced zero-emission buses (ZEBs) to their fleets, including battery electric buses, fuel cell battery electric buses, and fuel cell plug-in hybrid electric buses in an effort to reduce transportation-related impacts on air quality (Avenali et al., 2024). As of 2023, approximately 635,000 electric buses (e-buses) are in operation worldwide, with the number continuing to increase (Rodrigues & Gauthier, 2025). These electric buses are becoming a fundamental part of fostering a sustainable and efficient public transport system as cities deal with increasing pollution, greenhouse gas emissions, and traffic congestion. They are not just a technological change, but they also represent a shift towards cleaner and more reliable mobility that benefits all communities, especially those living in the Global South.

According to Mateo-Babiano et al. (2020), the Philippines has one of the highest levels of PUV congestion. It was considered to be the primary transportation system in the country. Its purpose is to provide accessible and affordable transport options for citizens. Jeepneys are the most iconic and popular mode of transportation in the Philippines.

Unfortunately, they are inadequately maintained to keep fares low and ensure accessibility for a larger population. As a result, they release harmful pollutants that can adversely affect people’s health, degrade air quality, release greenhouse gases, and cause climate change (Cartojano, 2023). The government recognized these issues and acknowledged the need for reform. On June 19, 2017, the Department of Transportation (DOTr) issued Department Order No. 2017-011, or the Omnibus Guidelines on the Planning and Identification of Public Road Transportation Services and Franchise Issuance, also known as the Public Utility Vehicle Modernization Program (PUVMP), which aims to replace traditional jeepneys with safer, more efficient, and eco-friendly vehicles (Lu, 2024).

In the study of Estipular (2020), among the significant components of the PUVMP is fleet modernization, which entails modernizing the PUVs/Public Utility Jeepneys (PUJs) to achieve a Comfortable, Accessible, Reliable, Environment-friendly, and Sustainable (C.A.R.E.S) with due consideration to persons with disabilities (PWDs) and the elderly.

In alignment with this, Tayug Pangasinan Transport Service Cooperative (TAPTRANSCO) was established in 2018 to comply with the government’s PUV modernization program. These modern jeepneys are not just equipped with at least Euro-4 emission-compliant engines. However, they are also complete with safety features such as closed-circuit television (CCTV) cameras, dash cams, speed limiters, an automatic fare collection system, and must adhere to the Philippine National Standards (PNS) approved by the Bureau of Philippine Standards (Austria, 2024).

The Public Utility Vehicle Modernization Program aims to transform the traditional jeepney fleet into a more sustainable and modern system. It aligns with Sustainable Development Goals (SDGs) 8, 11, 12, and 13 by fostering economic growth, sustainability, and environmental responsibility. It supports SDG 8: Decent Work and Economic Growth by creating jobs and improving the livelihoods of public transport workers.

Additionally, it contributes to SDG 11: Sustainable Cities and Communities by enhancing public transportation, reducing pollution, and making urban mobility more efficient and accessible. The initiative mandates the use of Euro 4-compliant or electric engines, promoting SDG 12: Responsible Consumption and Production through fuel efficiency and the potential integration of sustainable materials. Furthermore, by reducing emissions and advocating for cleaner transportation, PUV modernization aligns with SDG 13: Climate Action, reinforcing efforts to combat climate change and create a more sustainable future.

This study aimed to improve the country's public transportation system and preserve the environment. It was inspired by TAPTRANSCO's commitment to modernization, which promotes sustainability and inclusivity. The study assessed the comfort, safety, and accessibility of passengers in modern PUVs in Tayug, Pangasinan. The evaluation focused on passenger satisfaction regarding comfort features such as air conditioning, entertainment systems, and seating. Furthermore, it assessed the effectiveness of safety features like seatbelts, CCTV cameras, and emergency exits.

Literature Review

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As stated by Cahigas et al. (2022), factors such as accessibility, safety, economic benefits, and crisis management have a significant and positive impact on passenger trust, which in turn affects passenger attitudes, subjective norms, and perceived behavioral control. According to Mohammadi et al. (2020), the comfort level on public transport vehicles can be broken down to five critical factors: thermal, vibration, noise, lighting, and air quality. Another important factor that passengers consider when making transportation choices is safety (Dunsmore, 2023).

Nowadays, one of the most significant issues of public transport is how to make it inclusive and accessible for people with all levels of abilities. In the study of Hotor (2024), Persons with Disabilities (PWDs) in Ghana experience various forms of discrimination and social exclusion when accessing public transportation. This makes it harder for them to acquire education, healthcare, and work. Hence, an accessible transport system is essential to encourage more people to use public transport (Sweco Group, 2025).

As technology and sustainable innovation advancements emerged throughout the years, several transport agencies and companies have introduced zero-emission buses (ZEBs) to their fleets, including battery electric buses, fuel cell battery electric buses, and fuel cell plug-in hybrid electric buses in an effort to reduce transportation-related impacts on air quality (Avenali et al., 2024). As of 2023, approximately 635,000 electric buses (e-buses) are in operation worldwide, with the number continuing to increase (Rodrigues & Gauthier, 2025). These electric buses are becoming a fundamental part of fostering a sustainable and efficient public transport system as cities deal with increasing pollution, greenhouse gas emissions, and traffic congestion. They are not just a technological change, but they also represent a shift towards cleaner and more reliable mobility that benefits all communities, especially those living in the Global South.

According to Mateo-Babiano et al. (2020), the Philippines has one of the highest levels of PUV congestion. It was considered to be the primary transportation system in the country. Its purpose is to provide accessible and affordable transport options for citizens. Jeepneys are the most iconic and popular mode of transportation in the Philippines.

Unfortunately, they are inadequately maintained to keep fares low and ensure accessibility for a larger population. As a result, they release harmful pollutants that can adversely affect people's health, degrade air quality, release greenhouse gases, and cause climate change (Cartojano, 2023). The government recognized these issues and acknowledged the need for reform. On June 19, 2017, the Department of Transportation (DOTr) issued Department Order No. 2017-011, or the Omnibus Guidelines on the Planning and Identification of Public Road Transportation Services and Franchise Issuance, also known as the Public Utility Vehicle Modernization Program (PUVMP), which aims to replace traditional jeepneys with safer, more efficient, and eco-friendly vehicles (Lu, 2024).

In the study of Estipular (2020), among the significant components of the PUVMP is fleet modernization, which entails modernizing the PUVs/Public Utility Jeepneys (PUJs) to achieve a Comfortable, Accessible, Reliable, Environment-friendly, and Sustainable (C.A.R.E.S) with due consideration to persons with disabilities (PWDs) and the elderly.

In alignment with this, Tayug Pangasinan Transport Service Cooperative (TAPTRANSCO) was established in 2018 to comply with the government's PUV modernization program. These modern jeepneys are not just equipped with at least Euro-4 emission-compliant engines. However, they are also complete with safety features such as closed-circuit television (CCTV) cameras, dash cams, speed limiters, an automatic fare collection system, and must adhere to the Philippine National Standards (PNS) approved by the Bureau of Philippine Standards (Austria, 2024).

The Public Utility Vehicle Modernization Program aims to transform the traditional jeepney fleet into a more sustainable and modern system. It aligns with Sustainable Development Goals (SDGs) 8, 11, 12, and 13 by fostering economic growth, sustainability, and environmental responsibility. It supports SDG 8: Decent Work and Economic Growth by creating jobs and improving the livelihoods of public transport workers.

Additionally, it contributes to SDG 11: Sustainable Cities and Communities by enhancing public transportation, reducing pollution, and making urban mobility more efficient and accessible. The initiative mandates the use of Euro 4-compliant or electric engines, promoting SDG 12: Responsible Consumption and Production through fuel efficiency and the potential integration of sustainable materials. Furthermore, by reducing emissions and advocating for cleaner transportation, PUV modernization aligns with SDG 13: Climate Action, reinforcing efforts to combat climate change and create a more sustainable future.

This study aimed to improve the country's public transportation system and preserve the environment. It was inspired by TAPTRANSCO's commitment to modernization, which promotes sustainability and inclusivity. The study assessed the comfort, safety, and accessibility of passengers in modern PUVs in Tayug, Pangasinan. The evaluation focused on passenger satisfaction regarding comfort features such as air conditioning, entertainment systems, and seating. Furthermore, it assessed the effectiveness of safety features like seatbelts, CCTV cameras, and emergency exits.

Statement of the Problem

This study aimed to determine the Passenger Satisfaction in Modern PUVs: Comfort, Safety, and Accessibility of Commuters in TAPTRANSCO Tayug, Pangasinan.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
    a. Age;
    b. Sex;
    c. Frequency of Commuting;
    d. Purpose of travel;
    e. Distance to Destination; and
    f. Monthly Income?
2. What is the satisfaction of passengers and the service provided by modern TAPTRANSCO PUVs in terms of:
    a. Comfort;
    b. Safety; and
    c. Accessibility?
3. Is there a significant difference between the perceived satisfaction of passengers and the service provided by modern TAPTRANSCO PUVs across profile variables?

II. Methodology

This section describes the research methodology employed to conduct the study. It discusses the Research Design and Strategy, Population and Locale of the Study, and Data Gathering Tool, Data Gathering Procedures, Validation of the Instrument, Statistical Treatment of Data, and Ethical Considerations.

Research Design and Strategy

The researchers employed a descriptive research design utilizing a survey questionnaire. This method was chosen as the most suitable approach for gathering data to evaluate passenger satisfaction in modern public utility vehicles (PUVs), with a particular focus on comfort, safety, and accessibility for commuters of TAPTRANSCO in Tayug, Pangasinan.

Furthermore, the descriptive research examined passenger satisfaction with the services provided by modern TAPTRANSCO PUVs. The primary goal was to highlight the gap between passenger expectations and their actual experiences regarding the service, particularly in terms of comfort, safety, and accessibility. Data were collected using a structured questionnaire.

Descriptive research is a methodological approach that aims to depict the characteristics of a phenomenon or subject under investigation. In scientific inquiry, it serves as a fundamental tool enabling researchers to observe, record, and analyze detailed aspects of a specific topic.

This method offers a comprehensive and nuanced account that facilitates understanding, categorization, and interpretation of the subject matter (Singh, 2023).

Population and Locale of the Study

The research respondents were passengers of modern TAPTRANSCO PUVs in Tayug, Pangasinan. Convenience sampling was used to select individuals based on their expected service quality and perceived satisfaction with the service provided by modern TAPTRANSCO PUVs, particularly regarding comfort, safety, and accessibility.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting data on the variables. The instrument was required to be reliable and valid. The questionnaire consisted of two sections: the first section focused on the respondents' profiles, while the second section addressed passenger satisfaction with the service provided by modern TAPTRANSCO PUVs. To ensure validity, three professionals examined and validated the survey questionnaire.

The survey employed a detailed rating scale with descriptive interpretations as follows: (4) "Very Satisfied," (3) "Moderately Satisfied," (2) "Satisfied," and (1) "Dissatisfied."

Validation of the Instrument

The questionnaire checklist was administered to the evaluators, while the critic reader and statistician conducted the validation process. To determine the validity of the instrument used in this study, Validator 1, , Validator 2, and Validator 3, served as validators due to their expertise in the relevant field.

The validators employed a content validation checklist to assess whether the questionnaire was suitable for use. Upon completion of the validation, they concluded that the questionnaire checklist was recommendable as an instrument for data collection.

The validation results are presented below:

Validator	**Mean**	**Description**
Validator 1	3.85	Very Good
Validator 2	4.00	Very Good
Validator 3	4.28	Excellent
Average Weighted Mean	**4.04**	**Very Good**

Legend:

Statistical Range	**Descriptive Equivalent**
4.21-5.00	Excellent
3.41-4.20	Very Good
2.61-3.40	Good
1.81-2.60	Fair
1.00-1.80	Poor

Data Gathering Procedure

The researchers formally sought permission from the commuters before data collection. They also consulted their adviser regarding the appropriate steps for data gathering. The study's nature was thoroughly explained to ensure full cooperation from the participants. Researchers distributed questionnaires through face-to-face surveys, administering the questions directly and strictly adhering to the prescribed instructions. The researchers then analyzed the completed questionnaires to achieve the objective of understanding passenger satisfaction with the service provided by modern TAPTRANSCO PUVs, focusing on comfort, safety, and accessibility. Upon collecting all completed questionnaires, the researchers compiled and tabulated the data for further analysis.

III. Results and Discussion

This chapter presented, interpreted, and discussed the findings of the data collected throughout the research on Passenger Satisfaction in Modern PUVs: Comfort, Safety, and Accessibility of Commuters in TAPTRANSCO Tayug, Pangasinan.

Table 1
Profile of Respondents
n=356

Variables		F	%
A. Age			
	below 20 years old	128	36.0
	20-29	166	46.6
	30-39	36	10.1
	40-49	15	4.2
	50 & above	11	3.1
B. Sex	Male	154	43.3
	Female	202	56.7
C. Frequency of Commuting	1-2 days a week	238	66.9
	3-4 days a week	65	18.3
	5 days or more a week	53	14.9
D. Purpose of Travel	School	189	53.1
	Work	97	27.2
	Leisure	66	18.5
	Religious	4	1.1
E. Distance of Destination	5 kms and less than	26	7.3
	6-10 kms	49	13.8
	11-15 kms	34	9.6
	16-20 kms	59	16.6
	more than 20 kms	188	52.8
F. Monthly Income			
	PHP 5,000 and less	181	50.8
	PHP 5,001-PHP 10,000	95	26.7
	PHP 10,001-PHP 15,000	22	6.2
	PHP 15,001-PHP 20,000	17	4.8
	more than PHP 20,000	41	11.5

Profile of the respondents of passengers of TAPTRANSCO

The profile variables included age, sex, frequency of commuting, purpose of travel, distance to destination, and monthly income, each reported with corresponding counts © and % of total (P). Each variable was subjected to interpretation and analysis. A total of 356 respondents were surveyed, with the total count for each variable representing 100%.

Age. Out of 356 respondents, 166 individuals, or 46.6% of the total, were aged between 20 and 29. A relatively small proportion, 3.1%, were 50 years old or older. This indicated that almost half of all respondents (46.6%) were part of the younger demographic, specifically Generation Z or individuals in their 20s. This suggests that young adults, particularly students and young professionals, likely chose TAPTRANSCO because it aligns with their modern, cost-conscious, and eco-conscious lifestyles. For a generation with limited income, riding public transportation was a more affordable alternative to the high costs associated with car ownership. Moreover, many young people were environmentally aware and viewed public transportation as a sustainable choice, a value that TAPTRANSCO appeared to support through its modern, eco-friendly fleet.

Table 2
Satisfaction of Passengers and the Service Provided by Modern TAPTRANSCO PUVs in terms of Comfort
n=356

The satisfaction of TAPTRANSCO passengers regarding comfort yielded a total weighted mean of 3.03, corresponding to the descriptive rating of "Moderately Satisfied" (MS). The results indicate that while the company met the basic comfort expectations of passengers, there remains considerable room for improvement. This suggests that passengers were neither actively dissatisfied nor highly impressed with the level of comfort provided.

Indicators	WM	DE
1. Offers spacious legroom and cushioned seats for passengers.	2.99	MS
2. Optimizes clean vehicles and terminals.	3.39	VS
3. Consistently observes clean and well sanitized seats and floors.	3.21	MS
4. Maintains a cool and well-regulated air condition temperature.	2.85	MS
5. Ensures a smooth ride experience.	3.03	MS
6. Accommodates enough storage spaces for baggage.	2.76	MS
7. Provides easy and hustle free fare collection.	3.13	MS
8. Operates quietly with minimal engine or road noise.	3.12	MS
9. Arrives and departs accordingly on the set time.	2.98	MS
10. Ensures that the number of passengers per trip doesn't cause overcrowding.	2.79	MS
Average Weighted Mean	**3.03**	**MS**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Very Satisfied (VS)
2.51 - 3.25	Moderately Satisfied (MS)
1.76 - 2.50	Satisfied (S)
1.00 - 1.75	Dissatisfied (D)

The second indicator, *"Optimizes clean vehicles and terminals",* received the highest mean score of 3.39, corresponding to the descriptive rating of "Very Satisfied" (VS). This indicated that cleanliness was a significant strength of TAPTRANSCO's service, demonstrating that the company's efforts in routine cleaning, sanitation, and maintenance were effective and highly valued by customers.

The research conducted by Ubaidillah et al. (2022) indicated that tangibility, which encompasses physical elements like vehicle and terminal cleanliness, significantly impacted passenger satisfaction.

The sixth indicator, "*Accommodates enough storage spaces for baggage,"* received the lowest mean score of 2.76 and was rated as "Moderately Satisfied" (MS). This indicated that although storage spaces were available, they were insufficient, marking this as a critical area for improvement to enhance overall passenger satisfaction and service quality.

Table 3
Significant Difference Between the Perceived Satisfaction of Passengers and the Service Provided by Modern TAPTRANSCO PUVs Across Profile Variables
n=356

	Level of satisfaction
Age	0.749
Sex	0.576
Frequency of Commuting	0.182
Purpose of Travel	0.212
Distance of Destination	0.382
Monthly Income	0.051

Table 3 shows the significant differences in passenger satisfaction with the services provided by modern TAPTRANSCO PUVs across various profile variables. Age corresponded to a p-value of 0.749.

Since the p-value exceeded 0.05, the null hypothesis was not rejected. Consequently, it was determined that there was no significant difference in satisfaction levels according to age.

In other words, factors influencing satisfaction or dissatisfaction—such as comfort, safety, or accessibility—were viewed similarly by younger, middle-aged, and older passengers. This suggested that TAPTRANSCO’s service standards were viewed similarly by passengers of different ages.

Moreover, the analysis demonstrated no significant difference between perceived satisfaction and service as related to sex. The p-value was 0.576, and since it was greater than 0.05, there was no statistically significant difference in satisfaction levels between male and female passengers. This finding indicated that the null hypothesis was not rejected, suggesting equal levels of satisfaction across sexes. It suggested that TAPTRANSCO’s service standards and the quality of modern PUVs neither favored nor disadvantaged either male or female passengers.

Regarding the frequency of commuting, the corresponding p-value was 0.182, which exceeded 0.05. Thus, the null hypothesis was not rejected, indicating that there was no statistically significant difference in satisfaction based on commuting frequency. This suggested that whether a passenger commuted daily, weekly, or infrequently, their overall satisfaction with TAPTRANSCO’s services remained statistically consistent. Practically, the positive and negative aspects of the service were experienced similarly across all passenger groups, regardless of usage frequency.

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions of the study that aimed to identify passenger satisfaction regarding the comfort, safety, and accessibility of services provided by TAPTRANSCO in Tayug, Pangasinan. It also offered recommendations for staff management. A majority of respondents were female, particularly undergraduate students or young professionals, who traveled long distances, mostly once or twice a week, for their academic or professional pursuits. This group was mostly low-income and relied on public transportation as a more cost-effective alternative to private vehicles. For them, public transportation was often a necessity rather than a choice. TAPTRANSCO'S major strength was cleanliness, with passengers highly satisfied in this aspect. This demonstrated that the company's efforts in routine cleaning, sanitation, and maintenance were practical and valued by customers. In the context of public transportation, where cleanliness often prompts complaints, this result represented a significant achievement, suggesting that passengers perceived the company as professional, reliable, and respectful of their well-being. The utilization of CCTV effectively strengthened passenger confidence and ensured their sense of safety while using transportation services. Passengers perceived it as a tangible and practical safety measure, which made them feel secure and more at ease during their commute.

This suggested that the company's investment in surveillance technology was highly valued. It demonstrated that the company understood and actively addressed a primary concern of public transportation users: their personal safety. TAPTRANSCO's priority seating was consistently available, clearly marked, and respected by other passengers, indicating the company's success in a key public service area. This was a strong testament to their commitment to accessibility and social responsibility, which passengers highly valued. In many cultures, including the Philippines, considerable importance is placed on demonstrating respect toward elders and individuals with physical disabilities. By implementing and enforcing priority seating, the company aligns its services with these fundamental societal values.

The results indicated that TAPTRANSCO's services are functional and reliable enough to avoid passenger dissatisfaction; however, significant opportunities for improvement exist across all areas to achieve higher levels of passenger satisfaction and loyalty. Based on these findings, the researchers offer the following recommendations for TAPTRANSCO to enhance its services: To ensure passenger convenience and comfort, TAPTRANSCO should optimize and organize available storage spaces for baggage. The company should consider incorporating larger luggage compartments or installing overhead racks in future fleet upgrades. Additionally, implementing a low-cost measure, such as staff training to assist passengers in properly storing their bags and maintaining clear aisles, would promote a safer and more comfortable onboard experience. Moreover, maintaining consistently cool and well-regulated air conditioning is essential to enhance passenger comfort.

A strict and regular maintenance schedule should be implemented for all air conditioning units, including checks on refrigerant levels, cleaning of filters, and inspections of compressors.To guarantee passenger safety and avoid potential risks, TAPTRANSCO must equip all vehicles with easily accessible, fully stocked first aid kits in clearly marked, prominent locations, preferably near the driver or main entry point, with their availability communicated via visible signage. TAPTRANSCO must also ensure that all vehicles are equipped with fully charged and properly sealed fire extinguishers, which should be mounted in highly visible, clearly marked, and accessible locations, such as near the front or rear doors, and kept clear of obstructions. In addition, staff should receive basic first aid training and proper use of equipment, such as fire extinguishers, to provide immediate assistance during emergencies, thereby enhancing passenger confidence and demonstrating a proactive commitment to safety. Moreover, TAPTRANSCO should ensure that all vehicles are equipped with functional and accessible seatbelts. TAPTRANSCO should continue improving accessibility by upgrading low-floor entry points and adding features such as ramps, handrails, and clear signage to better accommodate persons with disabilities (PWDs), the elderly, and pregnant women, ensuring safer and more convenient boarding for all passengers. To minimize passenger wait times and optimize service reliability, TAPTRANSCO should implement Real-Time Scheduling. This system dynamically adjusts the number of vehicles in operation based on real-time passenger demand, traffic conditions, and vehicle locations, rather than adhering strictly to a predetermined timetable. This approach not only reduces passenger wait times but also greatly benefits vulnerable groups, such as the elderly and individuals with mobility or cognitive impairments. By minimizing the stress and anxiety associated with prolonged and uncertain waits, it enables these passengers to reach their destinations more efficiently.

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Sustaining Income Amidst Competition: Marketing Strategies of Pasalubong Sellers in Mines View, Baguio City

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Abstract — Pasalubong, a Filipino tradition of bringing home souvenirs or delicacies, played a vital role in strengthening cultural identity and supporting local economies. This study explored the marketing strategies used and challenges faced by pasalubong sellers in Mines View, Baguio City. It aligned with Sustainable Development Goals (SDG) 8: Decent Work and Economic Growth by creating jobs and opportunities for locals of Mines View, Baguio City;
SDG 9: Industry, Innovation, and Infrastructure by encouraging digital marketing to adapt to market trends; and SDG 12: Responsible Consumption and Production by promoting sustainable practices through ethically sourced and eco-friendly products. A descriptive research design was employed, using a survey questionnaire administered to a purposive sampling of 50 pasalubong sellers. Data analysis included frequency, percentage, and weighted mean, with T-tests and Kruskal Wallis Test applied to test for significant differences.
Among the respondents, 48% had been operating for one to five years, mostly earned a monthly income between ₱6,000–₱10,000, had moderate expenses, and employed two to three workers. The study found that marketing strategies were effective across five areas; product, price, people, promotion, and place, having an average weighted mean of 3.364, described as Strongly Agree. This indicated focusing on quality products, fair pricing, and good customer service together supported business growth. Findings revealed no significant differences between business profile and both marketing strategies and challenges faced. The study recommended improving promotions through flyers, posters, and social media, offering personalized products, and providing delivery options, which enhance customer attraction, satisfaction, and loyalty.

Keywords* — *Readiness; HUMSS Students; Ex-post-Facto; Performance; Career Goal; Potential Challenges

I. Introduction

Pasalubong was a Filipino tradition of bringing home gifts or souvenirs for friends and family after traveling, particularly from a different region or country. The Filipino word 'pasalubong' derives from the word salubong, which means 'meet' or 'welcome'. When prefixed by pa, the act of salubong turned into an object relating to it – 'to meet', 'to welcome'. Pasalubong, therefore, is a souvenir – a gift given to someone (Caballar, 2022). Pasalubong reflected Filipino values of thoughtfulness and generosity and was a way to share experiences and memories with loved ones. It often included local delicacies, handicrafts, or unique items representing the place visited. Pasalubong strengthens familial and social ties, creates a sense of connection, and supports local economies by promoting local artisans and businesses. In essence, pasalubong embodied the spirit of sharing and connection central to Filipino culture.

In today's competitive business environment, small enterprises face numerous challenges in achieving sustainable growth. Limited resources, ever-changing market conditions, and evolving customer expectations make it increasingly challenging for small businesses to maintain profitability and long-term success (Lani & Lancon, 2024). There are several common reasons for business failure, including a lack of an effective marketing strategy and ineffective business operations (Du & Kim, 2021).

In this regard, Hermayanto (2023) argued that traditional marketing strategies, such as television, radio, and print advertisements, have become less effective, and businesses must innovate and embrace new and alternative methods to connect with their customers and remain competitive. By understanding the latest marketing strategies and their effectiveness across industries, businesses can develop customized marketing plans that address their specific needs and objectives. However, some companies continue to rely on traditional promotional methods that were once effective but no longer align with modern consumers' digital-first preferences. The shift toward digital engagement has transformed how consumers interact with brands, with purchasing decisions increasingly influenced by online experiences, targeted advertising, and user-generated content. Businesses that fail to embrace digital transformation risk falling behind their competitors as consumer engagement becomes more fragmented across multiple digital platforms (Salam and Megawaty, 2025).

The pasalubong industry, a significant part of Filipino culture, requires effective marketing strategies to thrive in a competitive market. These strategies should resonate with the cultural significance of pasalubong, emphasizing emotional connections and memories. Differentiating products with unique features, quality, and authenticity helps sellers stand out. Understanding the target demographic, including locals and tourists, is crucial for tailoring marketing efforts. Emphasizing sustainable practices and supporting local artisans can appeal to socially conscious consumers, enhancing brand loyalty. Thus, the marketing strategies of pasalubong sellers are vital for promoting their products, fostering customer relationships, and driving industry growth.

Sarmnia & Hasibuan (2023) stated that a marketing strategy is a comprehensive, integrated, and unified plan in marketing that provides guidance for the activities carried out to achieve a company's marketing objectives. Marketing strategy is the means by which a company communicates its goals, guiding the direction to be taken to achieve them to stakeholders or parties who have a say in the company. Therefore, marketing strategy serves a very important role for service and non-service companies to remain competitive (Haslinda et al. 2021).

Souvenirs are elements of territorial communication and are examples of the marketing strategies used by destinations. Souvenirs are objects that allow tourists to remember moments they have experienced and places they have visited (Fuste-Furne et al., 2022). Tourists are increasingly interested in locally produced food and are bringing it home as souvenirs (Karsiningsih & Rafsanjani, 2023). Traditional culinary delights are not only souvenirs that decorate tourist destinations but also influence tourists' perceptions and attraction to a destination (Maghfirotunnisa et al. 2023).

Goods that showcase local uniqueness, such as handicrafts or regional specialties, attract travellers seeking genuine experiences. The level of competition in the snack and souvenir products business is quite high (Wilujeng, 2024). It is evident that academic interest in this field is growing. This is because the economic significance of souvenirs is great and the challenges are significant (Masset & Decrop, 2021; Swanson & Timothy, 2012, as cited in Shen & Lai, 2022). A business needs pricing that is effective and generates consistent revenue. It should help the firm strengthen its position by building trust with customers and, at the same time, achieve all the business goals set by the company (Bhasin, 2023).

For tourism entrepreneurs, a well-designed package is a crucial part of the marketing strategy. This can help businesses stand out in a crowded market, communicate their local product message, and increase the likelihood that tourists will buy (Tassawa & Khumhome, 2023). Some companies offer a free souvenir with the purchase of their products; this increases the satisfaction of their "heavy users" with their purchases by providing an extra gift (Vera-Jimenez et al. 2023). Digital marketing has become increasingly important in recent years, with the rise of social media and e-commerce (Chaiyaworn, 2023; Kingsnorth, 2022).

Literature Review

This study employed the Five Ps of the Marketing Theory of McCarthy (1960). Marketing is crucial for small businesses, especially pasalubong business owners in tourist destinations like Mines View, Baguio City. Effective strategies, based on the 5 Ps of Marketing, attract customers, increase sales, and sustain businesses.

This theoretical framework provides a foundation for analyzing the marketing strategies used by pasalubong business owners in Mines View.

The Product component examines the variety, quality, and uniqueness of the items sold, while Price explores the pricing strategies used to remain competitive and appeal to tourists. The People aspect highlights the role of both sellers and customers in shaping the business environment, emphasizing customer service and purchasing behaviors. Promotion assesses the advertising and marketing techniques used by vendors, from traditional word-of-mouth marketing to digital strategies. Lastly, Place focuses on the impact of the stall’s location, accessibility, and potential expansion into online selling.

The 5 P's framework aims to provide insights into how pasalubong business owners in Mines View position their businesses in the competitive market. It helps pasalubong business owners understand and address key areas to effectively market their products and services. Through this analysis, the study offered valuable recommendations for enhancing the marketing approaches of pasalubong vendors to one of Baguio City's most visited tourist attractions.

Statement of the Problem

This study aimed to determine the Marketing Strategies of pasalubong business Owners in Mines View, Baguio City.

Specifically, it sought to answer the following questions:

1. What is the business profile of the respondents in terms of:
   a. Years in operation;
   b. Monthly income;
   c. Monthly expenses; and
   d. Number of employees?
2. What marketing strategies were used by pasalubong business owners in Mines View, Baguio City, in terms of:
   a. Product;
   b. Price;
   c. People;
   d. Promotion; and
   e. Place?
3. What were the challenges faced by the pasalubong business owners in marketing their products in terms of:
   a. Product;
   b. Price;
   c. People;
   d. Promotion; and
   e. Place?

4. Is there a significant difference among marketing strategies used by pasalubong business owners across business profiles?

5. Is there a significant difference in the challenges faced by pasalubong business owners when marketing their products across business profiles?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discussed the Research Design and Strategy, the Population and Locale of the Study, the Data Gathering Tool, the Data Gathering Procedures, the Validation of the Instrument, the Statistical Treatment of Data, and Ethical Considerations.

Research Design and Strategy

The researchers used a descriptive research design utilizing a survey questionnaire. The method used was considered the most appropriate research method for gathering data to determine the marketing strategies of pasalubong business owners in Mines View, Baguio City. In the study of Andias (2023), the descriptive method is used to evaluate marketing strategies of pasalubong centers assisted by Local Government Units. As a result, the used method revealed that these centers focus on product differentiation and quality to achieve customer satisfaction, which is essential for maintaining competitiveness.

Meanwhile, descriptive research examined the Marketing Strategies of pasalubong sellers in Mines View, Baguio City. The primary goal was to attract tourists, promote local culture, and create a unique shopping experience, while building brand loyalty and expanding their reach in a competitive market. The data was collected through a survey questionnaire. Descriptive research was a methodological approach that sought to depict the characteristics of a phenomenon or subject under investigation. Additionally, it is widely employed across diverse fields, with the primary objective of systematically observing and documenting all variables and conditions influencing the phenomenon (Singh, 2023).

