

Perceived impacts of the plastic reduction ordinance on store owners in Pasacao

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Abstract

This study assessed the perceived impacts of Municipal Ordinance No. 01, Series of 2020, also known as the Plastic Bag Prohibition Ordinance, among store owners in Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo in Pasacao. Specifically, it determined the level of awareness and compliance of store owners regarding the ordinance, examined the relationship between awareness and compliance, and identified the ordinance's impacts on daily business operations. A descriptive-correlational research design was utilized, with 202 store owners serving as respondents. Data were gathered through survey questionnaires and analyzed using frequency count, percentage, weighted mean, and Pearson r correlation. Findings revealed that store owners possessed a very high level of awareness and compliance with the ordinance. Most respondents were categorized as highly aware and highly compliant, indicating effective dissemination and implementation of the policy by the Local Government Unit and barangay officials. The study also revealed a strong positive relationship between awareness and compliance, suggesting that higher awareness contributes to stronger adherence to environmental regulations. Furthermore, the ordinance produced both environmental and economic impacts. While respondents acknowledged reduced plastic waste and improved environmental cleanliness, they also experienced increased packaging expenses and temporary income decline due to the higher cost of eco-friendly alternatives. Overall, the findings suggest that strengthening information campaigns and providing affordable sustainable packaging options may further improve compliance and support local businesses in adapting to

environmentally responsible practices and long-term waste reduction initiatives within the municipality for the promotion of sustainable environmental practices in Pasacao.

Keywords: Plastic Bag Prohibition Ordinance, awareness, compliance, environmental sustainability, waste reduction

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1. Introduction

Plastic pollution has emerged as one of the most pressing environmental challenges of the 21st century due to the rapid increase in global plastic production and consumption. Recent reports indicate that global plastic production has exceeded 400 million metric tons annually, with a significant portion consisting of single-use plastics that are discarded shortly after use (OECD, 2022). Despite the economic benefits of plastics, such as durability, versatility, and low production cost, their improper disposal has led to widespread environmental degradation (PlasticsEurope, 2023). An estimated 11 million metric tons of plastic waste enter the oceans each year, threatening marine biodiversity, contaminating food systems, and disrupting ecological balance (UNEP, 2021). Since plastics can take hundreds of years to decompose, their persistence in the environment has intensified global concern and highlighted the urgent need for sustainable waste management strategies and policy interventions.

Global Perspective on Plastic Pollution - At the international level, plastic pollution is recognized as a critical issue directly linked to sustainable development. The United Nations emphasized that addressing plastic waste is essential to achieving Sustainable Development Goal (SDG) 12: Responsible Consumption and Production, which promotes waste reduction through recycling and reuse, and SDG 14: Life Below Water, which focuses on preventing marine pollution (United Nations, 2025). Various countries have responded by implementing bans, levies, and extended producer responsibility (EPR) schemes targeting single-use plastics (Wang et al., 2021). Studies have shown that policy-driven interventions, such as plastic bans and improved waste management systems, can significantly reduce plastic leakage into the environment when effectively enforced (Lau et al., 2020). However, the success of these initiatives often depends on the behavioral responses and cooperation of key stakeholders, particularly those involved in production, distribution, and retail.

International Experiences on Plastic Reduction Policies - Several international studies highlight the effectiveness of stakeholder participation in zero-plastic policies. In the United Kingdom, the implementation of a plastic bag charge resulted in a reduction of over 80% in plastic bag usage, demonstrating strong consumer participation and compliance (Department for Environment, Food & Rural Affairs, 2016). Similarly, in Ireland, the implementation of a plastic bag levy led to a 90% decrease in plastic bag consumption, showing that economic instruments combined with public awareness can significantly influence behavior (Convery et al., 2007). In Rwanda, one of the strictest plastic bans globally, high compliance levels were achieved due to strong enforcement and community cooperation, leading to significant reductions in plastic waste (Behuria, 2021). In the United States, local plastic bag bans have also been associated with substantial decreases in plastic bag usage and litter, particularly when supported by public awareness campaigns and strict enforcement measures (Homomoff, 2018). These studies suggest that successful implementation of zero-plastic ordinances depends not only on policy design but also on active participation, awareness, and compliance among stakeholders.

Plastic Pollution in the Philippines - In developing countries such as the Philippines, plastic pollution remains a major environmental concern due to high plastic consumption and inadequate waste management infrastructure. The Philippines has consistently been identified as one of the top contributors to marine plastic pollution because of mismanaged waste and the widespread use of single-use plastics (Meijer et al., 2021). To address this issue, the government enacted Republic Act No. 9003, also known as the Ecological Solid Waste Management Act of 2000, which mandates waste segregation, recycling, and local government responsibility for waste management (Environmental Management Bureau, 2019). In addition, various local government units (LGUs) have implemented ordinances restricting or banning plastic use, complemented by community-based initiatives such as coastal cleanups, recycling programs, and environmental awareness campaigns (DENR, 2021). Despite these efforts, challenges remain in ensuring consistent compliance, particularly among small businesses that heavily rely

on affordable plastic packaging.

