



Assessing the impact of NGOs on consumer awareness and adoption of green products

Dr. L Venkatesan, Dr. S Shobana

¹ Assistant Professor, Department of Management Studies, Ponnaiyah Ramajayam Institute of Science & Technology, Thanjavur, Tamil Nadu, India

² Associate Professor and Director, Department of Commerce and Management, Kamalam College of Arts and Science, Affiliated to Bharathiar University, Udumalpet, Tamil Nadu, India

Abstract

Non-governmental organizations (NGOs) have emerged as pivotal entities in advancing sustainable consumption, particularly by enhancing awareness of environmentally friendly products. They utilize various educational tools, public outreach initiatives, and environmental campaigns to inform consumers about the advantages of selecting eco-friendly alternatives. Through these awareness-building endeavors, NGOs facilitate a connection between environmental knowledge and responsible purchasing behavior. In addition to consumer education, NGOs employ diverse strategies to influence businesses and policymakers. These strategies include developing certification standards, forming partnerships with companies to enhance sustainability practices, and advocating for regulations that support the development of green products. Such initiatives foster an environment conducive to encouraging industries and governments to prioritize environmentally responsible production and market policy. This quantitative study, conducted with 266 consumers in Coimbatore, India, reveals that NGOs significantly enhance consumer awareness (overall mean = 4.09) through diverse channels. Eco-certification programs were identified as the most effective strategy (mean = 4.3), while NGO initiatives demonstrated a strong positive correlation with green product adoption ($r = 0.65-0.72$, $p < 0.05$). These findings underscore NGOs' crucial role in shaping sustainable consumption patterns.

Keywords: NGOs, green products, consumer awareness, sustainable consumption, environmental advocacy, eco-certification, green marketing, sustainable development

Introduction

Environmental challenges, including climate change, escalating pollution levels, and unsustainable exploitation of natural resources, have intensified global initiatives aimed at fostering environmentally responsible consumption. A pivotal strategy for addressing these challenges is the promotion of green products, which are designed to mitigate adverse environmental impacts throughout their life cycle. While governments and industries play vital roles in this transition, non-governmental organizations (NGOs) have emerged as critical actors in influencing consumer behavior, shaping policy decisions, and supporting sustainable production systems. NGOs serve as advocates, educators, watchdogs, and collaborators, acting as intermediaries between consumers, policymakers, and industries. Their involvement enhances public understanding of sustainability, fosters trust in eco-friendly labels, and supports the adoption of greener alternatives to plastic. This study examines how NGOs contribute to raising awareness and facilitating the widespread adoption of green products through education, advocacy, partnerships and strategic interventions.

Background of the Study

The global market has experienced increasing interest in environmentally sustainable products as consumers become more conscious of ecological issues. Nevertheless, the widespread adoption of these products remains constrained by factors such as insufficient awareness, concerns regarding greenwashing, limited accessibility, and inconsistent policy support. Non-governmental organizations (NGOs) are essential for addressing these

challenges. Historically, NGOs have advocated for environmental causes by raising awareness, mobilizing communities, exerting pressure on governments, and supporting industry transitions toward sustainability. Over the past decades, their role has expanded from advocacy to include certification, research, and direct collaboration with the private sector. Initiatives such as eco-labeling, environmental audits, and sustainability campaigns have enhanced public trust and facilitated market growth for green products in India. As environmental concerns intensify, understanding the role of NGOs in influencing awareness and consumer adoption is crucial for strengthening sustainability development frameworks.

Review of Literature

Schweitzer and Meng (2023) ^[19] illustrate that partnerships between non-governmental organizations (NGOs) and businesses significantly enhance consumer trust in environmentally sustainable products. NGO endorsements alleviate perceived risks and enhance credibility, thereby increasing purchase intention. This highlights the role of NGOs as legitimacy providers, which strengthens consumer confidence in environmental claims.

Kumari (2022) ^[20] conducted a systematic review that identified consumer awareness, social norms, and institutional support as pivotal green consumption enablers. Non-governmental organizations (NGOs) are significant institutional actors that enhance awareness and foster behavioral change through campaigns, education, and advocacy.