Population and Locale of the Study

The target population for this study was selected from pasalubong stores currently operating in Mines View, Baguio City. A purposive sampling technique is used, selecting individuals with extensive knowledge and experience in selling pasalubong products, who provide in-depth and relevant information on the marketing strategies used by sellers in Mines View, Baguio City.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting information on the variables. The instrument used had to be reliable and valid. The questionnaires were divided into three sections. The first part covered the business profiles of pasalubong business owners. The second part investigated the marketing strategies used by pasalubong business owners. The third part explored the challenges pasalubong owners face in marketing their products.

Three experts validated the survey questionnaire to ensure its content quality. Part I of the survey questionnaire included the business profile of the pasalubong business owners, including years in operation, monthly income, monthly expenses, and number of employees. Part II of the survey questionnaire, which was the marketing strategies used by pasalubong business owners, included descriptive interpretations such as (4) “Strongly Agree,” (3) “Agree,” (2) “Moderately Agree,” and (1) “Disagree.” Part III of the survey, which included the challenges faced by pasalubong owners in marketing their products, had descriptive interpretations such as (4) “Highly Challenging,” (3) “Challenging,” (2) “Moderately Challenging,” and (1) “Not Challenging.”

Data Gathering Procedure

The researchers formally asked permission from the pasalubong business owners. They also consulted their adviser on the steps they should take in collecting the data. The nature of the study was explained to ensure full cooperation from the tourists.

The researchers distributed survey questionnaires face-to-face to pasalubong business owners. The questions were administered directly by the researchers, who scrupulously adhered to the instructions.

The researchers analyzed the retrieved questionnaires and aimed to understand the current marketing practices of pasalubong business owners in Mines View, Baguio City. After collecting all the completed questionnaires, the researchers compiled and tabulated the data.

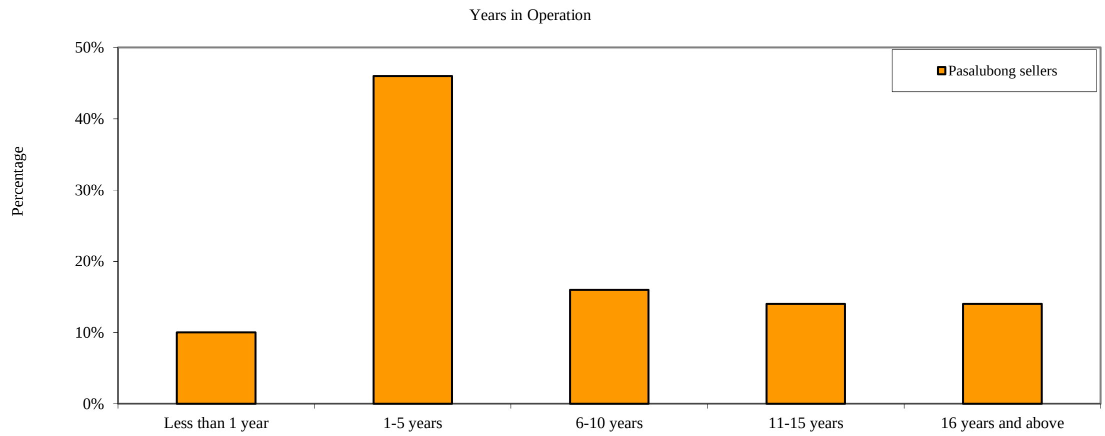
III. Results and Discussion

This chapter presented, interpreted, and discussed the findings of the data collected throughout the research of Sustaining Income Amidst Competition: Marketing Strategies of *Pasalubong Sellers* in Mines View, Baguio City.

Business Profile of the Respondents of Sustaining Income Amidst Competition: Marketing Strategies of Pasalubong Sellers in Mines View, Baguio City

The business profile included years in operation, monthly income, monthly expenses, and number of employees, along with the corresponding frequency counts (f) and percentages (%) for each bracket. Each variable had its interpretation and analysis. Fifty respondents were asked, meaning each variable’s total frequency count was 100.

Figure 4
Years in Operation
n=50



Years in operation. It indicated that 23 out of 50 respondents, or 46% of the total percentage, had operated for 1 to 5 years. Relatively, 10% of respondents have been in operation for less than 1 year. This suggested that the majority of the *pasalubong* businesses operating in Mines View, Baguio City, were still relatively new in the market. This implied that most businesses were still in the process of establishing their presence and building a customer base.

According to Vena Solutions (2024), recent data reveal that a significant portion of businesses don't make it past their first few years of operation. This indicated that *pasalubong* sellers faced challenges in sustaining their businesses during their early years, highlighting the vulnerability of small enterprises.

Table 2
Marketing Strategies used by *pasalubong* sellers in Mines View, Baguio City, in terms of Price
n = 50

Indicators	WM	DE
1. Set prices that are competitive with other stores in Mines View.	3.28	SA
2. Consider both customer affordability and profit in pricing decisions.	3.52	SA
3. Offer discounts or promotional prices during peak seasons.	3.56	SA
4. Provide bundle pricing or special rates for bulk purchases.	3.44	SA
5. Do pricing like "6 products for 100 pesos."	3.68	SA
Average Weighted Mean	**3.50**	**SA**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Strongly Agree(SA)
2.51 - 3.25	Agree(A)
1.76 - 2.50	Moderately Agree(MA)
1.00 - 1.75	Disagree(D)

Table 2 showed the marketing strategies used by pasalubong sellers in Mines View, Baguio City, with an average weighted mean of 3.50 and a descriptive equivalent of Strongly Agree (SA). The results revealed that pasalubong sellers were focused on promotions with low pricing and high quality to attract customers.

The fifth indicator, "Do pricing like '6 products for 100 pesos'," had the highest mean of 3.68 and the descriptive equivalent of Strongly Agree (SA).

Based on Vidovic (2021), sales are the foundation of all company success; the main aim is to create a condition and atmosphere in which both sellers and customers are happy. Customer happiness is fundamental to every successful business.

The first indication, "Set prices that are competitive with other stores in Mines View," received the lowest mean of 3.28 and was classified as Strongly Agree. It demonstrated that pasalubong sellers offered better pricing that matched customers and was competitive with other stores.

Table 3
Challenges Faced by *pasalubong* sellers in Mines View, Baguio City, in terms of Product
n = 50

Indicators	WM	DE
1. Find it hard to sell unique items because some stalls offer the same products.	3.26	HC
2. Having trouble in keeping good products while keeping prices low.	2.96	C
3. Losing customers to the stalls with better packaging.	2.62	C
4. Selling similar products, so it’s hard to stand out.	2.96	C
5. Struggle to think quickly of new product ideas.	2.70	C
Average Weighted Mean	**2.90**	**C**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Challenging (HC)
2.51 - 3.25	Challenging (C)
1.76 - 2.50	Moderately Challenging (MC)
1.00 - 1.75	Not Challenging (NC)

Table 3 presented the challenges faced by pasalubong sellers at Mines View, Baguio City, regarding the product, with a total average weighted mean of 2.90 and a descriptive equivalent of Challenging (C). The result indicated that pasalubong sellers struggled to sell unique items due to similar offerings in the market, leading them to lose customers.

The first indicator, “Find it hard to sell unique items because some stalls offer the same products”, got the highest weighted mean of 3.26, with the descriptive equivalent of Highly Challenging (HC). Wu et al. (2022) stated that the homogenization of souvenirs, where many stalls sell very similar items, reduces tourists' perception of uniqueness and makes it harder for individual sellers to stand out and sell unique products.

The third indicator, "Losing customers to the stalls with better packaging," got the lowest mean of 2.62 and was characterized as Challenging (C). This meant customers were drawn to a product with better packaging, leaving pasalubong sellers to lose their customers.

Although packaging played a significant role in attracting customers, which pasalubong sellers found challenging, it was still considered the least concern compared to other indicators. It implied that pasalubong sellers-maintained customer loyalty through the uniqueness of their products.

IV. Conclusions and Recommendations

This chapter summarized the findings and conclusions from the study aimed at understanding how pasalubong sellers in Mines View, Baguio City, sustain their income in a highly competitive market. It also offers recommendations for pasalubong stall management. A significant majority of respondents of pasalubong sellers were operating for one to five years, earning a monthly income of six thousand to ten thousand, and having monthly expenses within the same range of six thousand to ten thousand. Pasalubong businesses prefer to hire at least two to three employees, as a small number of employees translates into lower business expenses. Based on the findings, the pasalubong sellers are prioritizing high-quality standards for all products. Pasalubong sellers offer pricing like "six products for one hundred pesos". The staff provides excellent customer service and offers free products to returning customers. Lastly, their business is located in a busy area that attracts tourists. The results highlight the strong commitment of pasalubong sellers to deliver exceptional service to their customers, which helps them sustain their businesses amid high market rivalry. Pasalubong sellers encounter various challenges in their operations. The strong score indicates that pasalubong sellers are under pressure to lower their prices because others are selling at lower prices. They find it hard to sell unique items since some stalls offer the same products, making it challenging to stand out in the market. Risk losing customers because there are numerous pasalubong sellers for buyers to choose from. Moreover, they cannot keep up with competitors who are more skilled in online promotion because they lack online advertising tools. Lastly, they compete for attention in busy areas with numerous stalls and shops. These challenges collectively show how highly competitive the business environment for Mines View pasalubong sellers is. The findings revealed no significant difference in the business profiles of the respondents regarding years in operation, monthly income, monthly expenses, and number of employees regarding marketing strategies of pasalubong sellers in Mines View, Baguio City, concerning product, price, people, promotion, and place. Additionally, there is no significant difference between the business profiles of the respondents in terms of years in operation, monthly income, monthly expenses, and number of employees, with the challenges faced by pasalubong sellers in Mines View, Baguio City, with regard to product, price, people, promotion, and place. Based on the results, the researchers made the following recommendations: Since the indicator

"Prioritize high-quality standards for all products" received the highest mean, it is suggested that pasalubong sellers maintain strict quality control by regularly checking product freshness, packaging, and ingredient sourcing to ensure buyers continue to purchase. It is encouraged that pasalubong sellers standardize value-bundle pricing, such as "6 products for 100 pesos" or "family bundles," to satisfy tourists seeking bulk pasalubong at affordable prices. It is recommended that pasalubong sellers continue to emphasize excellent customer service by training staff in hospitality, patience, and handling tourists from different cultural backgrounds. Pasalubong sellers are encouraged to encourage satisfied customers to share feedback on social media by offering small incentives, such as free samples. This is based on the finding that the indicator "Rely on word-of-mouth to increase customer awareness" had the highest mean. It is strongly encouraged that pasalubong sellers capitalize on strategic locations by improving signage, using attractive storefront displays, and creating photo-friendly product setups to draw in tourists passing by.om

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Promotional Strategies of Urdaneta City Museum: Reaching Local-Regional Audience

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Abstract — Museums today function not only as custodians of heritage but also as active institutions for education, cultural identity, and sustainable development. This study assessed the effectiveness of the Urdaneta City Museum's promotional strategies and examined how its operations contribute to global development goals.
The museum supports SDG 4 (Quality Education) by serving as a space for continuous cultural learning, SDG 8 (Decent Work and Economic Growth) by enhancing local tourism and supporting community participation, and SDG 11 (Sustainable Cities and Communities) through the preservation and promotion of local heritage. Using a descriptive research design, the study involved 27 respondents, the majority of whom were Administrative Staff (92.59 per cent of the sample). Data were analyzed using frequency and percentage, weighted mean, and the Mann-Whitney U Test and the Kruskal-Wallis H Test in SPSS version 26. Findings revealed high effectiveness in the museum's promotional strategies, particularly in special events (WM = 3.56), educational programs (WM = 3.48), exhibits (WM = 3.34), and collections (WM = 3.32). Based on these results, the study recommends enhancing digital promotional efforts and sustaining community-based activities to strengthen public engagement and cultural appreciation further.

***Keywords* — Community engagement, Collaboration with schools, Digital storytelling, Museum branding, Community engagement, Local artist features, Interactive exhibits, public relations initiatives, Event partnerships, regional collaboration**

I. Introduction

Museums are global treasures of human history, culture, and creativity, preserving artifacts and artworks that tell stories of civilizations, societies, and individuals. They enrich our knowledge and appreciation of the world through historical relics, cultural displays, and scientific exhibitions. Museums also function as educational institutions, offering interactive learning experiences and promoting cultural literacy. They foster national and local identities by curating exhibitions focusing on local history, heritage, and achievements. Museums contribute to the economy and tourism, stimulating local businesses and enhancing civic pride (Graves, 2023).

While museums continue to fulfil their traditional roles in education, conservation, and heritage preservation, they are now expected to engage broader, more diverse audiences. As cultural institutions compete for public attention, especially in the digital age, the need for strategic and innovative promotional efforts has become increasingly important. Gordin and Matetskaya (2020) highlight that modern museum must strike a balance between preserving cultural values and implementing sustainable, creative marketing approaches. Yakhina and Salikhova (2022) further emphasize that effective promotion goes beyond increasing visibility—it also fosters strong community ties and strengthens institutional identity

Glow, Kershaw, and Reason (2021) emphasize that for cultural institutions to remain sustainable, they must prioritize audience diversification in their strategic planning.

It means not only increasing visitor numbers but also reaching previously underserved groups, including younger generations and regional communities. Similarly, Bagdonavicius et al. (2023) observed that museums in Eastern Europe are effectively engaging broader audiences by adopting emotional branding and storytelling techniques. These approaches help transform museums from traditional educational venues into immersive cultural experiences.

According to Glow et al. (2021), successful museum marketing requires a balance between traditional methods and innovative digital approaches. By combining in-person experiences with online engagement—such as social media campaigns, virtual exhibitions, and community partnerships—museums can broaden their audience reach. Batat (2020) supports this by noting that these strategies are effective in attracting diverse demographic groups. The case of the New Acropolis Museum illustrates how a well-integrated marketing mix—encompassing product, price, place, promotion, people, process, and physical evidence—was instrumental in attracting over 2 million visitors in its first year (Papadopoulos et al., 2020). This demonstrates the potential of strategic, coordinated marketing efforts to drive attendance and enhance public engagement.

Tkalac Verčič et al. (2020) emphasized that successful marketing in cultural institutions depends on understanding the unique needs and preferences of specific audience groups, particularly the youth. Tailoring promotional strategies to these segments allows museums to create more engaging and relevant visitor experiences.

Likewise, Hutter and Hoffmann (2021) highlighted the growing importance of digital transformation in museum marketing, particularly in response to the significant shift in consumer behaviour following the COVID-19 pandemic.

As the cultural landscape continues to evolve, museums must keep pace with technological advancements to remain relevant and competitive. López and Navarro (2024) introduced the concept of Marketing 5.0, which combines digital innovation, artificial intelligence, and human-centred communication to engage today's audiences effectively. While these advancements offer new opportunities to expand reach and enhance visitor experience, they also pose challenges—particularly in maintaining the museum's authenticity and cultural integrity. Gonzales et al. (2021) underscored the vital role of social marketing strategies in increasing museum visibility and boosting audience engagement. Their research shows that by leveraging digital platforms and implementing community-centered initiatives, museums can effectively promote their cultural offerings and maintain public interest.

In the Philippine context, tourism-focused studies emphasize that cultural attractions, such as museums, play an essential role in promoting local identity and boosting regional tourism (Tan, 2021). Additionally, Pagsanghan & De la Rosa (2020) noted that cultural institutions in provincial cities should localize their marketing strategies by incorporating regional languages and heritage values to foster stronger emotional resonance with their audiences. Almonte Acosta (2022) and Medrana et al. (2023) highlighted how place-based branding and local storytelling significantly contribute to cultural tourism and community identity, aligning with the City Museum's goals in Urdaneta City.

Additionally, integrating the City Museum into the city's tourism development plan could increase its visibility and contribute to economic development (Cruz & Dela Cruz, 2023).

Pagsanghan and De la Rosa (2020) similarly suggest that cultural institutions in provincial cities should localize their marketing strategies by incorporating regional languages and heritage values to foster stronger emotional resonance with their audiences.

The City Museum of Urdaneta is a vital institution that preserves and promotes local culture and history. However, it faces challenges in attracting a diverse audience and maximizing visitor engagement. The effectiveness of its current marketing strategies is uncertain, particularly for younger demographics and tourists.

This study aimed to find out the promotional strategies employed by the Urdaneta City Museum.

Literature Review

This study is anchored on the Destination Branding Theory, which highlights the strategic process of creating a unique identity and favorable image for a place to attract and engage target audiences. Traditionally applied to cities, regions, and countries, destination branding is also highly relevant to cultural institutions like museums, which serve as symbolic and experiential representations of local heritage.

According to Anholt (2002), a strong destination brand integrates the tangible and intangible attributes of a place—including its cultural assets, historical significance, and emotional appeal—into a cohesive narrative that resonates with visitors. For the Urdaneta City Museum, this means positioning it not merely as a repository of artifacts but as a vibrant cultural destination that reflects the city's identity and values.

In this context, the museum becomes a strategic branding tool for the city itself. Effective promotional strategies—whether through storytelling, partnerships, social media, public events, or educational programs—can help shape perceptions and deepen engagement among both residents and regional visitors. Destination Branding Theory thus supports the idea that consistent, values-driven, and culturally anchored promotion can enhance visibility, foster community pride, and stimulate cultural tourism.

This theoretical lens guides the analysis of the museum's promotional efforts, focusing on how these strategies contribute to building a compelling identity for Urdaneta City Museum and how this identity aligns with broader regional branding goals

Statement of the Problem

This study aimed to determine the marketing strategies employed by the City Museum of Urdaneta to attract visitors and promote local tourism. Specifically, it sought to answer the following questions:

1. What is the profile of the Tourism Officer in terms of:

   a. Age;

   b. Sex; and

   c. Position?

2. What promotional strategies employed by the City Museum of Urdaneta in terms of:

   a. Collections;

   b. Exhibits;

   c. Special Events; and

   d. Educational Programs?

3. Is there a significant difference in the promotional strategies employed by the City Museum of Urdaneta across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the Research Design and Strategy, the Population and Locale of the Study, the Data Gathering Tool, the Data Gathering Procedures, the Validation of the Instrument, the Statistical Treatment of Data, and Ethical Considerations.

Research Design and Strategy

The researchers used a descriptive research design utilizing a survey questionnaire. This method was used because it is considered the most suitable for gathering data to determine the City Museum of Urdaneta City's marketing strategies

Meanwhile, descriptive research describes the characteristics of the group, situation, or phenomenon being studied without manipulating variables or testing hypotheses. This can be reported using surveys, observational studies, and case studies. Researchers can use both quantitative and qualitative methods to compile the data (Dovetail Editorial Team, 2023).

Population and Locale of the Study

this study focused on 30 museum staff and a Department of Tourism (DOT) representative in Urdaneta City who were directly involved in the City Museum of Urdaneta's marketing strategies. Of the 30-museum staff identified, only 27 responded, while three declined to participate in the study. A purposive sampling technique was used, ensuring that participants had the necessary expertise and experience in cultural tourism marketing. Participants have at least 6 months of experience managing and promoting the museum's services and exhibitions to diverse target audiences.

Data Gathering Tool

The researchers used a developed survey questionnaire as the primary tool for collecting information on the variables. This instrument was tested for validity and reliability. The questionnaires were divided into two sections. The first section covered the respondents' profiles. The second section investigated the marketing strategies of the City Museum in Urdaneta City. Three experts, two from the College of Hospitality and Tourism Management and one from the College of Business Management and Accountancy, validated the survey questionnaire to ensure its validity.

The survey was detailed with descriptive interpretations such as (4) “Strongly Agree”, (3) “Agree”, (2) “Slightly Disagree”, (1) “Strongly Disagree”

Data Gathering Procedure

The researchers used a developed survey questionnaire as the primary tool for collecting information on the variables. This instrument was tested for validity and reliability. The questionnaires were divided into two sections. The first section covered the respondents' profiles. The second section investigated the marketing strategies of the City Museum in Urdaneta City. Three experts, two from the College of Hospitality and Tourism Management and one from the College of Business Management and Accountancy, validated the survey questionnaire to ensure its validity.

The survey was detailed with descriptive interpretations such as (4) “Strongly Agree”, (3) “Agree”, (2) “Slightly Disagree”, (1) “Strongly Disagree”

III. Results and Discussion

This chapter presented, interpreted, and discussed the findings of the data collected throughout the research of the Promotional Strategies employed by the Urdaneta City Museum in Urdaneta City.

Table 1
Profile of Respondents
n=27

Variables	F	%
Age		
20 Below	1	3.7
20-29	1	3.7
30-39	8	29.63
40-49	10	37.04
50 & above	7	25.93
Sex		
Male	7	25.93
Female	27	74.07
Position		
CGADH-1	1	3.7
Regular Staff	1	3.7
Admin Staff	25	92.59

Profile of the respondents of Urdaneta City Museum

The profile included age, sex, and highest educational attainment, with corresponding frequency counts (f) and percentages (%) for each bracket. Each variable has its interpretation and analysis. Twenty-seven respondents were asked, meaning each variable's total frequency count is 100.

Age. Of the 27 respondents, 10 (37.04%) were aged 40-49. In contrast, only 7.4% were 29 years old and below. This indicates that the majority of the staff at the Urdaneta City Museum are middle-aged, suggesting a workforce likely equipped with considerable professional experience and stability.

However, the low percentage of younger employees suggests a gap in generational diversity, which may affect the infusion of innovative ideas, digital adaptability, and the institution's long-term sustainability.

Table 2
Promotional Strategies employed by the Urdaneta City Museum in Urdaneta City in terms of Collections
n=27

The Promotional Strategies employed by the Urdaneta City Museum in Urdaneta City, in terms of collections, yielded a total average weighted mean of 3.32, with the descriptive equivalent of Strongly Agree (SA). The result indicates that the City Museum is effectively promoting its collections. This suggests that the museum's strategies—such as highlighting artifacts in exhibits, curating displays to emphasize cultural value, and creating opportunities for public engagement—are effective in raising awareness of its heritage resources.

Indicators	WM	DE
1. Artifacts in the museum have clear and informative labels or descriptions.	3.56	SA
2. Printed brochures or leaflets about the museum's collection are readily available to visitors.	3.37	SA
3. Items from the collection are featured regularly on the museum's social media accounts.	3.33	SA
4. Online content (videos, posts, etc.) provides educational background on the collection.	3.00	A
5. Talks, lectures, or seminars are held that relate to the collection.	3.37	SA
6. The museum displays posters or visual materials highlighting selected collection items.	3.56	SA
7. The museum uses QR codes or interactive media to give more information about displayed items.	3.07	A
Average Weighted Mean	**3.32**	**SA**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Strongly Agree (SA)
2.51 - 3.25	Agree (A)
1.76 - 2.50	Disagree (D)
1.00 - 1.75	Strongly Disagree (SD)

While modern promotional approaches often rely on digital platforms, the museum must remain cautious in adopting such methods to ensure compliance with the Data Privacy Act, especially when handling sensitive records, images, or archival materials. Thus, effective promotion should balance accessibility and innovation with ethical responsibility, ensuring that heritage is celebrated while institutional integrity and legal safeguards are maintained.

The indicators 'Artifacts in the museum have clear and informative labels or descriptions' and 'The museum displays posters or visual materials highlighting selected collection items' both obtained the highest mean of 3.56, which is descriptively equivalent to Strongly Agree (SA). As stated by Faherty (2024), successful museum labels anticipate and respond to visitors' unspoken queries about the artwork or object on display. At the same time, they develop emotional relationships with the tourists.

Table 3
Significant difference in the promotional strategies employed and the profile of the respondents
n=27

Profile	Collections	Exhibits	Special Events	Educational Programs
	Sig.	Sig.	Sig.	Sig.
Age	.364	.174	.515	.549
Sex	.19	.676	.197	.888
Position	.377	.603	.88	.968

Table 3 shows no significant differences in promotional strategies by age. The strategies related to collections (.364), exhibits (.174), special events (.515), and educational programs (.549) all have values greater than 0.05, suggesting that age does not significantly affect how individuals perceive or engage with promotional strategies. This implies uniform preferences and receptiveness across age groups.

Similarly, no significant differences in promotional strategies by sex were found, with values of .190 for collections, .676 for exhibits, .197 for special events, and .888 for educational programs. This indicates that both male and female respondents responded similarly, highlighting the gender-neutral effectiveness of the museum's strategies.

Lastly, results also show no significant difference based on position, as all values (.377 for collections, .603 for exhibits, .880 for special events, and .968 for educational programs) are above 0.05. This means that regardless of whether the respondent is a staff member, assistant head, or in another role, their perceptions of the museum's promotional strategies remain consistent.

IV. Conclusions and Recommendations

This chapter summarized the findings and conclusions drawn from the study aimed to identify the promotional strategies employed by the city museum in Urdaneta City. It also offers recommendations for staff management to consider. The majority of respondents were female, middle-aged, and Local Government Unit personnel, particularly administrative staff. This indicates that the operations of the Urdaneta City Museum are sustained mainly by experienced LGU employees, with women playing a significant role in managing both administrative functions and cultural responsibilities within the institution. The Urdaneta City Museum's cultural and historical resources promote community engagement and cultural appreciation. The Urdaneta City Museum's cultural and historical resources promote community engagement and cultural appreciation. It is concluded that there is no significant difference in the promotional strategies of Urdaneta City Museum across profile variables. Based on the results, the researchers made the following recommendations: Improve Online Visibility Through a Dedicated Website Page, Digital Brochures, and QR Codes. Create a dedicated museum webpage to clarify and make information more accessible at both the local and regional levels. Additionally, develop updated digital brochures highlighting the museum's collections, history, and exhibits. To further enhance accessibility, install QR codes around the museum and partner locations, allowing visitors to instantly access cultural information, timelines, exhibit details, and museum updates through their mobile devices. Enhance the quality and accessibility of digital content. This includes creating more interactive virtual experiences, using higher resolution visuals, and providing engaging narration or guided walkthroughs. Additionally, promoting these virtual materials more actively through social media, the museum website, and partner institutions can increase visibility and encourage online engagement. Upgrading the content and strengthening its promotion, virtual tours can become a more impactful tool for reaching broader audiences, especially those unable to visit the museum in person. Increase the frequency of storytelling events and broaden their reach through partnerships with local schools, cultural groups, and community organizations.

Offering more scheduled performances, mobile storytelling sessions, or pop-up reenactments in public spaces can make these activities more visible and accessible. Enhancing promotion through social media and local networks can also encourage broader participation. By making these events more regular and community-centered, the museum can deepen engagement and reinforce its role in preserving Urdaneta's history. broader participation. By making these events more regular and community-centered, the museum can deepen engagement and reinforce its role in preserving Urdaneta’s history. Establish partnerships with local schools, barangay halls, public libraries, and community centers where these materials can be regularly distributed and displayed.

By extending placements beyond the museum premises, the museum increases visibility among target audiences who may not frequently visit the site. This community-based distribution system ensures that information about the museum's educational programs reaches a broader audience, reinforcing awareness and encouraging participation. Collaborate with Local and Regional Vloggers / Content Creators Work with both local and regional digital creators to feature the museum in travel vlogs, heritage videos, and promotional content. These increases reach and support regional cultural tourism. Physical Brochure

To enhance the museum's visibility and strengthen its promotional efforts, a well-prepared physical brochure is recommended. The brochure developed in this study presents essential information about the museum, including its history, key artifacts, significant historical figures, and notable features of its facility.

It may be distributed during school visits, community activities, and tourism events to provide visitors with accessible, informative materials that foster greater awareness of the museum and its cultural offerings. On the next page, shows the different proposed brochure for this study.

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Destination Spending and Its Benefits on Romantic Tourism in Baguio City

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Abstract — Baguio City, known as the "Summer Capital of the Philippines," has long been a favored destination for couples drawn to its cool climate, scenic views, and vibrant cultural atmosphere. In recent years, demand for romantic travel experiences such as pre-nuptial photoshoots, destination weddings, and couple getaways has grown, strengthening the city's reputation as a hub for romantic tourism. This study used a quantitative design to examine the benefits of destination spending on romantic tourism in Baguio City.

A total of 100 employees participated through convenience sampling, and data were analyzed using ANOVA to identify differences in perceptions of social, economic, and cultural impacts across business profile variables, including business type, business form of organization, years of operation, average monthly income, and monthly expenses. Findings revealed that most businesses engaged in romantic tourism were from the food and beverage sector, underscoring the vital role this sector plays in this market. Results showed that destination spending generates important economic benefits, including increased revenues, job creation, and livelihood opportunities. Socially, it enhances bonding among couples, while culturally, impacts are uneven: tourism fosters pride in heritage but also leads to adaptations of traditions to meet tourist expectations. Analysis indicated that years of operation influenced perceptions of benefits, while income and expenses showed less variation. The study concludes that destination spending sustains Baguio's romantic tourism. To ensure long-term growth, it recommends developing couple-oriented services, creating cultural travel packages, supporting small enterprises, and funding community-based projects that preserve culture while strengthening the city's appeal.

Keywords* — *Benefits, Destination Spending, Romantic Tourism Relationship, Social Impact, Economic Impact, Cultural Impact

I. Introduction

Romantic tourism is a growing segment of the travel industry that emphasizes travel experiences shared by couples, often involving honeymoons, anniversaries, proposals, or romantic getaways. It enables partners to strengthen their emotional bonds as they explore new destinations and cultures together. Romantic tourism offers personalized and emotionally enriching experiences that contribute to relationship satisfaction and long-term bonding. Destination spending refers to the expenditure's tourists incur while visiting a location, including accommodation, food, transportation, activities, and souvenirs. This spending supports local economies by generating income, creating jobs, and bolstering small businesses within the tourism sector.

This study contributes to advancing multiple Sustainable Development Goals (SDGs) by demonstrating the economic, social, and infrastructural impacts of romantic tourism. It supports SDG 9: Industry, Innovation, and Infrastructure by illustrating how romantic tourism stimulates resilient infrastructure development, including transportation networks, accommodations, and digital connectivity, while fostering innovation in tourism services, marketing strategies, and couple-focused travel experiences.

In terms of SDG 11: Sustainable Cities and Communities, romantic tourism promotes inclusive, safe, and resilient. Communities can achieve this by preserving local infrastructure, cultural heritage, and public spaces, with increased destination spending driving urban and rural revitalization and strengthening community pride.

Finally, in alignment with SDG 17: Partnerships for the Goals, the study highlights the essential role of collaboration among government agencies, tourism boards, private enterprises, and local communities in establishing sustainable tourism models that generate positive economic and social outcomes, underscoring the importance of coordinated efforts to achieve the SDGs.

According to Akerele et al. (2024), the digital revolution, characterized by the widespread use of social media platforms such as Facebook, Instagram, and Twitter, and dating applications such as Tinder, transformed how individuals form relationships. This transformation extended into the domain of romantic tourism, whereby digital tools facilitated faster, easier, and more convenient romantic connections with strangers around the world. Vera Cruz et al. (2024) emphasized that the Internet significantly reshaped interpersonal interactions, creating new opportunities to find romantic partners via dating applications. However, these advancements entailed potential drawbacks. Their study introduced the Problematic Online Dating Apps Use Scale (PODAUS), designed to assess addiction-like behaviors associated with dating app usage.

Exploring the emotional dynamics within romantic tourism, Liu et al. (2024) investigated how unilateral compromises in tourist relationships affected emotional well-being. Drawing on expectancy theory, their research highlighted the significant influence of social cues and anonymity on emotional outcomes.

Luo (2023) found that exposure to romance-themed tourist attractions triggered the lay belief that "romance is uncontrollable," thereby reducing perceptions of personal control. Relationship quality remained a vital element of romantic tourism.