Local Plastic Reduction Policies in the Philippines - In line with the national movement to reduce plastic waste, several municipalities across the Philippines have already implemented ordinances regulating plastic use. The “No Plastic Policy” is not a single national law but rather a nationwide movement led by local government units. According to the Climate Reality Project Philippines (2022), approximately 489 cities and municipalities, representing around 30% of LGUs nationwide, have already adopted ordinances regulating plastic use. This reflects a growing national trend toward plastic reduction. A study conducted in Cabanatuan City revealed that the implementation of a plastic ban resulted in reduced plastic usage and increased environmental awareness among store owners, although challenges such as increased operational costs were also observed (Macaso, 2023).

The No Plastic Policy in Pasacao - In connection with these initiatives, the Municipality of Pasacao implemented Municipal Ordinance No. 01, Series of 2020, also known as the “Plastic Bag Prohibition Ordinance of 2020.” This local policy regulates the use and distribution of single-use plastics and Styrofoam products within the municipality to protect the environment and promote sustainable practices. It prohibits the use of plastic bags for dry goods and as secondary packaging for wet goods, as well as the use of Styrofoam containers and utensils. Limited use of plastic is only permitted for primary packaging of wet goods, while reusable, paper, or indigenous bags are encouraged. The ordinance, supported by the Municipal Environment and Natural Resources Office (MENRO), includes a three-month phase-out period, penalties for violators such as fines and suspension of business permits, and incentives for eco-friendly establishments through reward systems and express lane privileges. As a coastal municipality dependent on fishing and tourism, Pasacao is highly vulnerable to the impacts of plastic pollution, making environmental protection a critical priority for local sustainability.

Role of Store Owners in Policy Implementation - The effectiveness of such local ordinances largely depends on the participation and cooperation of store owners, who serve as key actors in implementing plastic reduction practices at the retail level. Store owners play an essential role in shaping consumer behavior, managing packaging materials, and complying with environmental regulations. Their level of awareness, perception, and capacity to adapt to policy changes directly influence the success of plastic reduction initiatives. In the Municipality of Pasacao, there is a need to examine how store owners perceive and respond to the No Plastic Policy, particularly regarding awareness, compliance, and its effects on daily business operations.

Purpose of the Study - This study aims to assess the perceived impacts of the Plastic Pollution Reduction Ordinance on store owners in three selected barangays of Pasacao and provide recommendations for improving the policy. Ultimately, this research contributes to sustainable environmental governance by aligning local initiatives with SDG 12 and SDG 14. By evaluating the experiences and responses of store owners, the study supports the development of more inclusive, practical, and effective policies that promote responsible consumption, reduce plastic waste, and protect marine ecosystems for future generations.

Statement of the Problem - This study aimed to examine the impacts of plastic pollution reduction initiatives on store owners in Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo, Pasacao. Specifically, it sought to answer the following questions:

- What is the level of awareness of store owners regarding Municipal Ordinance No. 01, Series of 2020?
- What is the level of compliance of store owners with Municipal Ordinance No. 01, Series of 2020?
- Is there a significant relationship between the level of awareness and the level of compliance of store owners in the three selected barangays?
- What is the impact of Municipal Ordinance No. 01, Series of 2020 on the daily business operations of store owners?
- Based on the findings, what recommendations can be proposed to enhance the effectiveness of the

ordinance and support store owners in adopting sustainable practices?

Objectives of the Study - This study aimed to determine the impacts of plastic pollution reduction initiatives on store owners in Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo, Pasacao. Specifically, it aimed to:

- Determine the level of awareness of store owners regarding Municipal Ordinance No. 01, Series of 2020, also known as the No Plastic Policy.
- Assess the level of compliance of store owners with Municipal Ordinance No. 01, Series of 2020.
- Examine the significant relationship between the level of awareness and the level of compliance of store owners in the three selected barangays.
- Evaluate the impact of Municipal Ordinance No. 01, Series of 2020 on the daily business operations of store owners.
- Propose recommendations based on the findings to enhance the effectiveness of the ordinance and support store owners in adopting sustainable practices.

Significance of the Study - The findings of this study will be beneficial to the following:

Local Community of Pasacao - The findings of this study will help the local community, particularly the residents of Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo, better understand the importance of reducing plastic waste and complying with environmental ordinances. It may encourage residents to adopt more sustainable consumption habits and support eco-friendly practices within their barangays. Increased awareness may also strengthen community participation in environmental protection efforts, contributing to a cleaner and healthier environment.