Ali *et al.* (2022) ^[22] demonstrate that social media campaigns and eco-labeling significantly influence green

purchasing behavior. Given that non-governmental organizations (NGOs) often spearhead these campaigns and engage in certification processes, their communication efforts effectively enhance awareness and intention to adopt environmentally friendly products.

Yener (2023) [21] employed the MOA framework to substantiate that sustainability awareness significantly influences the purchasing of green products. Non-governmental organizations (NGOs) play a crucial role in enhancing consumers' motivation and ability through educational programs and informational campaigns, thereby increasing the likelihood of adoption.

Research Gap

While the extant literature underscores the role of non-governmental organizations (NGOs) in enhancing credibility, raising environmental awareness, and promoting green products, there is a paucity of research specifically investigating the impact of NGO-led initiatives on consumer awareness and actual adoption. Most studies concentrate on the general drivers of green purchasing or collaborations between firms and NGOs rather than isolating the specific effects of NGOs. Additionally, there is a notable deficiency of evidence from developing countries, a limited understanding of the most effective NGO strategies, and scant research on how trust in NGOs influences consumer behavior. Furthermore, existing studies predominantly employ cross-sectional designs, resulting in a gap in understanding the long-term effects of NGO intervention on the sustained adoption of green products.

Statement of the Problem

Despite the increasing global emphasis on sustainability, a substantial proportion of consumers remain inadequately informed or motivated to engage with environmentally friendly products. Factors such as misinformation, skepticism regarding environmental claims, limited exposure to sustainability education, and insufficient regulatory support hinder the adoption of green products by consumers. Non-governmental organizations (NGOs) have implemented various strategies to address these challenges; however, the scope and efficacy of their influence have not been thoroughly examined yet. Consequently, this study aims to investigate the following central issue: What role do NGOs play in promoting awareness of and the adoption of green products among consumers, industries, and policymakers?

Research Objectives

1. To examine how NGOs create awareness among consumers about green products through education, campaigns, and public outreach initiatives.
2. To evaluate the strategies used by NGOs, such as certifications, partnerships, and advocacy, to encourage businesses and policymakers to support green product adoption.
3. To assess the impact of NGO-driven programs and interventions on consumer behavior, market demand, and the overall adoption of environmentally friendly products.

Research Questions

1. In what ways do non-governmental organizations (NGOs) educate and inform consumers about environmentally sustainable products?

2. What strategies do NGOs employ to influence businesses and policymakers to adopt green products?
3. How do NGO-led interventions impact consumer behavior and the market demand for environmentally sustainable products?

Scope and Limitations

This study investigates the role of non-governmental organizations (NGOs) in fostering awareness and the adoption of green products. It scrutinizes NGO activities, such as advocacy, education, certification, and partnerships. This research does not independently assess the impact of government or private sector efforts, although these may be discussed in relation to NGO initiatives. This study is confined to green products that offer environmental benefits, excluding unrelated corporate social responsibility practices. The data and discussion emphasize NGO contributions at the local, national, and global levels.

Research Methodology

Research Design

This study utilized a descriptive research design to investigate the role of non-governmental organizations (NGOs) in fostering awareness and adoption of environmentally friendly products. This design enables researchers to collect empirical data, describe prevailing conditions, and analyze the relationships between NGO activities and consumer responses. A quantitative methodology was employed to assess the levels of awareness, perception, and adoption of green products influenced by NGO initiatives.

Population and Sample Size

The study population comprised individuals who were prospective consumers of environmentally friendly green products within the designated area of interest. Employing appropriate sampling methodologies, 266 respondents were selected from the Coimbatore region to participate in the study. This sample size was adequate for quantitative analysis and ensured the reliability and generalizability of the findings.

Sampling Technique

A simple random sampling technique was used to ensure that each potential respondent had an equal probability of selection. This approach minimizes bias and enhances the accuracy of the findings concerning consumer awareness and adoption patterns.

Research Instrument

A structured questionnaire was used as the primary data-collection tool. The questionnaire consisted of four sections.

