



International Journal of Research Publication and Reviews

Journal Homepage: www.ijrpr.com ISSN 2582-7421

Environmental Law Awareness and Consumer's Willingness to Pay for Green Products: A Study of Mumbai

Riddhi More

Masters of Arts (Economics), HSNC University, Mumbai
moreiddhi2104@gmail.com

ABSTRACT:

Environmental laws in India aim to reduce plastic-waste, electronic-waste and pollution. But it is yet not known whether awareness about these regulations has any effect on consumer spending on green products. The study investigates the correlation between awareness of environmental regulations and willingness to pay additional cost on green products.

Data for the current study have been gathered through primary research with 100 respondents from Mumbai in form of an online survey. Respondents were selected by convenience sampling. There were three hypotheses that have been tested using chi-square test of independence and regression analysis to investigate the correlation between environmental regulation awareness, education level, income and willingness to pay.

From the results of the study, it can be concluded that there is no statistically significant correlation between environmental regulations awareness and willingness to pay for green products. Education also shows only a weak relationship. Income is also not related significantly to willingness to pay. However, additional analysis reflects respondents who believe that environmental awareness influences their buying decisions shows a higher willingness to pay extra. This indicates that individual's views on the impact of awareness may be different from their readiness to pay more.

It appears that merely creating awareness may not be sufficient to promote environmental consumption. Incentives in terms of prices and proper product information can assist consumers in making decisions for the benefit of the environment. But it is necessary to note that the study was constrained due to the non-random selection of a small sample. Thus, it does not establish causality but only identifies relationships among the variables.

INTRODUCTION:

There are numerous decisions made every day by people that have an impact on the environment. Some of these decisions may range from using plastic bags or cloth bags, purchasing water bottles, or the need to change appliances within the house. It is through legislation that the government seeks to limit any harm done to the environment. In India, some of the most notable legislations are the "Environmental Protection Act" (1986), the "Plastic Waste Management Rules" (2016), and the "E-Waste Management Rules" (2016). The effectiveness of the legislations will depend on how the people appreciate the same.

Green products are important part of this effort. These products are designed to reduce harm to the environment through the materials used or the way they are produced. However, some green products are more expensive than regular products. Consumers must therefore decide whether the environmental benefits are worth paying extra for. In economics, the decision is related to willingness to pay, which refers to the amount a person is prepared to spend on a product or service.

Consumer's willingness to pay for the product plays an essential role both for business and public policy. It assists in finding out whether consumers will prefer to purchase environmentally conscious products despite their higher prices. This information can help policymakers find out if any public programs are required to make consumers behave sustainably.

Study Area

This study is based on Mumbai, Maharashtra. People living in Mumbai face problems like pollution and waste disposal in their daily lives. They can also choose between eco-friendly products and regular products. Therefore, Mumbai is a suitable place to understand whether awareness of environmental laws affects people's willingness to pay more for green products.

Research Question

This study aims to understand whether people who know about environmental laws are more willing to pay extra for eco-friendly products in Mumbai.

It also looks at two related questions:

- Is education related to consumer's willingness to pay more for green product?
- Is income related to consumer's willingness to pay more for green product?

RESEARCH OBJECTIVES:

The main objectives of this study are:

- To understand consumer's awareness of environmental laws and their willingness to pay more for green products.
- To find out whether awareness of environmental laws is related to willingness to pay.
- To examine whether income and education are related to willingness to pay for green products.

RESEARCH HYPOTHESES:

Based on the objectives of this study, three hypotheses are tested. They help us understand whether awareness of environmental laws, people's opinions and education are related to their willingness to pay more for green products.

Hypothesis 1 (H1): Awareness of Environmental Laws and Willingness to Pay

H₀(Null Hypothesis): There is no significant relationship between awareness of environmental laws and willingness to pay more for green products.

H₁(Alternative Hypothesis): There is a significant relationship between awareness of environmental laws and willingness to pay more for green products.

Hypothesis 2 (H2): Income and willingness to pay

H₀(Null Hypothesis): There is no significant relationship between monthly income and willingness to pay more for green products.

H₂(Alternative Hypothesis): There is a significant relationship between monthly income and willingness to pay more for green products.