Local Government Unit (LGU) of Pasacao - This study will serve as a valuable reference for the Local Government Unit in evaluating the effectiveness of Municipal Ordinance No. 01, Series of 2020. The results may help identify gaps in implementation, enforcement challenges, and areas requiring improvement. Furthermore, the recommendations may assist policymakers in strengthening environmental strategies and improving support systems for affected stakeholders.

Municipal Environment and Natural Resources Office (MENRO) - This study will benefit the Municipal Environment and Natural Resources Office (MENRO) by providing data-driven insights regarding the level of awareness and compliance of store owners with the Plastic Bag Prohibition Ordinance of 2020. The findings can serve as a basis for improving environmental programs, monitoring strategies, and public information campaigns.

City Environment and Natural Resources Office (CENRO) - The results of this study may assist the City Environment and Natural Resources Office (CENRO) in understanding the effectiveness of plastic reduction initiatives at the community level. The findings may guide the office in developing more effective waste management programs, promoting sustainable practices, and supporting businesses in complying with environmental regulation.

Department of Environment and Natural Resources (DENR) - This study will be valuable to the Department of Environment and Natural Resources (DENR) as it provides empirical evidence regarding the implementation of local plastic ordinances and their impact on stakeholders. The findings may contribute to the improvement of environmental policies and strengthen solid waste management programs nationwide.

Store Owners of Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo - The study will provide store owners with insights regarding their level of awareness and compliance with the No Plastic Policy. It will also help them understand how the ordinance affects their daily business operations. Through this, store owners

may identify practical ways to adapt sustainable practices while maintaining profitability and improving environmental responsibility.

Environment - This research contributes to environmental protection by emphasizing the importance of reducing plastic waste at the local level. By assessing the implementation of the ordinance, the study supports initiatives aimed at minimizing plastic pollution, protecting marine and terrestrial ecosystems, and promoting sustainable waste management practices.

Future Researchers - This study will serve as a useful reference for future researchers who wish to explore topics related to environmental policies, plastic waste management, and sustainable business practices. It may provide a foundation for further studies involving long-term impacts, policy comparisons, and innovative solutions to plastic pollution.

Scope and Limitation of the Study - This study focused on examining the perceived impacts of the Plastic Pollution Reduction Ordinance, specifically Municipal Ordinance No. 01, Series of 2020, also known as the Plastic Bag Prohibition Ordinance, on store owners in selected barangays of Pasacao. The study was limited to store owners operating within Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo. It aimed to assess their level of awareness and compliance with the ordinance, determine the relationship between awareness and compliance, and evaluate the effects of the policy on daily business operations. The respondents of the study were limited exclusively to store owners, including sari-sari store operators and small retail business owners, within the selected barangays. Other stakeholders such as consumers, local officials, suppliers, and waste management personnel were not included in the study. Data were gathered using a structured survey questionnaire designed to measure awareness, compliance, and perceived impacts of the ordinance. Furthermore, the study was confined to the current implementation of the ordinance and did not cover its historical development or long-term environmental outcomes. It focused only on selected variables such as awareness, compliance, and operational impact and excluded other factors such as financial performance, customer behavior, and broader economic effects. The findings of this study are limited to the selected barangays in Pasacao and may not be generalized to other municipalities or regions with different socio-economic and environmental conditions. In addition, the study relied on the honesty and accuracy of the respondents' answers, which may be subject to bias and personal interpretation. Despite these limitations, the study provides valuable insights into the implementation of local plastic reduction policies and supports the improvement of environmental programs and sustainable business practices.

Theoretical Framework - This study is anchored on three relevant theories: the Theory of Planned Behavior (TPB) by Icek Ajzen (1991), the Stakeholder Theory by R. Edward Freeman (1984), and the Tragedy of the Commons Theory by Garrett Hardin (1968). These theories collectively explain the behavioral, managerial, and environmental dimensions underlying plastic pollution reduction initiatives and their perceived impact on store owners in Pasacao.

Theory of Planned Behavior (TPB) - The Theory of Planned Behavior (TPB) developed by Icek Ajzen (1991) explains that an individual's behavior is influenced by behavioral intention, which is shaped by attitude, subjective norms, and perceived behavioral control. In this study, the theory is applied to understand how store owners respond to the implementation of the No Plastic Policy. The level of awareness of store owners regarding the ordinance may influence their attitude toward reducing plastic use, whether they perceive it as beneficial or burdensome. Subjective norms refer to the influence of customers, the community, and the Local Government Unit (LGU), which may encourage compliance. Perceived behavioral control reflects the store owners' ability to adopt alternative packaging materials and adjust their business practices. These factors collectively influence their level of compliance with the ordinance, suggesting that increased awareness may lead to more positive environmental behavior.

