



# Determinants of willingness to adopt zero plastic policy of the MSMEs in the Central Business District of Goa, Camarines Sur, Philippines

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## Abstract

Zero plastic policy bans the use of unnecessary plastic or single use plastic to promote a greener environment and to reduce harmful, non-biodegradable waste. This study investigates the business profile, plastic use policies, perceived usefulness, and level of awareness as the determinants of willingness to adopt zero plastic policy of the micro, small, and medium sized enterprises (MSMEs) in the central business district of Goa, Camarines Sur. The study used a descriptive research method, where questionnaires were used to gather data from 105 respondents. Results show that majority of the respondents are highly aware of the zero plastic policy and are willing to implement it as one of their business policies. Based on the regression analyses, it appears that existing plastic use policies, perceived usefulness, level of awareness, age, and number of employees have a direct relationship with the business' willingness to adopt zero plastic policy. The study concluded that the factors are the determinants of the willingness to adopt zero plastic policy of MSMEs in the central business of Goa, Camarines Sur. Using the results of this study as foundation, the study recommends transformative activities such as awareness campaigns, capacity building and policy integration, and for a follow-up research covering this study's limitations.

**Keywords:** *determinants, perceived usefulness, willingness to adopt, zero plastic policy*

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## **Introduction**

Plastic pollution is a major issue in growing Asian and African countries, even in developed countries; it can still be difficult to collect used plastics (Parker, 2019). It was estimated in the United Nations Environment Programme (UNEP) report that around 11 million tons of plastic ends up in the international oceans every year. The best course of action is to take action on the root cause of the problem. It is virtually impossible to completely cease the use of plastic; however, a definitive step can be initiated by incrementally reducing the unnecessary use of plastic, production of disposable plastic products, and more. One good example is the zero plastic policy, which bans the use of unnecessary plastic or single use plastic to promote a greener environment and to reduce harmful, non-biodegradable waste.

This study investigated the willingness of micro, small, and medium sized enterprises (MSMEs) to take decisive action against plastic pollution, specifically the willingness to adopt zero plastic policy as part of the environmental movement and as contribution to the Sustainable Development Goals 3, 12, and 14, also known as “good health and well-being”, “responsible consumption and production”, and “life below water”, respectively. The data regarding business profile, current plastic use policies, level of awareness, and willingness to adopt zero plastic policy that were gathered may also help in assessing the readiness of the MSMEs in the probable nationwide ban on single use plastics in the Philippines.

## **Methodology**

The study used a descriptive research method, where questionnaires were used to gather data from 105 respondents who are owners or managers of MSMEs established in the central business of Goa. The total population of MSMEs is 215, which means that by using Slovin’s formula with a 7% margin of error, the number of respondents became 105 owners or managers of MSMEs. The researchers requested a list of registered business entities in the Municipality of Goa that come under the category of MSMEs. The chosen respondents were then given the questionnaire that was validated by three capable researchers. The study employed stratified proportional sampling to guarantee that the sample fairly represents the population under investigation. Three (3) strata/clusters were identified based on the type of

business, namely: manufacturing, merchandising, and service business. Moreover, statistical tools such as logical, ordinal, and multivariate regression were used to analyze the data.

## Findings

Findings indicate that the central business district of Goa is made up mostly of start-ups that are less than ten years in operation. It is also dominated by merchandising businesses and sole proprietorships. It appears that over 80% of the businesses only have less than five employees. This can be attributed to the majority of the respondents being a new/start-up enterprise.

The results of data gathering shows that majority of the respondents have policies related to plastic use/waste management such as waste segregation, reuse and recycle of plastic, and encouraging both employees and customers to bring their own reusable bags. The rest are policies that are least implemented. This includes extra charge for requesting plastic for packaging, ban on single use plastics, and a deposit refund schemes for plastic bottles. As for the perceived usefulness, results yield that respondents see the zero policy as extremely useful when it comes to sustainability concerns and future regulatory compliance. Conversely, respondents find it relatively less useful in reducing operational costs, enhancing brand reputation, and development of innovation.

The respondents are highly aware of the zero plastic policy. Most of them heard of this term when a city in the same province as Goa had passed an ordinance related to this policy. Their awareness with zero plastic policy also makes them recognize the usefulness of its implementation. They are also aware of the Single-use Plastic Products Regulation Act, but they are more familiar with the Ecological Solid Waste Management Act.

The willingness to adopt was measured in three ways. The first revealed that 80.95% are willing to adopt the zero plastic policy. When asked to rate their willingness from 1 -5, more than half of the respondents rated it as 5, the highest rating. Moreover, they were asked to express it by their willingness to pay. Majority of the remaining respondents are mostly willing to pay 100, 200, or 500 pesos.

Various regression analyses were utilized to find out the determinants of willingness to adopt. Overall, the existing plastic use policies, perceived usefulness, level of awareness, age, and number of employees have a direct relationship with the business' willingness to

adopt zero plastic policy. To add, the level of awareness (*1.21 coefficient; 0.012 p < 0.05*) has the most influence on the willingness to adopt.

## **Conclusion**

Assessment of results reveals that MSMEs in the central business district of Goa, Camarines Sur are highly open to the implementation of the zero plastic policy in their business. This leads to the evaluation of the factors of their willingness to adopt. The study tested a total of seven possible determinants of a business' willingness to adopt zero plastic policy. The results reveal that five out of the seven determinants have a positive significant relationship on the willingness to adopt.

Based on the findings, it is concluded that plastic use policies, perceived usefulness, level of awareness, age, and number of employees are the determinants of willingness to adopt zero plastic policy of MSMEs. This suggests that businesses that have great consideration for plastic use and related practices are more likely to be willing to adopt another related policy. When businesses learn more about the zero plastic policy and its advantages, the more willing they are to implement the policy. As for the age and employees, it may be because older enterprises already established their place in the market, which means they have more freedom in exploring various things that can help promote the business further, which includes adopting a zero plastic policy.

This study was initially started to serve as a contribution and support to sustainable practices and environmental conservation. By determining the factors influencing businesses' willingness to adopt zero plastic policy, the results of such study can serve as a foundation for assessing the readiness for the implementation of such policy, and for drafting related government regulations. The study also recommends transformative activities such as awareness campaigns, capacity building and policy integration, and for a follow-up research covering this study's limitations.

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