Hypothesis 3 (H3): Education and willingness to pay

H₀(Null Hypothesis): There is no significant relationship between education level and willingness to pay more for green products.

H₃(Alternative Hypothesis): There is a significant relationship between education level and willingness to pay more for green products.

LITERATURE REVIEW:

This section looks back at research in five main areas. First, it covers the theory behind how people make buying decisions. Second, it talks about awareness and green buying. How much people. How that affects their choices to buy eco-friendly products. Third it explores regulation and how people understand the laws related to the environment. Fourth it examines stated willingness to pay. How much people say they are ready to pay for options even if they don't always follow through. Fifth it looks at how income and education level influence these choices.

Theoretical Background

The theory of planned behaviour is often used to explain buying. Ajzen (1991) said that a person's intention to do something can be predicted based on their attitude towards the action the opinions of people around them and how control they feel they have. This intention, along, with perceived control explains a lot of behaviour. WTP can be seen as an intention. Knowledge of laws can influence attitudes by showing why green products are important while income affects perceived control by determining whether a person can afford them.

Environmental Awareness, Knowledge and Green Buying

Studies of consumers generally link environmental awareness with green buying however the link with paying a higher price is not as clear. Ishaswini and Datta discovered that environmental concern and environmental awareness of eco-friendly products affected buying yet many consumers who were ready to buy such products were not prepared to pay a higher price. Evidence from outside India is similar. Naz et al. (2020) Asked 1,185 university students in Hungary, found that environmental knowledge helped green purchase behaviour, with WTP and purchase intention as the main factors. Environmental knowledge however does not always lead to spending. Kirmani and Khan identified a "green" group of Indian consumers who were highly

eco-literate yet whose environmental knowledge did not lead to environmental concern or willingness to pay. Taken together these studies suggest that environmental awareness may help purchase intention but that the step, to paying a price is weaker.

Government Regulation and Awareness of Environmental Laws

I notice that a smaller group of studies looks closely at the role of government regulation. Feng, Feng and Liu (2025) gathered 857 questionnaires about a green food brand and found that government regulation strengthened consumers' green orientation and made consumers more likely to buy green products. In Malaysia government regulation also had a positive influence, on the intention to purchase green electrical products according to a survey of 384 respondents (Ahmad Dailami et al. 2023). These studies however only show how consumers view government regulation not whether consumers actually know what environmental laws say.

These studies also look at how people see the role of government and do not check whether people actually know the laws. In India studies on plastic bans show that knowing a law and following it are things. A study in Perambalur, Tamil Nadu found that plastic use stayed high even though people knew about the hazards of plastic and the rules against plastic. In Puducherry, knowledge and practice scores rose after the single-use plastic ban and people with higher education and better jobs had a better understanding of the law. Enforcement also matters. Enforcement is key. A 2026 survey by Toxics Link found banned single-use plastic items still available, at most of the 560 locations visited in four cities.

Stated Willingness to Pay and Real Behaviour

People often say they're willing to pay more for products but their real behaviour tells a different story. Moser looked at shoppers and found that what people said about buying eco-friendly things didn't match what they actually bought. Witek saw the same in Poland. Even though people had feelings about protecting the environment that didn't turn into actual action. Price really matters. A McKinsey survey of 1,000 consumers in Europe and the U.S. Found that over 70 percent said they'd pay a 5 percent, for a green product. As the price went up interest dropped fast. than 10 percent said they'd pay 25 percent more for most kinds of products. This matches what we found in this study. Most people said they'd pay a small extra amount.

Income and Willingness to Pay

In economics WTP depends on both what a person values and what a person can afford. Income is a factor to study but the evidence is mixed. A study of 310 consumers in the Philippines found a difference in WTP between income groups linking affordability and income adequacy to willingness to pay for green products. A study in Malaysia found that income influenced the price consumers would pay for shampoo but not for the other products examined. A US survey of 999 shoppers found that lower-income shoppers were more likely to be willing to pay a premium, than middle and high-income shoppers although the survey firm noted that this could be linked to age. Income therefore does not always push WTP in the expected direction.

