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AI AND SUSTAINABILITY

How the use of GenAI tools influence consumer choice for
sustainable products

Diana Lopes Caetano

Master Thesis

presented as partial requirement for obtaining a Master's Degree in Data-Driven Marketing

NOVA Information Management School
Instituto Superior de Estatística e Gestão de Informação

Universidade Nova de Lisboa

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by

Diana Lopes Caetano

Master Thesis presented as partial requirement for obtaining the Master's degree in Data-Driven Marketing, with a specialization in Data—Driven Marketing

Supervised by

Simoni Fernanda Rohden, PhD, Nova Information Management School

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STATEMENT OF INTEGRITY

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism, any form of undue use of information or falsification of results along the process leading to its elaboration. I further declare that I have fully acknowledged the Rules of Conduct and Code of Honor from the NOVA Information Management School.

Diana Lopes Caetano.

Lisbon,

15th July, 2025.

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ABSTRACT

In an increasingly technology-driven world pressured by environmental challenges, can artificial intelligence truly help us consume more sustainably? This study seeks to answer that question by exploring the impact of ChatGPT, one of the most advanced Large Language Models (LLMs), on the intention to purchase sustainable products during the pre-purchase phase of the consumer journey. Through an experimental study with 121 participants, the effects of sustainable and non-sustainable recommendations provided by this AI system were analyzed. Variables such as trust in the agent, perceived accuracy of the recommendations, and consumers' level of environmental awareness were also considered. The results show that although participants attributed high levels of trust and accuracy to ChatGPT, the type of recommendation did not have a significant impact on purchase intention. Perceived trust and accuracy showed a positive association with this intention but were not affected by the type of recommendation. Environmental awareness also did not moderate the relationship between the recommendation and purchasing behavior. These findings raise a critical question: is AI capable of influencing decisions that involve deep emotions and values? This work offers new perspectives on the debate on technology and sustainability, suggesting that AI's effectiveness may depend on its ability to establish an emotional connection with users rather than merely providing information. For these tools to have a real impact on consumer decisions, they may need to be combined with more engaging narrative strategies that mobilize individual values and reinforce commitment to responsible practices. Only in this way can technology be turned into influence and intention into conscious action.

KEYWORDS

Artificial Intelligence; ChatGPT; Large Scale Language Models (LLM); Sustainability; Consumption Journey; Consumer Decision Making

Sustainable Development Goals (SDG):



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LIST OF ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
LLM	Large Language Model
NLP	Natural Language Processing
GPT	Generative Pre-trained Transformer
GAI	Generative Artificial Intelligence
ML	Machine Learning
TPB	Theory of Planned Behavior
PCE	Perceived Consumer Effectiveness
DV	Dependent Variable
IV	Independent Variable

1. INTRODUCTION

In the dynamic landscape of Artificial Intelligence (AI), Large Generative Language Models (LLMs) stand out as a fundamental innovation. These language models are probabilistic systems that enable natural language processing through advanced algorithms and form the core of Natural Language Processing (NLP) techniques. The qualifier “large” refers to the substantial number of parameters required to train these models, while “generative” designates a specific subset of LLMs designed for text generation. Generative LLMs are at the forefront of various applications, ranging from summarization to translation, typically provided through interactions that simulate dialogues with users (Zhao et al., 2023; Filippo et al., 2024).

The emergence of generative LLMs was propelled by ChatGPT, a chat system developed by OpenAI based on the Generative Pre-trained Transformer (GPT) model, launched at the end of 2022 (Filippo et al., 2024). This type of generative AI can create content based on the data it has assimilated, unlike conventional AI, which is primarily dedicated to analyzing data and drawing conclusions (Ray, 2023). Although ChatGPT can offer specific recommendations when requested by users, it is classified as a chatbot-based AI assistant rather than as an AI recommendation system (Balakrishnan & Dwivedi, 2021; Klaus & Zaichkowsky, 2022).

ChatGPT has generated significant interest by demonstrating how AI can interpret human thought and respond in an appropriate and interactive manner. It is believed that these capabilities of ChatGPT could bring about transformations across various sectors of society, including the consumer shopping experience. Consumers often struggle with purchasing decisions due to the wide array of benefits promoted by different brands (Kim et al., 2023; Chang & Park, 2024).

AI-driven conversational systems have assumed a central role in digitizing traditional interactions between customers and companies. However, despite their widespread adoption, there is still limited understanding of how customers engage with these technologies and why they may resist using them in purchasing contexts. The few existing studies in this area have primarily focused on customer satisfaction and rarely offer a comprehensive understanding of customers’ motivation, attitudes, and behavioral intentions toward the use of AI-based conversational agents in shopping. Therefore, there is a clear need for research that examines the factors influencing both the adoption and resistance to these technologies within the shopping context (Jiang et al., 2022; Ruan & Mezei, 2022; Jan et al., 2023).

Based on this, the primary objective of this study is to answer the research question, ***“How does the use of LLMs, specifically ChatGPT, in the pre-purchase phase of the consumption journey, influence consumer choice for sustainable products?”***

The specific focus on the influence of ChatGPT in consumption decisions regarding sustainable products is justified by the growing impact that environmental concerns and the goals of the 2030 Agenda have on consumer behavior (Lopes et al., 2024). In this context, sustainable consumption is a practice aimed at minimizing the negative environmental and social impacts associated with consumption (Lopes et al., 2023; Lopes et al., 2024). Today, consumers are demonstrating their preference for sustainability through green consumption choices, prompting companies to align themselves with sustainability principles (Dabija et al., 2020; Legere & Kang, 2020; Lopes et al., 2024). A notable example of this trend is seen in the retail sector, particularly in the fashion (Legere & Kang, 2020; Musova et al., 2021; Papadopoulou et al., 2022; Lopes et al., 2024) and food industries (Su et al., 2019; Kumar et al., 2021; Lopes et al., 2024).

Artificial Intelligence can help overcome barriers caused by a lack of information and human biases, which often hinder the development of solutions for environmental sustainability. By utilizing objective data that is free from emotional influence, AI enables the creation of more effective responses to the climate crisis. These responses are not shaped by the personal or reductionist interests of human beings, even though they are the ones responsible for designing its applications (Cullen-Knox et al., 2017; Nishant & Corbett, 2020).

2. LITERATURE REVIEW

2.1. ARTIFICIAL INTELLIGENCE

It is not easy to clearly define what Artificial Intelligence (AI) is. This is because it imitates or simulates something that has yet to be fully defined: human intelligence. Many psychologists, behavioral scientists, neurologists, and others have studied the human brain and the concept of intelligence. However, there is still no consensus on what human intelligence is. Until such a consensus is reached, it will not be possible to determine how to artificially replicate this intelligence with certainty. In short, AI can be described as "systems that exhibit intelligent behavior, analyzing their environment and taking action with some degree of autonomy to achieve specific goals." This definition encompasses all applications that have so far been classified as AI, while also allowing for future revisions to this classification (Sheikh et al., 2023).

2.1.1. GENERATIVE ARTIFICIAL INTELLIGENCE

Generative Artificial Intelligence (GAI) refers to a category of Artificial Intelligence models capable of creating new data based on patterns and structures learned from existing data. These models can generate content across various domains, such as text, images, music, and more (Ali, 2023; Naumova, 2023; Ray, 2023).

The use of GAI, also known as Large Language Models, in analyzing large volumes of both structured and unstructured data, as well as in Machine Learning (ML) techniques such as supervised and reinforcement learning, is simultaneously driving new opportunities and digital transformations (Akhtar et al., 2023; Gozalo-Brizuela & Garrido-Merchan, 2023; Wang et al., 2023; Akhtar et al., 2024).