Coffey et al. (2024) identified a correlation between shared vacation experiences and greater relationship satisfaction. Shahvali et al. (2023) corroborated this finding by noting that couples who traveled together reported higher cohesion and flexibility, factors linked to long-term relational success. Romantic tourism also served as an escape from routine life. Stončikaitė (2020) observed that travel provided both social and emotional relief from everyday monotony, encouraging openness and a sense of adventure that often-fostered intimacy and desire.

Travel companionship distinctly enhanced the quality of romantic tourism. Su, Cheng, and Swanson (2020) argued that companionship strengthened emotional closeness. Similarly, studies by Kim and Agrusa (2005a, 2005b) and Lee et al. (2020) demonstrated that trips with romantic partners, particularly outside the context of marriage, were perceived as joyful and fulfilling experiences consistent with romantic ideals. Supporting this, a survey by the U.S. Travel Association found that travel strengthened partnerships, ignited romance and intimacy, and led to healthier, happier relationships. According to the report, "couples who travel together reported higher levels of satisfaction with their relationships" (Storck, 2023).

Sharma et al. (2024) explored the rise of destination weddings and honeymoon tourism, in which couples combined ceremonies with leisure travel to create memorable, idyllic experiences.

Li et al. (2020) found that travel companions and the physical characteristics of destinations played crucial roles in shaping meaningful romantic travel experiences.

From an economic perspective, Dr. Prem Jagyasi (2021) noted that romantic tourism contributed significantly to the global tourism industry.

Destinations famous for scenic landscapes, historical castles, golden beaches, vibrant nightlife, and fine dining attracted couples and stimulated local economies. Recent trends indicate that couples are increasingly seeking romantic getaways. Talker Research (2025) found that 57% of couples felt more connected during vacations compared to daily life. The study also reported a 45% increase in public displays of affection (PDA), including handholding (53%) and cuddling (37%) while on vacation. In the Philippines, romantic tourism continued to flourish, propelled by rising domestic travel and a desire for emotional bonding experiences. Hansen (2021) observed that on Siargao Island, as in other parts of the Philippines, relationships between Filipina women and Western men served as pathways to economic capital, global mobility, and social elevation. Surfing women on Siargao distinguished themselves from stereotypical portrayals by emphasizing love-driven motivations rather than financial incentives in these relationships.

Gamboa (2023) highlighted the role of digital tourism marketing, such as the "Love the Philippines" campaign, which targeted both local and international travelers by promoting the country's romantic destinations.

According to Chris Melore (2022), 42% of Americans fell back in love with their partner while on vacation. In a survey of 2,000 adults, 77% agreed that vacations were essential for maintaining romantic connections.

Recent data from Agoda demonstrated a 144% increase in domestic travel among Filipino couples during Valentine's season (Mindanao Times, 2025).

The strategic timing of the holiday, falling on a Friday, encouraged extended getaways to popular destinations such as Manila, Cebu, Baguio, Boracay, and Tagaytay. These locations offered diverse romantic experiences, ranging from luxurious city staycations to tranquil island retreats.

Siargao Island, primarily renowned for surfing, also emerged as a premier destination for romantic getaways. Richest PH (2025) described Siargao as a haven for couples seeking adventure and intimacy. Its palm-fringed beaches, crystal-clear waters, and secluded lagoons provided the perfect backdrop for private moments and shared activities. Baguio City also became a romantic hotspot, with a reported 384% increase in interest (Arnaldo, 2025). Known as the Summer Capital of the Philippines, Baguio offers a cool climate and a cozy atmosphere, making it an ideal setting for couples. Activities such as romantic walks in Burnham Park, sunrise viewing at Mines View Park, and enjoying locally brewed coffee in quaint cafés enhanced the city's allure for lovers.

This study investigated destination spending and its perceived benefits in romantic tourism, focusing on how couples allocate travel budgets and the emotional, relational, and experiential values associated with these expenditures. As romantic tourism rose in popularity among couples seeking deeper connection and memorable experiences, this research evaluated how financial investment influenced relationship satisfaction and overall travel enjoyment. By examining spending behaviors, motivations, and perceived benefits, the study provided insights to improve travel planning, support destination marketing strategies, and understand the broader impact of romantic getaways on couple dynamics.

Literature Review

The Technology Acceptance Model (TAM), introduced by Fred Davis in 1986, is a general determinant of computer acceptance that explains users' behavior across a broad range of end-user computing technologies and user populations.

Applying TAM in this context allowed for a deeper understanding of how tourists evaluated and decided to invest in romantic travel experiences.

This framework was relevant to the study because romantic tourism increasingly involved the use of digital platforms for booking, planning, and navigating destinations. Understanding how perceived usefulness (PU) and perceived ease of use (PEU) influenced the willingness to spend on romantic getaways helped identify key factors that enhanced tourist satisfaction and strengthened romantic bonds through travel. Republic Act No. 10173, also known as the Data Privacy Act of 2012, was enacted in the Philippines to safeguard individuals' personal information from misuse and to ensure that all collected data is managed with strict confidentiality and with the informed consent of the data subjects. Republic Act No. 10175, Cybercrime Prevention Act of 2012, addressed offenses committed through digital means, including identity theft, data breaches, and online fraud. In relation to the study "Destination Spending and Its Perceived Benefits on Romantic Tourism," these laws ensured that the collection and use of personal or financial information from tourists and respondents were conducted securely and ethically. They promoted trust and accountability in data handling, particularly when surveys or interviews were administered online, thereby supporting the credibility and integrity of the research.

This study examined the benefits of destination spending on romantic tourism, following a framework of independent and dependent variables.

The independent variables included respondents' business profiles, including business type, business form, years of operation, average monthly income, and average monthly expenses.

Statement of the Problem

This study aimed to determine the benefits of destination spending on romantic tourism in Baguio City.

Specifically, it sought to answer the following questions:

1. What is the Business Profile of the Respondents in terms of:
    a. Type of Business;
    b. Form of Business Organization;
    c. Years of operation;
    d. Average monthly income; and
    e. Average monthly expenses?
2. What is the perceived impact of Destination Spending on the Romantic Tourism in terms of;
    a. Social Impact;
    b. Economic Impact; and
    c. Cultural Impact?
3. Is there a significant difference on the perceived impact of Destination Spending on Romantic Tourism across profile variables?

II. Methodology

This section describes the research methodology employed in the study. It discussed the research design and strategy, the population and study locale, data collection instruments, data collection procedures, instrument validation, statistical analysis, and ethical considerations.

Research Design and Strategy

The researchers used a descriptive research design utilizing a survey questionnaire. This method was employed because it was considered the most suitable approach for gathering data to determine the benefits of destination spending on romantic tourism in Baguio City. Descriptive research design was widely employed across diverse fields, with the primary objective of systematically observing and documenting all variables and conditions influencing the phenomenon (Sunaina Singh, 2023).

Population and Locale of the Study

The research respondents were employees of tourism-related establishments in Baguio City. Convenience sampling was employed to include participants who were readily available and willing to participate, provided they possessed general knowledge or experience related to destination spending and romantic tourism.

This approach ensured the collection of comprehensive and insightful data that substantially contributed to understanding the benefits of destination spending within the context of romantic tourism.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting information on the variables. This instrument was required to be reliable and valid. The questionnaire was divided into two sections. The first section focused on the respondents' business profiles. The second section investigated the perceived impact of destination spending on romantic tourism. Three experts validated the survey questionnaire to ensure its validity. The survey employed descriptive interpretations with the following scale: (4) "Always," (3) "Sometimes," (2) "Often," and (1) "Never."

Validation of the Instrument

The questionnaire checklist was administered to the evaluators, and the critical reader and statistician conducted validation. To ensure the instrument used in this study was valid, Validators A, B, and C served as validators because they were recognized experts in the field. The validators employed a content validation checklist to assess whether the questionnaire was recommendable for use. Upon validation, the validators recommended the questionnaire checklist as an instrument for data gathering.

The validation results are shown below.

Anonymity of Validator	Mean	Description
Validator A	5.91	Highly Validated
Validator B	4.71	Highly Validated
Validator C	4.29	Highly Validated
Average Weighted Mean	**4.43**	**Highly Validated**

Legend:

Statistical Range	**Descriptive Equivalent**
4.21-5.00	Highly Validated
3.41-4.20	Very Good
2.61-3.40	Good
1.81-2.60	Fair
1.00-1.80	Poor

Data Gathering Procedure

The researchers formally sought the respondents' permission. They consulted their adviser on the appropriate steps to take to collect the data. The study's nature was explained to ensure full cooperation from the respondents. The researchers distributed the questionnaires via face-to-face surveys.

The questions were administered directly by the researchers, who scrupulously adhered to the instructions. Upon retrieving the completed questionnaires, the researchers analyzed the data to achieve the objective of understanding the benefits of destination spending on romantic tourism in Baguio City. After collecting all completed questionnaires, the researchers compiled and tabulated the data.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings from the study on Destination Spending and Its Benefits on Romantic Tourism in Baguio City.

Business Profile of the respondents of Destination Spending and Its Benefits on Romantic Tourism

Table 1
Business Profile of the Respondents
n=100

Variables	Indicators	Frequency	Percentage
Type Of Business	Retail	3	3%
	Accommodation	31	31%
	Food and Beverage	66	66%
Form Of Business Organization	Sole Proprietorship	18	18%
	Partnership	2	2%
	Corporation	61	61%
	Cooperative	19	19%
Years Of Operation	Less Than 1 Year	8	8%
	1-3 Years	12	12%
	4-6 Years	7	7%
	More Than 6 Years	73	73%
Average Monthly Income	50,000 Below	22	22%
	50,000-100,000	6	6%
	100,001-200,000	2	2%
	200,000 Above	70	70%
Average Monthly Expenses	50,000 Below	20	20%
	50,000-100,000	7	7%
	100,001-200,000	2	2%
	200,000 Above	71	71%

The business profile included the type of business, form of business organization, years of operation, average monthly income, and average monthly expenses, along with the corresponding frequency counts (f) and percentages (%) for each category. Each variable was subjected to interpretation and analysis. The study surveyed 100 respondents, so the total frequency count for each variable was 100.

Type of Business. The data indicated that 66 of 100 respondents (66%) were engaged in the Food and Beverages sector. Relatively few respondents (3%) were involved in Retail and suggested that a large share of romantic tourism spending was concentrated in food and beverage establishments, as couples and tourists often associated dining experiences with creating memorable, romantic moments.

Knollenberg et al. (2020) asserted that potential visitors to each destination exhibited significantly different food and travel behaviors, indicating opportunities for destinations to capitalize on the differences among foodie travelers. By strategically targeting specific types of foodie travelers, destinations could build a competitive advantage by appealing to various segments of the foodie traveler market, thus optimizing the overall number of foodie travelers.

Form of Business Organization. Among the respondents, 61% were affiliated with corporations, while 2% represented partnerships or other business forms. It suggested that corporations dominated the business landscape in romantic tourism destinations, implying that larger, more formalized business structures were better positioned to attract tourist spending and sustain operations than smaller entities.

Table 2
Perceived Impact of Destination Spending on Romantic Tourism In terms of Social
n=100

Indicators	WM	DE
1. Employees in the tourism sector benefit socially from increased destination spending by romantic tourists.	3.45	A
2. Romantic tourists often engage positively with local staff and residents.	3.33	A
3. Destination spending contributes to more socially interactive and friendly environments.	3.34	A
4. Improved couple communication during romantic trips promotes smoother social interactions between guests and employees.	3.44	A
5. High-spending couples' satisfaction contributes to a more positive work environment for employees.	3.43	A
6. Romantic tourism helps promote community awareness and cultural exchange.	3.46	A
7. Romantic tourists influence social trends by sharing their experiences online.	3.47	A
8. Employees are more motivated to provide quality service for high-spending couples.	3.41	A
9. Romantic tourism contributes to a more inclusive and respectful social atmosphere.	3.34	A
10. Locals feel social pressure to accommodate or meet the expectations of high-spending tourists.	3.01	S
Average Weighted Mean	**3.37**	**A**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Always (A)
2.51 - 3.25	Sometimes (S)
1.76 - 2.50	0ften (O)
1.00 - 1.75	Never (N)

The perceived impact of destination spending on romantic tourism in terms of social impact had a total average weighted mean of 3.37, with a descriptive equivalent of "Always" (A). Highlighted the strong role of romantic tourism in shaping social perceptions, particularly as couples showcased their experiences digitally, further inspiring others to engage in similar travel activities. The seventh indicator, "Romantic tourists influence social trends by sharing their experiences online," received the highest mean of 3.47, with a descriptive equivalent of "Always" (A). Romantic tourists played a significant role in shaping social trends through their online sharing activities. Underscored the importance for businesses in the tourism and hospitality sectors to recognize and harness the power of user-generated content to shape consumer perceptions and drive industry trends.

Table 3
Significant Difference in the Perceived Impact of Destination Spending on Romantic Tourism
n=100

Business Profile	**Social Impact**		**Economic Impact**		**Cultural Impact**	
	F	Sig.	F	Sig.	F	Sig.
Type of Business	.297	.744	.253	.777	4.107	.019
Form Of Business Organization	.309	.871	3.102	.019	4.625	.002
Years Of Operation	.763	.157	2.731	.048	2.076	.109
Average Monthly Income	.620	.604	1.771	.158	1.443	.238
Average Monthly Expenses	.835	.478	2.146	.099	2.426	.070

Table 3. The analysis for both social impact (f = .297, p = .744) and economic impact (f = .253, p = .777) revealed that the effects of destination spending on romantic tourism did not differ significantly across business types. That is, business type did not appear to influence the perceived impact of destination spending in either domain at the 5% significance level. However, a significant difference in cultural impact was found by business type (f = 4.107, p = .019). Since the p-value was less than 0.05, there was a significant difference in cultural impact across business types. In other words, the type of business influenced how strongly respondents believed romantic tourism affected local heritage, traditions, festivals, cultural practices, arts, and identity. Significant differences in the perceived impact of destination spending on romantic tourism were also examined by business organization type. For social impact (f = .309, p = .871), since the value did not exceed the 0.05 significance level, there was no significant difference.

Businesses organized as sole proprietorships, partnerships, corporations, family-owned, etc., did not differ in how they perceived the social impacts of destination spending. However, significant differences were observed in economic (f = 3.102, p = .019) and cultural (f = 4.625, p = .002) impacts by form of business organization. Since the p-values were less than 0.05, differences existed in how various organizational forms perceived economic and cultural impacts. Some business forms were perceived as having stronger or weaker economic impacts, and perceptions of their cultural impacts varied.

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions from the study, which aimed to identify the influence of destination spending and its benefits on the tourism industry in Baguio City, focusing on social, economic, and cultural impacts. It also offered recommendations for business organizations. A significant majority of respondents were involved in food and beverage enterprises, primarily structured as corporations with an operational history of more than 6 years. These businesses reported both high monthly income and high monthly expenses, indicating the profitability of the romantic tourism sector. However, this profitability is accompanied by substantial costs necessary for maintaining quality services and operations. The findings of this study reveal that spending by romantic tourists positively influences tourism across three primary dimensions: social, economic, and cultural. Socially, romantic tourists significantly shape trends through their online experiences, illustrating the impact of user-generated content on consumer behaviors and social perceptions. Economically, their expenditures directly enhance the income and profitability of the tourism and hospitality sectors, underscoring the need to understand and address their preferences for sustainable growth. Culturally, romantic tourism promotes local pride and supports the preservation of traditional practices and cultural heritage. Thus, these findings collectively suggest that romantic tourism not only stimulates business development but also fortifies community identity and encourages engagement with cultural values. Overall, the study concludes that while romantic tourism contributes positively to both economic development and cultural engagement, its impacts vary depending on the business and organizational structure. Additionally, the length of business operation plays a significant role in shaping the extent of these economic outcomes. Building upon the conclusions drawn from the data analysis, the following recommendations are proposed: Employees should undergo regular training on professional guest interaction and inclusive behavior. It will help reduce social pressure from high-spending tourists and ensure all visitors feel respected and welcome. Employees should actively introduce and recommend local products, souvenirs, and experiences to tourists. Providing information about sustainable, locally made offerings can boost the economic benefits of romantic tourism for the community. Employees should incorporate local crafts, traditions, and cultural performances into guest interactions. By educating tourists about these cultural elements, employees can help preserve local identity and promote cultural appreciation.

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Assessing the Effectiveness of Hotel Vouchers in Selected Establishments in Baguio City

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Abstract — Baguio City is renowned for its vibrant tourism industry, which contributes significantly to the local economy. Despite this, hotels face numerous challenges that affect their operations, guest satisfaction, and overall performance. profitability. This study employed a quantitative research design to examine the difficulties faced by selected hotels in Baguio City.
A total of 20 Sales and Marketing staff or managers participated through convenience sampling, and the collected data were analyzed using the Kruskal Wallis test to identify differences by age, sex, highest educational attainment, years of experience, and position within the hotel. Among the respondents, 80% were aged 20 to 29, indicating that most staff members were young adults. Females comprised 80% of participants and reported better access to opportunities within the establishments than males (20%). One-third of respondents had ten or more years of experience, highlighting a balance between a youthful workforce and experienced personnel. The study identified key challenges faced by hotel establishments, including enhancing customer loyalty, attracting new guests, increasing off-peak occupancy, generating revenue, and implementing seasonal promotions. To address these challenges, strategies such as using hotel vouchers, integrating with loyalty programs, and running targeted promotional campaigns are recommended to enhance guest engagement, increase bookings, and improve profitability. Implementing these measures can improve operational efficiency while promoting sustainable growth within the hospitality sector. Overall, these interventions aim to strengthen hotel performance, foster customer loyalty, and contribute to the sustainable development of Baguio City's tourism industry, thereby ensuring long-term economic benefits for both the local community and the hospitality sector.

Keywords* — *Competitive Advantage, Technology Integration, Redemption Experience Smoothness, Guest Loyalty/Repeat Stay Intention, Terms& Conditions Clarity, Off-Peak Demand Stimulation

I. Introduction

The hospitality industry is driven by the goal of providing exceptional experiences that meet and exceed guests' expectations. In a highly competitive market where guest satisfaction directly influences a hotel's reputation, repeat patronage, and profitability, hotels must continuously innovate to enhance the overall guest experience. One strategy increasingly used by hotels is offering hotel vouchers as part of promotional packages, loyalty programs, or as compensation for service deficiencies.

Hotel vouchers may take various forms, including discounts on future stays, complimentary services, such as spa treatments, dinners, or room upgrades, and exclusive access to premium amenities. These incentives are designed to add value for guests, build loyalty, and enhance overall satisfaction during their stay. Despite their widespread use, the actual impact of hotel vouchers on guest satisfaction remains underexplored within the hospitality industry.

The hospitality industry has undergone a significant transformation in recent years, driven by evolving consumer preferences, economic uncertainty, and the growing influence of digital platforms (Bratianu & Bagnoli, 2023). According to Vishnu (2025), traditional loyalty programs, which once played a crucial role in customer retention, have faced challenges due to fluctuating reward values and the unpredictability of dynamic pricing models. As a result, hotels have begun exploring alternative strategies to sustain customer loyalty and satisfaction.

One such approach is the implementation of hotel voucher programs, which offer guests personalized benefits and incentives that enhance their overall experience (Dube et al., 2021). Hotel vouchers can enhance guest satisfaction, leading to increased brand advocacy and repeat visits, which in turn boost hotel revenue and foster long-term customer loyalty. This approach also reduces reliance on online travel agencies by promoting direct guest engagement (Sabre, 2023). Hotel vouchers, often issued as prepaid certificates redeemable for lodging, meals, or other services, serve as flexible and appealing incentives for returning customers. Unlike traditional loyalty points, which may fluctuate in value, vouchers offer immediate and tangible benefits such as discounts, bundled services, and exclusive experiences (Hollenbeck & Taylor, 2021). This demonstrates their critical role in driving customer satisfaction and loyalty.

Po and Jiang (2023) emphasized that increasing perceived value through personalized incentives significantly contributes to green customer loyalty in the hotel industry. This aligns with the purpose of hotel vouchers, which create a sense of exclusivity and appreciation among repeat guests. Similarly, Silud et al. (2020) found that hotels with well-structured reward systems are more likely to cultivate loyal clientele. By offering vouchers, hotels can strengthen their brand image and customer relationships, while strategically addressing off-peak occupancy challenges through targeted promotional campaigns (Christou et al., 2023).

Hotel vouchers serve as strategic tools that enhance market visibility and long-term customer retention. They allow hotels to enhance guest satisfaction while ensuring a steady flow of revenue, particularly during low-demand periods.

Furthermore, vouchers can attract first-time visitors through exclusive offers that go beyond standard room discounts (Holiday Check, 2023).

In Baguio City, one of the Philippines' premier tourist destinations, hotel vouchers hold significant potential. Tourism contributes up to 25% of Baguio City's Gross Domestic Product, highlighting the industry's crucial role in the local economy (Philippine Information Agency, 2023). By implementing hotel voucher programs, hotels can attract more visitors and encourage longer stays, ultimately boosting local tourism and economic activity.

Hotel vouchers also align with Sustainable Development Goals (SDGs). Specifically, SDG 8: Decent Work and Economic Growth focuses on promoting sustained, inclusive economic growth and decent employment opportunities. Encouraging repeat customers helps hotels maintain stable revenue streams, thereby supporting job security in the hospitality sector. SDG 9: Industry, Innovation, and Infrastructure is likewise relevant, as hotel vouchers stimulate innovation in service delivery and customer engagement. Moreover, SDG 12: Responsible Consumption and Production is linked to this study through its promotion of efficient resource management and eco-friendly tourism practices.

Several empirical studies have examined customer satisfaction and loyalty in the Philippine hotel industry. Cue et al. (2023) investigated hotels in Mountain Province and found that while guests were moderately satisfied, there remained opportunities for improvement. Hotel vouchers, by offering additional value and unique experiences, could help bridge these satisfaction gaps.

Similarly, Silud et al. (2020) emphasized that consistent and structured reward systems significantly strengthen customer loyalty, suggesting that well-designed voucher programs can contribute to higher customer retention in Baguio City's hospitality sector.

Santos and Reyes (2022) found that well-implemented voucher programs in Baguio City hotels led to increased repeat bookings and positive word-of-mouth referrals. Likewise, Cruz (2021) demonstrated that loyalty programs incorporating hotel vouchers significantly improved guest retention and satisfaction in Philippine hotels, underscoring the role of personalized incentives in building long-term relationships.

Despite the growing popularity of hotel vouchers as a strategic tool in the hospitality sector, there is limited empirical evidence on their effectiveness in enhancing guest satisfaction, particularly in Baguio City. Understanding how these vouchers influence guest experiences, loyalty, and purchasing behavior is essential for hotels seeking to maintain competitiveness and sustainability in an evolving market.

This study aimed to assess the effectiveness of hotel vouchers in selected establishments in Baguio City by exploring their perceived impact on guest satisfaction from the perspective of sales and marketing staff or managers. It examined how hotel vouchers were perceived to influence guests' perceptions of value, service quality, and overall experience.

Additionally, the study examined the effectiveness of various voucher types across market segments, including first-time visitors, repeat customers, and business and leisure travelers.

Insights from industry professionals helped identify how hotel vouchers can be strategically used to enhance customer satisfaction, strengthen guest loyalty, and improve hotels' competitive positioning in the local hospitality market.

Literature Review

This study was anchored on the principles of the Promotional Mix Theory by Kotler and Keller (2020) and the Consumer Behavior in Services Marketing Theory by Lovelock and Wirtz (2020). These theories emphasized how marketing tools, such as promotions and hotel vouchers, could influence consumer perception, decision-making, and satisfaction.

In the hospitality industry, hotel vouchers served as a form of sales promotion, providing potential customers with incentives to try or return to a service. This study assumed that the effectiveness of hotel vouchers could be evaluated through several key promotional factors: perceived value, discount attractiveness, voucher accessibility, trust in the promotion, and brand recall. In exploring the application of the Triple Bottom Line (TBL) theory to the study of strawberry farms, a holistic approach emerges that is essential for cultivating not only profitable businesses but also responsible environmental stewards.

These variables were believed to contribute significantly to customer satisfaction, a vital indicator of promotional success. The framework suggested that when customers perceived these promotional attributes positively, their overall satisfaction with hotel services increased.

Statement of the Problem

This research assessed the effectiveness of hotel vouchers in selected establishments in Baguio City.

Specifically, the study aimed to answer the following questions: What is the profile of the Sales Marketing Staff/Managers in terms of:

1. What is the profile of the Sales Marketing Staff/Managers in terms of:
   a. Age;
   b. Sex;
   c. Highest Educational Attainment;
   d. Years in Service; and
   e. Position?
2. What is the level of effectiveness of Hotel Vouchers in terms of:
   a. Boosting Customer Loyalty;

b. Attraction of New guests;

c. Enhances off-peak occupancy;

d. Generates hotel revenue; and

e. Seasonal promotions?

3. Is there a significant difference level of effectiveness of Hotel Vouchers across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the Research Design and Strategy, the Population and Locale of the Study, the Data Gathering Tool, the Data Gathering Procedures, the Validation of the Instrument, the Statistical Treatment of Data, and Ethical Considerations.

Research Design and Strategy

The researchers used a descriptive research design, utilizing a survey questionnaire. This method was chosen because it was considered the most suitable for gathering data to determine the effectiveness of hotel vouchers in enhancing guest satisfaction. Descriptive research using survey questionnaires effectively measured satisfaction levels and identified key service factors that influenced guest experiences in the hospitality industry (Samson et al., 2023). Therefore, employing a descriptive research design provided concrete data to evaluate the real-world effectiveness of hotel vouchers in enhancing guest satisfaction.

Population and Locale of the Study

The research respondents were sales and marketing staff of selected hotels in Baguio City, chosen through purposive sampling. This method involved selecting individuals based on their years of service, familiarity with hotel services, experience with hotel vouchers, and willingness to provide insights on the effectiveness of such vouchers.

Data Gathering Tool

The researchers used a developed survey questionnaire as the primary tool for collecting information on the variables. This instrument was designed to be both reliable and valid. The questionnaire was divided into three sections. The first section covered the profile of the sales and marketing staff or manager. The second section investigated the level of effectiveness of hotel vouchers. Three experts validated the survey questionnaire to ensure its content validity. The survey employed a detailed descriptive scale with interpretations as follows: (4) Very Effective, (3) Effective, (2) Slightly Effective, and (1) Not Effective.

Data Gathering Procedure

The researchers formally requested permission from the tourists and consulted their adviser regarding the appropriate steps for data collection. They explained the study's nature to the respondents to encourage full cooperation. The researchers distributed the questionnaires via face-to-face interviews with the tourists. The questions were administered directly by the researchers, who scrupulously adhered to the instructions.

After collecting the completed questionnaires, the researchers interpreted the responses to assess the effectiveness of hotel vouchers in Baguio City. The data were then compiled and tabulated for analysis.

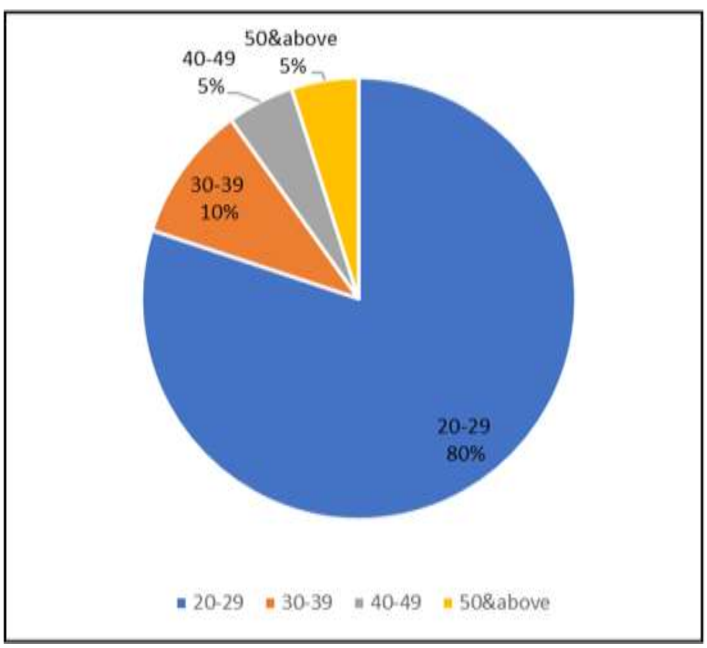
III. Results and Discussion

This chapter presents, interprets, and discusses the findings of the data collected throughout the research on Assessing the Effectiveness of Hotel Vouchers in Selected Establishments in Baguio City.

Profile of the Respondents

The profile included age, sex, and highest educational attainment, along with the corresponding frequency count (f) and percentage (%) for each category. Each variable was accompanied by its interpretation and analysis. Twenty respondents were surveyed, yielding a total frequency count of 100 for each variable.

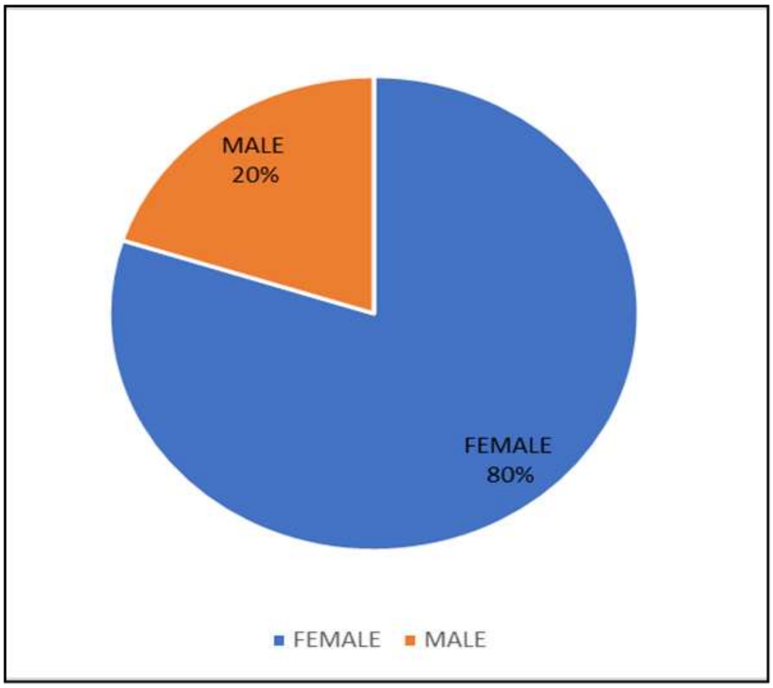
Figure 3
Age
n=20



Age. A majority of respondents were young adults: 16 of the 20 (80%) were aged 20 to 29 years, while only 2 respondents (10%) were aged 30 years or older. This indicated that younger individuals tended to start working early in life, particularly in certain local establishments. It suggested that these respondents were either motivated or willing to enter the workforce at a young age, possibly due to financial needs, career interests, or the availability of job opportunities suitable for young workers.

According to Vetráková (2019), younger marketing staff may influence stability, training, responses to voucher programs, and guest engagement, thereby affecting the effectiveness of voucher initiatives.

Figure 4
Sex
n=20



Sex. Sixteen out of twenty respondents (80 %) were female, while only 4 (20 %) were male. The representation of female staff (80 %) tends to predominate in guest-facing, communications, marketing, and administrative roles. Females are over-represented in-service roles, while males are over-represented in managerial or physically demanding roles.

