Systematic Review
Consumer Perceptions of Sustainable Products: A Systematic Literature Review

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Abstract: Due to the growing concern towards natural resource depletion and the increasing levels of waste generation caused by economic growth, sustainable consumption has gained the attention of both governments and society. Despite this, the market share of sustainable products remains low, and studies analysing the factors influencing consumers’ perception of sustainable products provide inconclusive results. This work aims to help bridge this gap by summarising the main literature results and focusing on practical implications. We perform a systematic literature review to identify the factors influencing consumers’ perception of sustainable products. Next, we classify these factors according to the triple bottom line framework, to provide a holistic perspective on the subject and present useful suggestions for companies. The findings suggest that most studies adopt a partial perspective on sustainability, focusing on only one of the sustainability dimensions or considering a single product category. The results also show that there are numerous factors that can influence consumer perception across all three sustainability dimensions. To increase the market share of sustainable products, companies should try and target new customer segments, by adopting a holistic approach to sustainability and analysing how consumers manage the trade-offs between the factors related to different sustainability dimensions. From a practical perspective, this study provides managers with a solid starting point to identify and assess the value of sustainable products in relation to the sustainability dimensions and the characteristics of the target customer segments.

Keywords: sustainable consumption; triple bottom line; green marketing; consumers’ preferences

1. Introduction

Due to the growing concern towards natural resource depletion and the increasing levels of waste generation caused by economic growth, sustainable production and consumption have gained the attention of both governments and society. In 2015, the United Nations (UN) set an agenda for 2030 including 17 Sustainable Development Goals (SDGs) citing “Responsible Production and Consumption” aimed at achieving economic growth, social integration, and environmental protection. Alongside the guidelines provided by national governments and NGOs, in recent years, scholars and researchers documented the growing level of environmental concern of consumers, who show a more favourable attitude towards sustainable products and are more aware of their role and responsibilities [1–3]. At the same time, more and more companies are shifting towards greener production processes to exploit new business opportunities [4].

Companies are trying to achieve these goals in multiple ways, such as production processes that are less harmful for the environment, investments in innovative technologies, the achievement of quality standards and certifications, investments in image and brand equity, and the development of new sustainable products designed to conquer new market segments [5–7]. Scholars started analysing the determinants of sustainable consumer behaviour and the factors capable of influencing the purchase of sustainable products,
often leading to conflicting results [8,9]. Some of the more common approaches take psychological and social factors into account. These studies are based on well-known sociological and psychological theories, such as the theory of planned behaviour or the value–norm–belief theory, and focus on the influence of factors such as consumers’ attitudes towards sustainable products, consumer values and beliefs, and the influence of society to explain consumers’ behaviour [10,11].

Findings from these studies suggest that even if a large number of consumers declare themselves aware of environmental issues and express their intention to purchase sustainable products by changing their consumption habits and paying a higher price, the market share of sustainable products does not exceed 3–4% [12,13]. This phenomenon is known as the “intention–behaviour” gap [14,15]. To explain the reasons for this gap, other studies approach the problem from a different perspective, distinguishing between environmental impact factors and functional factors. The former consider the features that increase product sustainability, such as the use of sustainable materials and production processes. The latter include more traditional performance metrics, such as price, durability, and appearance. Thus, many studies try to explain consumer choices by analysing the interplay between these two factors’ categories [16,17].

However, despite the number and relevance of the contributions, the literature investigating consumers’ perceptions of sustainable products still provides uncertain and inconclusive results. It is common for different studies to assign different importance to similar factors. For example, using the theory of planned behaviour, the authors in [15] find that the purchasing behaviour of organic food consumers is positively influenced by intention and negatively by subjective norms. At the same time, Ref. [18] also investigates consumers’ perception of organic food and, while confirming the positive influence of attitude, asserts that subjective norms do not play a relevant role.

In general, the literature suggests that there are multiple factors influencing consumers’ perception of sustainable products, depending on the context, the type of product, and its features. Despite this, most studies focus on the effect of single factors and variables, thus leading to isolated results. For example, many studies focus on analysing the influence of price on the purchase of sustainable products [19,20].