2.1.1.1. LARGE LANGUAGE MODEL (LLM)

Large Language Models (LLMs) are gaining increasing popularity in both academia and industry due to their exceptional performance across a wide range of applications. Unlike previous models, which were limited to solving specific tasks, LLMs can address a broad variety of challenges. In other words, they are computational models with the ability to understand and generate human language, as well as the transformative capacity to predict the probability of word sequences or generate new text based on a given input (Chang et al., 2024).

Compared to reinforcement learning, LLM-based agents possess a more comprehensive understanding of the internal world, which enables them to take more informed actions even without training on specific domain data (Wang et al., 2024).

LLMs have experienced impressive growth, reaching millions of users in just a few months, which demonstrates a remarkable rate of adoption and reveals their disruptive potential (Burtsev et al., 2023). This accelerated growth can be attributed to several factors. Firstly, technology itself is highly scalable. After initial development, expansion to a larger number of users often requires a modest increase in resources, especially when compared to the initial investment in training and infrastructure. This scalability facilitates the rapid dissemination of LLMs to a global audience. In addition, the growth of these models is amplified by network effects within the technological ecosystem. As user interaction increases, more data is generated, which can be used to improve and optimize the models, making them more accurate and efficient. Finally, the flexibility and wide range of applications of LLMs have accelerated their adoption. This factor is directly related to another characteristic of emerging technologies: significant impact. In fact, generative models have a wide variety of applications in different areas (Filippo et al., 2024).

The success of these models is not only due to the high quality of their results and their versatility, but also to the way users interact with them. The process begins with the user defining a specific task. They then describe that task (such as writing an academic article, suggesting creative ideas for an advertising campaign or correcting code in Python) by means of a prompt - in other words, instruction submitted to the generating system. The model processes the prompt and generates a textual response. The user, having an expectation of the desired result, compares the answer obtained with the initial objective. If necessary, the user can adjust the prompt and refine the interaction, thus establishing a kind of dialog with the system until the result meets their expectations (Filippo et al., 2024).

As these models continue to evolve and improve, they are expected to play an increasingly pivotal role in various aspects of daily life. ChatGPT has the potential to surpass all other LLMs through ongoing research, development, and optimization. It already stands out as one of the most advanced models, demonstrating remarkable performance across various natural language processing benchmarks (Ray, 2023).

2.1.1.2. CHATGPT

Among the first generative language models is GPT. Introduced by OpenAI in 2018, this system uses transformer architecture to generate natural language text. Over the years, progress in the field of LLMs has led to significant advances, resulting in a new generation of GPT technologies, with particular emphasis on OpenAI's GPT-3 (Ouyang et al., 2022; Filippo et al., 2024). GPT-3 is recognized as a large-scale model designed to handle various NLP tasks based on instructions provided in natural language. This type of model is trained on vast sets of textual data, enabling it to understand patterns in word distribution and generate new textual sequences (Reynolds & McDonell, 2021; Filippo et al., 2024).

In November 2022, OpenAI launched ChatGPT, a conversational artificial intelligence system built on GPT-3 technology (Van Dis et al., 2023; Filippo et al., 2024). The system quickly attracted global attention, becoming the fastest-growing consumer application in history by reaching 100 million users within just two months of its release (Hu, 2023).

Although companies such as Google and Meta already had chatbots, ChatGPT gained notoriety as it became accessible to the public (Aydın & Karaarslan, 2023; Baidoo-Anu & Ansah, 2023). But what is ChatGPT really? To start, the question was asked to the chatbot using the prompt: 'What is ChatGPT?' and the response generated was:

“ChatGPT is a language model developed by OpenAI, based on the GPT (Generative Pre-trained Transformer) architecture, which uses artificial intelligence to generate text in natural language and interact with users in a similar way to a human conversation. Trained with large volumes of textual data, ChatGPT can perform various tasks, such as answering questions, writing texts, summarizing information and translating languages. The model is fine-tuned with techniques such as Reinforcement Learning from Human Feedback (RLHF), where human feedback is used to improve the quality of responses.” (By ChatGPT december 26, 2024).

During pre-training, the GPT model is instructed to predict the next word in a text sequence based on the preceding words. This approach, known as language modeling, is a key component of many Natural Language Processing tasks. By training on an extensive set of textual data, the model develops the ability to identify and generalize linguistic patterns such as syntax, grammar, and semantics (Ray, 2023).

Given the nature of this research, it is important to explore the potential applications of this tool in business, marketing, and sales.

In business, ChatGPT can be used to develop customer service chatbots that assist customers with inquiries, provide product recommendations, and process transactions. In sales and marketing, ChatGPT analyzes customer behavior and preference data to offer personalized recommendations, thereby enhancing the customer experience (George et al., 2023; Ray, 2023; Kim et al., 2023).

OpenAI is currently developing GPT-5, a model designed to be trained on a significantly larger and more diverse data set. Generative large language models are at an early stage of evolution and fit the definition of emerging technologies described in the innovation literature. These technologies are characterized by a combination of disruptive novelty, accelerated growth, consistency, significant impact, and high levels of uncertainty and ambiguity (Rotolo et al., 2015; Filippo et al., 2024).

2.2. SUSTAINABLE CONSUMPTION

The concept of sustainable consumption goes beyond simple purchasing practices and is also reflected in the perspectives and lifestyles adopted by governments, companies, and consumers, whether individuals or families. This paradigm promotes the purchase of ecologically responsible products and encourages the adoption of habits aligned with environmental preservation, favoring more conscious choices that emphasize quality and reduce consumption in the long term (Sun et al., 2021).

In the context of sustainable consumption, consumers aim not only to meet their own needs, but also to promote the progress of society through environmentally responsible practices. In addition, those who believe in the durability of their actions show greater adherence to ecological behaviors. When their environmental objectives are perceived as more achievable and aligned with long-term goals related to sustainable behavior in their consumption patterns, it is reasonable to assume that they exert a more significant influence on the impact of green practices (Miniero et al., 2014).

There are several factors that motivate sustainable purchasing behavior. According to the Theory of Planned Behavior (TPB), the intention to act directly influences behavior. More specifically, TPB points to three factors that precede behavioral intention: (1) attitude, (2) subjective norms and (3) perceived behavioral control. In the case of ecological products, attitude has stood out as the main factor determining purchase intention (Kamalanon et al., 2022).

Over time, consumer behavior has become more focused on responsible consumption. As a result, new purchasing patterns have emerged, giving rise to so-called green consumers, a market segment that has become attractive to companies, which have adjusted their strategies to offer green products and services in response to the environmental concerns of this group (Mostafa, 2006; Mydock III, et al., 2018). These consumers are looking for products that are less polluting, recyclable and biodegradable, and demand that packaging does not cause damage to the environment (García-Salirrosas & Rondon-Eusebio, 2022). An environmentally sustainable product has a reduced environmental impact compared to a conventional product. This difference stems from its ecological characteristics, including the materials used, manufacturing processes, distribution methods, forms of disposal or recycling, and product features (such as low energy consumption) (Ottman, 2017).

Due to the crises, people are increasingly adopting sustainable practices in their daily lives. As they have become more aware of environmental issues, consumer demand has begun to change. These changes in consumer preferences and loyalty can eventually be reflected in marketing strategies (Hwang & Lyu, 2020). Companies therefore need marketing strategies that reinforce their green image and encourage consumers to adopt more eco-friendly behaviors (Mercadé Melé et al., 2020).

Despite numerous studies, there is still a significant gap between consumers' desire to buy green products and their actual purchase of green products, a phenomenon known as the “green attitude-behavior gap” (De Silva & Kuah, 2021; Kamalanon et al., 2022).

Artificial intelligence has the potential to transform the way companies interact with consumers, due to their ability to continuously monitor user behavior, identify patterns, and anticipate future needs (Davenport et al., 2020; Mari et al., 2024). Specifically, ChatGPT can take on the role of a sustainability advocate, helping to bridge the gap between consumers' interest in sustainable products and their access to relevant information. In doing so, it contributes to raising awareness about environmental issues and guiding individuals toward more environmentally responsible decisions. Thus, not only enhances consumer engagement but also plays a strategic role in encouraging sustainable consumption and empowering users to support a greener future (Biswas, 2023).