Table 1
The level of effectiveness of hotel vouchers in terms of boosting customer loyalty
n=20

Indicators	WM	DE
1. vouchers help retain existing customers	3.30	VE
2. vouchers users often return as repeat guests.	3.35	VE
3. vouchers contribute little to long-term guests' loyalty.	3.15	E
4. loyalty program participation increases with voucher use.	3.15	E
5. vouchers fail to create a loyal customer base.	2.40	SE
Average weighted mean	**3.07**	**E**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Very Effective (VE)
2.51 - 3.25	Effective (E)
1.76 - 2.50	Slightly Effective (SE)
1.00 - 1.75	Not Effective (NE)

The effectiveness of hotel vouchers in boosting customer loyalty had a weighted average of 3.07, with a descriptive equivalent of "Effective." This indicated that the hotel voucher program successfully enhanced customer loyalty. However, the moderate mean level suggested that, although guests generally perceived the vouchers as contributing to loyalty, the strength of this relationship was not at its highest. Therefore, it was recommended that voucher initiatives be supplemented with additional loyalty measures to realize their potential benefits fully. The second indicator, "Voucher users often returned as repeat guests," had the highest mean of 3.35, indicating a descriptive equivalent of Very Effective (VE). This suggested that the voucher program was particularly successful in encouraging valued guests to make repeat visits, reflecting a positive behavioral loyalty outcome.

According to Gubíniová, Papcová, and Babčanová (2023), loyalty programs and hotel vouchers were effective tools for strengthening customer relationships, as they provided tangible rewards that enhanced satisfaction and emotional engagement.

Hotels implementing these reward-based strategies experienced higher repeat booking rates and improved guest retention. Conversely, the fifth indicator, "Vouchers fail to create a loyal customer base," scored the lowest mean of 2.40 and was characterized as Slightly Effective (SE). This indicated that vouchers alone were insufficient to build a loyal customer base unless supported by excellent service quality, memorable experiences, and consistent value. In other words, loyalty could not be achieved solely through price incentives; it had to be earned through emotional connection, satisfaction, and trust in the brand. Therefore, hotels were advised to consider vouchers as short-term promotional tools rather than the primary strategy for customer retention.

Table 3
The significant difference on the level of effectiveness of Hotel Vouchers across profile variables
n=20

Profile	**Boosting Customer Loyalty**	**Attraction of New Guests**	**Enhances Off-Peak Occupancy**	**Generates Hotel Revenue**	**Seasonal Promotions**
	Sig.	Sig.	Sig.	Sig.	Sig.
Age	.211	.242	.374	.685	.050
Sex	.324	.840	.760	.875	.043
Highest educational attainment	.068	.254	.497	.235	.840
Years of service	.186	.182	.707	.859	.278
Position	.269	.337	.568	.860	.042

Table 3 presents significant differences in the effectiveness of hotel vouchers across profile variables. The analysis revealed no significant difference in the effectiveness of hotel vouchers across age groups, as indicated by p-values exceeding 0.05. Voucher effectiveness in boosting customer loyalty (0.211), attracting new guests (0.242), enhancing off-peak occupancy (0.374), and generating hotel revenue (0.685) suggested that individuals across age groups perceived the benefits of hotel vouchers similarly.

This demonstrated that age did not influence respondents' views on voucher effectiveness, indicating that hotel vouchers were regarded as equally beneficial across all age demographics.

However, the seasonal promotions had a p-value of 0.050, which was at the threshold of significance, suggesting that the perceived effectiveness of hotel vouchers by age was not significant. This implied that respondents' age played a role in shaping their perceptions of the vouchers' effectiveness, with different age groups holding varied opinions regarding their value.

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions derived from the study entitled "Assessing the Effectiveness of Hotel Vouchers in Selected Establishments in Baguio City." It also offers recommendations for farmers to consider. A significant majority of respondents were young, college-educated women, indicating a strong inclination among younger people to begin their careers in the hospitality industry early. This finding reflected the long-standing trend within the sector in which women continued to play vital roles in guest-facing and service-oriented positions. Based on the findings, hotel vouchers proved to be an effective marketing strategy for attracting and retaining guests. These vouchers strengthened customer loyalty, as many users returned for repeat stays, while also attracting first-time visitors and expanding the hotel's market reach. They helped maintain stable occupancy levels during off-peak periods and contributed to higher revenue by offering upselling opportunities when guests redeemed their vouchers. Furthermore, vouchers were widely used during holidays and promotional seasons, serving as valuable tools to increase bookings and support overall marketing efforts in the hospitality industry. The findings also revealed no significant difference in the perceived effectiveness of hotel vouchers across age, sex, highest educational attainment, years of operation, and position, as most computed p-values exceeded the level of significance. However, a notable difference emerged in seasonal promotions when grouped by age, sex, and position, indicating that perceptions of voucher effectiveness in promoting seasonal offers varied across these groups. In contrast, other factors, such as customer loyalty, guest attraction, and off-peak promotions, were perceived consistently across all respondent groups. Based on the findings of this study, the following recommendations are proposed to optimize voucher-based promotional strategies and enhance guest satisfaction: Hotel establishments are advised to continue implementing voucher programs as a strategic measure to strengthen customer loyalty, encourage repeat visits, and referrals. These programs function as mechanisms to incentivize guests, enhance their overall experience, and foster long-term relationships with the brand. The continuation of such initiatives is considered essential for maintaining a competitive advantage in the hospitality industry, particularly in contexts where customer retention is critical. Hotel establishments are advised to enhance promotional strategies by integrating vouchers into existing loyalty programs. This integration aims to broaden market reach, attract new guests, and enhance the overall effectiveness of marketing efforts. Hotel establishments are encouraged to implement targeted promotional strategies for vouchers, particularly during off-peak seasons. This approach seeks to maintain stable occupancy rates, which is vital for sustaining business operations and maximizing revenue. By effectively utilizing vouchers, hotels can attract guests even during periods of low demand, thereby ensuring more consistent financial performance throughout the year. Hotel establishments are encouraged to develop voucher programs that stimulate additional guest expenditures. This can be achieved by offering discounts on premium rooms, dining, or spa services. By implementing vouchers that promote upselling while enhancing value-added experiences, hotels can significantly increase guest spending, ultimately improving overall revenue contributions. Hotel establishments are encouraged to redesign seasonal vouchers to increase their attractiveness and relevance to guests. This includes aligning voucher offers with popular holidays, local events, or themed experiences. Promotion through engaging online campaigns and social media is essential, while enhancing the exclusivity and limited-time appeal of these vouchers is recommended to generate greater interest and participation.

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Operational Approaches in Handling Demand Shifts Between Peak and Off-peak Periods in Hotels

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Abstract — Baguio City, known as the "Summer Capital of the Philippines," draws both local and international visitors with its refreshing climate, cultural activities, and popular attractions. The city's hotels play an important role in tourism by providing comfortable stays and essential services for travelers.

However, these hotels encounter challenges due to seasonal fluctuations, with high demand during peak months, such as December to May, and considerably lower occupancy during off-peak months, like July to September. This study employed a quantitative research design to examine the operational strategies of hotels in Baguio City in managing demand fluctuations between peak and off-peak seasons. A total of 33 hotels participated in the study, and the data were analyzed using the weighted mean and the Kruskal-Wallis test to examine differences based on years of operation and staffing levels. Among the respondents, 42.4% of the hotels had been in operation for 1 to 5 years, while 27.3% had been operating for 16 years or more. In terms of workforce, the majority (54.5%) had 46 to 60 employees, indicating the labor requirements of hotel operations. Findings revealed that marketing campaigns received the highest weighted mean of 3.35, with a descriptive equivalent of Highly Practiced (HP). Price adjustments received a weighted mean of 3.15, while staffing changes had the lowest at 3.02; both were classified as Moderately Practiced (MP). Tests of Difference showed that neither years of operation nor workforce had a significant impact on how hotels employed these approaches, suggesting that strategies are influenced more by market demand than by hotel size or age.

Keywords — Operational Approaches, Hotel, Hotel Operations, Marketing Campaigns, Price adjustments, Staffing Changes

I. Introduction

Baguio City is widely known as the "Summer Capital of the Philippines" due to its temperate climate. It is located in the highlands of Benguet and serves as an excellent destination to escape the heat. During the American colonial period, the government established the city as a summer resort, it continues to attract visitors seeking fresh air, scenic views, and a tranquil environment. Burnham Park is a well-known destination for boating and biking, while Mines View Park provides visitors with a panoramic view of the surrounding mountains. Large pine trees dominate the city, creating a calm and refreshing atmosphere. These features make Baguio an ideal destination for relaxation and nature appreciation.

Baguio also possesses a rich cultural and traditional heritage. Indigenous communities such as the Ibaloi and Kankanaey reside in the city and continue to uphold their traditional practices. Every February, Baguio celebrates the Panagbenga Festival, also known as the Flower Festival. This event features elaborate flower floats and street dancing and is considered one of the city's most prominent celebrations. In addition to tourism, Baguio is also known for its educational institutions and agricultural produce. Many students from various regions travel to the city to study at its prestigious universities.

Furthermore, Baguio is famous for its strawberries and fresh vegetables, which are sold in local markets and are popular among tourists. These agricultural products contribute to the city's economic growth while preserving its natural appeal.

Despite being an urban development, Baguio remains a serene and picturesque location. It's cool climate, scenic landscapes, and cultural richness distinguish it from other destinations. Whether for leisure, education, or adventure, Baguio remains an attractive destination.

Hotels in Baguio City face seasonal challenges During peak periods such as holidays and festivals, tourist arrivals increase, resulting in higher hotel occupancy rates. Consequently, hotels require additional personnel, rooms, and resources to accommodate the influx of guests. In contrast, during off-peak periods, fewer tourists visit the city, leading to reduced income and lower employee workload. This seasonal fluctuation makes it challenging for hotels to sustain operations year-round. The peak season generally occurs from December to May, while the off-peak season typically falls between July and September, posing difficulties in maintaining stable revenue and employment.

Baguio City Ordinance No. 2, Series of 2019, also known as the Baguio Tourism Code, is a local law that regulates tourism-related businesses, including hotels. It sets operational standards, mandates business permits, and establishes tourism policies specifically tailored explicitly to Baguio's context.

The United Nations Sustainable Development Goals (SDGs), a framework of 17 global objectives, aim to address social, economic, and environmental challenges while promoting global prosperity. Several SDGs are particularly relevant to Baguio's hotel industry. SDG 8 (Decent Work and Economic Growth) supports the creation of employment opportunities and encourages year-round tourism. SDG 9 (Industry, Innovation, and Infrastructure) promotes the use of advanced technology and infrastructure to improve hotel operations. SDG 11 (Sustainable Cities and Communities) advocates for responsible tourism practices that help protect the environment and support local enterprises. Aligning with these SDGs can help Baguio's hospitality sector maintain sustainable growth throughout the year.

Seasonality significantly impacts the hotel industry, particularly in terms of revenue and guest volumes. Duro and Turrión-Prats (2022) emphasized that managing seasonality involves market specialization and consideration of external influences. Ridderstaat and Croes (2020) also noted that fluctuations in tourist demand affect hotel income and occupancy rates.

Hotels can reduce the impact of seasonal fluctuations by expanding their service offerings and catering to a variety of market segments. According to Sáez-Fernández et al. (2020), businesses that remain operational year-round are generally better able to cope with seasonality than those that temporarily close during off-peak months. Dalir (2023) identified notable differences in tourist behavior between peak and off-peak periods, which influence lodging choices, spending patterns, and return intentions. Balancing tourism demand can be achieved through strategies such as hosting events and leveraging digital technologies.

Xie (2020) noted that tourism seasonality impacts hotel financial stability and competitiveness. Different tourism segments, such as leisure, business, and conferences, experience distinct seasonal trends, which affect hotels' performance and sustainability in various ways. Benítez-Aurioles (2022) explained that the seasonality in peer-to-peer (P2P) accommodations is less pronounced than in traditional hotels, as professional hosts often implement dynamic pricing and marketing strategies to manage demand fluctuations.

Alrawabdeh Wasfi (2022) argued that the pronounced seasonality in the hotel industry requires comprehensive planning to avoid revenue losses. Merely cutting costs is often insufficient, and increasing prices during low-demand periods may deter potential customers. Lopes et al. (2022) highlighted that analyzing demand trends helps understand how seasonality affects hotel performance. Comparing occupancy rates across seasons reveals the relationship between demand patterns and the operational dynamics of hospitality establishments.

Lozano et al. (2020) suggested that understanding variations in visitor numbers and room prices throughout the year is essential to evaluating hotel performance. As noted by Yabanci (2023), governments and private sector actors employ a range of strategies, such as marketing, pricing, and product diversification, to adapt to tourism seasonality. These approaches help mitigate adverse effects while promoting sustainable operations.

Zvaigzne et al. (2022) found that tourism seasonality, shaped by institutional, economic, and environmental variables, has significant implications for employment, environmental sustainability, and local economies. Recognizing these effects is crucial for developing targeted strategies to manage seasonal variations in tourism. Additionally, Krabokoukis et al. (2021) noted that factors such as geography, natural conditions, and infrastructure influence tourist seasonality. Analysts can use such data to classify destinations by their level of seasonality, aiding in effective tourism planning. AlMomani and Mat Som (2021) highlighted that seasonality significantly influences both tourism supply and demand, creating a need for strategies to extend tourist seasons and enhance hotel occupancy rates. Although smaller hotels may benefit from lower labor costs due to their size, Chiriko (2021) noted that these establishments still experience significant revenue losses resulting from seasonal trends. Al-Tal, Al-Hyari, and Al-Salamin (2020) concluded that factors such as environmental conditions and institutional changes influence tourism demand and contribute to seasonality.

Calinao (2025) reported that hotel occupancy rates in Baguio vary throughout the year, reaching 85% in early 2025, highlighting the impact of seasonal demand. According to the Philippine News Agency (2022), the city attracts between 50,000 and 60,000 tourists on summer weekends, indicating that summer remains a high-demand period requiring substantial hotel preparedness.

An article by Filinvest Hospitality Corp. (2025) noted that the development of new hotels, such as the 256-room Grafik Hotel, contributes to tourism growth and can help stabilize tourist arrivals across different seasons. Furthermore, Valdez (2023) recommended that hotels in Baguio utilize online booking platforms and promote eco-friendly tourism to better manage fluctuations in visitor numbers. These innovations illustrate how technology can help hotels address seasonal challenges effectively. According to the City Tourism Office (2023), more than 100,000 visitors arrive in Baguio monthly between July and September.

This suggests that, with practical strategies in place, hotels can attract tourists even during off-peak seasons. The current study seeks to explore such strategies, aiming to help hotels enhance their operations and maintain revenue and employment levels, even during periods of low tourist activity.

Understanding these seasonal challenges will enable hotels to provide consistent service, retain their workforce, and maintain operational stability year-round. This benefits not only the businesses but also the local community by ensuring reliable employment and high-quality service delivery.

The purpose of this study is to investigate the challenges hotels face due to fluctuations in tourist arrivals throughout the year. Many establishments struggle to sustain revenue and retain staff during off-peak periods, negatively affecting both business operations and local employment. This research will examine key areas such as marketing, pricing, and staffing to identify actionable strategies for maintaining profitability, retaining personnel, and delivering exceptional service year-round. The findings aim to support a more stable, resilient, and sustainable tourism industry in Baguio City.

Literature Review

This created challenges for hotels, which faced high guest volumes during peak seasons and low occupancy during off-peak periods, complicating the management of staffing, resources, and revenue.

The peak season referred to the period of the year when tourism was most active, often due to holidays, favorable weather, or significant events. Hotels were often fully booked, resulting in higher room rates.

The off-peak season attracted fewer travelers, resulting in lower hotel occupancy rates and reduced business profits. The shoulder season represented the transitional period between peak and off-peak times, during which visitor numbers were moderate. Prices tended to be lower than during the peak season but higher than during the off-peak season, and the weather generally remained favorable for travel.

This theory was relevant to hotel operations in Baguio City, where tourism served as a significant industry. Baguio experienced increased tourist arrivals during the summer, holidays, and festivals such as the Panagbenga Festival, while fewer tourists visited during the off-peak months. As a result, hotels struggled with low bookings and decreased revenue. Drawing on Baum's Seasonality Theory, this study examined how hotels in Baguio manage seasonal fluctuations and identified strategies to maintain year-round profitability, including enhanced marketing, dynamic pricing, and improved hotel services.

Statement of the Problem

This study aimed to determine how seasonality affected hotel operations in Baguio City.

Specifically, it sought to answer the following questions:

1. What is the business profile of the hotels in Baguio City in terms of:
   a. Years of operation; and
   b. Number of Workforce?
2. What are the Operational Approaches in Demand shifts between Peak and Off-peak Periods in terms of:
   a. Marketing campaigns;
   b. Price adjustments;
   c. Staffing changes?
3. Is there a significant difference between Operational Approaches in Demand shifts between Peak and Off-peak Periods across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. This section discusses the research design and strategy, population and locale of the study, data-gathering tool, data-gathering procedures, validation of the instrument, statistical treatment of data, and ethical considerations.

Research Design and Strategy

The researchers used a descriptive research design, utilizing a survey questionnaire. The researchers used this method because they considered it the most suitable research approach for gathering data to determine the operational strategies for managing demand shifts between peak and off-peak periods in hotels.

Descriptive research refers to a method used to study and describe subjects such as people, groups, or situations. It focused on gathering information to understand what was occurring or what something was like. This type of research answered questions such as "What was happening?" or "What were the main features?" without attempting to determine the reasons behind the occurrence (Martinez & Lee, 2023).

Population and Locale of the Study

The participants in this study were hotel managers from three-star hotels in Baguio City. The research employed purposive sampling, The researchers selected hotel managers based on their experience and knowledge of hotel operations.

The researchers chose these respondents because they expected them to provide valuable insights into the factors affecting hotel operations in Baguio City.

Data Gathering Tool

The researchers used a survey questionnaire as the primary tool for collecting data on variables related to hotel operations. This instrument was required to be reliable and valid. The questionnaire was divided into two sections. The first section focused on the business profile of the respondents. The second section investigated the operational approaches in demand shifts between peak and off-peak periods.

The survey included descriptive interpretations, such as (4) “Highly Practiced,” (3) “Moderately Practiced,” (2) “Slightly Practiced,” and (1) “Not Practiced.”

Data Gathering Procedure

The researchers formally asked permission from the hotel managers. They also consulted their adviser on the steps they should take in collecting the data. The study’s nature was explained to ensure full cooperation from the hotel managers. The researchers distributed the questionnaires to hotel managers through face-to-face surveys. The questions were administered directly by the researchers, who strictly followed the instructions.

The researchers analyzed the collected questionnaires to understand the current strategies and challenges faced by hotel operations management during peak and off-peak seasons in Baguio City. After collecting all the completed questionnaires, the researchers compiled and tabulated the data.

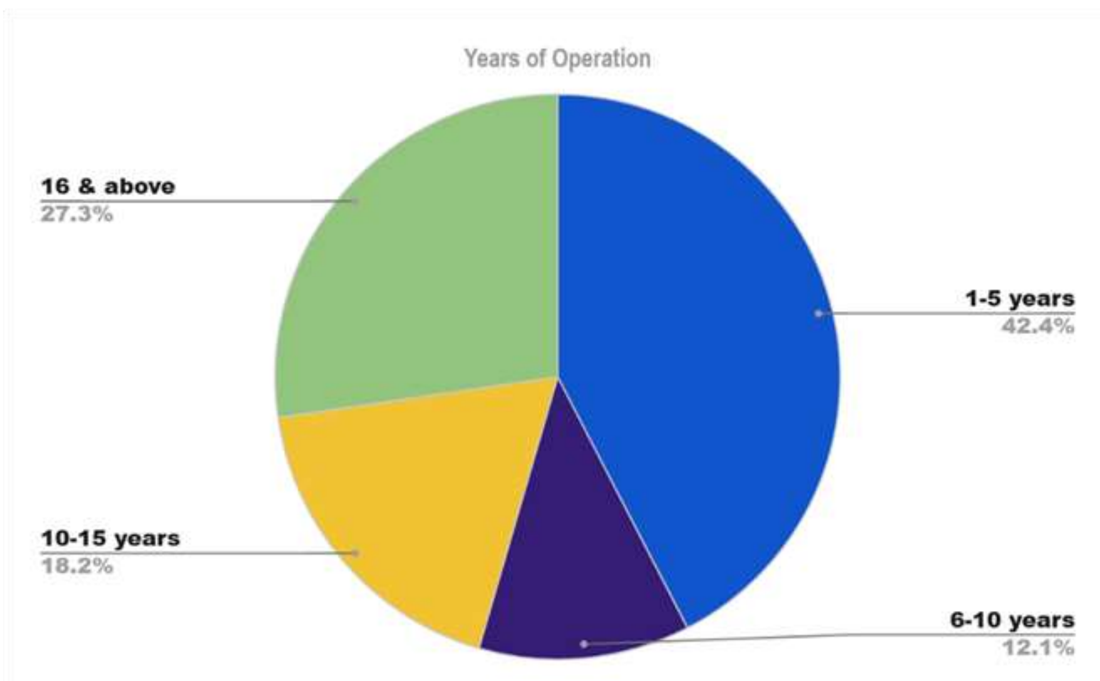
III. Results and Discussion

This chapter presents, interprets, and discusses the findings from the data collected in the study on operational approaches for managing demand shifts between peak and off-peak periods in hotels.

Figure 1
Years of Operation
n=33

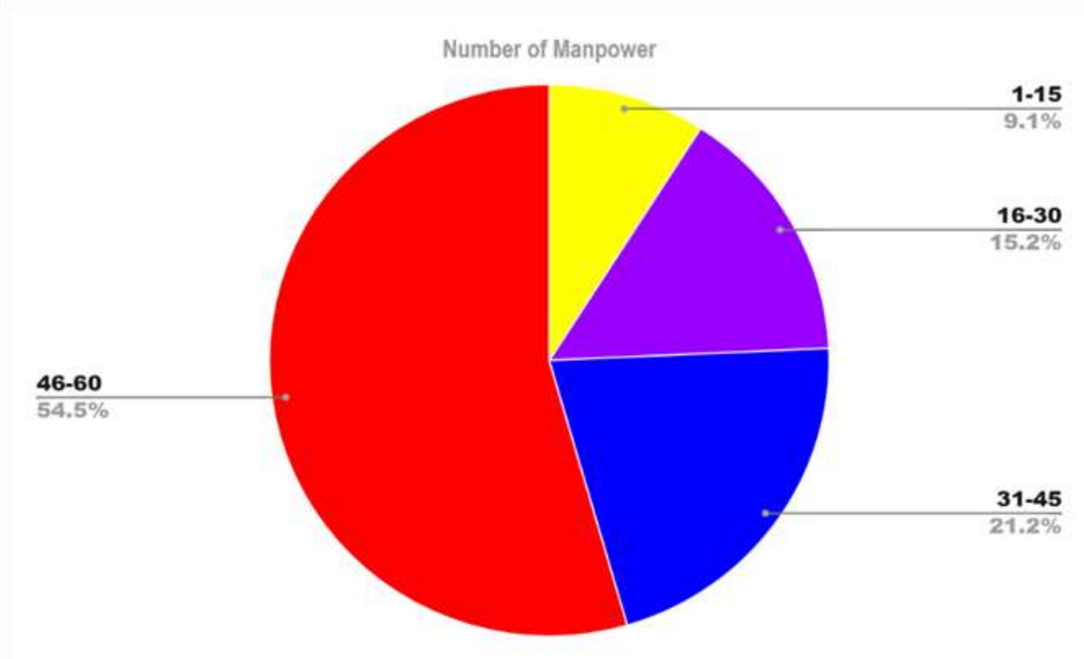
Business Profile of the respondents of Operational Approaches in handling demand shifts between Peak and Off-peak periods in hotels.

The business profile included years of operation and the number of workforces, along with the corresponding frequency count (f) and percentage (%) for each category. Each variable has its interpretation and analysis. The researchers asked thirty-three respondents, so the total frequency count for each variable equals 100.



Years of Operation. Out of the 33 respondents, 14 hotels (42.4%) had operated for 1–5 years, indicating that a significant portion of the hotels were still relatively new at the time of the survey. This suggests that many establishments were in the early stages of establishing their operational practices and adapting to market demands. Approximately 12.1% had been in operation for 6–10 years, and 18.2% had operated for 10–15 years. Meanwhile, nine hotels, or 27.3%, had been in operation for 16 years or more. These findings suggested that although some hotels were well established, the majority were still in the early stages of operation.

According to Tang & O'Neill (2025), hotel performance tends to decline in the initial years of operation. However, after about 40 years, older hotels may begin to improve again, particularly in large metropolitan areas.



Number of Manpower. The findings indicated that 18 of the 33 respondents (54.5%) employed 46–60 workers, representing the largest employee group. Conversely, only three respondents, or 9.1%, had employed 1–15 workers. These results suggested that most hotels required a larger workforce to manage daily operations and address the varying demands during peak and off-peak periods.

Grigoryan (2024) stated that factors such as work-life balance, low employee compensation, and job insecurity have significantly influenced labor shortages in the hospitality industry. These issues contribute to high turnover intentions, making it difficult for hotels to maintain sufficient staffing, especially during peak periods.

Table 1

Operational Approaches in Handling demand shifts between Peak and Off-peak periods in hotels in terms of Marketing Campaigns

n=33

Indicators	WM	DE
1. Offering weekend getaway packages to attract short term travelers.	3.12	MP
2. Providing long stay promotions to encourage extended visits.	3.18	MP
3. Implementing loyalty member exclusive to retain repeat customers.	3.03	MP
4. Promoting group or event focused deals to attract large bookings.	3.61	HP
5. Partnering with online travel agencies (OTAs) to increase visibility.	3.70	HP
6. Utilizing social media advertising to reach broader audience.	3.73	HP
7. Engaging in email marketing to maintain customer relationships.	3.58	HP
8. Offering discounted rates during off-peak seasons.	3.79	HP
9. Collaborating with influencers to enhance brand awareness.	2.58	MP
10. Building partnerships with local businesses to create value-added experiences.	3.15	MP
Average Weighted Mean	**3.35**	**HP**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Practiced (HP)
2.51 - 3.25	Moderately Moderately Practiced (MP)
1.76 - 2.50	Slight Practiced (SP)
1.00 - 1.75	Not Practiced (NP

The operational approaches used to manage demand shifts between peak and off-peak periods in hotels, specifically in terms of marketing campaigns, had a total average weighted mean of 3.35, corresponding to the descriptive rating of 'Highly Practiced' (HP). The results indicated that hotels actively implemented marketing strategies to balance demand during peak and off-peak seasons.

The eighth indicator, *'Offering discounted rates during off-peak seasons*,' received the highest mean of 3.79, corresponding to the descriptive rating of 'Highly Practiced' (HP). As stated by Dhanda (2023), hotels used discounts and promotional offers more frequently than influencer partnerships to attract guests during low-demand periods. These pricing strategies helped increase occupancy during periods of weak demand, and respondents considered them more dependable than influencer campaigns, which could have a potentially unpredictable effect. The ninth indicator, *"Collaborating with influencers to enhance brand awareness,"* obtained the lowest mean score of 2.58 and was classified as "Moderately Practiced" (MP). These findings indicate that although hotels saw the potential value of influencer partnerships, they prioritized simpler strategies, such as price adjustments and online promotions, to manage fluctuations in guest demand.

Table 2
Operational Approaches in Handling demand shifts between Peak and Off-peak periods in hotels in terms of Price Adjustments
n=33

Indicators	WM	DE
1. Use of dynamic pricing based on demand.	3.64	HP
2. Implementation of seasonal rate plans to reflect peak and off-peak periods.	3.64	HP
3. Offering last-minute deals to maximize occupancy and attract spontaneous travelers.	3.09	MP
4. Early bird discounts for advanced reservations.	2.82	MP
5. Offering a loyalty program to encourage repeat bookings and enhance guest retention.	2.82	MP
6. Package pricing such as room extras.	3.27	HP
7. Offering a flat discounts percentage to incentivize bookings across all room categories.	2.82	MP
8. Integrates pricing system with other platforms such booking engine and PMS.	3.42	HP
9. Implements promotional pricing during events or holiday.	3.24	MP
10. Offers referral discounts to guests who bring and new customers.	2.70	MP
Average Weighted Mean	**3.15**	**MP**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Practiced (HP)
2.51 - 3.25	Moderately Moderately Practiced (MP)
1.76 - 2.50	Slight Practiced (SP)
1.00 - 1.75	Not Practiced (NP

The operational approaches used in handling demand shifts between peak and off-peak periods in hotels, particularly regarding price adjustments, had a total average weighted mean of 3.15, with the descriptive equivalent of "Moderately Practiced" (MP). The results indicated that hotels applied price adjustment strategies to a moderate extent in balancing demand during peak and off-peak seasons.

The first and second indicators, *"Use of dynamic pricing based on demand"* and *"Implementation of seasonal rate plans to reflect peak and off-peak periods,"* obtained the highest mean score of 3.64, with the descriptive equivalent of "Highly Practiced" (HP). These results suggested that hotels prioritized pricing strategies to manage demand effectively.

Furthermore, Hidayati, Nata, Reindrawati, and Huda (2025) reported in their study at Bintan Island Resort that when the hotel employed dynamic pricing, adjusting room rates based on demand, it was able to attract more guests and generate higher income. They observed that this strategy was most effective during peak seasons, when guest demand was highest. Their findings demonstrated that hotels not only claimed to implement these pricing strategies but also experienced tangible benefits in real-world situations.

Table 3
Significant Difference on the Operational Approaches across profile variables
n=33

Profile	**Marketing Campaign**	**Price Adjustments**	**Staffing Changes**
	Sig.	Sig.	Sig.
Years of Operation	.670	.642	.961
Number of Manpower	.307	.222	.404

Table 3 presents the analysis of significant differences in operational approaches based on years of operation. The operational approaches related to marketing campaigns, price adjustments, and staffing changes yielded the following significance values: marketing campaigns = 0.670, price adjustments = 0.642, and staffing changes = 0.961. Since all significance values exceeded 0.05, the results indicate that there is no statistically significant difference in operational approaches based on years of operation.

These findings suggest that a hotel's years of operation do not strongly influence how marketing, pricing, or staffing strategies are applied. Both newly established and long-standing hotels employed these strategies similarly, likely because they represent fundamental practices in hotel operations.

These findings indicate that the use of such strategies depends more on market conditions and daily operational requirements than on the hotel's operational tenure.

Furthermore, the table presents the analysis of significant differences in operational approaches based on the number of personnel. The approaches related to staffing, pricing, and marketing produced the following significance values: marketing campaigns = 0.307, price adjustments = 0.222, and staffing changes = 0.404. Since all values exceeded 0.05, the results again indicate no statistically significant differences in operational approaches based on workforce levels.

The findings suggested that the number of employees did not substantially affect how hotels implemented marketing, pricing, or staffing strategies. This may be attributed to the fact that the application of these strategies relies more on managerial planning, decision-making, and operational judgment than on workforce size. As a result, both small- and large-scale hotels tended to adopt similar operational approaches to manage demand fluctuations.

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions of the study, which aimed to identify the operational approaches used to manage demand shifts between peak and off-peak periods in hotels. It also provides recommendations for improving staff management practices. A significant majority of respondents had been operating for 1–5 years, comprising 14 establishments, indicating that many hotels in the hospitality industry were still relatively new. At the same time, most hotels employed between 46 and 60 staff members, totaling 18 establishments, suggesting that the industry relies on a substantial workforce to deliver quality service and meet guest needs. Based on the findings, hotels employed various strategies to manage fluctuations in guest demand throughout the year. For marketing campaigns, they offered discounted rates during off-peak seasons to attract visitors and encourage extended stays even when demand was low. Regarding price adjustments, hotels implemented dynamic pricing and seasonal rate plans, allowing room rates to vary between peak and off-peak seasons. This approach enabled them to balance guest satisfaction with business profitability. In terms of staffing changes, hotels provided employee training to improve efficiency, ensuring consistent service quality during both high- and low-demand periods. Collectively, these operational approaches enabled hotels to remain competitive, sustain their operations, and maintain high-quality service despite the challenges posed by seasonal demand fluctuations. The findings revealed no significant differences in the business profiles of the respondents with respect to years of operation for marketing campaigns, price adjustments, and staffing changes. This indicates that, whether a hotel had been operating for only a few years or for an extended period, they generally applied the same strategies, such as offering discounts during off-peak seasons, using dynamic pricing, and training staff for efficiency.