As an alternative to these approaches, the triple bottom line framework [21] suggests that companies implement a holistic approach to sustainability in business operations, considering the three dimensions of economic performance, environmental protection, and social development [22–24]. Yet, very few studies consider the interplay between these three dimensions.

As a result, the literature examining the factors’ influencing consumers’ perception of sustainable products lacks systematisation and requires a critical overview. This study aims to contribute by analysing and synthesising the main literature results to provide a holistic perspective on the factors influencing consumers’ perceptions of sustainable products, which considers all three dimensions of the TBL framework. In doing this, we aim to also provide managers with useful insights to understand consumers’ choices and improve the performance of sustainable products on the market. Finally, by scanning and organising the available contributions, we aim to highlight under-investigated research areas to provide suggestions for future studies. Thus, the goal of this study is to answer the following questions:

RQ1: What are the main factors considered in the literature to explain consumers’ perception of sustainable products?

RQ2: How can these factors be analysed to provide managers with a holistic perspective and practical insights?

To answer the research questions, we performed a systematic literature review, referring to the PRISMA guidelines, to ensure the reliability and consistency of the procedure. Furthermore, we performed a content analysis to identify the main factors influencing consumers’ perceptions of sustainable products. Then, we organised these factors according to the three dimensions of the triple bottom line framework to provide a comprehensive
perspective of the literature results and provide managers with practical suggestions to improve the performance of sustainable products. Finally, we analysed the information retrieved to highlight under-investigated research areas.

2. Theoretical Background

Sustainability is becoming an increasingly important subject. Large and small businesses alike are adapting their manufacturing processes to supply the market with environmentally friendly products, driven by regulatory laws and renewed market needs. In this context, consumers play a key role in determining the transition to a more sustainable production and consumption logic [25]. Many authors studied the link between consumer perceptions and the factors capable of influencing the purchase of sustainable products. Some of the earliest and most important results are grounded in sociological and psychological theories.

According to the theory of reasoned action (TRA) [26], individual behaviour is mainly determined by two factors, namely, the individual’s attitude and social norms. Attitude represents the individual’s propensity to engage in a certain behaviour, generated by a set of beliefs, insights, and knowledge. Social norms represent the influence of society through experts’ opinions and norms and socially encouraged or discouraged behaviours. The theory of planned behaviour [27] extends the theory of reasoned action by including perceived behavioural control as a third determining factor to explain the behaviour of individuals. This factor expresses the difficulty experienced by individuals in performing a certain behaviour. Many studies referred to the TRA and the TPB to explain consumer behaviour, although with conflicting results [18,28,29]. The inclusion of socio-demographics introduced new arguments for debate [30–32]. Many authors explain the inconsistency of the results by highlighting how the theory of planned behaviour ignores external and situational factors [33,34].

The value–belief–norm theory of environmentalism [35,36] is a psychological theory that tries to explain the reasons behind pro-environmental behaviour by distinguishing between three value orientations: egoistic, altruistic, and biospheric. The results from numerous studies reveal that consumers oriented toward a biospheric and altruistic value system tend to put more emphasis on pro-environmental behaviour. An egoistic value system is generally a deterrent to pro-environmental behaviours, except in the case where sustainable products are more comfortable or healthy than traditional ones [36–38]. Another theory building on Ajzen’s theory of planned behaviour (TPB) and taking situational factors into account is the motivation–ability–opportunity theory (MAO) [39]. According to this theory, the motivation to perform a specific behaviour can be traced back to the factors considered in the TPB, while consistency between attitude and behaviour can be explained considering the moderating effect carried out by two factors: ability and opportunity. The former expresses the ability to perform a behaviour and includes elements of habit and task knowledge [40]. Opportunity refers to the situational factors capable of enabling an individual to perform or, conversely, preventing them from performing a behaviour. A different approach to sustainable consumption is grounded in the concept of value. Theories such as the theory of consumption value [41] propose that consumer behaviour is a function of multiple consumption values, independent of each other and whose importance changes significantly according to the situation and the product category [42]. Similarly, other studies used the concept of perceived green value to explain the overall assessment of consumers toward sustainable products [1,43].