H 1: Receiving a recommendation from ChatGPT will increase the customer's intention to buy sustainable products.

2.3. ACCURACY OF AI

The accelerated development of Artificial Intelligence (AI) has brought notable changes to consumer decision-making patterns. Applications such as ChatGPT are redefining how individuals search for information, assess alternatives, and make purchasing decisions (Davenport et al., 2020).

While marketing draws on knowledge from various fields within the social sciences, such as sociology and cultural anthropology, it is psychological theory that provides the foundation for understanding consumer behavior and conducting research in this domain (Mariani et al., 2022). Studies analyzing the psychological factors that affect consumer acceptance of AI-generated information indicate that the accuracy of recommendations significantly influences the perceived usefulness of this information, as well as consumers' willingness to follow the suggestions provided by AI (Kim et al., 2021; Kim et al., 2023). Perceived accuracy has also been identified as one of the key factors in users' adaptation to ChatGPT (Gursoy et al., 2023).

Compared to traditional recommendation systems, ChatGPT may deliver more accurate suggestions, as it engages directly with the user, who typically provides the context or purpose of their search—unlike algorithmic systems that offer personalized recommendations without explicit user input (Ratneshwar & Shocker, 1991; Shocker et al., 1991; Chang & Park, 2024).

H 2: The accuracy of the recommendation mediates the relationship between exposure to ChatGPT and the decision to buy sustainable products.

2.4. CONSUMER TRUST

Trust is a fundamental element in consumer behavior, especially when individuals are required to choose between competing products or services. Traditionally, this trust has been established through personal interactions, prior experiences, or the credibility associated with well-known brands (Gerlich, 2025). A recommendation system aims to present users with more advantageous options than those they could find on their own, responding better to their needs. To do this, the system must suggest products or information unknown to the user, who in turn must strike a balance between the potential benefits of these suggestions and the risk of failure due to the associated uncertainty. In this context, it is up to the user to decide whether they trust the system's suggestions or whether they prefer to rely on information obtained from other sources. Whatever the choice, it is essential that consumers overcome any doubts they may have about the recommended products to make more informed decisions beyond their personal experience. The transfer of trust can be a crucial element in overcoming this challenge (Chang & Park, 2024).

The three essential factors that underpin trust are: competence (the ability of the person responsible to do what is necessary or desired), benevolence (the commitment and willingness to act in the interests of the recipient) and integrity (the honesty of the person responsible and the fulfillment of commitments made) (McKnight et al., 2002; Chang & Park, 2024). Trust has proven to be a crucial factor in the adoption of new technologies (Sarkar et al., 2020), the acceptance of AI-based services (Ostrom et al., 2019) and dependence on automation (Langer et al., 2023).

Studies have identified several elements that contribute to increasing trust in artificial intelligence. For example, users tend to be more accepting of the use of AI in tasks that involve analysis and logical reasoning (Jarrahi, 2018). Since ChatGPT has no commercial motivation to recommend products, as it is a free independent system open to the public, users can trust its suggestions more (Chang & Park, 2024). Traditionally, however, consumers relied on advertisements, social media influencers and salespeople to guide their decisions, sources that are now increasingly questioned due to perceived biases and financial interests (Jin & Ryu, 2020).

Recent studies indicate that younger consumers, particularly Millennials and Generation Z, are increasingly aware of manipulative marketing strategies and tend to question the credibility of influencers who receive compensation from brands (Audrezet et al., 2020; Gerlich, 2025). These generations show a growing preference for objective, data-driven sources when making purchasing decisions (Morhart et al., 2015; Gerlich, 2025). In this context, AI tools like ChatGPT are often perceived as more neutral and impartial, as their recommendations are based on individual needs and preferences rather than commercial interests or paid sponsorships (Huang & Rust, 2021; Gerlich, 2025).

Furthermore, when AI agents, such as chatbots, demonstrate empathy and kindness towards users, consumers tend to perceive them more positively and view their suggestions as more trustworthy (Araujo, 2018; Mari et al., 2024; McLean et al., 2021).

H 3: The consumer trust of the recommendation mediates the relationship between exposure to ChatGPT and the decision to buy sustainable products.

2.5. CONSUMPTION ENVIRONMENTAL AWARENESS

A person's behavior is influenced by their values, and “sustainability” - which involves taking care of the environment, the planet and people, both now and in the future - has become a core value for all generations, starting with the Baby Boomers, who were pioneers in defending the environment from the 1960s onwards (Ottman, 2017).

Environmental knowledge is a cognitive aspect that concerns people's level of awareness of the environment, the collective responsibilities that are indispensable for achieving sustainable development and the main relationships associated with environmental impacts (Fryxell & Lo, 2003).

Several studies have found a positive relationship between environmental knowledge and consumers' purchase intention, as well as the actual purchase of ecological products (Ramayah, & Rahbar, 2013; Testa & Frey, 2019). On the other hand, other research has concluded that a lack of knowledge about environmental issues had a negative impact on sustainable purchasing behavior (Connell, 2010; Stucki, 2019).

Today, Generation Z (young people, born between 1995 and 2012) has received special attention in discussions about sustainability and environmental preservation. The idea that young people show greater sensitivity to environmental issues is widespread. It is argued that this generation, characterized by a higher level of education, advanced technological skills, greater interaction on social networks and a strong involvement with environmental movements, is more aware of the importance of sustainability and more inclined to value ecological consumption practices (Casalegno et al., 2022; Lopes & Trancoso, 2024).

The values that guide an individual's life shape their principles, which can align with either an individualistic or collectivist perspective. While traditional consumers focus on their own interests, seeking to maximize immediate benefits, green consumers prioritize the long-term impact of their decisions, considering the well-being of others and the environment (White et al., 2019). In this context, Akehurst et al. (2012) argued that Perceived Consumer Effectiveness (PCE) plays a crucial role, as it reflects the belief that individual actions can significantly contribute to environmental preservation. Consequently, environmentally conscious individuals are more likely to adopt substantial measures if they are convinced that these actions will effectively address environmental challenges (Emekci, 2019; Minh & Quynh, 2024).

According to a study carried out by Merck in 2022, young people in Portugal are increasingly concerned about sustainability. The study indicates that 90% of respondents are willing to change their habits to reduce their environmental impact. In addition, the results show that young Portuguese are increasingly aware of environmental issues, with 85% saying they respect the environment and 60% identifying education and talent as the fundamental pillars for building a solid and sustainable society (Merck, 2022).

In the context of disseminating environmental information and promoting responsible consumption, generative artificial intelligence (AI) has the potential to transform how people obtain, understand, and act on environmental data. Recent research has investigated how generative AI can support more sustainable consumption practices. For instance, Majid, Tussyadiah, and Kim (2024) demonstrate how AI-generated content can raise awareness of environmental issues. Additionally, Sharma and Paço (2024) examine the impact of AI on guiding consumers toward eco-friendly purchasing decisions.

H 4: The level of environmental awareness moderates the effect of AI recommendations on the decision to buy sustainable products.

3. METHODOLOGY

The following chapter focuses on the methodological approaches used in this study, after reviewing the key concepts and theories presented in the literature review. To ensure accurate and reliable data, primary data collection was carried out using quantitative research, an approach to testing objective theories that analyses the interactions between variables. As these variables can be quantified, statistical methods can be used to interpret the numerical data. The main reason for choosing this methodology is its ability to explore the factors that influence a particular outcome in a comprehensive way (Creswell, 2014).