Findings from the study revealed no significant differences in operational approaches when grouped according to the number of personnel for marketing campaigns, price adjustments, and staffing changes. This indicates that hotels, regardless of having a smaller or larger workforce, adopt similar strategies to balance guest demand, manage pricing, and maintain service quality. These results suggested that operational strategies were consistently practiced across hotels, demonstrating that neither years of operation nor workforce size significantly influenced how hotels managed demand shifts between peak and off-peak periods. Based on the results, the study indicated that hotels in Baguio City demonstrated varying strengths and challenges in managing guest demand during peak and off-peak seasons. To enhance service quality and maintain competitiveness, the following recommendations were proposed. These suggestions aim to assist hotel managers in developing more effective strategies, strengthening staff support, and fostering collaboration to advance the overall hotel industry within the city. Hotels with 6–10 years of operation are encouraged to continue strengthening their practices by refining strategies to remain competitive within the industry. Given that Baguio is a leading tourist destination with high competition, these hotels should also consider sharing their best practices and operational experiences with newer establishments. Such collaboration could contribute to raising the overall quality of hotel operations in the city and ensuring that even small or newly established hotels are able to meet tourist expectations. By mentoring newer hotels, they may also foster partnerships that enhance the overall resilience and growth of the hospitality sector in Baguio. For hotels with up to 15 employees, it is recommended that regular training and development programs be enhanced to improve employee skills and performance. As many hotels in Baguio are small to medium-sized, staff members are often required to multitask. Training would enable employees to perform more effectively during peak seasons, when tourist arrivals are high, and to maintain service quality even with limited staff during off-peak periods. Additionally, such initiatives would enhance employee confidence and adaptability, better preparing them for sudden shifts in guest demand. In terms of marketing campaigns, particularly collaborations with influencers to enhance brand awareness, hotels in Baguio are encouraged to strengthen their efforts by actively engaging with influencers and utilizing social media platforms. Given that Baguio attracts both local and international tourists, increased social media exposure could enhance visibility, attract new guests, and encourage visits even during low-demand periods, such as the rainy season. Influencer partnerships also enabled hotels to connect with younger travelers who rely heavily on online platforms when selecting accommodations. For price adjustment strategies, such as offering referral discounts to guests who bring in new customers, hotels in

Baguio are encouraged to expand this practice by developing structured referral programs. The observation that tourists often rely on word-of-mouth recommendations supports this recommendation when selecting accommodations. By offering rewards to encourage referrals, hotels could potentially increase bookings, strengthen customer loyalty, and promote their services through personal endorsements. A structured program also ensures greater consistency, allowing guests to clearly understand the benefits of participation and increasing their motivation to engage. In relation to staffing changes, including contracting third-party services to manage specific functions and implementing temporary layoffs or furloughs, hotels in Baguio are advised to balance these measures carefully. While these strategies helped reduce costs during off-peak periods, hotels also had to plan staff schedules effectively to ensure that they maintained high service quality. Given Baguio's seasonal surges in tourism during festivals, holidays, and summer, experts consider planning essential to meet demand without lowering service standards. This approach will ensure that hotels can handle sudden increases in guest volume while maintaining control over expenses during quieter months.

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Effectiveness on Food Waste Management Practices in All You Can Eat Restaurants in Urdaneta City, Pangasinan

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Abstract — All-you-can-eat (AYCE) buffets, regarded as an ultimate indulgence for diners, offer a variety of food selections at a fixed price. However, they contribute to substantial food waste due to overproduction, expiration, and consumer behavior. This study aligns with Sustainable Development Goals (SDGs) 12, 13, 2, and 17, which emphasize healthy eating, sustainable food system strategies, and strengthened partnerships through portion control, food donation, and composting to promote responsible consumption, climate action, food security, and collaborative action.

It aims to examine food waste management practices, assess their effectiveness, and provide insights and recommendations for AYCE restaurants in Urdaneta City, Pangasinan. The respondents comprised 40 employees from AYCE restaurants in Urdaneta City. Using a quantitative research design, data were analyzed Using a quantitative with descriptive statistics (weighted averages), independent t-tests, and the Kruskal-Wallis test to determine significant differences. Results indicated that disposal practices were the most effective, demonstrating high compliance with local regulations and waste segregation policies. Prevention measures, such as food labeling and monitoring uneaten quantities, were also regularly implemented. Conversely, reuse and recovery practices were the least commonly adopted, primarily due to safety concerns, limited external partnerships, and reliance on municipal waste collection. Therefore, the researchers recommend regular staff training, stronger collaboration with food banks and farms, and customer awareness programs to reduce food waste further, enhance sustainability, and reinforce multi-stakeholder partnerships in line with SDG 17.

Keywords — Food Waste, Food Waste Management, All-You-Can-Eat Staff, Sustainability

I. Introduction

All-you-can-eat buffets are more than mere dining experiences; they are perceived as culinary adventures, offering patrons an expansive array of flavors, textures, and international cuisines within a single, fixed-price setting. Whether hosted at luxury hotels, banquet halls, or specialized restaurants, these buffet services offer a diverse selection of dishes, including freshly carved meats, gourmet delicacies, vibrant salads, and elaborate desserts. However, the unrestricted consumption model inherent in such formats often leads to significant food waste. In response, restaurant operators have adopted strategic measures such as portion control, plated presentation of premium dishes, and strict no-leftover policies to mitigate excess consumption. Despite these efforts, inefficiencies in forecasting, overproduction, and spoilage continue to pose operational and environmental challenges behind the scenes.

To address these concerns, many establishments are integrating sustainable practices into their operations, including optimized cooking schedules, repurposing surplus food, and donating edible leftovers. These initiatives reflect a growing commitment to balancing consumer generosity with environmental responsibility. When managed effectively, all-you-can-eat dining can foster sustainable consumption patterns, creating memorable experiences while minimizing ecological impact.

Food waste refers to edible food that is discarded at various stages of the food supply chain, including production, distribution, retail, and consumption.

Contributing factors include overproduction, improper storage, spoilage, and consumer behavior, all of which generate high economic and environmental costs. The disposal of food waste not only squanders valuable natural resources—such as water, land, and energy—but also contributes to greenhouse gas emissions through anaerobic decomposition in landfills.

In the Philippines, legislative efforts have been introduced to address food waste systematically. The Food Waste Reduction Act (House Bill 8873) proposes mandatory food waste segregation into edible and inedible categories, with surplus edible food to be donated to food banks and inedible portions recycled into compost or fertilizer. The Department of Social Welfare and Development (DSWD) is designated to coordinate with food businesses, while the National Nutrition Council (NNC) leads the National Food Surplus Campaign. Non-compliance may result in administrative penalties, including fines and imprisonment. This legislation is critical for enhancing food security, improving waste management, and promoting sustainable disposal practices.

Similarly, Senate Bill No. 240, the Zero Food Waste Act of 2022, mandates that food-related enterprises, including supermarkets, restaurants, hotels, and food producers, establish partnerships with food banks and waste-recycling entities. Another legislative proposal, Senate Bill No. 3225, seeks to prohibit supermarkets and food establishments from discarding unsold but still edible food. While these bills reflect growing policy attention, none have been enacted into law as of 2025.

Empirical studies highlight the severity of food waste in buffet operations. Ariffin et al. (2023) examined customer perceptions and menu design in hotel buffets, finding that buffet layout signicantly in influences plate waste and overall food waste awareness. Strategic menu planning and customer education were identified as key interventions. Hayeebueraheng and Phanthuwongpakdee (2024) reported that a single buffet chain in Thailand generates approximately 6,000 kilograms of food waste daily, equivalent to 2,160 tons annually, with overproduction, consumer over-serving, and inefficient ingredient use as primary causes. The study recommended prevention and optimization strategies to reduce waste.

Egmen (2022) noted a general lack of awareness and structured waste management practices in local restaurants, advocating for portion control, staff and customer education, and collaboration with recycling firms. Wu and Teng (2023) emphasized the importance of accurate demand forecasting, proactive guest communication, and food donation programs in minimizing waste in buffet settings.

In the Philippines, civil society organizations such as GreenSpace and WWF Philippines have promoted bokashi composting to accelerate the decomposition of organic waste. Marikina City's food waste management program, initiated in 2014, converts food scraps into compost for urban agriculture, demonstrating a localized model of circular economy integration.

These practices align with global sustainability frameworks, particularly Sustainable Development Goal (SDG) 12 (Responsible Consumption and Production), which calls for halving global food waste by 2030.

Buffet restaurants that implement portion control, food donation, and composting contribute directly to this target. Furthermore, reducing food waste supports SDG 13 (Climate Action) by lowering methane emissions from landfills and conserving resources used in food production.

It also advances SDG 2 (Zero Hunger) by redirecting surplus food to vulnerable populations through food banks and shelters. SDG 17 (Partnership for the Goals) additionally emphasizes the role of partnerships at the global, national, and local levels as facilitators of sustainable development. It points out the necessity of different sectors' cooperation, for instance, the government, business, civil society, communities, and institutions, in ensuring that all the other SDGs are achieved. The SDG 17 initiative helps reduce food waste by collaborating with suppliers, food banks, NGOs, and the city's Local Government Unit (LGU).

Buffet restaurants, defined as self-service establishments offering a wide variety of dishes, often operate under an all-you-can-eat pricing model (Blink, 2023). While this model enhances customer satisfaction and perceived value, it exacerbates food waste challenges. Data from the Department of Business Development (DBD) in Thailand indicate a rising number of foodservice businesses, including all-you-can-eat buffets, particularly in Bangkok (Liu et al., 2020), underscoring the need for scalable waste reduction strategies.

Given the growing environmental, economic, and social implications of food waste, this study examined food waste management practices in all-you-can eat restaurants in Urdaneta City, Pangasinan.

Specically, it investigated the implementation of the waste hierarchy principles, Prevention, reduction, reuse, recycling, recovery, and disposal, and evaluated their effectiveness. The study also sought to determine whether significant differences exist in the application of these practices across selected establishments. Findings were intended to inform policy recommendations and operational improvements to enhance sustainability in the local food service industry.

Literature Review

The Waste Management Theory by Pongracz et al. (2004) is a comprehensive approach to waste management that focuses on preventing harm to human health and the environment. It redefines waste dynamically and proposes a structured system that minimizes waste generation and maximizes resource conservation. The hierarchy of waste management includes prevention, reduction, reuse, recycling, recovery, and disposal. Prevention involves avoiding food waste at the source through proper inventory management, portion control, and staff training. Reduction focuses on minimizing waste through efficient cooking techniques and repurposing ingredients.

Reuse involves redirecting surplus food to charitable organizations or repurposing leftovers for new meals. Recycling converts waste into compost or biogas, while recovery extracts energy from waste through waste-to-energy processes. Disposal, the least preferred option, involves sending food waste to landfills.

Environmental Management, from Theory to Practice, as presented by Sadghi (2019), involves a structured decision-making process that regulates human activities to mitigate adverse environmental impacts through planning, monitoring, coordination, and continuous improvement. The Environmental Management System (EMS) model, particularly its Plan-Do-Check-Act (PDCA) cycle, provides a useful framework for policy development, planning, implementation, corrective actions, and management review. This approach helps organizations and governments make informed decisions, continuously improve practices, and achieve sustainable development through structured processes and community involvement.

Statement of the Problem

This study aimed to determine the effectiveness of food waste management practices in all-you-can-eat restaurants in Urdaneta City, Pangasinan.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:

a. Age;

b. Sex;

c. Civil status;

d. Highest educational attainment; and

e. Number of years in service?

2. What food waste management practices are currently employed by the all-you-can-eat (AYCE) restaurant in terms of:

a. Prevention;

b. Reduce;

c. Reuse;

d. Recycle;

e. Recover; and

f. Disposal?

3. Is there a significant difference on the food waste management practices currently employed across profile variables?

II. Methodology

This section describes the research methodology employed to conduct the study. It discusses research design and strategy, the study's population and locale, data-gathering tools, data-collection procedures, instrument validation, statistical analysis of the data, and ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design employing a survey questionnaire. This method was chosen as the most suitable approach for collecting data to assess the effectiveness of food waste management practices in all-you-can-eat restaurants in Urdaneta City, Pangasinan.

Descriptive research aimed to describe individuals, events, or conditions as they naturally occurred. It could be purely descriptive or comparative, exploring trends over time through longitudinal data collection methods. This type of research typically utilizes observation or survey data for data collection (Siedlecki, 2020).

Population and Locale of the Study

The research respondents consisted of employees from all-you-can-eat restaurants in Urdaneta City, Pangasinan. Convenience sampling was employed, selecting individuals based on their knowledge, experience, and involvement in food consumption and waste management practices. These respondents were deemed capable of providing relevant insights into the causes of food waste and into existing waste-reduction strategies.

Data Gathering Tool

The researchers employed a survey questionnaire as the primary tool for collecting data on the variables. This instrument was required to be both reliable and valid. The questionnaire was divided into two sections. The first section addressed the respondents' profiles, while the second section investigated the food waste management practices currently used by all-you can-eat (AYCE) restaurants.

Three experts validated the survey questionnaire to ensure its validity. The survey employed descriptive interpretations such as (4) “Always,” (3) “Often,” (2) “Rarely,” and (1) “Never.”

Data Gathering Procedure

The researchers formally sought permission from the restaurant managers. They also consulted their adviser regarding the appropriate steps for data collection. The nature of the study was explained to secure full cooperation from both the restaurant managers and customers. The researchers distributed questionnaires through face-to-face surveys to the restaurant managers and customers. The questions were administered directly by the researchers, who ensured that all instructions were followed accurately. Upon retrieving the completed questionnaires, the researchers interpreted the data to assess the effectiveness of food waste management practices in all-you-can-eat restaurants in Urdaneta City. After collecting all responses, they compiled and tabulated the data for analysis.

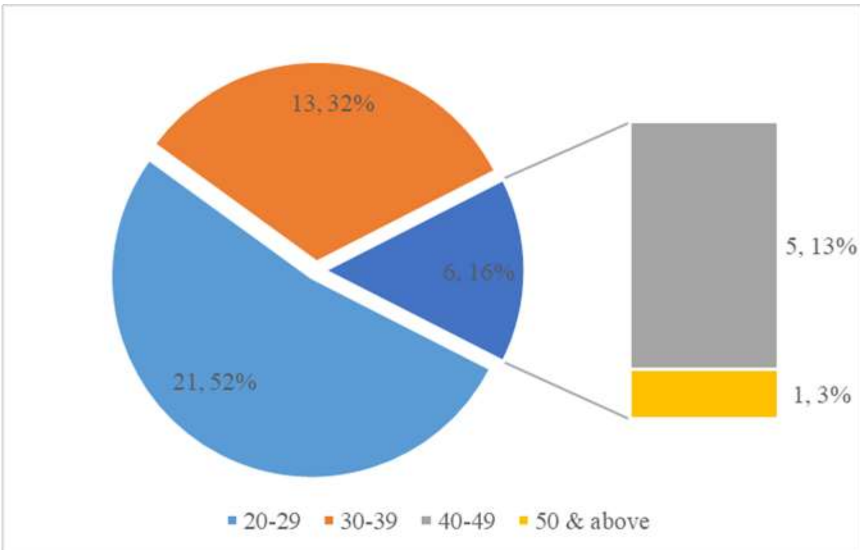
III. Results and Discussion

This chapter presents, interprets, and discusses the findings of the data collected throughout the research on the effectiveness of food waste management in all-you-can-eat restaurants in Urdaneta City, Pangasinan.

Profile of the Respondents

The respondents' profiles included age, sex, civil status, highest educational attainment, and number of years in service, with corresponding frequency counts (f) and percentages (%) for each category. Each variable was interpreted and analyzed accordingly. A total of 40 respondents were surveyed, resulting in a 100% frequency count for each variable.

Figure 5
Age
n = 40

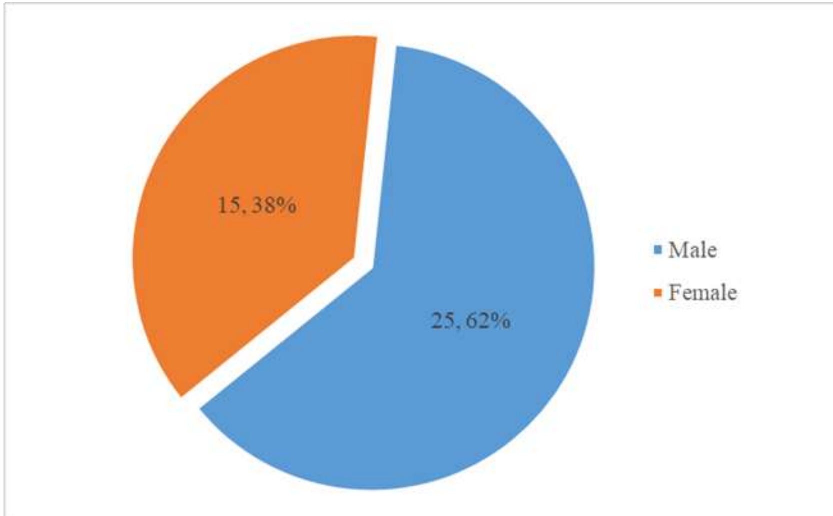


Age. Twenty-one out of forty respondents, or 52.5% of the total sample, were between the ages of 20 and 29.

In contrast, a relatively small percentage of respondents aged 50 and above was recorded at only 2%. These results indicated that employees in the all-you-can-eat (AYCE) setting were predominantly young workers. Young adults tended to be more adaptable and capable of managing demanding tasks, such as lifting heavy trays, while also demonstrating flexibility in handling a high volume of customers.

Harnett et al. (2021) reported that approximately 50% of service industry employees were under 30 years of Age, as these positions were easy to enter, required minimal qualifications, and offered flexible schedules attractive to young people balancing education and career. The report further noted that these roles provided young workers with valuable entry-level experience and transferable skills in customer service, teamwork, and time management, making restaurant work a popular choice among the younger generation as they remained in the sector while planning their future careers.

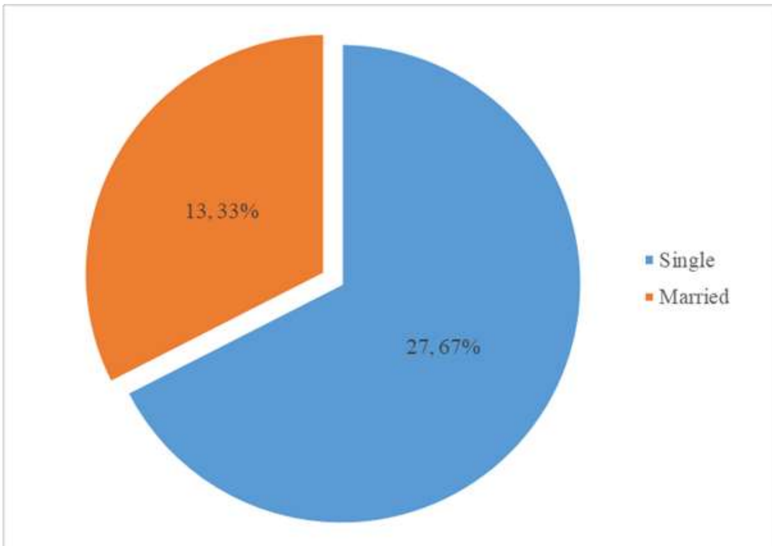
Figure 6
Sex
n = 40



Sex. Twenty-five out of forty respondents, or 62.5%, were male, while fifteen out of forty, or 37.5%, were female. This indicated that the higher number of male employees may have been attributed to the physical demands of restaurant work, such as lifting heavy trays, standing for extended hours, and moving swiftly during peak operations.

Studies by Silva and Couto (2023) revealed that the hospitality industry remains a sector with traditional values and significant male influence. Although the industry is generally gender-balanced in terms of employees, men typically perform the heavier tasks, which explains the male dominance observed in some regions of the restaurant sector.

Figure 7
Civil status
n = 40



Civil Status. Twenty-seven of forty respondents in all-you-can-eat restaurants were single, accounting for 67.5%, while thirteen were married, accounting for 32.5%.

The workforce was dominated by younger, single employees who were more flexible and willing to work different shifts.

Table 2
Food waste management practices are currently employed by the all-you-can-eat (AYCE) restaurant in terms of Prevention
n = 40

Indicator	WM	DE
Implement penalties or policies in charging for excessive leftovers to discourage food waste.	3.2	O
Provide signages or information to encourage customers to avoid overfilling their plates.	3.6	A
Monitors uneaten or frequently discarded food items.	3.65	A
Adjust food preparation based on customers flow like time of the dates and reservations.	3.35	A
Food items are labeled with preparations or expiration dates to ensure first-in-first out usage.	3.8	A
Average Weighted Mean	**3.52**	**A**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Always(A)
2.51 - 3.25	Often (O)
1.76 - 2.50	Rarely (R)
1.00 - 1.75	Never (N)

The food waste management practices currently employed by the all-you-can eat (AYCE) restaurants in terms of Prevention had a total average weighted mean of 3.52, corresponding to the descriptive equivalent of "Always" (A). This indicated a high level of awareness of food waste prevention.

The fifth indicator, "Food items are labelled with preparation or expiration dates to ensure first-in, first-out (FIFO) usage," received the highest mean score of 3.8, corresponding to the descriptive equivalent of “Always” (A). This indicated that among all prevention practices, labeling food items with preparation or expiration dates and applying FIFO were the most consistently implemented by AYCE restaurants.

Alamsyah and Putri (2024) emphasized the importance of FIFO in the food and beverage industry. Their study highlighted that using raw materials in the order they were received reduced the risk of spoilage or expiration neglect. This practice optimized raw material use, minimized waste-related losses, and improved the accuracy of inventory valuation and food cost management.

The first indicator, "Implement penalties or policies in charging for excessive leftovers to discourage food waste," scored the lowest mean of 3.2 and was characterized as “Often” (O). This suggested that while penalties or policies were often observed, AYCE restaurants remained reluctant to enforce them strictly due to potential customer complaints.

Table 3
Significant difference on the food waste management practices currently employed across profile variables
n=40

Profile	Prevention	Reduce	Reuse	Recycle	Recover	Disposal
	Sig.	Sig.	Sig.	Sig.	Sig.	Sig.
Age	.050	.289	.266	.011	.177	.028
Sex	.356	.709	.323	.861	.078	.651
Civil Status	.099	.604	.124	.018	.429	.25
Highest Educational Attainment	.211	.065	.029	.141	.067	.153
Number of Years in Service	.489	.401	.158	.169	.059	.307

Table 8 presents the significant differences in food waste management practices currently employed by all-you-can-eat (AYCE) restaurant employees across various demographic groups.

For Age, no significant differences were found, since the p-values extracted are greater than 0.05; therefore, the null hypothesis was not rejected for the practices related to reduce (p = 0.289), reuse (p = 0.266), and recover (p = 0.177), indicating Age did not influence employee behavior in these areas.

However, prevention (p = 0.05), recycling (p = 0.011), and disposal (p = 0.028) showed significant differences, since the p-values extracted are less than 0.05. Thus, the null hypothesis was rejected, indicating that respondents differed signifcantly in their engagement with these food waste management practices.

Regarding Sex, no significant differences since the p-value extracted are greater than 0.05, therefore the null hypothesis was failed to reject, it identifies in any of the food waste management practices prevention (p = 0.356), reduce (p = 0.709), reuse (p = 0.323), recycle (p = 0.861), recover (p = 0.078), and disposal (p = 0.651)—showing that gender did not affect how employees engaged in food waste management.

IV. Conclusions and Recommendations

This chapter includes conclusions drawn from the study aimed at identifying the food waste management practices employed by All You Can Eat Restaurants in Urdaneta City, Pangasinan. It also offers recommendations for staff management. Based on the findings, the following inferential statistics results were obtained: A significant majority of respondents were young, single, and male employees, with most having senior high school as their highest educational attainment and one to five years of work experience. Essentially, this rejected a typical case of the All-You-Can-Eat (AYCE) restaurant industry, which was vibrant and labor-demanding, and usually employed younger generations who chose this kind of work to balance their studies and career development conveniently. The study revealed that food waste management indicators were highly effective in minimizing food waste. Among these, the disposal indicator obtained the highest mean score, particularly in adhering to local regulations regarding proper waste disposal. The prevention indicator also demonstrated strong effectiveness, as food items were appropriately labeled with preparation or expiration dates to facilitate the first-in, first-out (FIFO) method of usage. The sub-indicator "Plans buffet menus based on demand patterns and seasonal ingredients" recorded the highest mean score under the decrease category. For the reuse category, the sub-indicator "Stores and cools leftover food following safety guidelines" achieved the highest mean score, with a descriptive equivalent of "Always." In the recycle category, "Participates in initiatives to improve recycling performance" emerged as the highest-rated indicator. Lastly, under the recovery category, the sub-indicators "Provides as staff meals" and "Offers as discounted meals at the end of the day" received the highest mean scores. The results indicated that food waste prevention, recycling, and disposal policies had a considerable impact on employees' Age. Civil status also showed a significant influence on recycling behavior, indicating differences in recycling practices among respondents based on their civil status. Additionally, educational attainment significantly affected food waste habits in terms of reuse, indicating that differences in reuse practices exist among employees across varying levels of educational attainment. Conversely, sex and number of years in service did not significantly affect how employees managed their food waste practices in prevention, reduction, reuse, recycling, recovery, and disposal. The following recommendations are provided based on the stated findings and conclusions. All-You-Can-Eat (AYCE) restaurants in Urdaneta City should implement a system to monitor the weekly quantities of food waste, including sorting and recycling efforts. Employee schedules should be rotated to ensure that all staff acquire knowledge and experience in tracking food waste. AYCE restaurants in Urdaneta City should establish partnerships with accredited food banks and local charities and donate surplus food to nearby orphanages to support the community. AYCE restaurants may improve their waste segregation practices by providing clearly labeled bins and conducting regular employee training sessions.

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Marketing Mix of Bangus Farm Owners in Dagupan City

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Abstract — Dagupan City, recognized as the Bangus Capital of the Philippines, is renowned for its milkfish (Chanos chanos), celebrated for its exceptional taste and tenderness. Bangus farming serves as a significant source of livelihood for residents; however, farmers face various challenges that affect both product quality and profitability. This study employed a quantitative research design to assess the difficulties encountered by bangus farmers in Barangay Pugaro, Dagupan City. A total of 40 farmers participated in the study through convenience sampling, and the data were analyzed using frequency, percentage, and weighted mean.

Results revealed that 25% of the respondents were aged 48–50 years (Generation X), 75% were male, and 77.5% had been engaged in bangus farming for six years or more. The computed average weighted means were as follows: product (2.73), price (3.28), place (3.01), promotion (2.73), people (3.51), and challenges (1.94). Findings indicated that the majority of farmers did not utilise social media platforms to market or promote their products. Additionally, many respondents did not engage in value-adding practices, such as producing daing (dried bangus) or tinapa (smoked bangus), which could potentially extend product shelf life and enhance income. Furthermore, all respondents reported that natural disasters, particularly typhoons and extreme heat, hurt their production and profit margins. To address these challenges, the study recommends that farmers utilize social media platforms, such as Facebook, to promote their products. Bangus farm owners should also prioritize the maintenance and repair of equipment and nets before typhoon seasons and engage in value-adding activities, such as producing daing and tinapa. These strategies are expected to enhance income stability, preserve product quality, and improve the overall sustainability of bangus farming in Dagupan City.

Keywords — Marketing mix, Marketing strategies, Production, Aqua farming, Business, Economic Growth, Aquatic Resources

I. Introduction

The milkfish (Chanos chanos), the sole species in the family Chanidae, inhabits tropical and subtropical waters and has a distribution that extends to South Africa, Hawaii, Japan, Australia, and the Red Sea. It plays an essential ecological role in coastal ecosystems. In the Philippines, milkfish are cultured in freshwater, marine, and brackish water systems. As a staple of Filipino cuisine, milkfish holds significant cultural and economic value, ranking among the most widely consumed fish species in the country. It is marketed and served in various forms, fresh, dried, smoked, or filleted, both locally and internationally. Although Indonesia surpassed the Philippines in milkfish production in 2010, Indonesia had long been recognised as the world's leading producer of milkfish.

In other developing nations such as Nigeria, aquaculture serves as a vital sub-sector that contributes significantly to employment generation, foreign exchange earnings, food security, and the empowerment of small communities (Pramono et al., 2022; Mulokozi et al., 2020). As one of the fastest-growing sectors in global food production, aquaculture presents immense potential as a sustainable protein source, especially for communities that depend heavily on fish for their livelihoods (Issa et al., 2022). Despite its rapid growth, aquaculture currently accounts for only a small portion of Nigeria's total fish production, indicating the need for further investment and development in the industry.

The aquaculture sector now accounts for over half of the world's total fish production, ensuring food security, nutrition, and sustainable livelihoods for millions worldwide (Galappaththi et al., 2020). The sector's growth is attributed to advancements in farming methods, efficient feed utilisation, and the maintenance of high-quality farmed fish meat (Ogueji et al., 2020). Moreover, aquaculture stimulates job creation across associated industries, including seafood processing, packaging, distribution, and equipment manufacturing.

According to the Food and Agriculture Organisation of the United Nations (FAO, 2020), aquaculture supports employment across a broad spectrum of fields, ranging from administrative and technical to scientific research, thereby contributing significantly to national economic development. With continued population growth, urbanisation, and rising awareness of sustainability and nutrition, global demand for aquaculture products, particularly fish, is expected to continue increasing, providing new opportunities for countries to participate in this sector (Celik & Akmermer, 2020).

In Brazil, increasing aquaculture consumption requires a deep understanding of consumer behaviour. Effective marketing strategies depend on comprehensive studies of consumption frequency, habits, and factors influencing purchasing decisions for species such as catfish, tilapia, tambaqui, and white-leg shrimp (Filho et al., 2020).

Due to the lack of extensive studies on seafood consumption patterns across Brazilian states, there is an urgent need for more research on consumer preferences.

Flores et al. (2021) indicated that understanding these factors can improve marketing approaches and stimulate demand for aquaculture products in Brazil. Beyond meeting global demand, the expansion of aquaculture production has proven to be a more sustainable and healthier alternative to red meat (Golden et al., 2022; Falcon et al., 2022). The continued growth of the industry offers countries opportunities to address environmental and nutritional challenges.

Over the past 25 years, aquaculture has evolved into a mature global industry, with production volumes having tripled (Garlock et al., 2022). Implementing effective marketing practices—including efficient fish handling, processing, and distribution—is crucial to ensuring that consumers receive fresh, high-quality products, thereby increasing both profitability and sustainability (Khanal et al., 2020).

Since the Spanish colonial period, the Philippines has been a significant hub for trade and commerce. The presence of bustling towns and marketplaces has long supported local economic growth by providing accessible venues for small business owners (Carmen et al., 2020; Zhong et al., 2020). These traditional markets, offering a wide range of fish species, play a crucial role in preserving regional biodiversity and strengthening local economies (Alfian et al., 2020).