1. Awareness of green products influenced by NGOs
2. NGO strategies (certification, advocacy, partnerships)
3. Adoption and consumer behavior toward green products

A Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to measure the responses.

Data Collection Procedure

Prior to data collection, permission was secured and the participants were informed of the study's objectives. The questionnaires were disseminated both physically and

electronically. The completed responses were subsequently collected, organized and encoded for statistical analysis.

Statistical Tools

Statistical tools were selected based on the research objectives.

Objective 1: To examine how NGOs create awareness among consumers regarding green products.

Statistical Tool: Weighted Mean and Standard Deviation

- It was used to determine the level of consumer awareness and describe responses regarding NGO-led educational and outreach activities.

Objective 2: Evaluate the strategies used by NGOs, such as certifications, partnerships, and advocacy, to support green product adoption.

Statistical Tool: Weighted Mean and Ranking

- This study measures the effectiveness of different NGO strategies and identifies which strategies are perceived as the most influential.

Objective 3: Assess the impact of NGO-driven programs and interventions on consumer behavior and green product adoption.

Statistical Tool: Pearson Correlation Coefficient

- Determines the relationship between NGO initiatives (education, certification, and advocacy) and the level of green product adoption among consumers.

Ethical Considerations

Participants were assured of confidentiality and anonymity. Their involvement was entirely voluntary, and the collected data were used exclusively for scholarly purposes. Informed consent was obtained from all participants before completing the questionnaire.

Results and Discussion

This study presents findings derived from data collected from 266 respondents. Both descriptive and inferential statistical methods were employed to analyze the data in accordance with the research objectives. The analysis encompassed the use of weighted mean, standard deviation, ranking, and Pearson correlation.

Level of Consumer Awareness Created by NGOs

Objective 1: To examine how NGOs create awareness among consumers about green products.

Table 1: Level of Awareness of NGO Activities Related to Green Products (n = 266)

Factors	Mean	SD	Interpretation
NGOs conduct educational campaigns	4.2	0.65	High
NGOs provide online materials and posts	4.15	0.7	High
NGOs distribute informational brochures	4.05	0.72	High
NGOs conduct community workshops	3.95	0.8	High
NGOs host environmental events	4.1	0.68	High
Overall Mean	4.09	0.71	High

The findings indicate that respondents exhibit a substantial level of awareness of the educational and outreach initiatives conducted by non-governmental organizations (NGOs). The elevated overall mean score of 4.09 suggests

that NGOs are proficient in disseminating information about eco-friendly products through various channels, including campaigns, social media posts, brochures, workshops, and public events. This suggests that NGOs effectively enhance consumer understanding of environmental issues and the benefits of green products.

Effectiveness of NGO Strategies in Promoting Green Product Adoption

Objective 2: Evaluate the strategies used by NGOs, such as certifications, partnerships, and advocacy, to encourage green product adoption.

Table 2: Effectiveness of NGO Strategies (n = 266)

NGO Strategies	Mean	Rank	Interpretation
Eco-certification programs	4.3	1	Very Effective
Advocacy and environmental campaigns	4.18	2	Effective
Partnerships with companies	4.12	3	Effective
Training and seminars	4.05	4	Effective
Policy lobbying and engagement	3.95	5	Effective

Eco-certification programs were identified as the most effective strategy (Mean = 4.3), reflecting substantial consumer confidence in labeling systems that ensure adherence to environmental standards. Advocacy campaigns and collaborations with industries also received high rankings, indicating that non-governmental organizations (NGOs) significantly influence both public perception and corporate practices. Although policy lobbying was ranked lowest, it still achieved an "Effective" rating, underscoring the important role NGOs play in shaping sustainability policies.

Impact of NGO Interventions on Consumer Behavior and Adoption

Objective 3: Assess the impact of NGO-driven programs and interventions on consumer behavior and the adoption of environmentally friendly products.