Specifically, sustainable products are evaluated by consumers based on functional values, such as price and quality, and symbolic values, such as appearance, emotional value, and social status. The focus on functional and symbolic factors allowed the researchers to identify different customer segments and explain the influence of these factors on the purchase of different product categories [44,45]. Despite the in-depth analysis of the factors that influence consumers’ perception of sustainable products, very few studies provided a
holistic view of the subject, highlighting the connections between consumer preferences and business sustainability dimensions.

The available literature reviews focus on specific product categories or on the impact that key factors can have on consumers’ perception of sustainable products [46]. As a result, while still providing useful insights, these studies lack generalisation and fail to draw definitive conclusions. Even the studies presenting a categorisation of the factors considered by consumers in the purchase of sustainable products do not directly link these factors to business dimensions [47]. This study aims to bridge this gap by synthesising the available literature and classifying the factors influencing consumers’ perception of sustainable products to provide a holistic and practical perspective by referring to the triple bottom line (TBL) framework. This is a well-established model proposed by Elkington in 1984 to provide companies with a tool to effectively consider the managerial implications of sustainability in business operations. The TBL framework articulates the concept of sustainability in three distinct dimensions and suggests managers define and balance sustainability objectives across all three dimensions [21,48,49]. The economic dimension pushes companies to consider how sustainability can help reduce costs or increase profits. The social dimension includes all aspects of corporate social responsibility (CSR) as well as the corresponding effects in terms of image. The environmental dimension includes aspects such as the sustainability of production processes, the management of waste and pollutants, and the creation of easily recyclable products and packaging. The adoption of the triple bottom line framework allows an original interpretation of the main literature results, highlighting the importance of all three sustainability dimensions for companies offering sustainable products on the market. As we explain in the methodology section, in this study, we use the TBL to define three core categories of factors influencing consumers’ perception of sustainable products, corresponding to the three dimensions of the framework. Then, we use these core categories to bring together and discuss the main literature results, reflecting on consolidated ideas, highlighting new trends, and providing valuable practical suggestions for management.

3. Methodology

To answer the research questions, we performed a systematic literature review. To ensure methodological rigour and the reliability of the results, we followed the PRISMA guidelines. PRISMA is a well-established protocol for systematic reviews that provides a checklist and reporting standards for systematic reviews [50,51]. In this section, we start by describing the material collection and selection process, illustrated in the PRISMA flow diagram depicted in Figure 1.

We carried out the material collection activity in September 2021, by querying the online database of scientific publications Scopus for suitable keywords. The database was chosen due to its reliability and popularity among researchers across different fields of study [46,52]. Table 1 shows the string used for the documentary search, the subject areas related to the research, and the total number of results. The research aimed to identify studies investigating the factors influencing consumers’ perception of sustainable products. Thus, we crafted the search string by identifying suitable keywords. In addition to the keyword “sustain*”, we included the term “green” as we noticed several researchers use the term green product as a synonym for sustainable product [10,53]. Then, we focused on consumers’ perceptions, pairing the term “consum*” with keywords such as “perception”, “preference”, and “attitude”. This allowed us to identify studies investigating the factors influencing consumers’ perceptions of sustainable products. We also included the keywords “intention”, “choice”, and “behaviour” as relevant studies investigate the factors influencing consumers’ perception of sustainable problems with respect to user choices and behaviours. Finally, we included the keywords “supply chain management” and “marketing” to identify studies discussing the implications of user choices for companies supplying sustainable products.
Figure 1. PRISMA flow diagram, illustrating the material collection and selection phase.

Table 1. Search string and subject areas.

<table>
<thead>
<tr>
<th>Search String</th>
<th>Subject Areas</th>
</tr>
</thead>
</table>
| (“sustain*” AND “green” AND (“consum*” OR “intention*” OR “choice*” OR “preference*”) AND (“attitude*” OR “behavior*” OR “perception*”) AND (“product*” OR “attribute*”) AND (“supply chain management” OR “marketing”)) | • Environmental Science
• Energy
• Engineering
• Social sciences
• Business, Management, and Accounting
• Decision sciences
• Strategy and Management

As illustrated in Figure 1, according to the PRISMA guidelines, the material collection and selection process is divided into three phases, namely identification, screening, and selection. In the identification phase, we moved from the 1362 initial results and scanned
the documents for duplicates to remove. Then, we decided to only include studies up to 2021. We made this choice to ensure reliability, as most of the 2022 studies were still in the publishing phase or were not tagged with the indicative “final version” tag. Next, we selected documents based on document type and language. Specifically, we only included journal articles in English, thus excluding conference proceedings, books, and book chapters. This is a common choice for systematic reviews [54,55] that allowed us to focus attention on contributions relevant to the research topic. This led us to the screening phase with a total of 934 documents remaining.