Stakeholder Theory - Stakeholder Theory by R. Edward Freeman (1984) emphasizes that the success of policies and organizational practices depends on the involvement and cooperation of stakeholders who are affected by or interested in the outcomes. In this study, store owners, the Local Government Unit (LGU), consumers, and

the local community are considered key stakeholders in implementing the Plastic Pollution Reduction Ordinance. Store owners are directly affected because they are required to modify their business practices, while the LGU is responsible for policy enforcement and support. Consumers and the community also influence compliance through their preferences and expectations for environmentally responsible practices. The interaction among these stakeholders significantly affects the effectiveness of the ordinance, highlighting the importance of collaboration, shared responsibility, and mutual support in achieving sustainable environmental goals.

Tragedy of the Commons Theory - The Tragedy of the Commons Theory by Garrett Hardin (1968) explains how shared environmental resources are often overused and degraded when individuals act according to self-interest without considering the collective good. In the context of this study, plastic pollution represents a common environmental problem resulting from the excessive use and improper disposal of plastic materials by businesses and consumers. Store owners may prioritize convenience and cost-efficiency by continuing to use plastic packaging, which contributes to environmental degradation, particularly in coastal areas such as Pasacao. The implementation of the No Plastic Policy serves as a regulatory intervention to minimize plastic overuse and protect shared environmental resources. This theory highlights the importance of regulations, collective action, and responsible behavior in achieving environmental sustainability.

2. Research methodology

Research Method - This study employed a quantitative research method. This approach was used to collect numerical data that could be statistically analyzed to answer the research questions. A structured survey questionnaire served as the primary data-gathering instrument in obtaining information regarding the level of awareness, level of compliance, and perceived impacts of the ordinance on store owners. The quantitative method was considered appropriate because it enabled the researchers to objectively measure variables, identify patterns, and determine the relationship between awareness and compliance. Furthermore, it allowed the use of statistical tools to ensure the accuracy, reliability, and validity of the findings.

Research Locale - The study was conducted in the Municipality of Pasacao, specifically in Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo. These barangays were selected because they are among the busiest commercial areas in the municipality where many small and medium-sized businesses operate. Pasacao is a coastal municipality, making it highly vulnerable to the effects of plastic pollution, particularly in marine and coastal environments. The selected barangays are known to have numerous sari-sari stores and small retail establishments that are directly affected by the implementation of the No Plastic Policy. The locale was considered appropriate for the study because it provided a relevant setting for assessing the awareness, compliance, and perceived impacts of the ordinance among store owners within the area.

Data Gathering Procedure - The researchers followed a systematic process in gathering the necessary data for the study. Initially, the researchers prepared the required research documents and secured approval from the research adviser and panelists. After approval, a notice to proceed was granted, allowing the researchers to formally conduct the study. A formal request letter was then submitted to the Local Government Unit (LGU) of Pasacao and to the barangay officials of Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo to seek permission to conduct the study within their jurisdiction. Upon obtaining approval, the researchers coordinated with local officials to identify the store owners who would serve as respondents. The data gathering was conducted on-site through face-to-face interviews using a structured survey questionnaire. Each selected store owner was personally approached, and the purpose, objectives, and procedures of the study were clearly explained before the interview. Consent was obtained from the respondents prior to participation. During the interview, the researchers directly recorded the responses of the participants to ensure the accuracy and completeness of the data gathered. This method also allowed the researchers to clarify questions whenever necessary and ensured that all questionnaire items were properly answered. After the interviews, the collected data were reviewed, organized, encoded, and tabulated for statistical analysis. Throughout the process, ethical considerations such as voluntary participation, confidentiality, and anonymity of respondents were strictly observed.

Population and Sampling Design - The population of the study consisted of store owners operating in Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo in Pasacao. The respondents specifically included store owners with valid business permits who were actively operating within the selected barangays. These individuals were selected because they were directly affected by and involved in the implementation of Municipal Ordinance No. 01, Series of 2020, also known as the Plastic Bag Prohibition Ordinance. A total of 202 respondents participated in the study. Of this number, 67 respondents came from Barangay Sta. Rosa Del Norte, 73 from Barangay Sta. Rosa Del Sur, and 62 from Barangay San Cirilo. The study employed probability sampling, specifically simple random sampling, in selecting the respondents. Store owners with valid business permits and actively operating within the identified areas were included in the sampling frame. From this group, respondents were randomly selected to ensure that each eligible store owner had an equal opportunity to participate in the study. This sampling technique was considered appropriate for quantitative correlation analysis because it minimized selection bias and improved representativeness (Creswell & Creswell, 2018). The use of this technique ensured fairness in respondent selection and increased the reliability of the data gathered, allowing the findings to better reflect the awareness, compliance, and perceived impacts of the ordinance among store owners in the selected barangays.