3.1. RESEARCH DESIGN

To answer the research question "How does the use of LLMs, specifically ChatGPT, in the pre-purchase phase of the consumption journey, influence consumer choice of sustainable products?" a conceptual model was developed, as shown in Figure 1 and explained below.

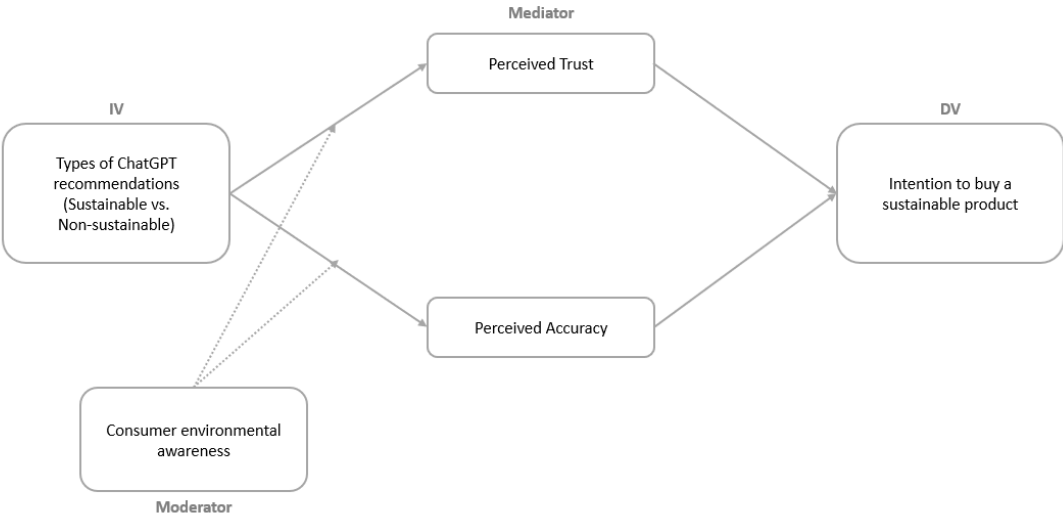


Figure 1- Concept Model | Source: Author

The Dependent Variable (DV) is the intention to buy sustainable products, which reflects the consumer's likelihood to buy these products based on the information or recommendations received. The Independent Variable (IV) is the exposure to the LLM, specifically ChatGPT, which can directly influence this decision by providing personalized recommendations. The moderating variable is the consumer's environmental awareness, which may strengthen or weaken the relationship between exposure to LLM and the purchase decision, since more environmentally conscious consumers may be more likely to follow sustainable recommendations. Finally, mediating variables such as perceived trust and perceived accuracy

explain how exposure to LLM affects the purchase decision, as trust in ChatGPT recommendations and the perception that these recommendations are accurate and relevant may increase the influence of LLM on consumer choice.

To validate the conceptual model, this study used experimental design as a data collection technique. Experiments allow researchers to identify causal relationships between an independent variable and a dependent variable by manipulating the independent variable and ensuring a high level of control over other factors in the environment (Kirk, 2013; Allen, 2017).

The analysis of causal relationships is one of the main reasons for choosing experimental research, which distinguishes it from cross-sectional surveys (Viglia et al., 2021). According to Kirk (2013), it is essential to accurately capture causality:

- i)** Manipulate the independent variable, ensuring that at least one manipulated group is exposed to the treatment and one control group is not. In this single-factor experiment, the independent variable manipulated was the type of ChatGPT recommendation (sustainable vs. non-sustainable).
- ii)** Use a randomized design in which participants are randomly assigned to the different conditions. As an independent groups experiment, participants were randomly assigned to two equal groups and exposed to one of the two conditions, with the aim of allowing generalization to a larger population and improving the external validity of the study. Because the participants are randomly assigned to the groups, and because it is assumed that the characteristics of the participants are similar between the groups, there is no reason to expect that one group will be different from the other. In this way, we can conclude that the effect of the intervention on the dependent variable is causal (Viglia et al., 2021).
- iii)** Ensure that the independent variable is manipulated before the dependent variable is measured.
- iv)** Conduct tests to check for differences in one (or more) dependent variables between conditions.

3.2. DATA COLLECTION

The quantitative research for this study was conducted using a questionnaire developed on the Qualtrics platform (Appendix B). To ensure comprehensive and detailed data collection, the questionnaire was structured into eight distinct sections. The first section contains a brief introduction, explaining the objectives of the study, data confidentiality and informed consent. In the second section, the independent variable is manipulated by exposing participants to two different interactions with ChatGPT: in one, the products are presented without any mention of environmental aspects; in the other, they are described with emphasis on their environmental benefits. The two scenarios presented are included in Annex 1. The third section follows with two questions, shown in Table 1, which aim to validate whether the participants perceived the two scenarios differently.

Table 1- Manipulation checks questions | Source: Author

Manipulation checks questions
ChatGPT suggested innovative products.
ChatGPT suggested sustainable products.
ChatGPT suggested energy-efficient products.
The products recommended by ChatGPT help to reduce environmental impact.
The products recommended by ChatGPT contribute to preserving the environment.
The products recommended by ChatGPT are environmentally friendly.

The fourth one contains questions reserved for the dependent variable, i.e. the intention to buy sustainable products using ChatGPT. In sections 5 and 6, questions are asked about the moderator and the mediator: their awareness of the environment and the confidence/accuracy of the suggestions made by ChatGPT, respectively. The seventh section includes control questions on the use of ChatGPT, specifically addressing sustainable consumption intention, satisfaction and trust in AI to moderate the model.

Table 2- Control Variables | Source: Author

Control variables
Do you use a chatbot, like chatGPT? Yes or No
How often do you interact with a chatbot? (7-point Likert scale)

Finally, the last section contains general questions about the interviewee, covering personal information such as age, gender and educational background. Table 3 summarizes the variables and scales, and their source, used in the questionnaire.

Table 3 –Description and Measurement of Variables

Variable	Items	Scale	Source
Purchase Intention	I would consider purchasing the product.	7-Point Likert scale	Adapted from: Belanche et al., (2021).
	I would contemplate the option of buying the product. It is likely that I am going to purchase the product.		
Sustainable Consumption Intention	I will consider buying products because they are less polluting in the coming times.	7-Point Likert scale	Paul et al. (2016).
	I will consider switching to environmentally friendly brands for ecological reasons.		
	I plan to spend more on environmentally friendly products rather than conventional products.		
	I expect to purchase the product in the future because of its positive environmental contribution. I definitely want to purchase green products in the near future.		

Perceived Trust	<p>I felt like the ChatGPT has my best interest at heart.</p> <p>I believe ChatGPT provides accurate information.</p> <p>I felt I could rely on ChatGPT suggestion of products.</p>	7-Point Likert scale	Adapted from: Fernandes e Oliveira, (2021).
Trust in IA	To what extent do you trust that technologies such a artificial intelligence know your preference and could assist you with purchase choices?	7-Point Likert scale	Adapted from: Kim et al. (2021).
Perceived Accuracy	<p>How accurate do you think ChatGPT's recommendations are for your preferences and needs?</p> <p>ChatGPT's recommendations always reflect exactly what you're looking for?</p> <p>Do you believe that the sources ChatGPT uses are reliable?</p>	7-Point Likert scale	Author
Satisfaction	<p>Overall, I am satisfied with the recommender.</p> <p>My overall satisfaction with the recommendation received is high.</p> <p>I am satisfied with my decision to purchase based on this recommendation.</p>	7-Point Likert scale	Adapted from: Abumalloh et al. (2020)
Environmental awareness	<p>I am a strong believer in the preservation of nature and wildlife.</p> <p>I am pleased to purchase green Products.</p> <p>I consider the potential environmental impact of my purchase when making many of my decisions.</p> <p>I would describe myself as an environmentally responsible person.</p>	7-Point Likert scale	Adapted from: Nekomahmud & Fekete-Farkas (2020).