In this phase, we first screened documents by subject area. We limited the selection to documents pertaining to the subject areas shown in Table 1. Among others, these included “Business, Management and Accounting”, “Strategy and Management”, and “Environmental Sciences”. Thus, we only selected the areas relevant to the scope and background of the study.

Then, we screened the documents by keywords. Specifically, we only selected the studies including at least one of the keywords present in the search string of Table 1. This led us to the identification of 501 eligible documents.

Next, we moved to the inclusion phase. To try and reduce bias, two researchers independently performed an abstract read to only select papers investigating consumers’ perceptions of sustainable products. In doing this, the researchers adopted two main criteria. First, we decided to exclude studies investigating consumers’ perceptions of non-sustainable products [56,57]. Second, we excluded studies analysing issues related to the production of sustainable products that do not focus on marketing implications or do not consider consumers’ perceptions [58,59]. Finally, we performed a full-text read of the remaining documents to select only relevant studies. We focused on articles mentioning at least one factor influencing consumers’ perception of sustainable products. All four authors participated in this selection process. To be included in the final sample, an article had to earn the approval of at least three researchers.

Following the material collection and selection process, we performed descriptive and content analyses. The descriptive analysis allowed us to provide an overview of the sample documents, providing essential information on the temporal distribution of the documents, the sources, the methodologies used in the studies, and the industrial sectors on which the researchers’ attention was focused. This enabled us to illustrate key features of the research in this field and served as a valuable introduction to the content analysis. In the latter, we extracted relevant information from the selected documents to highlight literature trends and synthesise the main results. To perform the content analysis, we adopted the three-step coding procedure suggested by [60]. Specifically, in the first step of open coding, we scanned the documents of the sample to identify distinct factors influencing consumers’ perceptions of sustainable products. Then, we labelled each factor with a code. In the second step of axial coding, we grouped the semantically similar codes to obtain overarching categories describing the main factors influencing consumers’ choices. In the third step of selective coding, we referred to the three dimensions of the TBL framework to define three core categories of factors influencing consumers’ perception of sustainable products. To reduce bias, two researchers independently performed the coding activity. Then, all four researchers revised the methodology and the attribution of factors to categories. Specifically, to be definitively classified, a factor had to be associated with a specific category by at least three out of four researchers.

3.1. Descriptive Analysis

The descriptive analysis phase started by analysing the temporal distribution of publications. To focus the analysis on the latest trends and results, it was decided to limit the review to articles published in the last 15 years. The oldest paper included in this study dates back to 2008. Since then, an increase in the number of articles studying the connections between consumer behaviour and the consumption of sustainable products can be observed. As shown in Figure 2, a particularly strong positive trend can be observed.
starting from 2016 and peaking in 2020, with the only exception being 2018. In this regard, it is worth noting that the 2021 data are to be considered partial, as the activity of data collection ended in September 2021. The results show a growing interest of scholars in sustainability-related issues, probably encouraged by the renewed interest of governments and society.

The distribution of the articles among the journals was also analysed. Figure 3 shows that a total of 43 different journals were identified. However, only two journals contributed more than three articles. The journal with the highest number of published papers is Sustainability (Switzerland) with 19 articles, followed by the *Journal of Cleaner Production* with 9. Together, these two publications account for over 37% of the total results. Another eight journals contributed more than one article.

The papers were categorised based on the methodology adopted. Five different approaches and methodologies were identified that will be briefly discussed. The first two categories include research papers focused on socio-demographic and psychological analysis. These studies aim to identify the factors antecedent to consumer behaviour, focusing on attitude and intentions. Despite the common theoretical background, this category include works in which rather heterogeneous methodologies are used. Specifically, it was decided to differentiate between socio-demographic analysis and structural equation modelling (SEM) analysis.