Ethical Considerations - The researchers ensured that all ethical standards were strictly observed throughout the conduct of the study. Prior to data gathering, permission was secured from the research adviser and panelists, followed by the issuance of a notice to proceed. Approval was also obtained from the Local Government Unit (LGU) of Pasacao and the respective barangay officials of Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo to conduct the study within their jurisdiction. Participation in the study was entirely voluntary. The researchers clearly explained the purpose, objectives, and procedures of the study to the respondents before conducting the interviews. Consent was obtained from all participants before proceeding with data collection. The researchers also ensured the confidentiality and anonymity of all respondents. Personal information such as names and business details was not disclosed in any part of the study. All responses were treated with strict confidentiality and were used solely for academic and research purposes in compliance with Republic Act No. 10173, also known as the Data Privacy Act of 2012. Furthermore, honesty and integrity were maintained throughout the data collection, recording, and analysis processes. No data were fabricated, altered, or misinterpreted. The findings were presented accurately and objectively. Proper acknowledgment was also given to all sources and references used in the study to uphold academic integrity and avoid plagiarism. Lastly, the researchers ensured that the study posed no harm to the respondents. The questions asked were relevant to the objectives of the study and did not invade personal privacy or cause discomfort. Respect, professionalism, and cultural sensitivity were observed throughout the interaction with respondents.

Statistical Treatment of Data - The data collected in this study were analyzed using appropriate statistical tools to ensure accurate interpretation of the findings. Percentage was used to determine the proportion of respondents based on variables such as awareness and compliance levels. It was computed using the formula: The weighted mean was used to determine the average responses regarding awareness and compliance levels and served as a measure of central tendency (Sevilla, 2007). A Likert scale was also utilized to measure respondents' awareness and compliance regarding plastic pollution initiatives, with corresponding numerical values ranging from 1 to 4. The resulting mean scores were interpreted using the following ranges: 3.26–4.00 interpreted as Very High, 2.51–3.25 as High, 1.76–2.50 as Low, and 1.00–1.75 as Very Low. Lastly, the Spearman Rank-Order Correlation Coefficient (Spearman's ρ) was used to determine the relationship between awareness and compliance because the data gathered were ordinal in nature and based on Likert-scale responses. The coefficient ranges from -1 to +1, indicating the strength and direction of the relationship between variables. A 0.05 level of significance was used to determine statistical significance (GeeksforGeeks, 2026).

3. Results and discussion

This section presents, analyzes, and interprets the data gathered regarding the awareness, compliance, relationship between awareness and compliance, and the perceived impacts of Municipal Ordinance No. 01, Series

of 2020, also known as the Plastic Bag Prohibition Ordinance, among store owners in Barangays Sta. Rosa Del Norte, Sta. Rosa Del Sur, and San Cirilo in Pasacao. The findings are discussed and supported by relevant literature and theories related to environmental awareness, policy compliance, and sustainable practices.

3.1 Level of Awareness of Store Owners Regarding Municipal Ordinance No. 01, Series of 2020

The findings revealed that the majority of store owners in the selected barangays possess a very high level of awareness regarding Municipal Ordinance No. 01, Series of 2020, also known as the No Plastic Policy. Out of 202 respondents, 108 respondents or 53.47% were categorized as Highly Aware, 74 respondents or 36.63% were categorized as Aware, and 20 respondents or 9.90% were categorized as Somewhat Aware. No respondents were classified as Not Aware. The overall weighted mean of 3.44 indicates a Very High level of awareness among store owners. In Barangay Sta. Rosa Del Norte, the majority of respondents were Highly Aware, with 40 respondents or 59.70%, while only 6 respondents or 8.96% were classified as Somewhat Aware. The computed weighted mean of 3.51 indicates a Very High level of awareness. In Barangay Sta. Rosa Del Sur, 36 respondents or 49.32% were Highly Aware, while 10 respondents or 13.70% were Somewhat Aware. The weighted mean of 3.36 also reflects a Very High level of awareness. Similarly, in Barangay San Cirilo, 32 respondents or 51.61% were Highly Aware, while only 4 respondents or 6.45% were Somewhat Aware. The computed weighted mean of 3.45 likewise indicates a Very High level of awareness.