Education and Consumer Characteristics

Research on who pays more also looks at characteristics. Laroche, Bergeron and Barbaro-Forleo found that consumers willing to pay more for friendly products were more likely to be female, married and living with children and that they often thought about ecological issues when buying. Education appears indirectly in the legal-awareness studies where better-educated groups understood the plastic law better. Direct evidence, on education and WTP is limited so this study tests it.

RESEARCH GAP:

Previous studies have found that awareness and concern are connected to intentions but the link to paying more is less clear. Most research on regulation focuses on how people view the government than whether they actually know the environmental laws. Also, people may say they are willing to pay more in surveys. Their real behaviour can be different. There is little information on whether awareness of environmental laws is connected to willingness to pay in an Indian city. This study examines that connection, in Mumbai. Also looks at how income and education might influence it.

DATA AND METHODOLOGY:

Research Design

This study uses a method and a cross-sectional survey design. Data was gathered one time from a group of people who buy things to find out if knowing about laws money earned and level of education are connected to wanting to pay more for green products. The design shows how the different things are linked. It does not show that one thing causes another.

Data Sampling

The study uses data that was collected directly from people using an online questionnaire made in Google Forms. The form was given to people who live in Mumbai through college groups and social media. The answers were gathered between 26th August 2026 and 11th October 2026.

Convenience sampling was used, which means the people who answered were those who were easy to reach and who decided to take part. This method is fast and cheap. The group of people who answered may not be the same, as all the people who live in Mumbai. This is explained in the limitations section.

Questionnaire Design

The questionnaire includes 17 questions that are all closed-ended. These questions are divided into five sections.

Section Questions What it measures

A. Demographics Q1–Q3 Age, education level and monthly household income

B. Awareness of environmental laws Q4–Q7 Whether the respondent knows environmental laws are in place their self-assessed awareness, familiarity with rules and where they get their information

C. Green product behaviour Q8–Q10 Familiarity, with the term "green products" past buying experience and opinion on the price of green products

D. Willingness to pay Q11–Q13 How much more they would pay for a product priced at Rs 100 if it were green and how likely they are to buy it at 10% and 20% extra

E. Perceived influence of awareness Q14–Q17 Whether respondents believe that awareness affects their buying decisions and their willingness to pay for green products

Sample Size and Data Cleaning

The form got 103 responses. Three people filled the form two times. For each of them only the first time they filled it was kept. This left a total of 100 people. No answer was missing any information. Email addresses were only used to find people who filled the form more than once and were removed before the analysis.

Measurement of Variables

Willingness to pay (dependent variable). People were asked how much they would pay for a product when a regular product costs Rs 100. The choices "Rs 100" and "I would not pay more" both mean no extra money so they were put together as one group with 0%. The other choices include 5%, 10% and 20% more and "more than Rs 120" which was considered as 25% more in the regression analysis. For the chi-square tests willingness to pay was put into three groups: no extra money, 5% extra and 10% or more.

Awareness of laws (H1). An awareness index was created using three questions. The first question asked if the person knew environmental laws exist. The second was about self-rated awareness. The third asked about knowledge of rules on plastic, e-waste and pollution. Each question was converted to a score from 0 to 100. Then averaged. For the chi-square test people were split into medium and high awareness using the 33rd and 67th percentiles of the score. Low was up to 58.3 medium was from 58.3 to 66.7. High was above 66.7. The groups are not the size because many people had the same score.

Income (H2). Monthly household income was grouped as below Rs 25,000 Rs 25,000 to 50,000 above Rs 50,000. Prefer not to say. The last group is kept separate so that people who do not want to share their income are not left out.

Education (H3). Education was grouped as up to secondary, graduate and postgraduate or professional.

Reliability. The reliability of the awareness index was tested with Cronbach's alpha, which was 0.35. This is, below the standard of 0.70. This means the three questions do not measure awareness in a way. This is a problem. It is taken into account when looking at the results.

Statistical Methods

Descriptive statistics: Frequencies, percentages, means and standard deviations were used to describe the sample and the pattern of willingness to pay.

Chi-square test of independence: The three hypotheses were tested with the chi-square test, which checks whether two categorical variables are related. It compares the number of respondents in each cell of a table with the number expected if the two variables were unrelated:

$$\chi^2 = \sum (O - E)^2 / E$$

where O is the observed frequency and E is the expected frequency. The degrees of freedom are $(\text{rows} - 1) \times (\text{columns} - 1)$. The null hypothesis was rejected if the p-value was below 0.05. The strength of any relationship was measured with Cramér's V, where values near 0.1 indicate a relationship near 0.3 a moderate one and near 0.5 a strong one.