The Philippines remains one of the leading producers of milkfish (Chanos chanos) in Southeast Asia. According to the Bureau of Fisheries and Aquatic Resources (BFAR, 2021), Milkfish farming serves as a significant source of livelihood for coastal communities. However, many small-scale farm owners face challenges in accessing larger markets due to limited logistics, inadequate cold storage facilities, and a lack of value-adding opportunities.

Government initiatives such as the DA-BFAR's "Fish Market on Wheels" and "Fish Tiangge" aim to connect farmers directly with consumers and institutional buyers. These programs are designed to eliminate intermediaries and increase farmers' income.

Moreover, cooperative marketing models are being encouraged to enhance the bargaining power and collective marketing capabilities of small-scale producers (DA-BFAR, 2020). With the rise of digital marketing, some milkfish farmers have begun promoting and selling their products on platforms such as Facebook, Shopee, and Lazada, as e-commerce becomes increasingly relevant in the post-pandemic era (Caballes et al., 2022).

Beneath the shimmering brackish waters of the northern Philippine province of Pangasinan lies a quiet powerhouse of aquaculture, a region that contributes a staggering portion of the country's fish harvest. Aquaculture remains a cornerstone of the Philippines' food security and economic development, with the northern province of Pangasinan emerging as a pivotal contributor by supplying approximately 27% of the country's annual fish production (Reyes et al., 2023). The region's unique brackish-water environments have fostered the cultivation of milkfish, locally known as bangus, which has become synonymous with both cultural identity and economic vitality in the area (Salazar et al., 2024). At the heart of this aquaculture hub lies Dagupan City, widely recognized as the center of Pangasinan's thriving fish farming industry, where innovations in sustainable practices and market expansion continue to elevate the local and national significance of bangus production (Garcia et al., 2023).

This dynamic interplay of natural resources, cultural heritage, and economic activity underscores Pangasinan's critical role in advancing the Philippines' aquaculture sector amid evolving global demands and sustainability goals. According to the City Government of Dagupan

(2002), then-Mayor Benjamin Lim introduced the Milkfish Festival to honour the significance of milkfish in the local economy and culture while emphasising the quality and importance of the region's fish production at both national and international levels.

BANGUS (MILKFISH) has long been a staple in Filipino diets, valued for its mild flavour, excellent nutritional value, and cultural significance. It is the top fish commodity produced in the country. In 2023, the value of production amounted to PhP45.9 billion, equivalent to 13.9 percent of the total fisheries production and about two percent of the total agriculture and fisheries output (J. Orzales, 2024)

The demand for milkfish is robust in countries with large Filipino communities, where it is regarded as both a culinary delicacy and a cultural symbol. Owing to the strong domestic and international demand, local farmers are encouraged to adopt improved farming practices, technological innovations, and modern marketing strategies to maintain competitiveness.

The Philippine Fisheries Code of 1998 (Republic Act No. 8550) has played a crucial role in regulating the aquaculture industry, ensuring that milkfish farmers, particularly in Dagupan City, practice sustainable, environmentally responsible aquaculture practices. This legislation enforces strict quality standards for fish farming, including proper handling, sanitation, and eco-friendly practices.

Compliance with these standards enables farmers to produce high-quality milkfish that meet both domestic and international market requirements. Furthermore, the law provides government support through financial assistance, training programs, and access to technological advancements, thereby enhancing farmers' productivity and market competitiveness.

Aligned with the United Nations Sustainable Development Goals (SDGs), specifically SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 14 (Life Below Water), the milkfish industry in Bonuan, Dagupan City, demonstrates significant potential to promote both economic development and environmental sustainability. Through digital marketing, promoting eco-friendly practices, and collaborating with sustainable enterprises, milkfish farmers can expand their market reach, enhance income opportunities, and safeguard marine ecosystems. These initiatives foster long-term growth while preserving natural resources and promoting responsible aquaculture practices.

This study aimed to investigate the marketing practices of Bangusfarm owners in Dagupan City.

The objective was to generate insights that could inform strategic recommendations for improving their marketing approaches. These findings were expected to contribute to the overall growth of the local fish farming industry, enabling farm owners to better adapt to the evolving market landscape and enhance their competitiveness in both local and broader markets.

Literature Review

The Marketing Mix, also known as the 5Ps, was developed by E. Jerome McCarthy in 1960 and served as a widely used framework for analysing and planning marketing strategies. Later on, Philip Kotler expanded the model by adding People as the fifth element of the mix.

The five key components, Product, Price, Place, Promotion, and People, represented the major decision areas that businesses needed to consider in effectively marketing their goods and services.

The Product referred to a business offering designed to meet the needs and wants of its target market, encompassing both physical goods and services. In the context of bangus (milkfish) farm owners, the Product included live bangus, whether fresh or frozen, as well as value-added products such as processed or packaged milkfish. Price denoted the amount customers were willing to pay for the Product. It influenced demand, profitability, and competitive positioning. Bangus farmers had to consider several factors, such as production costs, market demand, competitors' pricing, and consumer willingness to pay when determining appropriate price levels.

Place pertained to the distribution channels used to make products accessible to consumers. These channels included direct selling in local markets, transactions through middlemen, and online platforms. Efficient distribution systems were particularly crucial for perishable goods such as bangus to maintain product freshness and quality.

The promotion used various communication strategies to inform, persuade, and remind customers about the Product. These strategies included word-of-mouth advertising, participation in trade fairs, social media marketing, e-commerce promotion, and branding or packaging innovations that enhanced product appeal.

People referred to the employees, sales personnel, and other individuals who represented the business and interacted with customers, as their knowledge, attitude, and service quality directly influenced customer satisfaction and loyalty. Overall, the 5Ps strategy enabled bangus farm owners to develop competitive marketing plans by optimizing product offerings, pricing decisions, distribution methods, and promotional efforts. This approach enhanced their market visibility, customer engagement, and profitability, contributing to the sustainable growth of the local aquaculture sector.

Statement of the Problem

This study aimed to determine the marketing mix strategies employed by bangus (milkfish) farm owners in Dagupan City.

Specifically, it sought to address the following research questions:

1. What is the profile of the respondents in terms of:
   a. Age;
   b. Sex; and
   c. No. of years in Bangus farming?
2. What marketing mix do Bangus Farm Owners in Dagupan City currently employ to promote and sell their products in terms of:
   a. Product;
   b. Price;
   c. Place;
   d. Promotion; and
   e. People?
3. What challenges do Bangus Farm Owners face in implementing effective marketing mix?
4. What action plan be proposed to enhance or improve The Marketing Mix Strategies do Bangus Farm owners?3. Is there a significant difference in the skill competency of the athletes on their profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the research design and strategy, the study's population and locale, the data-gathering tool, data-gathering procedures, instrument validation, statistical analysis of the data, and ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design using a survey questionnaire. This method was selected as the most appropriate approach for gathering data on the marketing strategies of bangus (milkfish) farm owners in Dagupan City.

As McCombes (2023) stated, the goal of descriptive research is to systematically observe and describe the characteristics of a population, phenomenon, or situation without manipulating variables. It addressed questions such as "what," "where," "when," and "how," rather than "why." This method proved useful for identifying patterns, occurrences, and classifications within the specific research topic.

Population and Locale of the Study

The target population for this study comprised bangus (milkfish) farm owners and operators in Dagupan City. According to the Dagupan City Agriculture Office, there were approximately 773 bangus farming units across the city, utilizing a combined area of 915 hectares for fishponds and 5.411 hectares for fish cages.

These farms collectively produced an estimated 2,639 metric tons of bangus annually, with 40 registered farm owners. A representative sample was selected using appropriate sampling techniques to ensure that the study's findings reflected the broader farming community.

Data Gathering Tool

The researchers used a developed survey questionnaire as the primary instrument for collecting information on the study variables. The instrument was designed to be both reliable and valid. The questionnaire was divided into three sections. The first section focused on the profiles of bangus farm owners. The second section examined the marketing mix strategies currently employed by bangus farm owners in Dagupan City to promote and sell their products, specifically in terms of Product, place, price, and promotion. The third section investigated the challenges faced by farm owners in implementing effective marketing strategies.

To ensure validity, the survey questionnaire was reviewed and validated by three experts. Part 2 of the survey was structured using a four-point Likert scale with the following descriptors: 4 – Strongly Agree, 3 – Agree, 2 – Disagree, and 1 – Strongly Disagree. Part 3 of the survey also employed a four-point scale, detailed as: 4 – Always, 3 – Often, 2 – Sometimes, and 1 – Never.

Data Gathering Procedure

The researchers formally sought permission from the Bangus farm owners to conduct the study. They also consulted their research adviser on the appropriate procedures for data collection. The nature and purpose of the study were thoroughly explained to ensure the full cooperation of the Bangus farm owners.

The researchers personally distributed the questionnaires via face-to-face interviews with the Bangus farm owners. The questions were administered directly by the researchers, who carefully and strictly adhered to the prescribed instructions.

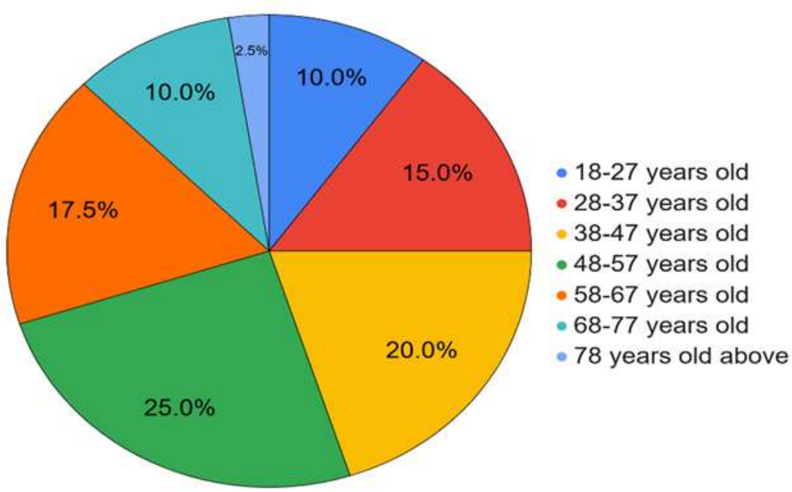
The researchers analyzed the retrieved questionnaires to determine the marketing strategies employed by Bangus farm owners in Dagupan City. After collecting all the completed questionnaires, the researchers compiled and tabulated the data for analysis.

III. Results and Discussion

This chapter presents, interprets, and discusses the findings of the data collected throughout the research on the Marketing Mix of Bangus Farm Owners in Dagupan City

The profile included age, sex, and number of years in Bangus farming, along with their corresponding frequency counts (f) and percentages (%) for each category. Each variable was presented with its respective interpretation and analysis. A total of 40 respondents were surveyed, yielding a frequency count of 40 for each variable.

Figure 4
Age
n=40



Age. The data indicated that 10 out of 40 respondents, representing 25% of the total, were between the ages of 48 and 57. A relatively small number of respondents, or 4%, were aged 78 or older.

This finding suggested that Bangus farm owners were typically in the age range of 48 to 57, likely due to accumulated experience, sufficient capital, land ownership or inherited assets, and the ability to manage technical, financial, and environmental challenges. Younger individuals were often hindered by barriers such as limited startup capital, risk aversion, and restricted access to land, training, or credit.

In the study titled "The Cultural Management and Some Economic Aspects of Milkfish (Chanos chanos) Culture" (2023), conducted in Pontevedra, Capiz, most milkfish pond owners were between 41 and 50 years old, with the oldest fishpond owner falling within the age range of 71 to 80 years. This finding suggested that many farmers were in their 50s, and some had continued their aquaculture activities well beyond the typical retirement age, demonstrating that older farm owners were relatively common in the industry.

Table 1
The marketing mix do bangus farm owners currently employ to promote and sell their products in terms of product
n=40

Indicators	WM	DE
1. Striving to innovate or improve our bangus production methods to enhance product quality.	3.43	SA
2. The size of the milkfish is suitable for target market.	3.48	SA
3. Experience shortage on the milkfish demands of big customers or suppliers.	3.1	A
4. Customer complains about the quality of the milkfish.	1.73	SD
5. Offers other milkfish products like daing, and tinapa to the market and not only fresh milkfish	1.9	D
Average Weighted Mean	**2.73**	**A**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Strongly Agree (SA)
2.51 - 3.25	Agree (A)
1.76 - 2.50	Disagree (D)
1.00 - 1.75	Strongly Disagree (SD)

The marketing mix that Bangus farm owners employed to promote and sell their products, in terms of the product dimension, yielded a total weighted mean of 2.73, corresponding to the descriptive equivalent of "Agree" (A). This finding indicated that Bangus farm owners applied the product dimension of the marketing mix only moderately. Nonetheless, the relatively modest score suggested that there remained considerable potential for improving product-related marketing practices among Bangus farm owners.

The second indicator, *"The size of the milkfish is suitable for the target market,"* obtained the highest mean of 3.48, corresponding to the descriptive equivalent of "Strongly Agree (SA)." This finding indicated that Bangus farm owners strongly believed that the milkfish they produced were well aligned with consumer preferences and market demand.

In the study conducted by Chong et al. (2025) in the Philippines, consumers demonstrated a preference for smaller milkfish, generally weighing between 200 and 250 grams, due to traditional cooking methods and appropriate portion sizes for family meals. Market segments varied in their preferred sizes: wet markets favoured smaller fish for household consumption, while institutional buyers preferred larger sizes for processing or export. Consumer preferences, market demands, and production practices determined the ideal size of milkfish in the Philippines. Aligning production with these factors enhanced profitability and effectively met consumer needs.

Table 2
The marketing mix do bangus farm owners currently employ to promote and sell their products in terms of in terms of price
n=40

Indicators	WM	DE
1. Monitoring customer responses to prices and make adjustments when necessary.	3.18	A
2. Pricing strategy reflects the quality and value of the milkfish products.	3.40	SA
3. Changes in pricing in every season.	3.33	SA
4. The price is affordable for most consumers in the target market.	3.38	SA
5. Consumers are sensitive to changes in Bangus prices.	3.13	A
Average Weighted Mean	**3.28**	**SA**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Strongly Agree (SA)
2.51 - 3.25	Agree (A)
1.76 - 2.50	Disagree (D)
1.00 - 1.75	Strongly Disagree (SD

The marketing mix that Bangus farm owners employed to promote and sell their products, in terms of the price dimension, yielded a total weighted mean of 3.28, corresponding to the descriptive equivalent of "Strongly Agree (SA)." This finding indicated strong agreement that the pricing strategies for milkfish products were appropriate and effectively implemented. It further suggested that pricing represented a key strength in the marketing mix of Bangus farm owners.

The second indicator, *"Pricing strategy reflects the quality and value of the milkfish products,"* obtained the highest mean of 3.40, corresponding to the descriptive equivalent of "Strongly Agree (SA)." This finding indicated strong agreement that the pricing of the milkfish products was perceived as affordable for most consumers. It suggested that affordability represented a key strength in the pricing strategy, enhancing accessibility and market fit.

In the study conducted by Yusof (2023), which explored the Influence of Consumer Behaviour on Purchasing Decisions for Boneless Milkfish: Partial Least Squares Structural Equation Modelling (PLS-SEM) Methods, it was identified that product quality factors, including taste and packaging, along with price considerations, played crucial roles in consumers' purchasing decisions. This suggested that consumers were willing to pay a premium for milkfish products that offered higher perceived quality and added convenience.

Table 3
The challenges table do Bangus Farm Owners face in implementing effective marketing mix
n=40

Indicators	**WM**	**DE**
1. Limited knowledge or use of modern marketing tools (social media, digital ads).	2.03	S
2. Price competition from larger farms or imported fish.	1.88	S
3. Many farms offer similar bangus products, making it hard to start stand out.	2.03	S
4. Farm owners may lack training in marketing principles and strategy.	1.6	N
5. Lack of capital to invest in marketing activities (branding, packaging, promotions).	2	S
6. Our supply during harvest season leads to lower prices.	2.38	S
7. Inconsistent adherence to food safety and quality standards.	1.83	S
8. Competing with large scale producers or imported seafood products.	2.25	S
9. Weak online branding causes to reach unfair overseas market.	1.38	N
10. Short shelf life of bangus without proper equipment.	2.08	S
Average Weighted Mean	**1.94**	**S**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Always (A)
2.51 - 3.25	Often (O)
1.76 - 2.50	Sometimes (S)
1.00 - 1.75	Never (S)

The challenges that Bangus farm owners faced in implementing an effective marketing mix obtained a total average weighted mean of 1.94, with a descriptive equivalent of "Sometimes (S)." This finding suggested that while farm owners occasionally encountered challenges in applying the marketing mix, these issues were not perceived as constant or overwhelming.

The sixth indicator, *"Our supply during harvest season leads to lower prices,"* received the highest weighted mean score of 2.38, corresponding to the descriptive equivalent of "Sometimes (S).".

This indicated that while an increased supply during harvest periods occasionally led to lower prices, this outcome was not consistent and often depended on various market factors.

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions derived from the study, which aimed to identify the marketing practices employed through the marketing mix by Bangus farm owners in Dagupan. It also provided recommendations intended to guide Bangus farm owners in improving their marketing strategies.

The majority of the respondents were male, primarily belonging to Generation X, and possessed more than six years of experience in Bangus (milkfish) farming. This demographic profile indicated that Bangus farm owners in Dagupan City were predominantly older males with substantial experience in fish farming, suggesting their capability to sustain and effectively manage the Bangus farming business. In the analysis of the marketing mix for Bangus (milkfish), it was noted that the attitudes of both staff and owners played a significant role in influencing customer loyalty. The target market accepted the sizes of milkfish currently available, and the pricing of the fish reflected their quality and size as determined by the farm owners. Bangus products were readily accessible to consumers in the market, and the geographic locations of farm owners, along with their distribution routes, appeared to have minimal impact on sales.

Furthermore, Bangus farm owners in Dagupan actively participated in local events and agricultural fairs, which contributed to their knowledge and exposure to market trends and promotional opportunities. The challenges faced by bangus farmers in Dagupan City while implementing marketing mix were not constant and not alarming; the farm owners occasionally face competition from large-scale producers and imported seafood products, and the shelf life of bangus without proper equipment appeared to have little impact on the bangus farming business. The price of bangus during harvest season led to lower prices occasionally, and the farmers sometimes faced a lack of capital to invest in marketing activities such as branding, packaging, and promotions. Some of the farm owners were inconsistently following the food safety and quality standards; they also have limited knowledge in using social media and digital ads as their marketing tools.

To enhance the sustainability and profitability of milkfish farming, it is imperative for farm owners to adopt a multifaceted approach that addresses production efficiency, market access, and consumer engagement. Bangus farm owners should establish a clear limit on harvest volumes to prevent shortages during negotiations and order fulfillment with large suppliers or customers. Accurate assessment of harvested quantities is essential to ensure that demand from key partners can be reliably met. Farm owners should communicate factors influencing bangus pricing to consumers, as market prices fluctuate according to the harvesting season. Proactive dissemination of pricing information can reduce consumer complaints and enhance acceptance of market-driven price variations. Farm owners should pursue supply agreements with supermarkets to expand market reach and secure larger clientele. Concurrently, the strategic use of social media platforms, such as Facebook, TikTok, and Instagram, is recommended to promote products, increase visibility, and attract a broader consumer base. Farm owners should implement traditional marketing strategies, including flyers and posters, particularly prior to harvest, to enhance product visibility. Additionally, maintaining active communication with customers to understand their preferences can facilitate meeting consumer needs and strengthen customer loyalty.

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The effect of Ready-to-Eat Meals on the lifestyle of Hospitality Management Students

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Abstract — Ready-to-Eat (RTE) meals, defined as pre-cooked food products requiring minimal or no preparation, provide a convenient and time-efficient means for students to meet their daily nutritional needs. Increasingly popular among university students, RTE meals offer affordability and accessibility suited to modern academic life. This study examined the effects of RTE meal consumption on the lifestyle of Hospitality Management students at Urdaneta City University and its relevance to selected Sustainable Development Goals (SDGs).
RTE meals contribute to SDG 2: Zero Hunger by offering budget-friendly options that help reduce malnutrition; SDG 3: Good Health and Well-Being by promoting mindful dietary choices; SDG 12: Responsible Consumption and Production through portion control and eco-friendly packaging; and SDG 17: Partnerships for the Goals by encouraging collaboration among schools, communities, and stakeholders to promote healthier and more sustainable food practices. A quantitative-descriptive research design was employed, involving 284 respondents from first to third year through stratified sampling. Data were analyzed using the T-test and Kruskal–Wallis test to identify differences in lifestyle indicators across sex, year level, and daily allowance. Findings showed that most respondents were female (58%) and that first-year students formed the largest group (36%). Academic performance and focus obtained the highest mean scores, followed by sleep quality, while dietary habits and self-control were lowest. The study concludes that although RTE meals provide convenience, excessive dependence may negatively influence health-related behaviors. It recommends promoting nutritional awareness and encouraging students to prepare simple, wholesome meals that support well-being and advance sustainable consumption aligned with the SDGs.

Keywords — Ready-to-eat meals, busy lives, convenience, Nutrition

I. Introduction

Ready-to-eat (RTE) meals have grown increasingly popular among students seeking quick, convenient, and affordable food solutions. Many students face challenges in preparing their own meals as they must balance class schedules, homework, and extracurricular activities. These meals save students time and enable them to manage their busy lives without compromising their academic responsibilities or other commitments. Beyond convenience, RTE meals provide students with accessible and budget-friendly options to maintain energy throughout the day. Understanding why students prefer RTE meals and how these meals impact their health can support efforts to promote healthier eating habits and improve meal quality, ensuring that students receive adequate nutrition for both academic and personal success.

Ready-to-eat meals are pre-cooked food products designed for immediate consumption with minimal or no preparation required. Convenience stores serve as a primary source for individuals with busy lifestyles or limited time to cook. RTE meals are also commonly consumed by travelers and in emergencies. The primary purpose of these products is to offer convenience; they can be consumed directly or heated if necessary. These meals appeal to busy populations—including students, employees, and parents, who seek to save time and effort by reducing the need to cook.

Food consumption is fundamentally associated with closely linked to the Sustainable Development Goals (SDGs). In particular, ready-to-eat (RTE) meals contribute to:

SDG 2: Zero Hunger by reducing the time required for food preparation and improving access to nutritious food. This enhanced accessibility plays a vital role in preventing malnutrition and promoting better dietary intake among a wider population. Additionally, the affordability and broad availability of RTE meals support efforts toward the global eradication of hunger.

SDG 3: Good Health and Well-Being. Which seeks to ensure access to healthier food choices that improve overall quality of life. SDG 3 stresses the significance of a balanced diet, noting that excessive consumption of processed foods may increase the risk of lifestyle-related illnesses. Since dietary behaviors have a direct impact on health outcomes, RTE meals are critically connected to the achievement of this goal.

SDG 12: Responsible Consumption and Production. Portion-controlled RTE meals help minimize food waste. By providing accessible, nutritious food to individuals facing cooking challenges, busy students, and low-income families, these sustainable practices benefit from these sustainable practices.

Several studies have examined RTE meal consumption among students. Choi (2021) found that younger age groups, particularly college students, increasingly consume RTE foods and highlighted related dietary habits, lifestyle patterns, and demographic characteristics. Choudhury et al. (2022) reported that students who eat prepared meals save 30 to 45 minutes daily, often reallocating this time for study or relaxation.

However, Thompson (2023) found that frequent consumers of RTE meals expressed concerns about long-term health effects and a sense of losing control over their dietary choices.

Tianchon (2025) explored the relationship between consumer buying behavior and perceptions of RTE foods among college students, noting that increasing academic demands significantly influence students' mental health and lifestyle choices, especially in rigorously trained fields like hospitality management. Calonia (2022) documented that most students experienced moderate to extreme stress, with a significant link between academic stress and mental health issues. According to Smith and Rogers (2020), students who regularly consumed RTE meals exhibited higher incidences of weight gain, fatigue, difficulty concentrating, and lower physical activity levels. These outcomes may negatively impact cognitive function and academic performance with possible long-term lifestyle consequences.

Adegboye et al. (2020) observed that students consuming RTE foods more than three times per week scored lower on memory and attention tests compared to those who maintained balanced diets. Kusuma et al. (2020) found that university students with frequent RTE meal consumption demonstrated irregular eating patterns, reduced intake of essential nutrients, and greater reliance on fast food, which adversely affected their energy and academic focus. Rachmawati et al. (2021) noted that rising RTE meal consumption among hospitality students, who often manage unpredictable schedules and internships, is associated with diminished dietary diversity and physical wellness, key indicators of lifestyle quality.

Almohanna et al. (2021) highlighted that unhealthy eating behaviors, including frequent RTE meal consumption, were linked to decreased physical activity, poorer sleep quality, and increased stress. This study underscored the complex interplay between diet, academic pressures, and personal well-being.

Delicado-Soria et al. (2021) analyzed food consumption among Tunisian university students, associating dietary patterns with sociodemographic and lifestyle factors. Socioeconomic status significantly influences students' access to and choices of RTE meals (Delicado-Soria, 2021). Budget constraints often lead students to select cheaper, less nutritious options (Ahmed & Patel, 2023).

Cadungog et al. (2023) stated that taste, price, and availability are primary factors influencing RTE consumption among college students in Davao del Norte. Although RTE meals are appreciated for their convenience, promoting healthy food choices among youth is critical, given the associations between high consumption of ultra-processed foods, which include many RTE products, and long-term health risks. Avram et al. (2024) found that intensive academic schedules exacerbate unhealthy eating habits, irregular meal patterns, and excessive snacking among students.

Laguna et al. (2020) demonstrated that consumer perceptions of liking, safety, and healthiness of RTE meals are influenced by packaging and sensory qualities, which may offset negative perceptions of these products. Moreover, Republic Act No. 7394 (Consumer Act of the Philippines) protects Filipino consumers by enforcing quality, safety, and truthful labeling standards for goods and services, including RTE meals. Proper labeling, detailing full complete ingredient lists, is vital for individuals with dietary restrictions or allergies, safeguarding consumers' rights to information and equitable treatment while holding producers and retailers accountable.

Research by Villanueva et al. (2022) revealed increased anxiety and depression levels among Filipino college students, attributable to academic pressures, health concerns, and social isolation. Similarly, Pérez-Fuentes et al. (2021) found that higher perceived stress correlates with lower academic performance and life satisfaction internationally.

Ready-to-eat meals often present an economical choice for students with limited financial resources, as they tend to cost less than freshly cooked alternatives (Reyes & Castro, 2022). However, overreliance on RTE foods can lead to negative adverse psychological outcomes such as low self-esteem, guilt, and dissatisfaction with lifestyle choices. Furthermore, reliance on convenience foods may reduce opportunities to develop critical culinary and budgeting skills crucial for long-term self-reliance (Martinez & Gomez, 2021). Gonzales and Antoni (2020) observed a decline in healthy eating among Cebuano youth, who increasingly favor instant or ready-made foods, underscoring the need for moderation and balanced diets to sustain health.

This study aimed to investigate the impact of RTE meal consumption on students' eating patterns, such as meal frequency and preferences for convenience over nutrition. It sought to understand potential health consequences, including effects on energy levels, weight management, and long-term health risks. Additionally, the study will examine how RTE meals influence students' time management.

Factors such as cost, accessibility, peer influence, and geographic location also affect students' choices to consume RTE meals.

Despite extensive research on RTE meals and their general health effects, substantial gaps remain regarding their specific impact on students, particularly Hospitality Management students at Urdaneta City University. Existing literature primarily focuses on adults, employees, or the general population, yet students face unique routines and pressures.

With constrained schedules, limited financial means, and continuous academic demands, many students resort to RTE meals for convenience. Nevertheless, limited information exists on how these meals affect their health, time management, social life, and dietary habits.

Literature Review

Maslow's Hierarchy of Needs is a psychological theory proposed by Abraham Maslow (1943) that organizes human needs into a five-tier pyramid, ranging from basic physiological needs to higher-level psychological needs. This framework facilitates the understanding of consumers' motivations for choosing ready-to-eat (RTE) meals at various levels of need.

At the physiological level, the focus is on immediate hunger relief and convenience, which makes ready-to-eat meals particularly popular among busy students.

The safety level pertains to the desire to avoid health risks, making trusted brands and clear labeling critical factors in RTE meal selection. The social level emphasizes the communal aspect of eating, where culturally familiar and shareable ready-to-eat meals reinforce social bonds and foster a sense of community. At the esteem level, ready-to-eat meals can function as status symbols, reflecting personal values such as health consciousness and environmental responsibility.

Finally, the self-actualization level highlights ethical consumption and personal expression through dietary choices, where consumers use their food preferences to align with their values and aspirations.

This theory is designed to address human needs quickly and efficiently by providing basic sustenance. For individuals who are busy or lack time to cook, ready-to-eat meals offer a convenient way to fulfill nutritional requirements with minimal effort. This study aims to investigate the consumption behavior of ready-to-eat meals and identify the types of such meals consumed based on the recommended daily intakes of first to third year Hospitality students at Urdaneta City University.

Statement of the Problem

This study aimed to determine the level of badminton skill competencies of athletes on strength and conditioning.

Specific, it sought to answer the following questions:

1. What is the profile of the respondents?

    a. Athletes

        i. Age

        ii. Sex

This study aimed to determine the effect of ready-to-eat meals on the lifestyle of Hospitality Management students.

Specifically, it sought the answers to the following questions:

1. What is the profile of the respondents in terms of:
    a. Sex;
    b. Year Level; and
    c. Daily Allowance?

2. What are the effects of ready-to-eat (RTE) meals on the lifestyle of the hospitality student in terms of the following:
   a. Physical Activity;
   b. Health & Well- Being;
   c. Academic Performance & Focus;
   d. Self-Quality & Rest; and
   e. Dietary Habits & Self-Control?
3. Is there a significant difference between the effect of ready-to-eat (RTE) meals on the lifestyle of the hospitality student across profile variables?

II. Methodology

This section describes the research methodology utilized to conduct the study. It discusses the research design and strategy, population and locale of the study, data gathering tools, data gathering procedures, validation of the instruments, statistical treatment of data, and ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design using a survey questionnaire to collect data. This methodological choice was deemed most appropriate for investigating "The Effect of Ready-to-Eat Meals on the Lifestyle of Hospitality Management Students," as it facilitated the systematic gathering of quantitative and qualitative data directly from the target population.

By utilizing a structured questionnaire, the study aimed to capture comprehensive and reliable information regarding students' eating habits, lifestyle patterns, and perceptions related to ready-to-eat meals consumption.

Descriptive research methods are fundamentally designed to observe and describe phenomena as they naturally occur, without experimental manipulation or intervention. This approach allowed the researchers to explore the characteristics, behaviors, and conditions of the study participants in their real-life context.

The descriptive framework focused on answering fundamental questions such as "what" behaviors existed, "where" these behaviors took place, they occurred "when" they occurred, and "how" participants engaged with ready-to-eat meals in their daily lives.

Moreover, as emphasized by Siedlecki (2020), descriptive survey designs serve the critical function of collecting data that provide a systematic and detailed description of the defining features or factual characteristics of a specific population. In this study, the descriptive survey facilitated an in-depth understanding of the patterns and trends concerning the effect of ready-to-eat meals on students' lifestyles, offering essential insights that could inform future interventions, policy recommendations, and academic discourse.

Population and Locale of the Study

The study focused on students at Urdaneta City University who consumed ready-to-eat meals, specifically targeting those enrolled in the first, second, and third years of the Hospitality Management program. This population was selected due to their unique dietary behaviors influenced by academic demands and lifestyle factors associated with their course of study. A total of 284 respondents comprised the sample, representing a significant segment of the student body within the program.

To ensure the representativeness and reliability of the data collected, the researchers employed a stratified sampling technique.