Awareness is considered a crucial factor in the successful implementation of environmental policies because it reflects how well individuals understand the purpose, provisions, and implications of such regulations. Studies indicate that higher levels of awareness regarding environmental issues, particularly plastic pollution, contribute to more positive attitudes and responsible environmental practices. Public awareness is also considered an important factor in influencing behavioral change and strengthening policy support within communities. The results suggest that the ordinance has been effectively communicated to store owners in the selected barangays. This may be attributed to the efforts of the Local Government Unit (LGU), barangay officials, and environmental campaigns conducted within the municipality. The absence of respondents categorized as Not Aware further indicates that the policy has reached the target population successfully. However, the presence of respondents under the Somewhat Aware category suggests that not all store owners possess complete understanding of the ordinance and its provisions. This implies that awareness alone may not always guarantee full comprehension and proper implementation of the policy. Some store owners may only be familiar with the existence of the ordinance without fully understanding its objectives and environmental significance.

The findings support studies emphasizing that environmental awareness does not always translate into complete understanding or actual environmental behavior. Research also highlights the existence of a knowledge-action gap in environmental practices, wherein individuals may recognize environmental issues but still lack sufficient understanding regarding sustainable practices and policy implementation. The findings are best explained through the Theory of Planned Behavior (TPB) by Icek Ajzen (1991), which states that awareness and knowledge influence an individual's attitudes and intentions toward a specific behavior. The very high level of awareness among store owners suggests a greater likelihood of developing positive attitudes toward the No Plastic Policy, which may eventually lead to stronger compliance with environmental regulations.

3.2 Level of Compliance of Store Owners with Municipal Ordinance No. 01, Series of 2020

The findings revealed that store owners in the selected barangays generally demonstrate a very high level of compliance with Municipal Ordinance No. 01, Series of 2020. Out of 202 respondents, 90 respondents or 45% were categorized as Highly Compliant, 87 respondents or 43% were Moderately Compliant, and 25 respondents or 12% were Somewhat Compliant. No respondents were classified as Not Compliant. The overall weighted mean of 3.33 indicates a Very High level of compliance among store owners. In Barangay Sta. Rosa Del Norte, the majority of respondents were Moderately Compliant, with 34 respondents or 50.75%, while only 8 respondents or 11.94% were categorized as Somewhat Compliant. The computed weighted mean of 3.25 indicates a High level

of compliance. In Barangay Sta. Rosa Del Sur, 35 respondents or 47.95% were categorized as Highly Compliant, while 8 respondents or 10.96% were Somewhat Compliant. The weighted mean of 3.37 indicates a Very High level of compliance. Similarly, in Barangay San Cirilo, 30 respondents or 48.39% were Highly Compliant, while 9 respondents or 14.52% were Somewhat Compliant. The weighted mean of 3.34 also reflects a Very High level of compliance.

Compliance with environmental policies is essential in minimizing environmental degradation and promoting sustainable practices. Studies indicate that policy compliance is influenced by awareness, enforcement mechanisms, and the perceived benefits of environmental regulations. High compliance among small business owners reflects effective implementation and enforcement of local environmental policies. The findings indicate that store owners generally follow the provisions of the No Plastic Policy. The absence of non-compliant respondents suggests that the ordinance has been effectively implemented and accepted within the community. However, the presence of moderately and somewhat compliant respondents implies that some store owners may still encounter difficulties in fully complying with the ordinance. These challenges may include limited availability of eco-friendly packaging materials and the higher cost of sustainable alternatives.

The results further imply that the ordinance has contributed to positive behavioral change among store owners. Nevertheless, varying levels of compliance indicate that some businesses may only meet the minimum requirements of the ordinance rather than fully adopting sustainable practices. This supports studies emphasizing that long-term environmental behavior requires continuous education, monitoring, and reinforcement. The findings are best explained through the Theory of Planned Behavior (TPB) by Icek Ajzen (1991). According to the theory, behavior is influenced by intention, which is shaped by attitudes, subjective norms, and perceived behavioral control. The high level of compliance among store owners suggests that they have developed positive attitudes toward the ordinance, perceive social and regulatory pressure to comply, and believe that they can follow the policy.

3.3 Relationship Between the Level of Awareness and Compliance of Store Owners in the Selected Barangays

The findings revealed a strong positive relationship between the level of awareness and compliance of store owners regarding Municipal Ordinance No. 01, Series of 2020. The computed r-value of 0.82 indicated a strong positive correlation, while the computed t-value of 5.67 exceeded the critical value of 2.00 at the 0.05 level of significance, confirming a statistically significant relationship. The results suggest that store owners with higher awareness of the ordinance are more likely to comply with its provisions. This indicates that understanding environmental policies influences sustainable behavior and decision-making. The findings also imply that awareness campaigns conducted by the Local Government Unit (LGU) and barangay officials were effective in promoting compliance. However, compliance may also be influenced by factors such as the availability of eco-friendly alternatives, economic considerations, enforcement measures, and support from local authorities. Continuous education, monitoring, and policy reinforcement therefore remain important in sustaining environmental responsibility. The findings support previous studies showing that environmental awareness positively influences compliance with environmental regulations and sustainable practices. These findings are further explained by the Icek Ajzen's Theory of Planned Behavior, which states that awareness and knowledge influence attitudes and intentions, leading individuals to perform specific behaviors.