Ethical Considerations

Participation was voluntary and confidential. No names or contact details were used in the analysis, and respondents answers were used only for this research.

RESULT AND ANALYSIS

This section contains the survey results. It starts by describing the respondents, their level of awareness of environmental legislation and their WTP. It then tests the three hypotheses and finishes off with a number of further checks. The final sample has 100 respondents from Mumbai. Most of them are young, with 62 respondents aged 18-25. About two-thirds, 66 respondents are graduates. About one in five, 19 respondents chose not to state their income.

Table 1: Profile of respondents (n = 100)

Characteristic	Category	Number of respondents
Age	18-25 years	62
	26-35 years	19
	36-45 years	10
	46-55 years	6
	Above 55 years	3
Education	Up to higher secondary	19
	Graduate	66
	Postgraduate or professional	15
Monthly household income	Below Rs 25,000	26
	Rs 25,000-50,000	34
	Above Rs 50,000	21
	Prefer not to say	19

Awareness of Environmental Laws

I notice that most respondents (79) said respondents knew that environmental laws exist. Thirteen respondents said respondents did not know. Eight respondents were not sure. When respondents were asked to rate respondents' awareness sixty-one respondents chose "moderate". Twenty-seven respondents chose "low" or "very low". Twelve respondents chose "high" or "very high". Knowledge of rules on plastic, e-waste and pollution was also mostly moderate. Fifty respondents were moderately familiar with plastic, e-waste and pollution rules. Twenty-six respondents were very or extremely familiar. Twenty-four respondents were slightly or not all familiar.

I see that an awareness index from zero, to one hundred was created from these three questions. The average score is 59.8, which shows a level of awareness. Few respondents have a high level of awareness. Therefore, the group is small when respondents are divided into medium and high awareness.

Willingness to Pay for Green Products

Respondents were asked how much they would pay for a product if a similar normal product costs Rs 100. On average respondents would pay 8.0 per cent extra. The middle value or median is 5 per cent.

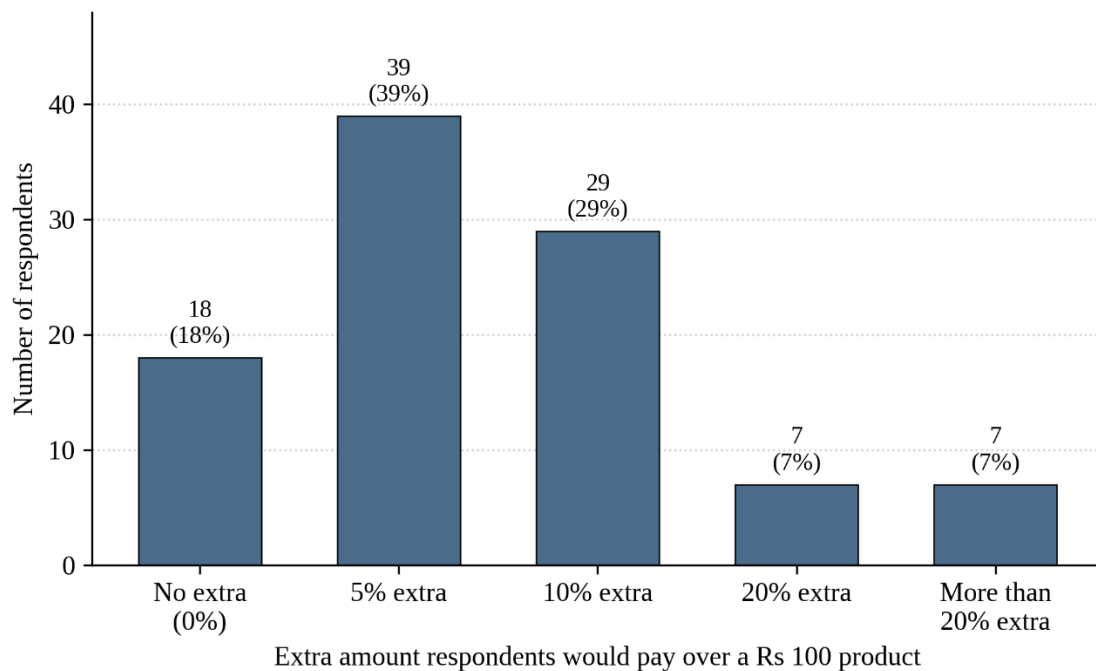
Most respondents are ready to pay a small extra amount. 18 Respondents would pay nothing extra while 39 would pay 5 per cent more and 29 would pay 10 per cent more. 14 Respondents would pay 20, per cent or more.