The former type of analysis relies on tools such as interviews, questionnaires, focus groups, and choice experiments and is suited to exploratory research. SEM analysis, on the other hand, is a viable methodology to assess and validate theories through hypothesis testing. The third approach revolves around the use of mathematical models to study sustainable supply chain management techniques. In most cases, these studies are based on well-known scenarios from game theory. Consumer preferences are introduced into the models by considering factors such as price discounts or an assessment of consumer perception of sustainable products.

The fourth category includes literature reviews. This approach consists of extensively analysing scientific literature to provide an overview of the studies related to a subject of interest. The purpose of these studies is to summarise the available literature on the topic, highlighting the most used approaches and the main findings while at the same time identifying the research gaps and under-investigated research areas. The fifth and final approach is that of the case study, consisting of the analysis of real situations and the assessment of the effect of specific variables of interest. Figure 4 summarises the results. The socio-demographic analysis is the most frequently encountered approach in around 46% of cases, followed by SEM analysis at 24% and mathematical optimisation approaches based.
on game theory, found in 15% of cases. Literature reviews account for 13% of the results, while case studies are the least common category, being encountered in just two cases.
The articles were also categorised depending on product categories. Seven product categories were identified, as shown in Figure 5. The only exception in the categorisation is represented by the item “sustainable supply chain management”. In these cases, the studies do not focus attention on a specific product category, but rather address the problem from a broader perspective. As shown in Figure 5, the most popular product category among researchers is agri-food products, considered in 46% of the articles. The second most common category includes articles focused on sustainable supply chain management, which accounts for approximately 26% of the total. Following this are apparel and textile products at 8%, remanufactured or regenerated products at 6%, and electronic devices at 5%. The category “other” brings together different unique product categories.
3.2. Content Analysis

Following the methodology described previously, we first scanned the documents to identify and label the factors influencing consumers’ perceptions of sustainable products. Then, we grouped these factors into overarching categories and, finally, we used this classification to assign each factor to one of the core categories representing the three dimensions of the triple bottom line framework.

Leveraging the results of the coding activity, we were also able to classify each article based on its focus on sustainability dimensions. Almost half of the articles (47.6%) focus on a single sustainability dimension: the most frequently adopted perspective is the psychological–sociological one, found in over 20% of cases. As previously mentioned, in most cases, these papers revolve around classical behavioural theories such as the TPB or the VBN theory of environmentalism, paired with methodologies such as SEM and socio-demographic analyses. Around 19% of the articles focus on the economic dimension, tackling problems of sustainable supply chain management using mathematical tools and game theory. Only 7.5% of the articles focus exclusively on the environmental dimension. Of the remaining 42 articles (52.5%) 33 consider 2 sustainability dimensions and only 9 (11.3%) consider all 3 sustainability dimensions. To deepen the analysis of these articles, it is necessary to consider a further element, namely, the focus on specific product categories.

These product categories are presented in Table 2. We also analyse the implications of the link between product categories and sustainability dimensions. As shown in Table 2, two-thirds of the articles focus on single product categories. Among the papers that consider two sustainability dimensions, 25 (75.8%) focus on a single product category, while among the papers that consider all three sustainability dimensions, the studies focused on a single product category total seven (77.8%). As for the two articles that consider all three sustainability dimensions and provide a broader perspective, one focuses on the underlying causes of “green scepticism”, that is, the reasons why consumers distrust information on sustainable products, while the second proposes a classification of factors influencing consumers’ perception of sustainable products based on the distinction between subjective factors, objective product features, and the influence of society.

Table 2. Publications by the focus on product categories.

