

A study on Awareness and Adoption of Eco-friendly Products among Urban Consumers

Shivangi Sharma¹

Assistant Professor, Department of Management, Arihant College, Indore,

Email: shivisharma2022@gmail.com

Swati Jariya²

Assistant Professor, Department of Management, Arihant College, Indore

Email: swatijariya001@gmail.com

Abstract: This study investigates the awareness levels, adoption patterns, and influencing factors among urban consumers regarding eco-friendly products. A descriptive research design was employed, using primary data collected through a structured questionnaire administered to 63 urban respondents via convenience sampling. Percentage and chi-square analyses were applied to assess the relationship between respondents age and eco-friendly product adoption. The findings reveal high awareness levels but inconsistent adoption rates, primarily influenced by factors such as price sensitivity, perceived product quality, availability, and skepticism toward green claims. Notably, the study concludes that age has no significant impact on awareness and adoption behaviors.

Keywords: Eco-friendly products, Consumer awareness, Green marketing, Urban consumers.

Introduction:

In recent decades, growing environmental concerns and increasing awareness of the adverse effects of industrialization and consumerism have led to a rising interest in sustainable living practices. One prominent area of this shift is the adoption of eco-friendly products, which are designed to minimize environmental impact through sustainable sourcing, reduced waste, and lower carbon footprints. As global warming, pollution, and resource depletion continue to pose significant threats, consumers, especially in urban areas, are becoming more conscious of their purchasing decisions and their potential role in environmental preservation.

Urban consumers represent a vital segment for the eco-friendly product market due to their higher purchasing power, better access to information, and exposure to diverse product choices. Their awareness and adoption behavior can significantly influence market trends and encourage manufacturers to adopt sustainable practices. However, despite increased awareness, the actual adoption of eco-friendly products remains inconsistent. Many factors, including price sensitivity, perceived product quality, availability, and skepticism toward environmental claims, affect consumers' willingness to switch to greener alternatives.

Understanding the dynamics of awareness and adoption among urban consumers is critical for businesses, policymakers, and environmental advocates aiming to promote sustainable consumption. This study focuses on exploring the levels of awareness, the factors influencing adoption, and the challenges urban consumers face in purchasing eco-friendly products. By identifying the barriers and motivators, the research aims to provide insights that can help enhance marketing strategies, policy formulation, and educational efforts to foster a more sustainable consumer market.

Review of Literature:

Consumer awareness is fundamental to the adoption of eco-friendly products. **Diamantopoulos et al. (2003)** noted that social norms significantly impact green purchasing behaviors.

Peattie and Crane(2005) argued that eco-friendly products require marketing strategies emphasizing both environmental and personal benefits, highlighting credibility and transparent communication.

Lee (2008) suggested that collectivist cultures foster higher eco-friendly product adoption, as consumers in such societies often consider community well-being alongside personal benefit.

Rashid (2009) found that premium pricing discourages regular eco-friendly purchases, identifying price as a consistent barrier to adoption.

Leonidou et al. (2010) identified barriers such as habitual purchasing, limited perceived effectiveness, and convenience factors that restrict widespread adoption even among aware consumers.

Smith and Brower (2012) found that digital marketing and social media have emerged as powerful tools for raising awareness and influencing eco-conscious purchase decisions.

Delmas and Grant (2014) showed that eco-labeling positively influences consumer perceptions and increases purchase intentions, provided consumers trust and understand these labels.

Joshi and Rahman (2015) emphasized that while awareness enhances positive attitudes toward green products, it alone doesn't ensure adoption due to other influential factors like price and trust. **Biswas and Roy (2015)** further argued that product performance and convenience must meet consumer expectations for effective market competition.

Nguyen et al. (2019) highlighted that environmentally conscious urban consumers are more inclined to purchase eco-friendly products, even at a premium, stressing the importance of environmental education in fostering behavioral change.

Kumar et al. (2020) identified determinants such as environmental concern, social influence, perceived product quality, and price sensitivity affecting adoption among Indian urban consumers.

Sharma and Gupta (2021) identified a significant gap between consumer awareness and actual purchasing behavior, attributing this to skepticism about the authenticity of environmental claims.

Objectives:

- To study the challenges faced by urban consumers while using Eco friendly products.
- To study the impact of age on adoption and awareness of Eco friendly products in urban consumers.

Research Methodology:

The study adopts a **descriptive research design** to explore the awareness and adoption behavior of urban consumers regarding eco-friendly products.

Data Collection:

Primary data was gathered through a self structured questionnaire comprising close-ended and multiple-choice questions suitable for percentage analysis.

Sampling Technique:

Convenience sampling was employed due to time and accessibility limitations. The study sampled 63 **urban respondents**.