Table 2: Willingness to pay extra for green products (n = 100)

Extra amount over Rs 100	Number of respondents	Percent
No extra (0%)	18	18
5%	39	39

Extra amount over Rs 100	Number of respondents	Percent
10%	29	29
20%	7	7
More than 20%	7	7

For the tests the answers are divided into three groups: nothing extra (18 respondents) 5% extra (39 respondents) and 10% or more (43 respondents)



Source: Primary survey, Mumbai (n = 100).

The figure above shows that the majority of respondents are willing to pay a small extra amount. The frequent choice is 5 % extra with 39 people selecting this option. Next comes 10% extra chosen by 29 respondents. 14 Respondents said they would pay 20% or more.

Testing the Hypotheses

We tested the hypotheses with the chi-square test. The chi-square test checks whether two things are related. For example, the test can show whether people with awareness also tend to pay more. The result is shown by the p-value. If the p-value is below 0.05, the relationship between the two things is unlikely to be due to chance. The null hypothesis is rejected. If the p-value is above 0.05 no clear relationship is found. The strength of the relationship is shown by Cramér's V. A Cramér's V value near 0.1 is weak near 0.3's medium and, near 0.5 is strong.

Table 3: Summary of chi-square tests (n = 100)

Hypothesis	Variable tested against WTP	Chi-square value	p-value	Cramér's V	Result
H1	Awareness of environmental laws	5.64	0.228	0.17	Not supported
H2	Income	1.85	0.933	0.1	Not supported
H3	Education	6.67	0.154	0.18	Not supported

In all three cases the p-value is above 0.05 so none of the hypotheses is rejected.

H1: Awareness of laws and willingness to pay

The test shows that there is no important link between awareness of environmental laws and willingness to pay. The chi-square value is 5.64 and the p-value is 0.228. Table 4 shows that people who have awareness do not want to pay more. 33.3 Per cent of the high-awareness group would pay 10 per

cent or more compared with 40.9 per cent of the low-awareness group and 48.8 per cent of the medium-awareness group. The high-awareness group is small, with 15 respondents so these percentages should be read carefully.

Table 4: Awareness and willingness to pay (row percentages)

Awareness level	Respondents	No extra	5% extra	10% or more
Low	44	25	34.1	40.9
Medium	41	7.3	43.9	48.8
High	15	26.7	40	33.3

Therefore, H1 is not supported. Understanding laws does not seem to prepare people to pay more for green products.

H2: Income and willingness to pay

The test shows no relationship between income and willingness to pay (chi-square = 1.85 $p = 0.933$) and the relationship is very weak ($V = 0.10$). Table 5 shows that there is no pattern. In fact, half of the lowest-income group (50.0 per cent) would pay 10 per cent or more compared with 38.1, per cent of the group earning above Rs 50,000. These differences are small. Are not significant.

Table 5: Income and willingness to pay (row percentages)

Monthly income	Respondents	No extra	5% extra	10% or more
Below Rs 25,000	26	19.2	30.8	50
Rs 25,000-50,000	34	14.7	44.1	41.2
Above Rs 50,000	21	23.8	38.1	38.1
Prefer not to say	19	15.8	42.1	42.1

Therefore, H2 is not supported. People with incomes were not more likely to pay extra for green products.

H3: Education and willingness to pay

The test shows no relationship between education and willingness to pay (chi-square = 6.67 $p = 0.154$). Table 6 shows that postgraduates and professionals were the most willing to pay extra with 66.7 per cent to pay 10 per cent or more. This compares with 34.8 per cent of graduates. However, the postgraduate group has 15 respondents, which is too small to detect a clear difference, in the test.