<table>
<thead>
<tr>
<th>Articles’ Focus on Product Categories</th>
<th>No. of Articles</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articles focusing on one product category</td>
<td>53</td>
<td>66.3%</td>
</tr>
<tr>
<td>Two-dimensional articles focused on one product category</td>
<td>25</td>
<td>75.8%</td>
</tr>
<tr>
<td>Two-dimensional articles not focused on a single product category</td>
<td>8</td>
<td>24.2%</td>
</tr>
<tr>
<td>Three-dimensional articles focused on one product category</td>
<td>7</td>
<td>77.8%</td>
</tr>
<tr>
<td>Three-dimensional articles offering a holistic perspective</td>
<td>2</td>
<td>22.2%</td>
</tr>
</tbody>
</table>

The present study aims to propose a different classification, organising the main literature results to provide a holistic perspective. To achieve this goal, in the second step of the content analysis, 80 articles were scanned to identify the key factors influencing consumers’ perceptions of sustainable products. A total of 27 factors were identified. These factors were then categorised according to the triple bottom line framework, which includes three different sustainability dimensions: economic, social, and environmental [20]. Specifically, environmental impact factors include those related to sustainable production and consumption, the emission of pollutants, and waste generation, as well as those that provide information on the environmental impact of products, such as traceability and certifications. Socio-demographic and ethical factors include social influences and consumers’ ethics and beliefs such as ethical standards, perceived quality of life, self-esteem, and trust in the supply chain. Economic factors, despite not being linked to the environmental impact of products, are those traditionally considered to explain consumer preferences and include, among others, price, performance, accessibility, design, and brand awareness.

Table 3 presents the results by classifying the factors among each of the three dimensions of the triple bottom line framework. The three factors of overall environmental impact,
overall social impact, and overall economic performance were included to assess the overall weight of the three sustainability dimensions. Of the 27 specific factors identified, 10 belong to the category of environmental factors, 9 to the category of social and ethical factors, and 8 to the category of economic and performance factors. As shown in Table 3, most of the articles consider factors belonging to at least two of the three sustainability dimensions: the most common are the economic and performance factors, included in over 87% of the articles, followed by the environmental impact factors encountered in around 86% of the papers. Psychological and social factors are mentioned in 61% of the papers. Demographic factors are considered in around 54% of the studies.

Table 3. Factors influencing consumers’ perception of sustainable products.

<table>
<thead>
<tr>
<th>Triple Bottom Line Framework Areas</th>
<th>Factors Influencing Consumers’ Perception</th>
<th>Frequency</th>
<th>% Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Impact Dimension</td>
<td>Overall Environmental Impact</td>
<td>69</td>
<td>86%</td>
</tr>
<tr>
<td></td>
<td>Sustainable Production Methods and Processes</td>
<td>64</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>Sustainable Purchasing and Disposal</td>
<td>45</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>Information Standards</td>
<td>40</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Certification Labels</td>
<td>32</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Emission Energy Consumption Information</td>
<td>25</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Organic/Natural Origin</td>
<td>22</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>Origin Information/Traceability</td>
<td>20</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Packaging</td>
<td>18</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Local Production</td>
<td>17</td>
<td>21%</td>
</tr>
<tr>
<td></td>
<td>Sustainable Transportation and Distribution</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>Social and Ethical Dimension</td>
<td>Overall Social Impact</td>
<td>49</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>Trust in Supply Chain/Information</td>
<td>36</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>Ethical Standards</td>
<td>33</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>Healthiness/Improved Life Quality</td>
<td>28</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>Social Status/Self Esteem</td>
<td>16</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Place of Purchase/Place of Consumption</td>
<td>15</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>Corporate Social Responsibility (CSR) Actions</td>
<td>11</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Support to Local Economy</td>
<td>10</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Animal Welfare</td>
<td>10</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Trust/Mistrust in Product’s Novelty</td>
<td>8</td>
<td>10%</td>
</tr>
<tr>
<td>Economic and Performance Dimension</td>
<td>Overall Economic Performance</td>
<td>70</td>
<td>87%</td>
</tr>
<tr>
<td></td>
<td>Quality/Performance/Perceived Value</td>
<td>70</td>
<td>87%</td>
</tr>
<tr>
<td></td>
<td>Price</td>
<td>68</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>Brand Awareness/Advertising</td>
<td>39</td>
<td>49%</td>
</tr>
<tr>
<td></td>
<td>Accessibility (Complexity, Compatibility, Availability)</td>
<td>32</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Monetary Incentives</td>
<td>24</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Safety/Risks</td>
<td>23</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Appearance/Design</td>
<td>19</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>Placement on the Shelf/Visibility of the Product</td>
<td>5</td>
<td>6%</td>
</tr>
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</table>