Table 3: Correlation between NGO Initiatives and Adoption of Green Products

Variables Tested	Pearson r	p-value	Interpretation
NGO awareness activities and consumer adoption	0.68	Significant	
NGO strategies and consumer adoption	0.72	Significant	
NGO interventions and green product market demand	0.65	Significant	

The findings demonstrate a robust positive correlation between non-governmental organization (NGO) initiatives and consumer adoption of environmentally friendly products. Pearson correlation coefficients ranging from 0.65 to 0.72 suggest that NGO activities significantly influence consumer decision-making processes. The p-value of 0.000 (p < 0.05) further substantiates the statistical significance of these relationships. This implies that increased exposure to NGO awareness activities enhances the likelihood of consumers adopting green products in the long run. Moreover, effective NGO strategies such as certification, advocacy, and partnerships positively impact purchasing decisions. Consequently, NGO interventions contribute to an overall increase in the market demand for green products.

The findings suggest that non-governmental organizations (NGOs) play a crucial role in enhancing awareness and adoption of environmentally friendly products. Elevated awareness levels indicate that NGOs effectively disseminate environmental information through various channels. These results are consistent with the existing literature that identifies NGOs as pivotal communicators in sustainability movements. The effectiveness ranking revealed that consumers place significant trust in NGO-led certification and advocacy initiatives. Certifications, in particular, exert considerable influence by enabling consumers to differentiate authentic green products from deceptive claims, commonly referred to as greenwashing. Collaboration with businesses further extends the reach of green product promotion. Correlation analysis confirmed that NGO activities have a substantial impact on consumer behavior. Increased awareness and exposure to NGO programs are associated with higher rates of adoption of green products. This finding supports theoretical frameworks such as the Social Cognitive Theory and Diffusion of Innovation Theory, which elucidate how information exposure and change agents facilitate behavioral transformations.

Summary of Findings

This study examined the role of non-governmental organizations (NGOs) in enhancing consumer awareness and adoption of green products. A total of 266 respondents participated in this study. Descriptive and inferential statistical methods, including weighted mean, ranking, standard deviation, and Pearson's correlation, were employed to analyze the data. The first objective was to evaluate how NGOs raise awareness of green products through education, campaigns, and public outreach. The results indicated a high level of awareness among respondents (overall mean = 4.09), suggesting that NGO-led information dissemination through workshops, media posts, brochures and events is highly effective. The second objective was to assess the effectiveness of various NGO strategies, such as certifications, partnerships, and advocacy. The findings revealed that eco-certification programs were perceived as the most effective strategy (mean = 4.30), followed by advocacy campaigns and partnerships with businesses. All tested strategies were rated as "Effective" or "Very Effective," indicating that NGOs employ robust mechanisms to promote green product adoption. The third objective was to analyze the impact of NGO interventions on consumer behavior and market demand. Pearson correlation results demonstrated strong significant relationships between NGO initiatives and green product adoption ($r = 0.65-0.72$; $p < 0.05$). This suggests that NGO activities positively and significantly influence consumer purchasing decisions and the demand for eco-friendly products.

Conclusions

The findings suggest that non-governmental organizations (NGOs) play a crucial role in enhancing consumer awareness of environmentally friendly products through educational and outreach initiatives. These efforts effectively disseminate environmental information and promote sustainable consumption. Their strategies, including eco-certification, advocacy and partnerships, are particularly impactful. Certifications bolster consumer trust

and mitigate concerns regarding greenwashing, whereas advocacy and collaborative initiatives extend the reach of sustainability promotion. Moreover, NGO interventions exert a significant positive influence on consumer behavior and market demand for green products, as increased exposure to NGO initiatives increases the likelihood of consumers adopting environmentally friendly options. Overall, NGOs serve as influential advocates, educators, and strategic partners in shaping sustainable consumption patterns and advancing sustainable development.

Future Scope

Future research could employ qualitative methodologies, such as focus groups or in-depth interviews, to thoroughly investigate the nuanced consumer perceptions of NGO credibility and the psychological processes underpinning their trust in eco-labels. Additionally, comparative studies across diverse socio-economic and cultural contexts, particularly in other developing countries, would provide valuable insights into the generalizability and context-specificity of NGO effectiveness. Longitudinal studies are also warranted to understand the sustained impact of NGO initiatives on long-term green product adoption.

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