Data Analysis:

Percentage and frequency analysis was used for evaluating awareness levels, factors influencing purchasing behavior, and barriers to adoption. **Chi-square test** was applied manually to test the hypothesis regarding the impact of age on awareness and adoption.

Scope of the Study:

The study analyzes consumer awareness sources, types of eco-friendly products used, factors influencing purchase decisions, and barriers to adoption. Its findings will assist marketers, policymakers, and manufacturers in understanding consumer attitudes and developing effective promotional strategies. The data is interpreted using percentage analysis for clear and simple insights into consumer preferences and behaviors.

Demographic Information of Respondents:

Table 1: Distribution of Respondents by Age

Age	No. of responses	Percentage
Below 20	3	4.76%
21-30	45	71.42%
31-40	12	19.04%
Above 40	3	4.76%
Total	63	100%

The analysis of respondents by age indicates a predominantly youthful demographic. Most participants (71.42%) fall within the 21–30 age group, which suggests that the data collected primarily reflects the perceptions and behaviors of young adults. This age bracket is often characterized by increased awareness and adaptability toward sustainable consumption

patterns. A smaller yet significant proportion (19.04%) lies within the 31–40 age group, potentially reflecting working professionals with moderate experience. Respondents below 20 years and above 40 years each constitute 4.76% of the sample, indicating minimal representation from teenage and older age cohorts. This age-wise distribution is crucial in interpreting consumer awareness and attitudes toward eco-friendly products, especially as younger generations are often more environmentally conscious.

Table 2: Distribution of Respondents by Gender

Gender	No. of responses	Percentage
Male	33	52.38
Female	30	47.61
Total	63	100%

The gender-wise analysis reveals a balanced representation of male and female respondents. Out of the total 63 participants, 52.38% are male and 47.61% are female, which suggests that gender bias in sampling was minimal. Such near parity enhances the reliability of gender-based comparisons in consumer awareness and behavior toward eco-friendly and green products. Moreover, the presence of both genders in near-equal proportion allows for broader generalizations in terms of sustainable consumption preferences across gender lines.

Table 3: Distribution of Respondents by Educational Qualification

Qualification	No. of responses	Percentage
High School	5	7.93%
Graduate	14	22.22%
Post Graduate	31	49.20%
Professional Degree	30	47.61%
Total	63	100%

Respondents in this study exhibit a high level of educational attainment, with a majority holding postgraduate (49.20%) or professional degrees (47.61%). Only 7.93% of respondents had completed high school, and 22.22% were graduates, indicating that over 90% of the sample population possesses education beyond the secondary level. This highly educated demographic suggests a potential for greater environmental awareness and higher

responsiveness to green product initiatives. The prevalence of professional and postgraduate qualifications further implies that the sample may include individuals with specialized knowledge and decision-making capacity related to sustainability.

Table 4: Distribution of Respondents by Occupation

Occupation	No. of responses	Percentage
Business	7	11.1%
Service	28	44.44%
Student	21	33.3%
Others	7	11.1%
Total	63	100%

In terms of occupation, the sample reflects a diverse employment profile. The service sector emerges as the dominant occupation, encompassing 44.44% of respondents. This is followed by students who represent 33.3%, indicating the involvement of a younger and potentially more environmentally engaged group. Individuals engaged in business activities and other forms of occupation each constitute 11.1% of the total sample. The occupational distribution, particularly the presence of working professionals and students, suggests an informed consumer base that may have significant exposure to sustainable practices and eco-conscious decision-making environments.

Table 5: Awareness of Eco-friendly and Green Products

Awareness of Eco Friendly & Green Products	No. of responses	Percentage
Yes	59	93.6%
No	4	6.3%
Total	63	100%

A critical insight from the study lies in the level of awareness regarding eco-friendly and green products. An overwhelming 93.6% of respondents affirm awareness of such products, highlighting a high degree of environmental consciousness among the sample population.

Only 6.3% reported being unaware, which indicates a near-universal recognition of the concept. This strong awareness is likely influenced by the high levels of education and professional engagement seen in previous tables. The findings underscore the relevance of targeting educated, service-sector, and youth-oriented audiences in campaigns promoting green products.

Analysis Tool :

Analysis of the collected data was done by using Percentage & frequency analysis in case of objective 1 and chi square test was applied for objective 2.

Result:

- There is no significant impact of age on adoption and awareness of Eco friendly products in urban consumers.
- As per the chi square statics, calculated value (1.71) > p value (0.635) we fail to reject Null Hypothesis i.e. There is no significant impact of age on adoption and awareness of Eco friendly products in urban consumers.