Table 6: Education and willingness to pay (row percentages)

Education	Respondents	No extra	5% extra	10% or more
Up to higher secondary	19	10.5	36.8	52.6
Graduate	66	22.7	42.4	34.8
Postgraduate or professional	15	6.7	26.7	66.7

Therefore, H3 is not supported by the chi-square test, although the pattern for postgraduates is worth noting. This is checked further in the next section.

Additional Checks

To confirm that the main result is not tied to the test used two alternative methods were applied: a regression analysis and an ordered logit model. Both of these analyses treat all factors together. In each analysis awareness of laws shows no meaningful impact on WTP (see Table 7). When the awareness index rises by ten points the change in the amount is only minus 0.47 percentage points, which is not different, from zero ($p = 0.40$). The same conclusion appears when individuals who did not report their income are excluded ($p = 0.49$).

Table 7: Awareness and willingness to pay regression results

Method	Effect of a 10-point rise in awareness	p-value
Regression, awareness only	-0.35 percentage points	0.53
Regression with other factors	-0.47 percentage points	0.4

Method	Effect of a 10-point rise in awareness	p-value
Regression with other factors, income stated only (n = 81)	-0.39 percentage points	0.49
Ordered logit with other factors	Odds ratio 0.92	0.5

Other factors include age, education, income whether someone has bought products before how familiar they are with the term "green products " and what they think about the price of green products.

Two results showed up in these models. First people who had a postgraduate degree or were professionals said about 5 percentage points more than those who had a graduate degree ($p = 0.03$) which matches the pattern in Table 6. Second people who had heard of the term " products" were more likely to be in a higher WTP group ($p = 0.01$, in the ordered logit model). These results were not part of the three hypotheses so they are shared as findings.

Opinion About the Influence of Awareness

Respondents were also asked if they think that being aware of laws changes how much people are willing to pay. Most answered yes – 74 people. Seventeen were unsure. Nine said no. This question was not part of the three hypotheses but it shows a clear pattern and is reported here.

The answers are strongly linked to willingness to pay (chi-square = 31.02 $p < 0.001$ $V = 0.39$). Those who said yes would pay, on average 9.3 percent more. Those who were unsure would pay 5.6 percent more. Those who said no would pay 2.2 percent more – but there were only nine people in that group. Three more statements on this topic gave answers and were also connected to a higher willingness to pay in the regression. Each point, on the scale added 1.65 percentage points to willingness to pay ($p = 0.04$).

This finding needs to be looked at. Both the opinion and the amount people are willing to pay are, from the people, which means their answers match up. It does not show that being aware causes people to pay more and the awareness score did not show that connection.

Summary of hypothesis tests

Respondents are willing to pay an extra amount of about 8 percent, for green products. Neither awareness of laws nor income explains how much they are willing to pay. Education shows a weak and uncertain connection. The strongest pattern is that respondents who believe awareness matters also say they are willing to pay more. This is not supported by their level of awareness.

DISCUSSIONS

This study asked whether awareness of laws, income and education are related to how much extra consumers, in Mumbai are willing to pay for green products. The results do not support any of the three hypotheses. They do show some patterns, which are discussed below.

Consumers are ready to pay a small extra amount. The average extra amount consumers would pay is 8 %. Most consumers choose 5 or 10 %. Fourteen percent of consumers would pay twenty percent or more. This agrees with studies. Ong and Goh (2015) found that Malaysian consumers would pay quite a bit more for products than for non-green ones but still less than the current prices. Salvador (2013) found that in the Philippines thirty-nine percent of consumers willing to pay would pay, up to five percent more. Consumers seem to accept a premium but not necessarily the big extra costs that green products often carry.

Awareness of laws is not connected to willingness to pay (H1). People who had awareness were not more likely to pay extra than people who had low awareness. There are possible reasons but this study does not confirm which one is correct.

- Knowing a law does not mean people will follow it. In Perambalur, Tamil Nadu, Duraisamy et al. (2023) Found that most people used plastic in life even though many had heard of the plastic ban and only about 35 per cent knew about the laws and regulations themselves. Awareness, by itself may not change what people buy.
- I notice that most laws are aimed at producers and sellers. Consumers do not always see a link between these laws and their own shopping choices. Because of this knowing about the laws does not always change how much Consumers will pay.