	Do you use a chatbot, like chatGPT?		
ChatGPT use	How often do you interact with a chatbot? For what purposes do you use a chatbot?	Dichotomous ("yes" or "no")	Author

Data collection was divided into two phases, beginning with a pretest. This is an essential procedure to ensure the validity and reliability of the research instruments before the official data collection. The pretest makes it possible to identify and correct problems such as ambiguities in the questions, difficulties in understanding and inconsistencies in the answers. It also makes it possible to estimate the time needed for application, reduce bias, and assess the suitability of data analysis techniques, thus helping to improve the quality of the information collected and make the research results more rigorous and reliable. A convenience sample was used, meaning that participants were selected based on their accessibility and availability, with no randomization criteria. Participants had to be at least eighteen years old, able to understand and answer the questionnaire in English, and have access to the Internet. The link was distributed via social media, especially WhatsApp.

The first pre-test began on February 8th. However, the results obtained were not what was desired, which led to the need to reformulate some sections of the questionnaire. After these changes, a second pre-test was conducted on March 11th to validate the new version.

After the successful completion of the second round of pre-testing, we proceeded with the official data collection. At this stage, convenience sampling was used, a non-probabilistic technique that consists of selecting participants based on ease of access and willingness to answer the survey. This approach is often used in exploratory contexts or when time and resources are limited, as is the case with studies conducted in an academic environment. To implement this sampling, the Prolific platform was used, an online service widely recognized in academic research for its advanced filtering features and access to a diverse and global base of participants. Prolific allows specific selection criteria to be defined, ensuring greater control over the profile of respondents and the quality of the data collected.

The questionnaire was published on the platform on April 13th and strict eligibility criteria were applied. Only individuals located in the UK, fluent in English and who declared that they frequently use chatbots (such as ChatGPT or Google Gemini, among others) could take part. These criteria aimed to guarantee the relevance of the answers to the object of study and to ensure a minimum level of familiarity of the participants with the technologies under analysis.

4. DATA ANALYSIS

Analysis of the data collected, including that from the pre-tests and the official collection phase, was carried out using IBM SPSS Statistics software, a widely recognized tool in academic research for processing and analyzing quantitative data.

4.1. PRETEST I

A total of 35 participants completed the survey. After cleaning the data set, which included excluding incomplete or incorrect responses, 21 responses were considered valid. Thus, the final sample consisted of 21 participants, of whom 11 viewed the sustainable scenario and 10 viewed the unsustainable scenario. The mean age of the participants was 26 years (SD= 4.223), and 51% identified themselves as female.

The manipulation tests were unsuccessful ($t= 1.54, p= .14$ and $t= 1.60, p= .13$), indicating that the manipulation of the scenarios did not result in statistically significant differences in perceptions of sustainability between the groups. Participants who viewed the unsustainable scenario reported slightly lower levels of sustainability ($M= 4.67, SD= 1.26$) compared to those who viewed the sustainable scenario ($M= 5.39, SD = 0.93$).

Considering the results obtained, it was necessary to conduct a second pretest. Changes were made to improve the clarity and effectiveness of the tool. The introduction was rewritten to make the purpose of the study clearer and to emphasize the importance of reading the scenario carefully. The scenarios were revised to use more direct and appealing language, and the sustainable scenario was enriched with additional references highlighting its attributes. In addition, the order of the questions was reorganized to facilitate subsequent analysis, and the question about the frequency of use of the chatbot was converted into a scale, replacing the free-text format that proved inadequate.

4.2. PRETEST II

A total of 37 people participated in this second pre-test. After filtering and cleaning the data, 22 valid responses were included in the analysis. Of these, 10 corresponded to the sustainable scenario and 12 to the unsustainable scenario. The average age of the participants was 28 years (SD= 5.601), 64% of whom identified themselves as female.

The manipulation test was successful ($t= 2.85, p= .010$), indicating that this time the manipulation of the scenarios resulted in statistically significant differences in perceptions of sustainability between the groups. Participants who saw the unsustainable scenario rated sustainability slightly lower ($M= 3.28, SD= 1.38$) than those who saw the sustainable scenario ($M= 4.97, SD= 1.38$).

4.3. STUDY I

A total of 126 participants completed the questionnaire. After eliminating invalid responses, the final sample consisted of 121 individuals, of whom 61 viewed the sustainable scenario and 60 viewed the non-sustainable scenario.

4.3.1. DESCRIPTIVE ANALYSIS

Analysis of the gender variable shows a balanced distribution among the participants, with 48.8% female and 51.2% male. This slight difference suggests that the sample is representative of both genders, which contributes to greater diversity in the responses and to obtaining more comprehensive and balanced results.

The sample ranged in age range from 19 to 78, with an average age of 42 (SD= 14.505), reflecting a broad age range, although with a predominance of younger participants. As for gender, the distribution is balanced, with 48.8% women and 51.2% men, which suggests an adequate representation of both genders. The combination of age diversity and gender balance contributes to a richer and more representative sample, favoring more complete and unbiased results.

According to the data presented in Table 4, the sample is primarily composed of participants with a bachelor's degree (43%), which represents the highest educational level, while the doctorate (1.7%) constitutes the lowest proportion. These findings suggest a predominance of intermediate and higher education levels, with a relatively low representation of advanced degrees.

Table 4 – Study 1 Education Level Distribution | Source: Author

Education level	Frequency	Percent
High School	45	37.2%
Bachelor's degree	52	43%
Master's degree	22	18.2%
Doctorate	2	1.7%

4.3.2. SCALE RELIABILITY AND MANIPULATIONS

The internal consistency of the constructs was assessed using the Cronbach's alpha coefficient, which is widely used to check the reliability of scales in quantitative studies. The results indicate high levels of reliability in all the constructions analyzed, with coefficients higher than the reference value of 0.60, as established by Malhotra and Birks (2023). These results confirm the suitability of the scales used in terms of internal consistency. The specific Cronbach's alpha values for each construct are shown in Table 5.

Table 5 – Cronbach's Alpha values | Source: Author

Cronbach's Alpha values	Variables
Purchase Intention	.894
Perceived Trust	.903
Environmental Awareness	.911
Perceived Accuracy	.914
Sustainable Consumption	.962
Satisfaction	.966

Manipulation check 1 was successful ($t = 6.27, p = .001$), with participants who viewed the sustainable scenario reporting higher levels of sustainability ($M = 5.64, SD = 0.90$) than those who viewed the unsustainable scenario ($M = 4.66, SD = 0.83$). Manipulation check 2 was also successful ($t = 6.65, p = .001$), with participants in the sustainable scenario reporting higher perceptions of sustainability ($M = 5.32, SD = 1.11$) than those in the non-sustainable scenario ($M = 3.84, SD = 1.32$).

The control variables were not statistically significant, as indicated by Levene's test for equality of variances. Regarding trust in AI, the results showed $t = .938, p = .350$, while the level of satisfaction with the chatbot recommendation showed $t = 1.59, p = .11$. Sustainable consumption did not prove to be significant either, with a value of $t = 1.16$ and $p = .25$. Thus, none of the control variables were included as covariates in the subsequent analyses.

A linear regression was carried out to analyze whether the type of scenario presented (sustainable or non-sustainable) has a significant impact on the intention to buy a vacuum cleaner with sustainable characteristics. The results showed no significant effect ($F = .920, p = .339, \eta^2 = .008$). The average purchase intention was 4.69 ($SD = 1.26$) for participants exposed

to the sustainable scenario, and 4.47 (SD= 1.29) for participants who viewed the non-sustainable scenario. It can therefore be concluded that the type of information the consumer is exposed to, and whether this information includes references to the sustainability of the product, does not have a significant influence on purchase intention.