Chi-Square Test:

Age Group	Observed Frequency (Aware)	Observed Frequency (Not Aware)	Expected Frequency (Aware)	Expected Frequency (Not Aware)
Below 20	3	0	2.8	0.2
21-30	43	2	44.6	0.4
31-40	11	1	11.8	0.2
Above 40	2	1	2.8	0.2

Chi-square Value: 1.71

Degrees of Freedom (df): 3

P-value: 0.635

Result: Not statistically significant ($p > 0.05$)

Interpretation: Age does not significantly affect awareness or adoption of eco-friendly products.

Findings:

The study found that 93.6% of urban consumers are aware of eco-friendly products, reflecting strong influence from media, education, and social networks. Most respondents were aged 21-30 (71.42%), with a balanced gender split. A majority held postgraduate or professional degrees, and service sector employees (44.44%) formed the largest occupational group.

Reasons Behind No significant impact of Age: Urban consumers across all age groups share similar exposure to media, education, and eco-awareness campaigns. Widespread internet access and a cultural shift toward environmental consciousness have made eco-friendly values common across generations, minimizing age-based differences.

Practical implications

For Marketers : Brands should implement **unified, age-neutral campaigns** that highlight key benefits like health and quality, using **cross-generational influencers** to reach a broader audience effectively.

For Policy Makers: Broad community education initiatives should be prioritized over age-specific interventions, as evidence indicates these programs effectively reach and influence all age groups, optimizing resource allocation and impact.

Conclusion:

The study concludes that **urban consumers demonstrate high awareness levels regarding eco-friendly products**, driven by increased environmental concerns and exposure to sustainability-focused information. However, the **adoption of these products is not significantly influenced by age**, implying that Eco-consciousness transcends generational divides within urban areas.

Limitations of the Study:

The study was limited to urban consumers, excluding rural participants, affecting result generalizability. It used a small sample size of 63 respondents via convenience sampling, introducing possible selection bias. The research did not distinguish between different eco-friendly product categories, and focused only on age as a variable, ignoring other factors like income, social influence, and price sensitivity.

References:

1. Biswas, A., & Roy, M. (2015). *Green products: an exploratory study on the consumer behaviour in emerging economies of the East*. *Journal of Cleaner Production*, 87(1), 463–468. <https://doi.org/10.1016/j.jclepro.2014.09.075>
2. Delmas, M. A., & Grant, L. E. (2014). *Eco-labeling strategies and price-premium: The wine industry puzzle*. *Business & Society*, 53(1), 6–44. <https://doi.org/10.1177/0007650312459861>
3. Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). *Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation*. *Journal of Business Research*, 56(6), 465–480. [https://doi.org/10.1016/S0148-2963\(01\)00241-7](https://doi.org/10.1016/S0148-2963(01)00241-7)
4. Joshi, Y., & Rahman, Z. (2015). *Factors affecting green purchase behaviour and future research directions*. *International Strategic Management Review*, 3(1–2), 128–143. <https://doi.org/10.1016/j.ism.2015.04.001>
5. Kumar, P., Verma, P., & Jain, P. (2020). *Determinants of green product purchase behaviour: An Indian perspective*. *Resources, Conservation and Recycling*, 158, 104802. <https://doi.org/10.1016/j.resconrec.2020.104802>
6. Lee, K. (2008). *Opportunities for green marketing: Young consumers*. *Marketing Intelligence & Planning*, 26(6), 573–586. <https://doi.org/10.1108/02634500810902839>
7. Leonidou, C. N., Leonidou, L. C., & Kvasova, O. (2010). *Antecedents and outcomes of consumer environmentally friendly attitudes and behaviour*. *Journal of Marketing Management*, 26(13–14), 1319–1344. <https://doi.org/10.1080/0267257X.2010.523501>
8. Nguyen, T. N., Lobo, A., & Greenland, S. (2019). *The influence of cultural values on green purchase behaviour: The case of collectivist Asian consumers*. *International Journal of Consumer Studies*, 43(4), 405–421. <https://doi.org/10.1111/ijcs.12522>

9. Peattie, K., & Crane, A. (2005). *Green marketing: Legend, myth, farce or prophesy?* *Qualitative Market Research: An International Journal*, 8(4), 357–370. <https://doi.org/10.1108/13522750510619733>
10. Rashid, N. R. N. A. (2009). *Awareness of eco-label in Malaysia's green marketing initiative.* *International Journal of Business and Management*, 4(8), 132–141. <https://doi.org/10.5539/ijbm.v4n8p132>
11. Sharma, M., & Gupta, S. (2021). *Consumer perception and purchasing behavior towards green products: A study of urban consumers in India.* *Journal of Cleaner Production*, 295, 126487. <https://doi.org/10.1016/j.jclepro.2021.126487>
12. Smith, N. C., & Brower, T. R. (2012). *Longitudinal study of green marketing strategies that influence consumers' purchase decisions.* *Journal of Business Ethics*, 105(3), 365–376.