The result is also in line with Indian work. Ishaswini and Datta found that awareness of eco-friendly products influenced buying but many consumers who were ready to buy were not willing to pay a higher price. Kirmani and Khan found a group of consumers with knowledge of environmental issues whose knowledge did not lead to a higher willingness to pay. It differs from studies where general environmental knowledge raised purchasing, such as Naz et al. (2020) On students. One reason may be that this study measured knowledge of laws, which is narrower, than general environmental knowledge.

Income is not related to willingness to pay (H2). A simple budget argument says that people with income should be ready to pay more. This was not found. In fact, half of the lowest-income group would pay ten per cent or more against thirty-eight per cent of the highest-income group although the differences are small and not significant. One possible reason is that a small premium of five to ten per cent may be affordable at income levels so income does not separate people. Earlier studies also show that income matters in some cases and not in others. Ong and Goh (2015) found that income affected

the price consumers would pay for green shampoo and not for the other products they examined. Another point is that many respondents are young and their own spending may not match their household income. Nearly one, in five did not state their income.

Education shows an uncertain link as stated in hypothesis three (H3). The chi-square test did not reach significance. Among the sample postgraduates and professionals were the most willing to pay an extra amount; 66.7 of them chose 10% or more compared with 34.8% of graduates. However, 15 postgraduates and professionals were present which made the test unable to reveal a clear difference. Earlier studies on education also present results. Naz and colleagues in 2020 observed no effect of age, gender or qualification on the green purchase behaviour of students. In Perambalur, graduates used plastic often than individuals with no formal education even though they were more aware of its hazards. Therefore, the education pattern observed in this study should be regarded as a hint for research rather, than a definitive conclusion.

People's opinions about awareness do not match their awareness. Most respondents, 74 out of 100 said that awareness of laws changes how much consumers are willing to pay and these respondents also gave higher amounts. Still the respondents' own awareness showed no connection with their willingness to pay. This means that people may believe that awareness matters. That belief does not appear in what they say they would pay. This observation fits the research that shows a gap, between attitudes and behaviour. Because the opinion and the amount both come from the respondents this pattern shows consistency in the respondents' answers and does not prove cause and effect.

POLICY IMPLICATIONS:

The results come from a sample so the ideas below are only possibilities to think about, not final rules.

- **Awareness campaigns alone may not be enough.** Because knowing the laws does not make people want to pay more campaigns about the rules might have to be mixed with actions like price support, tax help or subsidies that bring the cost of green products closer to the cost of regular products.
- **Premiums should stay small.** Most people would pay 5 to 10 % more. Producers and policymakers would do better to set product prices within this range rather than expecting people to accept much higher prices.
- **Clear information on products matters a lot.** Witek (2019) found that people's knowledge of products was only general and only partial. Simple trustworthy labels and product details may help people see what they are paying for which may help more than telling people about the laws.
- **Rules need to be enforced.** A 2026 survey, by Toxics Link found that banned single-use plastic items were still found at most of the 560 places it checked in four cities. When rules are weakly enforced people may not see protection as a serious matter. Stronger enforcement could make campaigns work better.

LIMITATIONS:

Like any study this one has limits. They should be kept in mind when reading the results.

- **Small, non-random sample** -The sample is small and not random. The study is based on 100 respondents chosen by convenience sampling. Reached through an online form. The sample is mostly young (62% aged 18-25) and mostly graduates (66 %). This means it does not represent all consumers in Mumbai. The results should not be applied to the city or to India.
- **Stated willingness to pay** -Respondents said how extra they would pay but they did not actually buy anything. Earlier research shows that stated amounts can be higher than what people spend. So, the results show intentions and not real purchases.
- **Awareness was measured with a short scale** - Awareness was measured with a scale. The awareness index used three questions and its reliability was low (Cronbach's alpha = 0.35). The questions may not capture awareness of laws well. This could hide a relationship with willingness to pay. Most respondents also gave answers so there was little difference between people.
- **Small groups** -15 respondents had a high level of awareness and only 15 were postgraduates or professionals. Percentages for these groups can change a lot with a respondents. The tests have power to find differences. Some cross-tables also had expected counts. For this reason, a second set of p-values (Monte Carlo) was reported, the problem remains.
- **Income groups** -Nearly one in five respondents (19 %) did not state their income. Income was grouped into bands. The income question also had no band between Rs 75,000 and Rs 1,00,000. Respondents' own household income may also not reflect their spending, especially for young respondents.
- **Grouping choices** -To run the square tests willingness to pay and awareness were grouped into three categories each. Other ways of grouping could give different results. Although the main result did not change in the checks.
- **Association, not cause and effect** -The study looks at relationships at one point in time. It cannot show that awareness, income or education causes a change in willingness to pay or the reverse.