4.3.3. MEDIATION ANALYSIS

Andrew F. Hayes' PROCESS Model 4 was used to perform the mediation analysis.

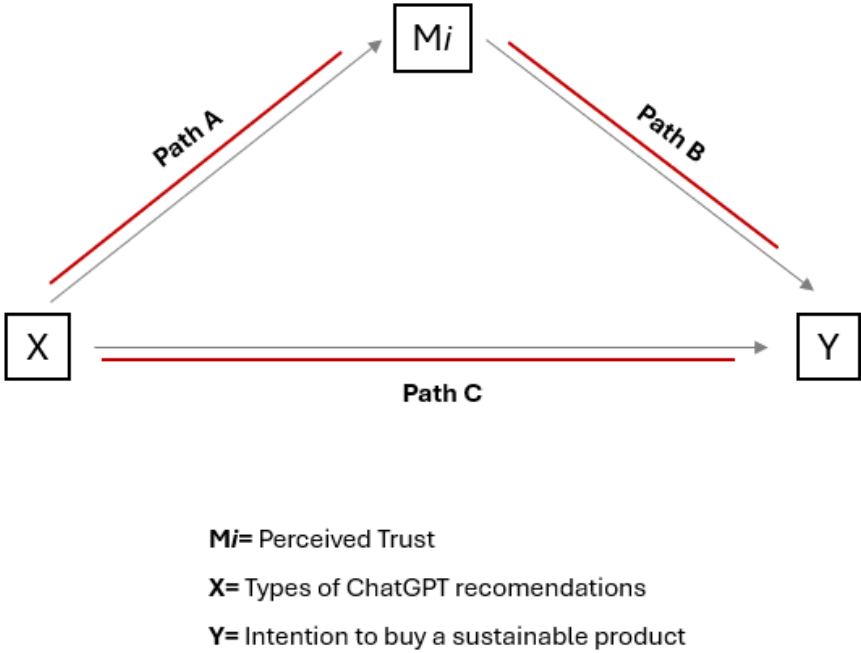
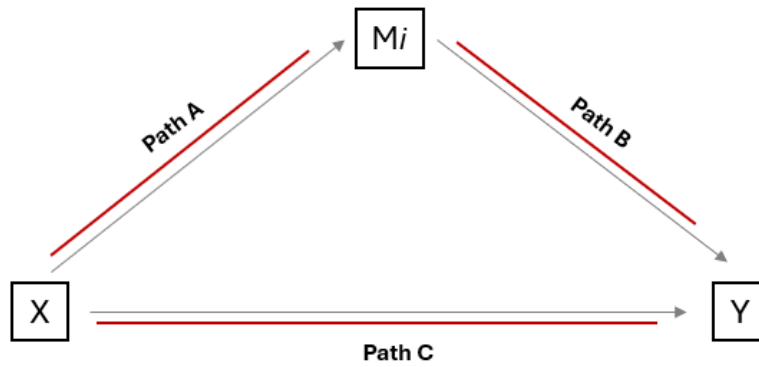


Figure 2 - Mediation of Trust on Intention to buy | Source: Author

Path A was not significant with type of ChatGPT recommendations influencing trust perceptions ($b = -.38$, $t = -1.12$, $p = .27$). Path B, from perceived trust to intention to buy was significant ($b = .38$, $t = 7.11$, $p = .001$). Direct effect of IV on DV is not significant ($b = -.08$, $t = -.96$, $p = .68$). Since there is no significant indirect effect, there is no mediation ($b = -.11$, $LLCI = -.316$, $ULCI = .086$).



Mi= Perceived Accuracy
X= Types of ChatGPT recommendations
Y= Intention to buy a sustainable product

Figure 3 - Mediation of Accuracy on Intention to buy | Source: Author

Path A was not significant with type of ChatGPT recommendations influencing accuracy perceptions ($b = -.17$, $t = -.65$, $p = .52$). Path B, from perceived Accuracy to intention to buy was significant ($b = .50$, $t = 7.24$, $p = .001$). Direct effect of IV on DV is not significant ($b = -.23$, $t = -.97$, $p = .33$). Since there is no significant indirect effect, there is no mediation ($b = -.14$, LLCI = $-.532$, ULCI = $.244$).

4.3.4. MODERATION ANALYSIS

Andrew F. Hayes' PROCESS Model 7 was used to perform the moderation analysis.

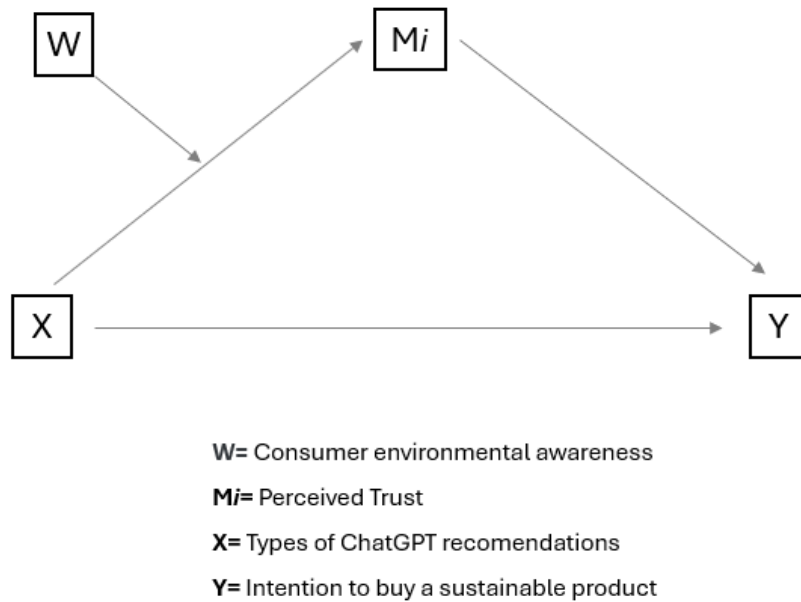
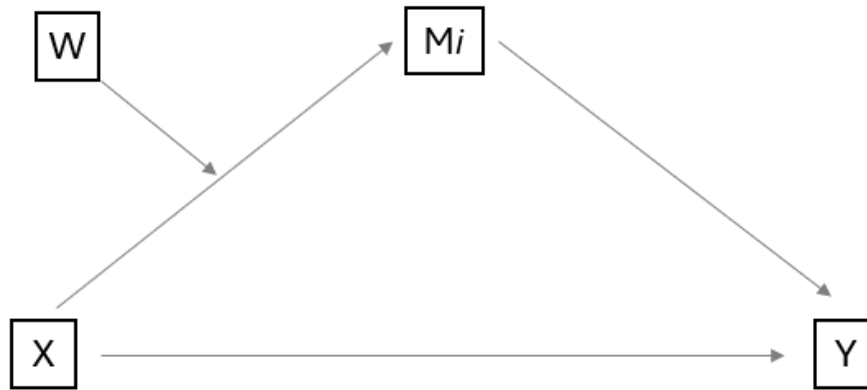


Figure 4 - Moderation of environmental awareness on trust and intentions to buy | Source: Author

The analysis revealed that the interaction effect between the type of recommendation and consumers' environmental awareness on perceived trust was not statistically significant ($b = -.15$, $t = -.56$, $p = .58$). This suggests that environmental awareness does not significantly moderate the impact of the recommendation type on the trust generated by ChatGPT.

As a result, the conditional indirect effects of the recommendation type on purchase intention, mediated by perceived trust and conditioned by environmental awareness, were also non-significant. These findings indicate that there is no evidence of moderated mediation in this model.



W= Consumer environmental awareness
Mi= Perceived Accuracy
X= Types of ChatGPT recommendations
Y= Intention to buy a sustainable product

Figure 5 - Moderation of environmental awareness on perceived accuracy and intentions to buy | Source: Author

To further explore the psychological mechanisms underlying the influence of ChatGPT's recommendations on consumers' intention to purchase sustainable products, an additional analysis was conducted in which perceived accuracy was tested as the mediating variable, replacing perceived trust.