3.4 Impacts of Municipal Ordinance No. 01, Series of 2020 on Daily Business Operations of Store Owners

The findings revealed that the implementation of the Plastic Bag Prohibition Ordinance of 2020 produced both environmental and economic impacts on store owners in the selected barangays of Pasacao. Some respondents experienced difficulties adjusting to the ordinance during its initial implementation, while others reported a temporary decrease in income due to changes in customer behavior and business practices. All respondents also reported increased packaging expenses because eco-friendly alternatives are more costly than plastic materials. Despite these challenges, respondents recognized the environmental benefits of the ordinance, particularly in reducing plastic waste and improving environmental cleanliness within the municipality. However, many still

considered the ordinance burdensome because of the high cost of sustainable packaging materials.

The findings suggest that the ordinance has a dual impact: it promotes environmental protection and sustainable practices while also creating financial and operational challenges for store owners. The temporary decline in sales further indicates that consumers initially resisted changes in packaging practices but gradually adapted over time. The study also implies that the success of environmental policies depends on the availability of affordable alternatives and adequate support for affected stakeholders. Financial assistance, continuous education, and access to affordable eco-friendly packaging may help reduce the burden on small business owners. The findings are supported by R. Edward Freeman's Stakeholder Theory and Garrett Hardin's Tragedy of the Commons, which emphasize cooperation, shared responsibility, and regulation in addressing environmental problems.

4. Summary, findings, conclusions, and recommendations

Summary - This study aimed to assess the level of awareness and compliance of store owners regarding the Plastic Bag Prohibition Ordinance of 2020 in selected barangays. Specifically, it sought to determine the level of awareness, level of compliance, the relationship between awareness and compliance, and the impacts of the ordinance on business operations. The study utilized a quantitative research design, employing a survey questionnaire as the primary data-gathering instrument. Respondents were randomly selected store owners with valid business permits operating within the identified areas. Statistical tools such as frequency, percentage, weighted mean, and Spearman Rank Correlation were used to analyze the data. The findings served as the basis for drawing conclusions and formulating recommendations to improve policy implementation and support sustainable practices.

Findings, Conclusions, and Recommendations

Problem 1: What is the level of awareness of store owners regarding the Municipal Ordinance No. 01, Series of 2020?

Findings - The findings revealed that store owners generally have a high level of awareness of the Plastic Bag Prohibition Ordinance of 2020. Out of 202 respondents, the majority were classified as Highly Aware (108 or 53%), followed by Aware (74 or 37%), and Somewhat Aware (20 or 10%), with no respondents under the Not Aware category. The computed overall weighted mean indicated a high level of awareness. While most respondents are knowledgeable about the existence and purpose of the ordinance in reducing plastic waste, some store owners demonstrated limited understanding of its specific provisions and detailed guidelines.

Conclusion - It can be concluded that although awareness of the ordinance is high among store owners, it does not necessarily equate to full comprehension of its details. Awareness alone is insufficient to ensure effective implementation, as some respondents may only have surface-level knowledge of the policy.

Recommendation - It is recommended that the LGU strengthen information dissemination through continuous education campaigns, seminars, and clear communication of the ordinance's provisions to ensure a deeper and more comprehensive understanding among store owners.

Problem 2: What is the level of compliance of store owners with the Municipal Ordinance No. 01, Series of 2020?

Findings - The findings indicated that store owners exhibit a high to very high level of compliance with the ordinance across the selected barangays. Among the 202 respondents, Highly Compliant (90 or 45%) and Moderately Compliant (87 or 43%) comprised the majority, followed by Somewhat Compliant (25 or 12%), with no respondents identified as Not Compliant. The overall weighted mean of 3.33 indicates a very high level of compliance. This suggests that most store owners are adhering to the policy, although some may not be fully consistent in its implementation.

Conclusion - It can be concluded that the ordinance has been effectively implemented, as reflected in the high level of compliance among store owners. However, variations in the degree of compliance suggest that some challenges still exist in achieving full and consistent adherence.

Recommendation - It is recommended that the LGU maintain strict monitoring and enforcement while providing continuous support to store owners to ensure consistent compliance. Additional guidance and resources should also be provided to address challenges faced by partially compliant respondents.

Problem 3: Is there a significant relationship between the level of awareness and level of compliance of store owners in the three selected barangays?