- **Self-reported Opinions** -The opinion that awareness affects willingness to pay and the stated amount both come from the respondents. The strong link, between them may partly reflect that people answer in a way.

CONCLUSION:

This study examined whether awareness of laws, income and education are related to how much extra consumers in Mumbai are willing to pay for green products. The study used data from one hundred respondents and tested three hypotheses with the chi-square test.

On average respondents were willing to pay eight per cent more for a green product. Most respondents would pay an extra amount of five to ten per cent and only a few respondents would pay twenty per cent or more. None of the three hypotheses was supported. Awareness of laws was not significantly related to willingness to pay and income was not related either. Education showed a weak and uncertain link; postgraduates and professionals appeared more willing to pay but the group was too small to be sure. The finding on awareness remained the same in the checks.

One pattern stood out. Most respondents believed that awareness of laws affects how much consumers are ready to pay and these respondents stated higher amounts. The measured awareness of respondents showed no such link. This suggests that people's views about the importance of awareness may not match what their own awareness shows.

The results suggest that awareness campaigns about laws may not on their own make consumers pay more for green products. Such campaigns may work better with price support clear product information and proper enforcement of the rules and with green products priced within the small premium that most consumers accept. Because the sample is small and not random and willingness to pay was self-reported these findings show associations, for this group of respondents. Should be confirmed by larger studies.

REFERENCES:

- Ahmad Dailami, A. F., Jaafar, J., & Ahmad, H. (2023). *Consumer intention toward green electrical products: A case study in Johor Bahru, Malaysia*. Universiti Kuala Lumpur MITEC. <http://hdl.handle.net/123456789/26733>
- Government of India. (1986). *The Environment (Protection) Act, 1986* (Act No. 29 of 1986).
- Ishaswini, & Datta, S. K. (2011). Pro-environmental concern influencing green buying: A study on Indian consumers. *International Journal of Business and Management*, 6(6), 124–133. <https://doi.org/10.5539/ijbm.v6n6p124>
- Kirmani, M. D., & Khan, M. N. (2016). Environmental attributes and market segmentation: Insights from India. *International Journal of Management Concepts and Philosophy*, 9(2), 73–92.
- Kittu, D., Aruljothi, S., & Chellamuthu, L. (2023). A community-based observational study on knowledge, attitude, and practice of single-use plastics ban in rural Puducherry, South India. *Journal of Community Health Research*, 12(1), 164–171. <https://doi.org/10.18502/jchr.v12i20.13662>
- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503–520. <https://doi.org/10.1108/EUM00000000006155>
- Ministry of Environment, Forest and Climate Change. (2016). *Plastic Waste Management Rules, 2016*. Government of India.
- Ministry of Environment, Forest and Climate Change. (2022). *E-Waste (Management) Rules, 2022*. Government of India.
- Moser, A. K. (2016). Consumers' purchasing decisions regarding environmentally friendly products: An empirical analysis of German consumers. *Journal of Retailing and Consumer Services*, 31, 389–397.
- Salvador, L. S. (2013). Determinants of purchase decisions and consumers' willingness to pay for green products. *IAMURE International Journal of Social Sciences*, 8(1).
- Toxics Link. (2026). *Revisiting single use plastic ban*. <https://toxicslink.org/toxicslink/revisiting-single-use-plastic-ban-2/>
- Witek, L. (2019). Attitude-behaviour gap among Polish consumers regarding green purchases. *Visegrad Journal on Bioeconomy and Sustainable Development*, 8(1), 31–36. <https://doi.org/10.2478/vjbsd-2019-0006>