As in the previous model, the interaction effect between the type of recommendation (sustainable vs. non-sustainable) and environmental awareness on perceived accuracy was not statistically significant ($b = -.15$, $t = -.77$, $p = .45$). This indicates that environmental awareness does not moderate the relationship between the type of recommendation and the perceived accuracy of ChatGPT.

As a result, the conditional indirect effects of the recommendation type on purchase intention, mediated by perceived accuracy and moderated by environmental awareness, were also non-significant. These findings suggest the absence of a moderated mediation effect in this alternative model.

5. RESULTS AND DISCUSSION

In general, the results of this study confirm the methodological quality of the experimental design, demonstrating adequate reliability of the scales and successful experimental manipulation. However, the formulated hypotheses were not empirically confirmed, prompting a critical analysis of the potential reasons for the absence of effects and their implications for artificial intelligence and sustainable consumption research.

The first hypothesis (H1) was that receiving a ChatGPT recommendation referencing a product's sustainability would increase purchase intent. However, the results of the regression analysis showed that the type of recommendation did not significantly affect purchase intention directly. This suggests that, despite the growing trust in artificial intelligence technologies, the mere presence of a sustainability recommendation is insufficient to influence consumer decisions. It is possible that participants perceived ChatGPT as a neutral source of information, which limited its persuasive power in the context of sustainability.

This limitation is closely linked to the unique nature of sustainability as a purchasing motivation. Unlike other factors, which can be analyzed more rationally and objectively, sustainability carries a strong emotional and ethical component. This component is expressed through the alignment between consumers' personal values and the social and environmental consequences of their choices (Schouten et al., 2021). This emotional dimension is often influenced by personal experiences, inspiring stories, or messages that appeal directly to an individual's sense of responsibility and empathy. Therefore, recommendations based solely on data or information, even if accurate, may not create the emotional connection necessary to influence purchase decisions effectively. A consumer may recognize the sustainability of a product, but the absence of an emotional or symbolic component in the recommendation renders it less impactful (Bagozzi et al., 2022; Kull et al., 2021). This phenomenon suggests that persuasion around sustainability requires more than information; it requires a narrative that fosters emotional involvement, activates values, and stimulates deeper commitment.

This challenge becomes even more evident in the context of artificial intelligence tools such as ChatGPT. Although AI can provide personalized, data-driven recommendations, it lacks the intrinsic ability to communicate empathy or establish genuine emotional connections. Consequently, even if ChatGPT indicates that a product is sustainable, this information may not overcome the emotional barriers that often influence consumer choices. Therefore, integrating strategies that combine objective information with emotional appeal is crucial for increasing the impact of sustainable recommendations on purchase decisions (Boerman et al., 2017).

Hypotheses H2 and H3 predicted that, respectively, perceived accuracy and trust in the recommendation would act as mediators in the relationship between the type of recommendation (sustainable versus non-sustainable) and purchase intention. The models tested in both cases revealed that these mediating variables were positively and significantly

associated with purchase intention, confirming their important role in the consumer decision-making process. However, the type of recommendation had no significant impact on perceived accuracy or confidence in the artificial intelligence's response. This absence of an effect invalidates the existence of a mediation process in the two models and suggests that participants' assessments of ChatGPT's reliability and credibility remain consistent regardless of the recommendation's content.

These results suggest that, although accuracy and trust influence purchase intention, the nature of the recommendation does not affect these perceptions. Therefore, it is plausible that participants attribute a high level of trust and reliability to ChatGPT from the outset, which reduces the effect of the independent variable (type of recommendation) on the psychological variables involved in the decision-making process. This interpretation aligns with the idea that AI tools like ChatGPT are valued for their ability to swiftly synthesize large amounts of data and offer fact-based recommendations. This is particularly appealing to consumers who distrust subjective recommendations from human influencers (Gerlich, 2025). Additionally, Nagy & Hajdú (2021), found that trust in AI systems significantly influences consumer acceptance because these systems are perceived as providing reliable, accurate, and neutral information. These findings support the idea that consumers trust AI recommendations intrinsically due to their factual and impartial nature. This may explain the consistent levels of trust and perceived accuracy, regardless of the type of recommendation.

Finally, the fourth hypothesis (H4) predicted that participants' environmental awareness would influence their reaction to sustainable recommendations. It was expected that individuals with a higher level of environmental awareness would be more receptive to these recommendations. However, the results indicated no statistically significant difference in reaction, suggesting the recommendations affected all participants similarly, regardless of their level of environmental awareness. This lack of moderation can be explained by two main factors. First, the recommendations may not have been sufficiently explicit or convincing to highlight their sustainable nature, making it difficult to differentiate participants' responses. Second, the recommendations were generated by an artificial intelligence agent, such as ChatGPT. This may have created a perception of neutrality and impartiality, resulting in a uniform reaction among consumers, regardless of their environmental awareness.

Therefore, these results suggest that environmental awareness may have less impact on purchasing decisions in the context of AI-automated recommendations than expected, possibly because the form and channel of the recommendation standardizes consumers' responses.

6. CONCLUSIONS AND FUTURE RESEARCH

Given the growing integration of artificial intelligence into consumer decision-making processes, the findings of this research reveal a more nuanced scenario than initially expected. Despite being technically sophisticated and generally well received by users, advanced tools such as ChatGPT did not prove sufficient to significantly alter consumers' intentions to purchase sustainable products. While the accuracy and reliability of the AI-generated recommendations were acknowledged, no statistically significant effects were observed between the groups exposed to different types of information, nor among participants with varying levels of environmental awareness. These findings underscore the complexity of sustainable consumption behavior, where rational considerations coexist with emotional, social, and ethical factors.

Statistical analysis confirmed that trust and perceived accuracy are positively associated with purchase intention. However, these perceptions were not influenced by the nature of the recommendations received, whether sustainable or not. Moreover, environmental awareness did not moderate the relationships analyzed. These results support the hypothesis that the influence of AI in contexts of ethical and sustainable consumption may be constrained by the lack of affective engagement in interactions with such systems. Modern consumers demand more than objective information; they seek value alignment, symbolic identification, and emotional resonance.

This study contributes meaningfully to the ongoing debate on the role of AI in promoting conscious consumption, emphasizing the need for strategies that combine the analytical power of large language models (LLMs) with human and narrative elements. Through more empathetic, personalized, and emotionally compelling approaches, it may be possible to enhance the impact of AI as a facilitator of responsible consumer choices.

Despite the relevance of these findings, this study presents some limitations that should be acknowledged. First, it did not examine variations in the tone or style of language used by generative AI, such as formal versus informal communication, which may significantly influence how users perceive and respond to AI-generated messages. Additionally, the study focused on a single product category, likely characterized by a utilitarian profile and limited association with environmental impact, which may have reduced participants' sensitivity to sustainability cues. While the experimental design allowed for causal inference, it did not provide deeper insight into consumers' cognitive and emotional processes. Future research could benefit from adopting more exploratory or qualitative approaches, such as in-depth interviews with consumers who use generative AI tools to search for product information. This could offer a richer understanding of how these systems shape sustainable purchasing behavior.

For future studies, it is recommended to apply the proposed model across different product categories, consumer segments, and cultural contexts. Additionally, further exploration of more advanced interactive dynamics such as conversational agents with human-like characteristics or the simulation of artificial empathy could provide valuable insights.

At a time when conscious consumption is a global priority and language models are ubiquitous in everyday decision-making. It is essential to recognize that technology alone is not sufficient to drive behavioral change. Transformation requires human connection, meaning, and purpose. The true potential of artificial intelligence in sustainable marketing, therefore, lies in its ability to bridge the gap between data and values, information and emotion, and technology and humanity.