This approach involved dividing the target population into distinct strata based on academic year level, and then selecting individuals from each stratum who exhibited consistent patterns of consuming ready-to-eat meals.

By doing so, the study was able to capture a diverse range of experiences and consumption behaviors relevant to the research objectives. The stratified sampling method enhanced the precision of the study by ensuring that each subgroup was adequately represented, thereby providing detailed and pertinent information about the effects of ready-to-eat meals on students' lifestyles and health.

Data Gathering Tool

The researchers used a survey questionnaire as the primary instrument for collecting data on the study variables. This instrument was required to be both reliable and valid to ensure the accuracy and consistency of the information gathered. The questionnaire was divided into two sections: the first section collected demographic and profile information of the respondents. In contrast, the second section examined the effects of ready-to-eat meals on the lifestyle of the students.

To establish the validity of the survey questionnaire, it was reviewed and validated by three experts in the relevant field. The survey employed a detailed rating scale with descriptive interpretations to measure responses, including (4) "Highly effective," (3) "Effective," (2) "Slightly effective," and (1) "Not effective."

Data Gathering Procedure

The researchers formally sought permission from the first to third-year students of the College of Hospitality Management. They also consulted their adviser regarding the appropriate steps for data collection. The nature and purpose of the study were thoroughly explained to the students to ensure their full cooperation.

Questionnaires were distributed through face-to-face surveys administered directly by the researchers, who strictly followed the prescribed instructions.

The researchers analyzed the completed questionnaires with the objective of assessing whether the frequent consumption of ready-to-eat meals influenced students' physical well-being, cognitive abilities, eating patterns, and daily activities. Upon collection of all completed questionnaires, the researchers compiled and tabulated the data for further analysis.

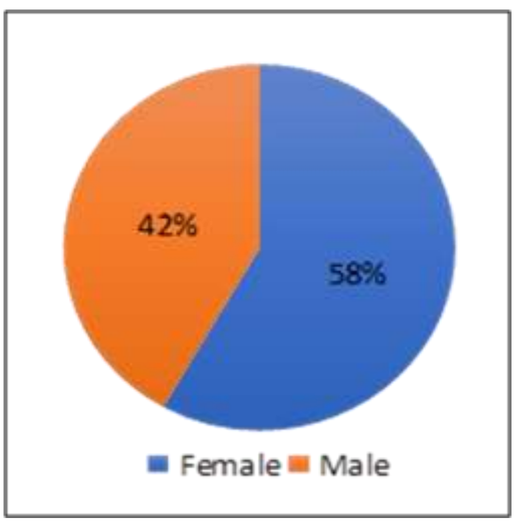
III. Results and Discussion

This chapter presents, interprets, and discusses the findings derived from the data collected throughout the research on the effect of ready-to-eat meals on the lifestyle of Hospitality Management students.

Profile of the Respondents

The profile included sex, year level, and daily allowance, with the corresponding frequency count (f) and percentage (%) for each category. Each variable was accompanied by its interpretation and analysis. A total of 284 respondents participated, ensuring that the total frequency count for each variable equaled 100%.

Figure 3
Sex
n=284

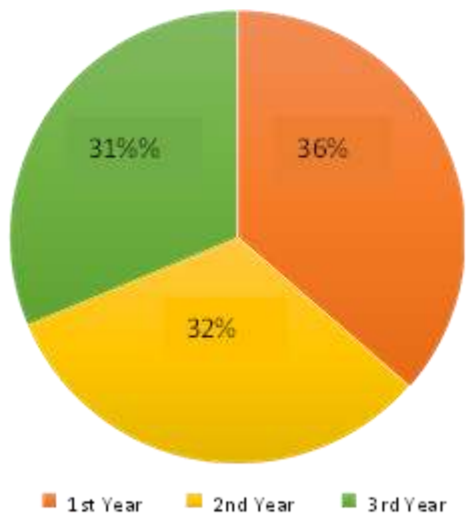


Sex. Out of 284 respondents, 164 (58%) were female, while 120 (42%) were male. This indicated that the majority of the respondents were female. The predominance of female respondents suggested that female students were more inclined toward ready-to-eat (RTE) meals due to their convenience and time-saving benefits.

Previous studies have demonstrated that females, particularly college students, often balance academic, social, and personal responsibilities, which may lead them to prefer easily accessible and quick food options. Additionally, females tend to be more conscious of food preparation hygiene and meal satisfaction, factors that RTE meals can address when traditional cooking is not feasible.

Gao, Z. et al. (2024) found that although female participants scored lower than male participants toward pre-prepared foods, their behavioral scores (i.e., actual consumption and purchasing) were higher than those of male participants.

Figure 4
Year level n=284



Year Level. Out of the total 284 respondents, 36% were first-year students, while 31% were third-year students. This indicated that the majority of participants were in their first year of study, suggesting that they relied more on ready-to-eat meals as they adjusted to the demands of college life.

First-year students were often in a transitional phase, learning to balance academic tasks, social adjustments, and personal responsibilities, which may have led them to choose convenient food options that saved time and effort.

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Table 2
The effect of ready-to-eat meals on the lifestyle of hospitality management students in terms of physical activity
n=284

Indicators	WM	DE
1. Give enough energy to perform physical activity	3.20	E
2. Improves physical performance during exercise	3.09	E
3. Helps to recover better after workouts or physical exertion	3.00	E
4. Supports goal of maintaining an active lifestyle	3.08	E
5. Allows to maintain a busy and active lifestyle	3.01	E
Average Weighted Mean	**3.08**	**E**

Statistical Range	Descriptive Equivalent
3.26 - 4.00	Highly Effective (HE)
2.51 - 3.25	Effective (E)
1.76 - 2.50	Slightly Effective (SE)
1.00 - 1.75	Not Effective (NE)

The effect of ready-to-eat meals on the lifestyle of hospitality management students had an average weighted mean of 3.08, corresponding to the descriptive rating of Effective (E). This indicated that the consumption of ready-to-eat meals was meaningfully integrated into the students' lifestyle and exerted a recognizable influence.

The findings suggested that ready-to-eat meals were not merely convenience options with negligible effect but instead played a substantive role in shaping students' daily routines, nutritional habits, time use, and likely their physical and/or mental well-being.

The first indicator, *"Give enough energy to perform physical activity,"* obtained the highest mean of 3.20, with a descriptive equivalent of "Effective" (E). This suggested that students most strongly agreed that ready-to-eat meals effectively supplied sufficient energy to engage in physical activity.

Table 3
Significant difference on the effect of ready-to-eat (RTE) meals on the lifestyle of the hospitality students across profile variables
n=284

Profile	Physical Activity	Health & Well-Being	Academic Performance & Focus	Sleep Quality & Rest	Dietary Habits & Self-Control
	Sig.	Sig.	Sig.	Sig.	Sig.
Sex	0.123	0.403	0.327	0.364	0.307
Year and Level	.005	.008	.645	.327	.073
Daily Allowance	.100	.891	.055	.770	.269

Table 3. Presents the significant differences in the effect of ready-to-eat meals on the lifestyle of hospitality students based on sex. The effects of ready-to-eat meals on the lifestyle of hospitality students yielded the following significance values: Physical Activity (0.123), Health and Well-Being (0.403), Academic Performance and Focus (0.327), Sleep Quality and Rest (0.364), and Dietary Habits and Self-Control (0.307).

Since all significance values were greater than 0.05, there was no significant difference in the effect of ready-to-eat meals on the lifestyle of hospitality students based on sex.

Factors such as time scarcity, convenience, and busy academic schedules likely overshadowed gender differences in eating behaviors among hospitality students, resulting in no significant difference in the impact of ready-to-eat meals. Although dietary habits sometimes showed gender-based variations in food choices, the specific pressures of the hospitality field appeared to create similar reliance on convenience foods across all students, regardless of sex.

Regarding year and level, the significant differences in the effect of ready-to-eat meals on the lifestyle of hospitality students were as follows: Academic Performance and Focus (0.645), Sleep Quality and Rest (0.327), and Dietary Habits and Self-Control (0.073).

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions drawn from the study aimed at identifying the effect of ready-to-eat (RTE) meals on the lifestyle of Hospitality Management students at Urdaneta City University. It also offers recommendations for student consumers to consider. A significant majority of respondents were female (58%), first-year students (36%), with a daily allowance below 200 (46%). This suggested that ready-to-eat meals were a popular choice among female students seeking convenience and affordable food options. These factors influenced their reliance on ready-to-eat meals, aligning with the needs of students managing limited financial resources. Based on the findings, ready-to-eat meals were found to have a generally practical impact on the lifestyle of Hospitality Management students. In terms of physical activity, ready-to-eat meals provided students with quick energy that supported an active lifestyle despite busy schedules. Regarding health and well-being, ready-to-eat meals helped reduce stress and save time, although nutritional limitations were observed. For academic performance and focus, ready-to-eat meals assisted students in managing their time and concentrating on academic tasks, though their direct effect on performance remained limited. In relation to sleep quality and rest, ready-to-eat meals prevented students from going to bed hungry and reduced late-night meal preparation, but some digestion concerns were noted. Lastly, regarding dietary habits and self-control, ready-to-eat meals offered convenience but also encouraged overeating and occasional skipping of healthier meals. The findings revealed no significant differences in the profiles of the respondents regarding sex, year, and level, and daily allowance across physical activity, academic performance and focus, health and well-being, sleep quality and rest, and dietary habits and self-control. This meant that students' gender, year level, or daily allowance did not significantly change how ready-to-eat meals affected their lifestyle. In other words, whether a student was male or female, in the first year or upper years, or had a low or higher daily allowance, the impact of ready-to-eat meals on physical activity, academic focus, health, sleep, and eating habits was similar across all groups. Additionally, there was no significant difference in the effect of ready-to-eat meals on the lifestyle of hospitality students according to year and level. This includes aspects related to physical activity, academic performance and focus, health and well-being, sleep quality and rest, and dietary habits and self-control. The findings indicated that the effects of ready-to-eat meals on students' lifestyles were consistently experienced across different year levels. This suggests that the convenience, time-saving benefits, and nutritional contributions of ready-to-eat meals were similarly valued by all students, regardless of their academic standing. These results suggested that ready-to-eat meals played a significant role in supporting the overall lifestyle of Hospitality Management students, offering practical solutions for managing academic demands, maintaining physical activity, and meeting dietary needs. Based on the results of the study, the researchers made the following recommendations to improve students' awareness and use of ready-to-eat (RTE) meals. These recommendations aimed to promote better time management and healthier eating habits among students. Students should be encouraged to incorporate quick and easy physical activities into their daily routines, such as taking the stairs, walking or biking to class, or engaging in brief workouts during study breaks. Students should maintain a healthy lifestyle within their budget by preparing affordable, nutritious meals at home, emphasizing whole foods and simple recipes to support both physical and mental well-being. Students should avoid relying solely on ready-to-eat meals to enhance academic performance. They need to balance these meals with proper nutrition, adequate rest, and effective study habits to achieve genuine improvement in their performance.It is recommended that providers of ready-to-eat (RTE) meals and students who consume them prioritize light and well-balanced meal options that minimize the risk of discomfort or indigestion, especially before bedtime. Additionally, students should be encouraged to practice mindful eating by limiting excessive consumption of RTE meals late at night and opting instead for options with higher nutritional value to promote better digestion and improved sleep quality. Students should avoid skipping healthier meals solely because ready-to-eat meals are quicker and easier to prepare. While convenience is important given a busy academic schedule, overreliance on RTE meals may lead to poor nutritional outcomes.

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Effective Strategies Employed by Local Buffet Restaurant in Urdaneta City, Pangasinan

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Abstract — This study examined the effective strategies employed by local buffet restaurants in Urdaneta City, Pangasinan, to enhance customer satisfaction, loyalty, and retention. Specifically, it explored operational strategy, customer experience, marketing promotions, and staff management practices through surveys and interviews. The study aimed to assist restaurant owners in improving overall performance, minimizing food waste, and promoting sustainable, customer-centered practices that contribute to long-term business success, competitiveness, and community impact. A descriptive research design was used to identify the effective strategies used by local buffet restaurants. Data were gathered through validated survey questionnaires administered to owners, managers, and customers using purposive sampling. Statistical tools, including frequency, percentage, weighted mean, and t-test, were used to analyze the data. Findings revealed that staffing, management, and operational practices were widely implemented, while marketing and promotion strategies were only moderately implemented. Both managers and customers expressed high satisfaction with restaurant operations, employee performance, and service quality, indicating consistent management efficiency. Moreover, customer experience, staffing, and management practices were found to influence business success and customer satisfaction significantly. Food quality, ambiance, cleanliness, and service efficiency also emerged as key factors affecting customer perceptions. Based on the results, the study recommended strengthening promotional efforts, improving social media engagement, enhancing in-store marketing materials, and providing continuous staff training to promote customer loyalty, operational excellence, and long-term business sustainability.

Keywords* — *Promotional Campaigns, Customer Engagement, Menu Innovation, Food Quality Control, Service Efficiency, Inventory Management, Health and Safety Standards, Cost Control, Service Quality, Sustainability Practices

I. Introduction

In the competitive foodservice industry, effective strategies are critical to the long-term success of local buffet restaurants. While attracting new customers remains important, retaining existing patrons is often more cost-effective and profitable. Repeat customers contribute to steady revenue streams and function as brand ambassadors through word-of-mouth marketing. Local restaurants encounter unique challenges, including competition from large chains and shifting consumer preferences. Consequently, these establishments must continuously innovate and implement effective strategies to sustain customer loyalty and business viability.

Convenient restaurant designs feature short distances between seating and food stations, with open layouts, thereby reducing congestion and minimizing the time and effort diners spend accessing their food. Conversely, inconvenient designs hinder food accessibility, deterring frequent refills. Some highly inconvenient layouts include barriers, such as turnstiles, that discourage diners from returning for additional servings, and buffet designs vary considerably in terms of convenience (Rosseto, 2023).

Management decisions regarding the quantity of food prepared, serving methods, the size, shape, and color of containers and plateware, and meal timing directly affect consumer plate waste. Buffets with self-service bars produce less food waste than those that serve food from rolling trolley carts (Chang, 2022).

In-depth interviews with kitchen staff and waitstaff at an all-inclusive resort hotel in Turkey yielded detailed recommendations for modifying service procedures, including educating patrons about unfamiliar foods and adjusting buffet offerings based on guests' gender, age, or nationality (Okumus et al., 2020). Despite freestanding buffet restaurants being significant sources of food waste, research on such establishments remains limited (Wu & Teng, 2022). Munawaroh and Widuri (2022) found that service quality positively and significantly influences customer loyalty through customer satisfaction.

Chang (2021) noted that buffet service in hotels enhances operational efficiency by reducing reliance on servers, thereby improving guest service. However, unlimited buffet food often increases food waste, as clients may feel less compelled to moderate the amount, they leave uneaten on their plates. Factors contributing to food waste in the restaurant and hotel sectors include meal preparation processes, portion sizes, and consumer consumption patterns (Dolnicar et al., 2020).

A comprehensive conceptual model of plate waste drivers provides a foundation for designing targeted interventions. Key leverage points to reduce plate waste include inappropriate food combinations, unfamiliar foods, and unconscious overserving (Juvan et al., 2021). Ideally, behavioral interventions aimed at reducing plate waste or portion sizes should be field-tested to measure actual behavior. However, field studies are costly, and managers often lack motivation to implement interventions lacking scientific validation. Additionally, the underlying theoretical mechanisms explaining behavior change cannot be established through field experiments alone (Van Valkengoed et al., 2022).

One limitation of belief-based approaches is their dependence on cognitive processing and attention. In the buffet context, guests must read and process messaging such as signs before serving food. This attention may be exceptionally low during vacations when guests focus on enjoyment rather than information processing (Demeter et al., 2023). The persuasiveness of such messages in reducing uneaten food remains understudied (Juvan et al., 2021). Dolnicar et al. (2020) conducted one of the few field studies, demonstrating that flyers or stamp collection booklets increase hotel guests' awareness of plate waste and positively impact the amount of food discarded.

Buffet restaurants present distinct challenges regarding food sustainability and waste prevention; in all-you-can-eat settings, consumers are financially and visually incentivized to serve themselves more food than they ultimately consume (Chang, 2022). University restaurants, depending on capacity, may serve thousands of students daily, producing substantial food waste volumes (Kaur et al., 2021).

An analysis of a buffet restaurant revealed key operational challenges, particularly during peak seasons, where personnel shortages significantly reduce service capacity. This results in long waiting times for customers at the entry and during service (Jhoselyn Rodriguez & Edian Reyes, 2022).

To evaluate customer satisfaction effectively, feedback from TripAdvisor reviews for 2022–2023 was analyzed, identifying positive and negative comments to guide improvements in future dining experiences (Alfred & Rowell, 2024).

Furthermore, improving storage, transportation, and sales practices is essential to minimizing losses and waste resulting from longer distances between production and consumption points (Rosalinda Nicastro & Petronia Carillo, 2021).

Effective strategies within local buffet restaurants also support the United Nations Sustainable Development Goals (SDGs). Although often approached as marketing tools, customer retention strategies align with sustainability objectives in multiple ways. For instance, SDG 8 (Decent Work and Economic Growth) benefits from strategies that sustain business performance and revenue, facilitating job creation and livelihood support. SDG 9 (Industry, Innovation, and Infrastructure) is advanced through tactics involving innovation, such as digital loyalty programs, online ordering systems, and customer feedback mechanisms. SDG 12 (Responsible Consumption and Production) is promoted by retention-focused restaurants prioritizing sustainable sourcing, waste reduction, and healthier menu options. Additionally, SDG 11 (Sustainable Cities and Communities) is supported by local buffets that contribute to community identity and resilience through long-term collaborations with local farms, suppliers, and businesses. Lastly, SDG 17 (Partnerships for the Goals) is enhanced by community partnerships that improve service quality and strengthen local networks.

This study investigated the impact of cultivating long-term customer relationships on repeat business and maximizing customer lifetime value, specifically in the context of local buffet restaurants in Urdaneta City, Pangasinan. By analyzing the effective strategies employed by these establishments, the research highlighted the significance of customer loyalty and engagement in driving sustained profitability and growth.

By examining various relationship-building techniques, the study aimed to provide insights into how these strategies could be implemented to foster deeper connections with patrons, thereby increasing visit frequency and overall customer satisfaction.

Literature Review

The Full Circle Approach to Customer Retention by Kanti Banerjee (2015) emphasized the importance of adopting a holistic view of the customer journey, focusing on understanding, engaging, and nurturing relationships with customers at every touchpoint. By prioritizing personalized experiences, exceptional service, community building, and continuous improvement, businesses fostered customer loyalty and ensured long-term success. This approach not only enhanced customer satisfaction but also encouraged repeat patronage and positive word of mouth, ultimately contributing to sustainable business growth.

Love for the Brand referred to the emotional connection customers felt toward a brand. When customers enjoyed the food, service, and atmosphere of a restaurant and felt welcomed, this emotional bond strengthened their loyalty. Such affection encouraged them to return and recommend the restaurant to others.

Value for Money was essential to customer satisfaction. Customers desired to feel that they were receiving high-quality products and services for the price they paid. When the overall experience was perceived as worth the cost, they were more satisfied and more likely to return.

Word-of-Mouth Marketing occurred when satisfied customers shared their positive experiences with friends and family. This type of unpaid promotion was highly effective, as individuals tended to trust recommendations from people they knew. For local restaurants, word of mouth was a powerful tool for attracting new customers.

Repeat Purchases occurred when customers were both satisfied and emotionally connected to a brand. These customers returned regularly, providing consistent revenue and reducing the cost of acquiring new patrons.

In terms of customer retention, marketing strategies for local businesses, and improving customer experience in restaurants, the Full Circle Approach offered a strong theoretical foundation. It integrated key elements such as emotional connection, satisfaction, advocacy, and loyalty into a comprehensive framework that research could build upon or test in real-world settings. By applying this theory, the study gained both depth and direction, offering practical implications for businesses that aimed to achieve sustainable growth through a loyal customer base.

Statement of the Problem

This study aimed to examine the effective strategies used by local buffet restaurants and assess their impact on customer loyalty and satisfaction.

Specifically, it sought to answer the following questions:

1. What is the business profile of the local buffet restaurant in terms of
   a. business location?
   b. years of operation; and
   c. number of employees?
2. What is the profile of the customers of the Local buffet Restaurant in terms of:
   a. age;
   b. sex;
   c. occupation;
   d. monthly income; and
   e. frequency of visit?
3. What does the buffet restaurant employ effective strategies for the following?
   a. operational strategy;
   b. customer experience;
   c. market promotion; and
   d. staff and management?

II. Methodology

T This section describes the research methodology used to conduct the study. It discussed the research design and strategy, the study's population and locale, the data-gathering instruments and procedures, the validation of the instruments, the statistical analysis of the data, and the ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design using a survey questionnaire. This method was considered the most appropriate for gathering data to identify the effective strategies utilized by local buffet restaurants in Urdaneta City, Pangasinan.

Smith (2021) described descriptive research as a systematic process of observing, describing, and analyzing the features, properties, or characteristics of a subject. He emphasized that this method provided numerical descriptions that helped explain aspects such as size, location, and frequency.

Population and Locale of the Study

The study conducted in Urdaneta City, Pangasinan, Philippines, focused on a local buffet restaurant recognized for its stable customer base. It aimed to examine the customer service practices and marketing strategies commonly employed by small to medium-sized food establishments in the area.

The study population consisted of restaurant owners or managers and selected customers who had firsthand experience with the restaurant's operations. Purposive sampling was employed to ensure that the respondents possessed relevant knowledge and insights concerning the restaurant's customer service approaches and customer retention strategies

Data Gathering Tool

The primary tool for data collection was a structured survey questionnaire. To ensure validity and reliability, the questionnaire was reviewed and validated by experts. The questionnaire was divided into three sections. The first section addressed the business profile of the local restaurants. The second section examined the customers' profiles of the local restaurants.

The final section explored the effective strategies employed by the owners or managers of the local buffet restaurants. Three experts validated the survey questionnaire to confirm its validity.

The survey employed descriptive interpretations, including (4) "Highly Practiced," (3) "Moderately Practiced," (2) "Slightly Practiced," and (1) "Not Practiced."

Data Gathering Procedure

The researchers obtained formal consent from the owners, managers, and customers prior to commencing the study. They consulted their adviser to determine appropriate data-collection methods and ensured the study's purpose was clearly communicated to secure participants' cooperation.

Questionnaires were distributed in person to owners, managers, and customers, with the researchers administering the questions directly and adhering strictly to established protocols. Upon collecting the completed questionnaires, the researchers compiled and tabulated the data for analysis, which aimed to identify effective marketing strategies that facilitated customer attraction and retention in local restaurants.

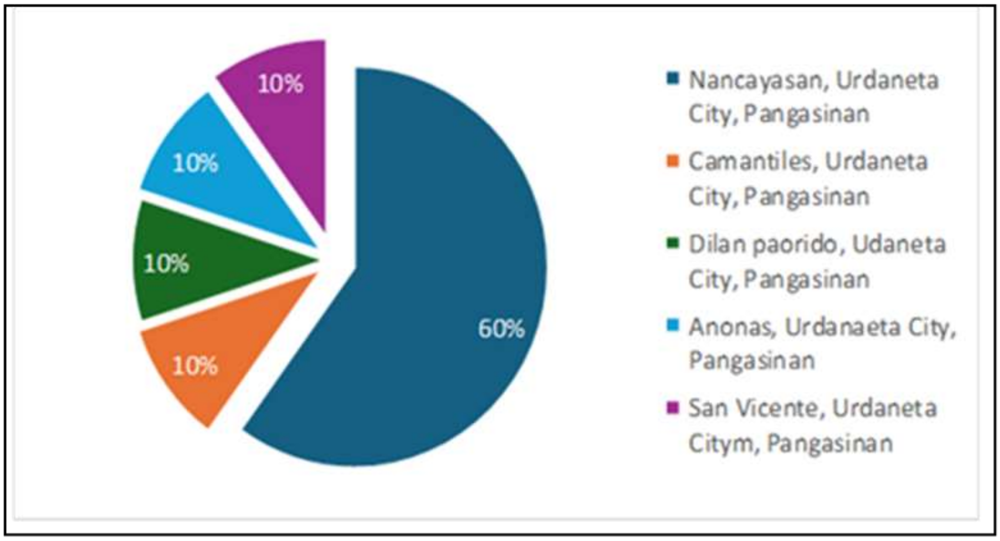
III. Results and Discussion

This chapter presents, interprets, and discusses the findings of the data collected throughout the research on the practical strategies employed by the local buffet restaurant in Urdaneta City, Pangasinan.

Profile of the Respondents

The profile included Business Location, Years of Operation, and Number of Employees, along with the corresponding frequency count (f) and percentage (%) for each category. Each variable was interpreted and analyzed accordingly. Six (6) respondents were surveyed, resulting in a total frequency count of six (6) for each variable.

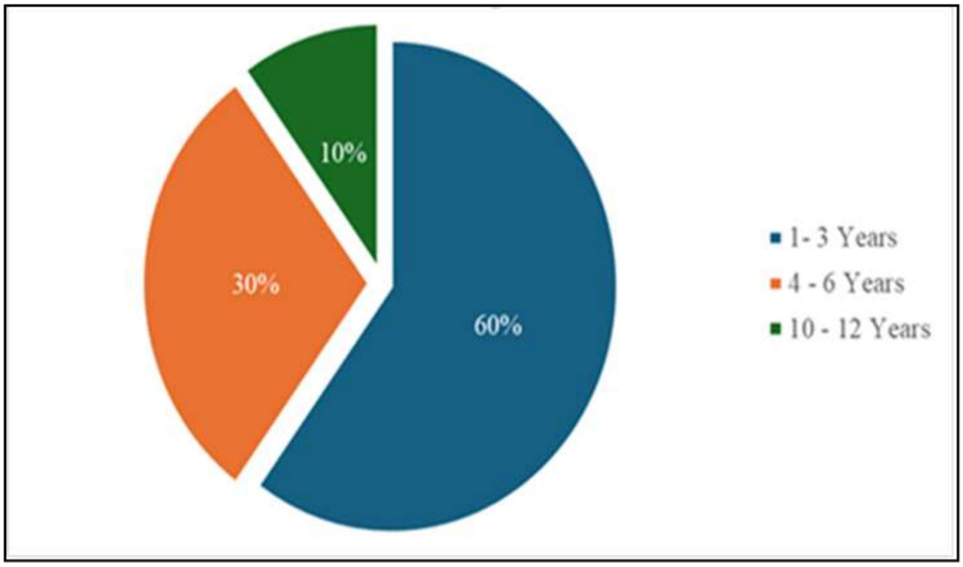
Figure 4
Business location
n = 6



Business Location. The findings revealed that 60% (2 out of 6) of buffet restaurants were situated in Nancayasan. In contrast, only a small number of restaurants, each representing 10% (1 out of 6), were located in Camantilles, Dilan Paurido, Anonas, and San Vicente, which were noted as the most convenient and accessible areas for customers. These locations likely benefited from their central positions, attracting more diners due to their proximity to businesses and ease of transportation.

Chowdhury et al. (2023) confirmed that strategic location, including ease of access and surrounding infrastructure, contributed positively to restaurant competitiveness and customer retention. From a customer behavior perspective, a convenient location reduced time and effort, thereby increasing the likelihood that people would choose a restaurant.

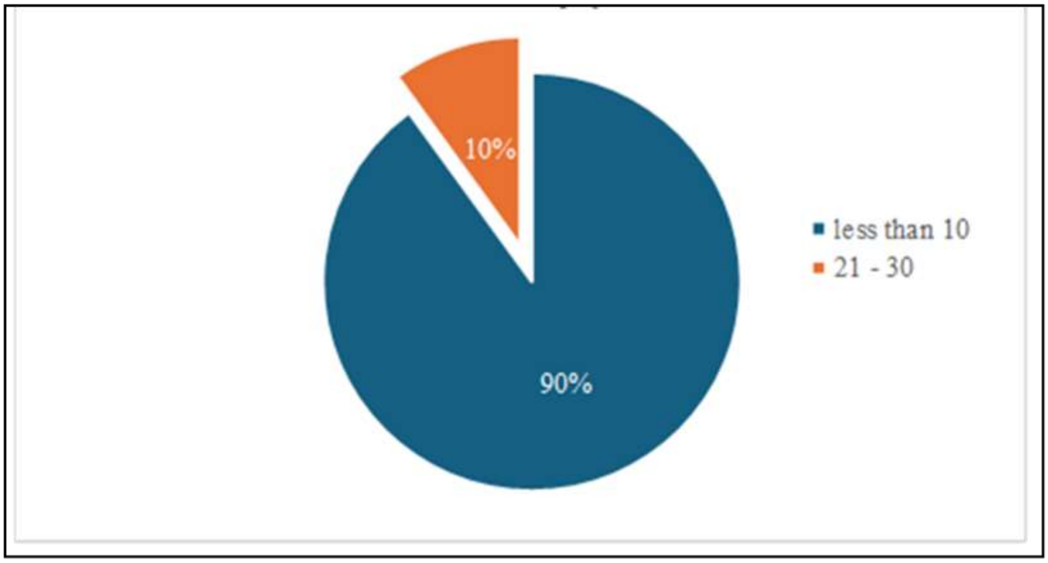
Figure 5
Years of Operation
n = 6



Years of Operation. Among the establishments surveyed, 3 out of 6, or 60%, had been in operation for 1 to 3 years, while only 1 out of 6, or 10%, had been in operation for 10 to 12 years. This indicated that many establishments were in the early stage of their business lifecycle, suggesting less institutional experience, fewer established customer relationships, and potentially greater experimentation with their operational and marketing practices.

According to Naseer and Asadullah (2024), a restaurant's longevity played a crucial role in its strategic efficiency. Established restaurants tended to develop systems focused on customer loyalty, capitalizing on their long-standing presence, whereas newer establishments typically emphasized experimentation and marketing to attract customers.

Figure 6
Number of Employees
n = 6



Number of Employees. Of the six businesses surveyed, five (90%) reported having fewer than 10 employees, while one (10%) reported having 21 to 30 employees.

This indicated that most businesses operated with small-scale staffing, with only a minority operating with a noticeably larger employee base. This variation in scale could affect staffing practices, service models, cost structures, and operational challenges.

In 2022, the Philippine Statistics Authority (PSA) conducted a survey on the "restaurants and mobile food service activities" sector in the Philippines. The findings revealed that, on average, each food service establishment employed approximately 12 workers. This statistic suggests that many establishments, including full-service restaurants, typically operate with relatively small staffs.

Table 1
The effective strategies employed by the managers of the buffet restaurant in terms of operational strategy
n=6

Indicators	WM	DE
1. Menu items are regularly related to maintain customer interest	4.00	HP
2. Ingredients are purchase based on demand forecasts	3.40	HP
3. Food waste is minimized through effective portioning	3.40	HP
4. Leftover food is repurposed in accordance with safety regulations	3.60	HP
5. The restaurant adapts its strategy based on customer trends	3.80	HP
Average Weighted Mean	**3.64**	**HP**

Legend:

Statitical Range	**Descriptive Equivalent**
3.26 - 4.00	Highly Practiced (HP)
2.51 - 3.25	Moderately Practiced (MP)
1.76 - 2.50	Slight Practiced (SP)
1.00 - 1.75	Not Practiced (NP)

The practical strategies employed by the buffet restaurant's managers in terms of operational strategy received a total average weighted mean of 3.64, with a descriptive equivalent of Highly Practiced (HP). The results indicated that the managers' operational strategies were vigorously implemented. The data suggested that the restaurant's operations were well-established and executed effectively.