Findings - The results showed a perfect positive correlation between awareness and compliance, with a computed Spearman Rank Correlation coefficient (ρ) of 1.00. The data revealed identical ranking patterns across all categories, where Highly ranked first (108 awareness; 90 compliance), followed by Moderately (74 awareness; 87 compliance), Somewhat (20 awareness; 25 compliance), and Not (0 for both variables). These results confirm a strong and direct relationship between the two variables, indicating that as awareness increases, compliance also increases.

Conclusion - It can be concluded that awareness is a significant factor influencing compliance among store owners. Higher awareness leads to better adherence to the ordinance, highlighting the importance of knowledge in shaping behavior.

Recommendation - It is recommended that awareness campaigns be further strengthened, as increasing awareness can directly improve compliance. The LGU should continue investing in educational initiatives and community engagement to sustain and enhance this relationship.

Problem 4: What is the impact of the Municipal Ordinance No. 01, Series of 2020 on the daily business operations of the store owners?

Findings - The findings revealed that the ordinance has both positive and negative impacts on store owners. The most reported challenge was difficulty in adjusting to the ordinance, with 45 respondents (22.27%) indicating this as a primary concern. Additionally, 75 respondents (37.12%) reported a temporary decrease in income during the initial implementation, while all respondents (202 or 100%) experienced increased packaging costs due to more expensive alternatives. On the positive side, 35 respondents (17.32%) noted a reduction in plastic usage, and 33 respondents (16.33%) reported increased environmental awareness. Furthermore, 29 respondents (14.35%) recognized the ordinance's contribution to reducing plastic waste in the community. Despite these challenges, store owners gradually adapted, and business operations stabilized over time.

Conclusion - It can be concluded that the Plastic Bag Prohibition Ordinance of 2020 has a dual impact on store owners, promoting environmental sustainability while imposing economic and operational challenges. Despite these difficulties, store owners show adaptability and recognize the benefits of the policy.

Recommendation - It is recommended that the LGU provide financial assistance or subsidies, ensure access to affordable alternatives, and implement support programs to ease the burden on store owners. Strengthening collaboration among stakeholders is also essential to balance environmental goals and business sustainability.

Problem 5: Based on the findings, what recommendations can be made to enhance the effectiveness of the ordinance and support store owners in adopting sustainable practices?

Overall Recommendations - Based on the findings of the study, it is recommended that the Local Government Unit (LGU) strengthen the implementation of the Plastic Bag Prohibition Ordinance of 2020 through continuous information dissemination, educational campaigns, seminars, and barangay-level orientations to improve awareness and compliance among store owners and consumers. Programs promoting sustainable practices, waste

reduction, and proper policy implementation should also be conducted regularly. The LGU should likewise provide financial assistance, subsidies, or incentive programs to help store owners manage the increased costs of eco-friendly packaging materials. Partnerships with suppliers and local producers may also help ensure the affordability and availability of sustainable packaging alternatives. In addition, strict monitoring and consistent enforcement of the ordinance should be maintained across all barangays. Consumer participation should also be encouraged through reusable bag campaigns and community-based initiatives such as “Bring Your Own Bag” programs. Finally, regular evaluations and stakeholder consultations should be conducted to assess the effectiveness of the ordinance, address implementation challenges, and improve the policy while balancing environmental sustainability and the economic welfare of store owners.

Practical Educational Implications - The findings of this study provide practical educational implications for teachers, students, school administrators, and local policymakers in promoting environmental awareness and sustainable practices. The study highlights the importance of integrating environmental education, particularly plastic waste management and pollution reduction, into classroom discussions and community-based activities. Teachers may use the results of this research as reference material in discussing environmental protection, ecological responsibility, and local government ordinances related to waste management. For students, the study enhances awareness of the effects of plastic pollution and the importance of practicing responsible waste disposal and the use of eco-friendly alternatives. The findings may encourage learners to actively participate in environmental programs, campaigns, and school initiatives that support sustainability and community cleanliness. Through increased environmental consciousness, students may develop values and behaviors that contribute to long-term environmental protection. Schools and educational institutions may also use the findings as a basis for strengthening school policies related to waste segregation, plastic reduction, and environmental conservation programs. The study may support the implementation of seminars, clean-up drives, recycling projects, and information campaigns that promote environmental responsibility among stakeholders. Furthermore, local government units and community leaders may utilize the findings in improving existing no-plastic policies and developing more effective strategies for ordinance implementation and public participation.

AI Use Disclosure - This study utilized ChatGPT by OpenAI as an artificial intelligence (AI) tool for language editing, grammar checking, sentence refinement, and assistance in organizing portions of the manuscript. All generated outputs were carefully reviewed, verified, and edited by the authors. The researchers ensured the accuracy and validity of the content, including interpretations, analysis, and conclusions presented in the study. No confidential or personally identifiable information was entered into the AI tool. The authors take full responsibility for the integrity and content of this manuscript.

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