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APPENDIX A: ETHICS COMMITTEE APPROVAL



This is to certify that

Project No.: **DDMKT2025-1-203779**

Project Title: **How does the use of LLMs, specifically ChatGPT, in the pre-purchase phase of the consumption journey, influence consumer choice for sustainable products?**

Principal Researcher: **Diana Lopes Caetano**

according to the regulations of the Ethics Committee of NOVA IMS and MagIC Research Center this project was considered to meet the requirements of the NOVA IMS Internal Review Board, being considered **APPROVED** on 1/20/2025.

It is the Principal Researcher's responsibility to ensure that all researchers and stakeholders associated with this project are aware of the conditions of approval and which documents have been approved.

The Principal Researcher is required to notify the Ethics Committee, via amendment or progress report, of

- Any significant change to the project and the reason for that change;
- Any unforeseen events or unexpected developments that merit notification;
- The inability of the Principal Researcher to continue in that role or any other change in research personnel involved in the project.

Lisbon, 1/20/2025

NOVA IMS Ethics Committee
ethicscommittee@novaims.unl.pt

APPENDIX B: SURVEY

Welcome to Our Survey!

Thank you for taking part in this study.

This questionnaire is part of an academic study aimed at analysing the factors that influence consumer purchasing decisions. The average time taken to answer the questionnaire is expected to be between 3 and 5 minutes. Your participation is completely voluntary and you can withdraw at any time without any penalty. There are no risks associated with your participation in this study.

The study in question has been approved by the NOVA IMS ethics committee and the answers will be treated anonymously and confidentially, being used for academic purposes only.

Please read the following statement carefully before proceeding:

CONSENT FORM

I declare that I am 18 years of age or older and agree to participate in this study. I understand that my participation is voluntary and that I may stop at any time without penalty. I have been informed that all data collected will be kept confidential. I understand that my answers will be related to influencer transparency and its impact on consumer trust, brand perception and purchase intent, and that there are no significant risks associated with this study.

Yes, I agree to participate in this study

No, I do not agree to take part in this study



CONTROL CENARIOS

✓ Sustainable

Imagine you are looking to purchase a vacuum cleaner and you decide to ask chatGPT, a generative artificial intelligence tool, for suggestions.

This is your conversation with ChatGPT:

ChatGPT ▾

Hello! I want to buy a vacuum cleaner for my house. Give me your top 3 recommendations

EcoCleanMaster 500 – Combines vacuuming and mopping with energy efficiency, reducing consumption by up to 30%. Made from recyclable materials, it features a modular design for easy repair and extended lifespan. The app control optimizes usage and prevents energy waste.

GreenSweep 2000 – A powerful vacuum with a low-consumption motor, cutting energy use by up to 40%. Made with 60% recycled plastics and easily recyclable components. The washable HEPA filter prevents unnecessary waste, while the automatic adjustment technology adapts power levels to avoid energy waste.

EcoSuction Pro – A high-performance upright vacuum for both solid and liquid debris, featuring an efficient motor for a lower carbon footprint. Its ergonomic design enhances durability, reducing the need for frequent replacements and promoting more sustainable use.

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Ask anything

+ Search Reason 🔊

ChatGPT can make mistakes. Check important info.

✓ Non-Sustainable

Imagine you are looking to purchase a vacuum cleaner and you decide to ask chatGPT, a generative artificial intelligence tool, for suggestions.

This is your conversation with ChatGPT:

ChatGPT ▾

Ask anything

+ Search Reason 🔊

ChatGPT can make mistakes. Check important info.

CleanMaster 500 – This model combines vacuuming and mopping for a deep clean. The robot can be used on different surfaces and features a very simple maintenance system.

PowerSweep 2000 – This powerful vacuum cleaner is designed to be energy-efficient, offering smart cleaning modes that adjust suction power as needed.

MaxSuction Pro – A vertical vacuum cleaner that delivers impressive suction power for both solid and liquid debris. Its ergonomic design is ideal for those seeking comfort and high performance.

📄 🗑️ 🗣️ 🗣️ 🗣️

Ask anything

+ Search Reason 🔊

ChatGPT can make mistakes. Check important info.

MANIPULATION CHECKS

Please assess how much you agree with the following sentences considering the scenario you read. (1. Totally disagree | 7. Totally agree)

	1. Totally disagree	2	3	4	5	6	7. Totally agree
ChatGPT suggested innovative products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ChatGPT suggested sustainable products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ChatGPT suggested energy-efficient products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please assess how much you agree with the following sentences considering the scenario you read. (1. Totally disagree | 7. Totally agree)

	1. Totally disagree	2	3	4	5	6	7. Totally agree
The products recommended by ChatGPT help to reduce environmental impact.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The products recommended by ChatGPT contribute to preserving the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The products recommended by ChatGPT are environmentally friendly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



DEPENDENT VARIABLE

Please assess how much you agree with the following sentences considering the scenario you read. (1. Unlikely | 7. Very likely)

	1. Unlikely	2	3	4	5	6	7. Very likely
I would consider purchasing one of the recommended vacuum cleaners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would contemplate the option of buying the vacuum cleaner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is likely that I am going to purchase one of these vacuum cleaners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please assess how much you agree with the following sentences considering the scenario you read. (1. Unlikely | 7. Very likely)

	1. Unlikely	2	3	4	5	6	7. Very likely
I will consider buying products because they are less polluting in the coming times.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will consider switching to environmentally friendly brands for ecological reasons.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I plan to spend more on environmentally friendly products rather than conventional products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect to purchase the product in the future because of its positive environmental contribution.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I definitely want to purchase green products in the near future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



MEDIATION QUESTIONS

Perceived Trust

Please assess how much you agree with the following sentences considering the scenario you read. (1. Not at all | 7. Very much)

	1. Not at all	2	3	4	5	6	7. Very much
I felt like the ChatGPT has my best interest at heart.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe ChatGPT provides accurate information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I could rely on ChatGPT suggestion of products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Perceived Accuracy

Please answer the following questions considering the scenario you read. (1. Not at all | 7. Very much)

	1. Not at all	2	3	4	5	6	7. Very much
How accurate do you think ChatGPT's recommendations are for your preferences and needs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ChatGPT's recommendations always reflect exactly what you're looking for?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you believe that the sources ChatGPT uses are reliable?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



CONTROL VARIABLES

Trust in AI

Please assess how much you agree with the following sentences considering the scenario you read. (1. Not much | 7. Very much)

	1. Not much	2	3	4	5	6	7. Very much
To what extent do you trust that technologies such as artificial intelligence know your preference and could assist you with purchase choices?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Satisfaction

Please assess how much you agree with the following sentences considering the scenario you read. (1. Not much | 7. Very much)

	1. Not much	2	3	4	5	6	7. Very much
Overall, I am satisfied with the recommender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My overall satisfaction with the recommendation received is high.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my decision to purchase based on this recommendation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



MODERATOR QUESTION

AWARE

Please assess how much you agree with the following sentences considering the scenario you read. (1. Not at all | 7. Very much)

	1. Not at all	2	3	4	5	6	7. Very much
I am a strong believer in the preservation of nature and wildlife.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am pleased to purchase green products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I consider the potential environmental impact of my purchase when making many of my decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would describe myself as an environmentally responsible person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



CONTROL QUESTIONS

Do you use a chatbot, like chatGPT?

Yes

No

How often do you interact with a chatbot?

	1.Never	2	3	4	5	6	7.Always
I interact with gen AI chatbots (ex: Gemini, ChatGpt, Bard, Claude, etc)...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For what purposes do you use a chatbot?



DEMOGRAPHIC QUESTIONS

1. What is your age?

2. What is your gender?

Female

Man

Other

3. What is your highest level of education completed?

High School

Bachelor's degree

Master's degree

Doctorate

No educational background