The first indicator, "Menu items were regularly related to maintaining customer interest," received the highest mean of 4.00, with a descriptive equivalent of Highly Practiced (HP). This suggested a high level of execution in the operational area, representing a key strength of the restaurant's operations.

In the study by Xin (2025), Factors Influencing Customer Revisit Intentions, Satisfaction, and Trust in Buffet Restaurants, menu variety was identified as one of the five most influential factors determining revisit intentions and customer satisfaction, alongside food quality, cleanliness, perceived value, and consistency.

This indicated that, for buffet restaurants, offering a diverse menu was closely associated with encouraging customer return.

The second and third indicators, "Ingredients were purchased based on demand forecasts" and "Food waste was minimized through effective portioning," received the lowest means, both scoring 3.40, with a descriptive equivalent of Highly Practiced (HP). The data suggested that the buffet restaurant managers purchased ingredients based on demand forecasts and minimized food waste through high-level portioning. Although these operational practices were strong, they were comparatively less robust than the top-tier practices, indicating small but meaningful opportunities for further improvement.

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions from the study aimed at identifying the marketing practices employed by the Local Buffet Restaurant in Urdaneta City, Pangasinan. It also offers recommendations for staff management. The majority of buffet restaurants in Urdaneta City, Pangasinan, were concentrated in "Nancayasan", an area noted for its strategic accessibility that attracted a consistent customer base. Most of these establishments had operated for 1 to 3 years, making them relatively new and still in the process of building their market presence. Additionally, they typically employed fewer than ten staff members, indicating a focus on small-scale operations that prioritized cost efficiency and streamlined management. Overall, the findings suggested that local buffet restaurants were newly established, small-scale ventures effectively positioned to serve customers. The results demonstrated that buffet restaurants in Urdaneta City, Pangasinan, effectively implemented strategies across several key operational areas. Their operational strategy ensured efficient daily functions and adherence to food quality standards. Management prioritized customer experience by focusing on quality service and attentiveness to guest needs, which enhanced customer satisfaction. Additionally, these restaurants actively utilize online platforms for marketing and promotions to boost visibility and attract a broader customer base. Staffing and management practices were characterized by strong internal structures, adequate supervision, and a commitment to staff development, all of which contributed to consistent service quality. Most customers dining in buffet restaurants in Urdaneta City were young adults, indicative of a market comprised primarily of socially active and experience-seeking individuals. Females slightly outnumbered males, indicating a greater preference among women for buffet dining, likely due to its variety and social appeal. A significant number of respondents were employed, emphasizing that regular income influenced their dining choices and enabled them to indulge in occasional dining experiences. The research also highlighted a predominant presence of middle-income customers, suggesting that buffet restaurants successfully attracted individuals seeking both affordability and value for money. Customers expressed high satisfaction regarding the restaurants' operations, food quality, and service, highlighting efficient management that ensured the consistent delivery of excellent dining experiences. Key factors contributing to this satisfaction included the cleanliness of the establishments, the pleasant ambiance, and the staff's attentiveness. While the marketing efforts were generally well received, an opportunity for improvement was identified: formulating more engaging, clearly defined promotional activities to enhance customer engagement and satisfaction further.

Based on the findings of this study on the selected buffet restaurant in Urdaneta City, the following recommendations are proposed to enhance operational performance, customer satisfaction, and overall guest experience: The management and staff are encouraged to implement more effective and sustainable operational practices, particularly in planning ingredient requirements and controlling food portions. Through comprehensive training programs and consistent monitoring, the restaurant can reduce food waste and operating costs, thereby improving efficiency and contributing to financial sustainability To attract more customers during holidays and peak periods, the restaurant should strategically plan seasonal promotions. Aligning campaigns with local events, leveraging social media, and offering special deals can sustain customer engagement and encourage repeat visits, thereby strengthening the restaurant's market competitiveness. The restaurant is advised to improve customer engagement by deploying additional promotional materials, such as posters, both within the dining area and outside the establishment. Regularly updating these materials and ensuring visually appealing designs can increase visibility, attract potential customers, and foster loyalty, ultimately encouraging patrons to return. Management should consider deploying additional staff during peak hours to enhance service efficiency. Proper staffing ensures faster table turnover, timely food replenishment, and smoother operations. Furthermore, targeted staff training during busy periods can maintain consistency in service delivery and uphold high standards of customer satisfaction. The management should use social media platforms (e.g., Facebook, Instagram) to enhance business visibility, high-engagement content that showcases both the variety and freshness of your offerings. Share short, appealing videos of dishes being prepared, restocked, or arranged on the buffet line to highlight abundance and quality.

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Assessment of Housekeeping Employees in the Guestroom Facilities Among the Selected Lodging Establishments in Pangasinan

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Abstract — This study examined housekeeping practices in Pangasinan hotels, emphasizing their role in enhancing guest satisfaction while advancing Sustainable Development Goals through eco-friendly operations, equitable employment, and collaboration with local partners.
Utilizing the SERVQUAL model, the research assessed housekeeping effectiveness, safety measures, and staff awareness across guestrooms, public areas, linen rooms, and laundry facilities. The findings underscore the importance of standardized, sustainable, and quality-focused housekeeping in enhancing service delivery, operational efficiency, and the overall guest experience. A descriptive research design was employed, using a validated survey questionnaire to evaluate housekeeping operations in selected 2- and 3-star hotels in Pangasinan. Data collected from housekeepers and guests were analyzed utilizing frequency distributions, percentages, weighted means, and Kruskal-Wallis tests. Ethical considerations, including informed consent and confidentiality, were strictly maintained throughout the study. The results highlighted key housekeeping practices, operational challenges, and recommended enhancements aimed at improving service quality and guest satisfaction. Performance evaluations revealed consistently high standards across all operational areas, with average weighted means ranging from 3.39 to 3.55, interpreted as Always (A). No significant differences were observed based on sex, indicating uniform adherence to cleanliness and efficiency standards among housekeeping staff across departments. Recommendations to further enhance safety, efficiency, and guest experience include regular maintenance of electrical appliances, proper disposal of damaged or stained items, consistent use of personal protective equipment (PPE) by housekeeping personnel, and daily cleaning of glass surfaces in public areas. Overall, this study demonstrates that effective housekeeping practices, supported by stringent quality and safety protocols, play a vital role in maintaining superior service levels, operational performance, and positive guest perceptions within selected lodging establishments in Pangasinan.

Keywords — Assessment of Housekeeping, Guestroom Maintenance, Linen Management, Laundry Operations, Lodging Establishments

I. Introduction

The performance of housekeeping employees in guestroom facilities plays a crucial role in maintaining service quality and ensuring guest satisfaction within the hospitality industry. In the selected lodging establishments in Pangasinan, assessing the effectiveness of housekeeping staff is essential to upholding high standards of cleanliness, safety, and comfort in guestrooms. Challenges may arise in areas such as workload management, skill proficiency, availability of resources, and adherence to established housekeeping procedures. By evaluating the competencies, practices, and difficulties experienced by housekeeping employees, lodging establishments can identify areas for improvement and develop strategies that enhance guestroom maintenance.

This study aims to provide insights into how a thorough assessment of housekeeping employees can contribute to improved service delivery, increased operational efficiency, and strengthened competitiveness among lodging establishments in the selected area in Pangasinan. A clean, comfortable, and safe environment for guests, visitors, and employees is the primary responsibility of a hotel's housekeeping department. Good operations in this area can be the best public relations a hotel can have.

If a hotel or motel is dirty, those who stay there, even for one night, will not return; they will tell others about the condition and discourage them from staying there (Atadil & Lu, 2021; Pratt & Tolkach, 2022).

The Occupational Safety and Health Administration (OSHA) has issued recommendations and rules to ensure that workplace housekeeping practices are safe and effective.

These rules aim to reduce the likelihood of accidents, increase worker safety, and maintain a clean and orderly workplace. OSHA emphasizes that housekeeping is more than simply cleaning; it is also about providing a safe workplace that reduces hazards such as slips, trips, falls, and exposure to toxic chemicals.

OSHA's housekeeping responsibilities are defined in the General Duty Clause (Section 5(a)(1) of the OSH Act), which requires employers to provide a workplace free of known risks that might cause serious injury or death. This guideline addresses general workplace housekeeping standards, emphasizing the importance of clean and dry floors, as well as open aisles and pathways. Additionally, 29 CFR 1910.141 - Sanitation requires that workspaces be clean and free of hazards that could cause harm or sickness. It addresses issues such as trash disposal, drinking water, and bathroom facilities.

Housekeeping practices at Pangasinan hotels can significantly improve client satisfaction while also aligning with the Sustainable Development Goals. Hotels that prioritize sustainable and responsible operations can have a beneficial impact on both their customers and the surrounding community.

- SDG 8: Decent Work and Economic Growth, requires hotel cleaning procedures to create equitable employment opportunities for local individuals. This includes providing competitive pay, employment stability, and opportunities for advancement, as well as contributing to economic growth and community well-being.

- SDG 9: Industry, Innovation and Infrastructure, allowing the hotel to invest in contemporary and environmentally friendly lighting, water-saving systems, and waste-reduction initiatives. Innovative cleaning practices that employ sustainable solutions can improve operations while lowering the hotel's environmental impact.

- SDG 11: Sustainable Cities and Communities, by ensuring that housekeeping operations are ecologically friendly and sustainable, the hotel can help to create a cleaner, safer, and more enjoyable environment for guests and the local community. This involves waste management, recycling, and a reduction in the usage of hazardous chemicals.

- SDG 17 Partnerships for the Goals, emphasizes the importance of partnerships with local suppliers and businesses. The hotel can collaborate with nearby neighborhoods to acquire local, sustainable cleaning supplies and guest amenities, thus building local supply chains and increasing community participation in the hotel's sustainability initiatives.

The effort that housekeeping makes in giving a guest a desirable room has a direct bearing on the guest's experience in a hotel (Augustine, 2024). In today's hospitality landscape, where standardized practices are the norm, customization is emerging as a game-changer for creating memorable guest experiences. Thus, sustainability has become a cornerstone of modern housekeeping, with a growing emphasis on eco-friendly practices that resonate with the values of environmentally conscious guests (Yang, 2025).

Beyond cleanliness, housekeeping contributes significantly to the safety and security of guests and staff within hospitality establishments.

In hotels, certain housekeeping protocols are in place to prevent fire hazards, reduce the risk of accidents, and ensure guest belongings are protected (Sulyo, 2024). The scope of work of the housekeeping department infiltrates almost every area of a hotel. The department ensures a clean, attractive, comfortable, and welcoming hotel environment (Gaisei, 2020).

Thao (2020) argues that housekeeping is a significant department of any accommodation establishment. A qualified housekeeper plays an essential role in maintaining the hotel's standards of cleanliness and surrounding appearance.

Housekeeping has evolved to prioritize sustainability, addressing the link between traditional methods and environmental impact. This shift has led to a focus on more sustainable practices in residential and hospitality settings (Dubey & Sharma, 2023). The hospitality industry significantly contributes to environmental degradation, and many hotels are developing strategies to address these negative consequences to maintain a competitive business environment and stay ahead (Akhtar & Najar, 2020).

Housekeeping is a crucial department in the hotel industry, responsible for maintaining cleanliness, hygiene, and ambiance in all sectors, except the kitchen. It is considered the backbone of the industry, as frequent guests can distinguish between good and mediocre hotels (Arun A.,2023). Good housekeeping involves ongoing operations, not just occasional clean-ups, as periodic "panic" clean-ups can be costly and ineffective in reducing incidents (Laycook, 2022).

According to Chau (2021), hotel visitors rate housekeeping more highly than reception and food and beverage when deciding whether to return or recommend the establishment. Hotel managers often do not see cleaning as a frontline service function. To improve customer satisfaction, standard operating procedures (SOPs) for housekeeping services, biomedical waste management, and hospital infection control practices were planned. A staff training calendar was also prepared, and the housekeeping team was strengthened (Pillai et al., 2024).

Rohaeni et al. (2021) highlight the housekeeping department's division into room, public area, laundry, pool attendant, florist, and gardening sections. The hotel section focuses on maintaining daily operations and enhancing guests' perceptions of the hotel.

Room attendants are responsible for presenting clean guest rooms, while housekeeping staff maintain and clean public areas, including common areas and hallways. Handling art objects and crafts is also crucial in shaping guests' first impressions of the property. The hotel's operation is expected to provide satisfying services for consumers, ensuring a positive experience for guests (Ann, S., et al. 2023).

The responsibility for maintaining hotel cleanliness predominantly lies with the housekeeping department; therefore, the performance of the cleaning staff in each hotel or motel constitutes a critical determinant of the perceived value that customers associate with the establishment. Efficient and thorough cleaning practices have the potential to substantially enhance the overall success of the hotel (Boğan & Dedeoğlu, 2020; Choi & Choi, 2021).

If they do not maintain these standards, they will certainly drive away visitors, jeopardize their own security and opportunities for growth, and forego the joy that comes from knowing they play an important role in providing a service that is useful, respected, and required in our fast-paced economy.

The Philippines has become a health-conscious culture. The Hotel, Resort, and Restaurants Association of the Philippines (HRRAP), as well as other chain or independent hotel operators, have been driving this trend. When choosing a resort to stay in, guests always prioritize cleanliness first. Cleanliness involves more than just removing dust, lint, grime, stains, and spills from surfaces; it also includes disinfection. Sanitation and excellent housekeeping are both described as the process of maintaining the establishment free of harmful agents to health (Grantham, 2020).

Winnie & Florence (2023) highlight the importance of housekeeping responsibilities in the hospitality industry, as they oversee the performance of room attendants. The front office and housekeeping departments are responsible for room letting, preparation, and servicing, and information about room status must be shared between them. Additionally, hotel front office and housekeeping practices are crucial for the hotel's success (Arellano, 2023).

Cayabyab (2025) suggested that cleanliness is crucial for guest satisfaction and reviews, and hoteliers must prioritize good housekeeping practices to maintain good standing. To address guest challenges, hospitality services must measure, monitor, and improve operational and management performance due to competitive realities.

Key performance features that focus on enhancing guests' experience and orientation through service efficiency, quality, and availability are becoming crucial elements of management performance. These elements have become evident in recent years, as they influence interactions between guests and the hospitality services (Samson et al., 2023).

This study aimed to assess the performance of housekeeping employees assigned to guestroom facilities in selected lodging establishments in Pangasinan by examining the effectiveness of their tasks, identifying potential safety and sanitation concerns, and determining their overall impact on guest satisfaction.

Literature Review

Republic Act No. 9593 (Tourism Act of 2009) empowers the Department of Tourism (DOT) to establish and enforce standards for all tourism enterprises, including hotels, which in turn impact housekeeping practices.

These standards, covering hygiene, sanitation, safety, and service quality, indirectly influence housekeeping protocols, cleaning methods, handling of hazardous materials, and the overall guest experience. Compliance with these standards is crucial for hotel accreditation and operational legality, which drives investment in training and resources to meet DOT requirements.

This study examined the housekeeping practices of hospitality establishments in selected areas in Pangasinan. It follows the Independent Variable (IV) and Dependent Variable (DV) model. The independent variable included the profile of the housekeepers in terms of age and gender.

Statement of the Problem

This study aimed to determine the Housekeeping Practices of Hospitality Establishments.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
   a. Age;
   b. Sex;
   c. Years of experience in housekeeping?
2. What are the assessment of housekeeping employees in the guestroom facilities among the selected lodging establishments in terms of:
   a. Guestroom Facility;
   b. Public Area;
   c. Linen Room; and
   d. Laundry Area?
3. Is there a significant difference in the housekeeping operations of hospitality establishments across profile variables?

II. Methodology

This section describes the research methodology employed to conduct the study. It discusses the research design and strategy, population and locale of the study, data gathering tool, data gathering procedures, validation of the instrument, statistical treatment of data, and ethical considerations.

Research Design and Strategy

The researchers employed a descriptive research design using a survey questionnaire. This method was selected as it was deemed the most appropriate for collecting data to assess the housekeeping practices of hospitality establishments in selected areas of Pangasinan.

Descriptive research design is used to gather information about the characteristics of a particular group or to measure trends within a population. Additionally, this type of research design involves observing and describing the behavior of a subject without influencing it in any way (Dr. Robertson Prime, 2024).

Population and Locale of the Study

The respondents of this study were housekeeping employees working in the guestroom facilities of selected lodging establishments in Pangasinan. The study included 3-star hotels and 2-star hotels, based on the official hotel classifications of the Department of Tourism (DOT).

These ratings follow DOT standards that focus on room quality, cleanliness, safety, available facilities, and the overall performance of hotel staff. All available housekeeping employees from these establishments were included in the study. They shared information about their duties, challenges, and their performance in maintaining guestrooms. The results showed how important housekeeping employees are in keeping guestrooms clean, comfortable, and safe for guests. The findings also identified areas where guestroom housekeeping practices can still be improved to meet hotel standards and further enhance service quality in lodging establishments across Pangasinan.

Data Gathering Tool

The researchers employed a survey questionnaire as the primary instrument for collecting data on the study variables. This instrument was required to be both reliable and valid. The questionnaire was structured into three sections: the first section addressed the profile of the housekeepers, while the second section examined housekeeping operations within hospitality establishments. To ensure validity, three experts reviewed and validated the survey questionnaire.

The survey utilized descriptive response categories, including (4) Always, (3) Sometimes, (2) Rarely, and (1) Never.

Data Gathering Procedure

The researchers formally sought permission from the managers of the selected lodging establishments and consulted their adviser to ensure proper procedures for data collection. The purpose and scope of the study were clearly explained to obtain full cooperation from the management.

The questionnaires were personally administered by the researchers to the housekeeping employees assigned to guestroom facilities. All instructions were carefully followed to ensure accuracy and consistency in the responses.

After collecting the completed questionnaires, the researchers analyzed, compiled, and tabulated the data to assess the performance of housekeeping employees and identify areas for improvement in guestroom operations among the selected lodging establishments in Pangasinan.

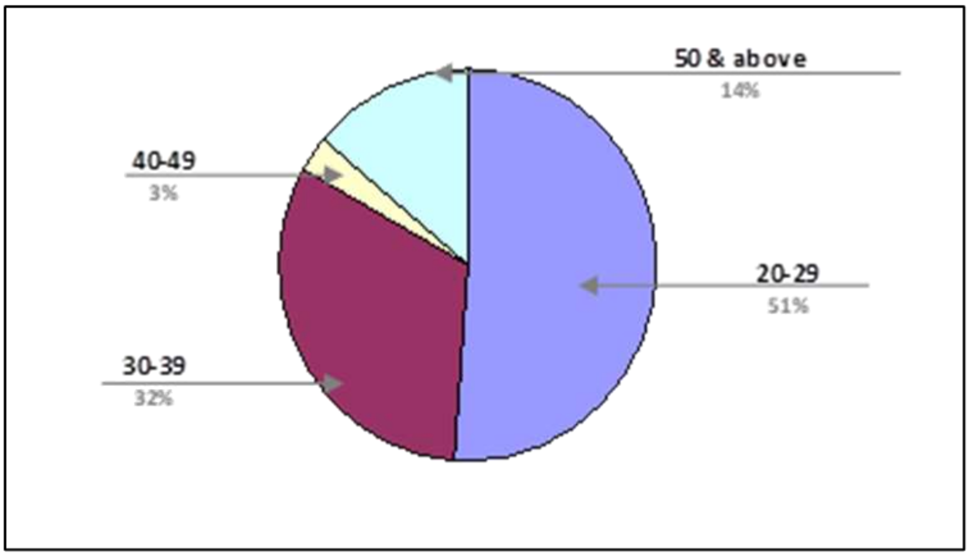
III. Results and Discussion

This chapter presents, interprets, and discusses the findings derived from the data collected during the research on evaluating housekeeping operations among selected hospitality establishments in Pangasinan.

Profile of the Respondents

The profile variables included age, sex, and years of experience in housekeeping, each presented with the corresponding frequency count (f) and percentage (%). Each variable was accompanied by its respective interpretation and analysis. Thirty-seven respondents participated, representing a total frequency count of 100%.

Figure 4
Age
n=37

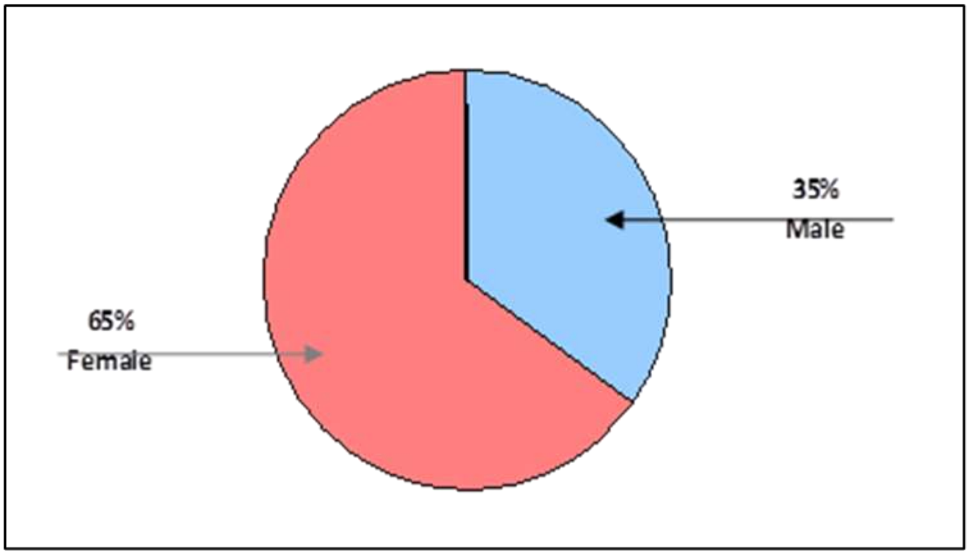


Age. Nineteen out of thirty-seven respondents, representing 51% of the total, were between the ages of 20 and 29. A smaller proportion of respondents, accounting for 14%, were aged 50 or older.

These findings indicated that the workforce was predominantly composed of younger adults, with older age groups constituting a minority among the housekeepers.

According to Chela-Alvarez et.al (2022), the inclusion criteria required participants to be over 18 years of age and to have worked as hotel housekeepers during the previous season. The study included participants with diverse profiles based on age, years of experience as housekeepers, hotel star ratings, and types of contractual agreements.

Figure 5
Sex
n=37

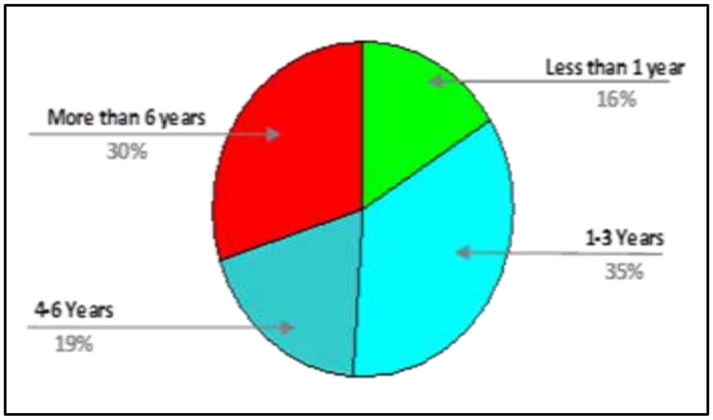


Sex. Twenty-four of the thirty-seven respondents, representing 65% of the total population, were female. Meanwhile, only thirteen respondents, or 35%, were male. This distribution indicated that females constituted the majority of the participants.

This gender distribution likely reflected the actual staffing composition within housekeeping operations at the participating establishments, where female employees outnumbered their male counterparts.

Consequently, the findings predominantly represented the perspectives and experiences of female housekeeping personnel. Any gender-based comparisons should therefore be interpreted with caution due to the smaller male subsample.

Figure 6
Years of experience
n=37



Years of Experience. Thirteen out of thirty-seven respondents, or 35%, reported having one to three years of experience in housekeeping, while the smallest group, accounting for 16%, had less than one year of experience. These findings suggested moderate employee retention, as many had remained beyond the initial hiring phase, though relatively few were recent hires. The low proportion (16%) of employees with less than one year of tenure could indicate either a reduced rate of new hiring or that many new hires left before completing their first year.

Table 2
Assessment of housekeeping employees in terms of guestrooms
n=37

Indicators	WM	DE
1. The guestroom is clean and well-prepared upon check-in.	3.62	A
2. The bathroom is sanitized and fully stocked with amenities.	3.65	A
3. Towels and bed linens are fresh and clean.	3.62	A
4. Trash bins are emptied and replaced with liners.	3.65	A
5. The housekeeping staff respects the “Do Not Disturb” sign.	3.51	A
6. All lights, appliances, and electrical outlets in the room function properly.	3.35	A
7. The room amenities are replenished regularly.	3.62	A
8. Housekeeping staff are polite and courteous.	3.43	A
9. Special requests are fulfilled promptly.	3.54	A
10. The room has a pleasant and fresh smell.	3.54	A
Average Weighted Mean	**3.55**	**A**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Always (A)
2.51 - 3.25	Sometimes (S)
1.76 - 2.50	Rarely (R)
1.00 - 1.75	Never (N)

Assessment of housekeeping employees, specifically regarding guestrooms, received an average weighted mean of 3.55, corresponding to the descriptive equivalent of "Always" (A). This suggested that housekeepers consistently observed guestrooms to be well-maintained, clean, and comfortable, reflecting a reliable level of service that met or exceeded guest expectations.

The second and fourth indicators, "*The bathroom is sanitized and fully stocked with amenities*" and "*Trash bins are emptied and replaced with liners,*" both received the highest mean of 3.65, also corresponding to "Always" (A). These findings indicated that bathrooms were consistently utilized and fully stocked with amenities, and trash bins were regularly emptied and liners replaced.

In hospitality environments, the availability and replenishment of bathroom amenities, such as shampoos, conditioners, and towels, signaled to guests that the space was well-maintained and regularly used, thereby enhancing guest satisfaction and perceived reliability (Eston, 2024).

Table 3
The summary of the assessment of housekeeping employees in the guestroom facilities
n=37

Indicators	WM	DE
1. Guest Room	3.55	A
2. Laundry Area	3.39	A
3. Linen Room	3.52	A
4. Public Area	3.43	A
Average Weighted Mean	**3.47**	**A**

Legend:

Statistical Range	**Descriptive Equivalent**
3.26 - 4.00	Always (A)
2.51 - 3.25	Sometimes (S)
1.76 - 2.50	Rarely (R)
1.00 - 1.75	Never (N)

The summary of housekeeping operations in hospitality establishments concerning the facilities received an average weighted mean of 3.47, with a descriptive equivalent of "Always" (A). This indicated that, overall, the housekeeping staff consistently performed their duties across various areas, maintaining cleanliness and order throughout the establishments. Despite encountering numerous operational challenges, the results demonstrated a strong commitment by the staff to ensure quality service and guest satisfaction.

The first indicator, the guestroom, received the highest overall weighted mean of 3.55, interpreted as "Always" (A), indicating that staff consistently maintained clean, organized, and well-prepared rooms, thereby directly supporting guest comfort and satisfaction.

The second indicator, the laundry area, obtained the lowest overall weighted mean of 3.39 but was still described within the "Always" (A) category. This demonstrated that staff generally followed laundry procedures and maintained proper operations, although occasional lapses in hygiene and safety protocols were observed.

IV. Conclusions and Recommendations

This chapter summarizes the findings and conclusions drawn from the study aimed to identify the assessment of housekeeping employees in the guestroom facilities among the selected lodging establishments in Pangasinan. It also offers recommendations for staff management to consider.

A significant majority of the respondents were young female employees, most of whom had one to three years of experience. This profile reflects common trends within the hospitality industry, particularly in the housekeeping department, where younger individuals are frequently employed due to the physically demanding and labor-intensive nature of the work. This demographic trend suggested that housekeeping operations in hospitality establishments relied heavily on the energy, adaptability, and efficiency of younger workers who effectively managed the challenges and fast-paced demands of maintaining cleanliness and service quality in guest areas. The results revealed that the selected lodging establishments demonstrated a high level of performance among housekeeping employees assigned to guestroom facilities. Housekeepers consistently ensured that guestrooms and bathrooms were properly cleaned, sanitized, and supplied with complete amenities. Towels and bed linens were kept fresh and well-maintained, contributing to guest comfort and hygiene. These findings reflect the strong commitment of the establishments to maintaining quality guestroom standards. The linen room was properly managed by the housekeeping employees, with clean and soiled linens stored separately to maintain sanitation and prevent cross-contamination. The laundry area was also kept well-ventilated and odor-free, showing that housekeeping staff followed proper cleanliness and safety practices. Overall, these findings indicate that the selected lodging establishments maintained systematic and efficient guestroom housekeeping operations, ensuring consistent cleanliness, organization, and hygiene. The results showed no significant differences in the assessment of housekeeping employees in guestroom facilities when grouped according to age, sex, or years of experience, as all computed p-values were higher than the 0.05 significance level. This indicates that these demographic factors did not significantly affect the performance of housekeeping employees or the challenges they encountered. Both younger and older staff, regardless of sex, experienced similar guestroom-related tasks and demands. Likewise, employees with different lengths of service performed at comparable levels, likely due to standardized housekeeping procedures, consistent training, and uniform supervision across the selected lodging establishments. These findings suggest that the quality and efficiency of guestroom housekeeping were maintained regardless of an employee’s demographic profile. The results show that selected lodging establishments in Pangasinan encounter various strengths and challenges in their housekeeping operations. To enhance cleanliness, service quality, and overall efficiency, the following recommendations are proposed. These recommendations are intended to assist hotel managers in supporting their housekeeping staff, optimizing work processes, and addressing operational challenges, thereby improving the performance and productivity of the housekeeping personnel. Hotels are encouraged to conduct regular inspections and ensure timely maintenance of lights, appliances, and electrical outlets in guest rooms. Proper coordination with the Maintenance Department is recommended to prevent safety risks and enhance guest comfort. Lodging establishments should strictly implement proper disposal procedures for damaged or stained items. This practice is essential in maintaining cleanliness, controlling quality standards, and ensuring guest satisfaction while promoting a safe and healthy environment. Housekeeping staff are advised to consistently use appropriate personal protective equipment (PPE), such as gloves, when handling soiled linens. This measure helps reduce health risks and promotes workplace safety and hygiene. Daily cleaning of mirrors, signs, and glass surfaces in public areas is recommended to maintain a clean and professional appearance, thereby improving guests' overall perception and satisfaction. Housekeeping employees are encouraged to receive regular training to strengthen their skills in cleaning, sanitizing, and maintaining guestroom amenities. Establishments are encouraged to implement routine performance checks to ensure that standards of cleanliness and comfort are consistently met. Providing updated tools and cleaning supplies can further improve the efficiency and quality of guestroom maintenance. Lodging establishments encourage assigning clear cleaning schedules to housekeeping staff to maintain the orderliness and cleanliness of public areas. Regular monitoring of lobbies, hallways, and other shared spaces will help ensure they remain welcoming and presentable to guests. Additional signage or reminders may support staff in consistently following established cleaning protocols. Proper segregation and storage of clean and soiled linens should be reinforced to maintain sanitation and prevent contamination. Housekeeping employees are encouraged to be trained in standard linen handling procedures to ensure consistency and efficiency. Regular inspections of the linen room can help identify issues in organization or supply levels before they affect operations. The laundry area is encouraged to be kept well-ventilated and clean to support a safe and healthy working environment for housekeeping employees. Establishments may invest in well-maintained equipment to improve washing efficiency and reduce delays in linen preparation. Consistent adherence to laundry procedures will ensure high-quality linens are always available for guestroom use.

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