Among the three most common specific factors, the first two refer to the economic dimension and are the quality/performance/perceived value factor, encountered in over 87% of cases, and price, considered in 85% of cases. The third most common factor belongs to the environmental impact dimension and includes sustainable production methods and processes, with a presence of 80%. The least popular factors, included in 10% or less of the studies, are three, one for each sustainability dimension. Specifically, trust in the product’s novelty belongs to the social category, the sustainable transportation and distribution factor belongs to the environmental impact category, and the placement on the shelf/visibility of the product factor belongs to the economic category.
4. Discussion

In this study, we performed a literature review to identify the factors influencing consumers’ perceptions of sustainable products. Additionally, we use the triple bottom line framework to systematise the literature findings and highlight trends and themes. Table 3, in the previous section, shows the factors we identified, according to the three dimensions of the TBL framework. Now, we discuss the main literature results to develop a holistic perspective on the topic and provide managers with practical suggestions to meet consumers’ demands, thus addressing the second research question.

First, we point out that all three sustainability dimensions have received attention from researchers. The theories and methodologies range from classical psychological theories, to empirical experiments, to mathematical models.

Despite the variety of approaches, it is worth noting that in most cases, the issue of sustainability is not investigated from a holistic perspective. Specifically, studies using psychological and sociological theories, such as the theory of planned behaviour or the value–belief–norm theory, focus on investigating factors antecedent to consumer behaviour, including attitude and social norms. Thus, these works provide a key contribution by clarifying the context and motivations underlying consumers’ perception of sustainable products [61,62]. At the same time, we argue that these studies neglect the influence of factors that are at the core of the investigation of economic and management studies. Indeed, these works typically investigate consumers’ choice to purchase sustainable products analysing economic variables, such as price, brand value, and perceived quality. In doing this, these works analyse key sustainable supply chain management issues and provide an effective representation of market dynamics, but fail to consider the psychological and conceptual factors that can influence consumers’ sustainability choices [63,64]. Finally, other relevant studies focus attention on the analysis of the characteristics of green consumer segments or on the influence that specific sustainability features, such as ecological footprint, carbon emissions, and labels, exert on the choices of different consumer segments [65,66]. While providing useful insights to understand green consumer markets, we argue that it remains to be clarified how companies can leverage these factors to improve the performance of sustainable products in the presence of competitors targeting customer segments less sensitive to environmental issues.

In synthesising, we observe that, due to the multiplicity of approaches, the literature on consumers’ perception of sustainable products offers a variety of theoretical perspectives and identifies numerous factors influencing consumers’ choices. At the same time, we argue that few studies provide a holistic perspective on sustainability. As highlighted in Table 2, few works present a multi-dimensional analysis of sustainability. As a result, we argue that it is precisely this perspective fragmentation that leads to conflicting or inconclusive results.

The problem is accentuated by the fact that most studies focus on specific product categories. Focusing on a single product category allows these works to assess the effect of multiple factors belonging to different sustainability dimensions on consumers’ preferences. At the same time, this precision is achieved at the expense of the generalisability of the results [67,68]. Different products have different functions and features, which affect how consumers assess the value of the products themselves.

The determining factors in the purchase of agri-food products are unlikely to perfectly match the key ones in the purchase of eco-friendly apparel [69]. As a result, authors seem to remain uncertain about the weight that individual factors play concerning the consumption of sustainable products. Some authors seem to confirm the central role played by the psychological and personal dimensions [70,71], while others believe that economic and performance factors still represent significant barriers to the purchase of sustainable products [72–74]. The impact of environmental factors remains uncertain, although many authors underline a growing and positive influence on consumers’ purchasing choices [75,76]. Beyond different interpretations, the analysis of the papers confirms the existence of a niche of consumers strongly engaged in environmental
issues. These customer segments regularly buy sustainable products and seem willing to pay higher prices and change their consumption habits.

Today’s consumers also appear to be able to distinguish between traditional and sustainable products and pay great attention to factors such as production methods, energy consumption, and the generation of pollutants [77]. Although highly committed, this customer segment represents a market niche that is difficult to conquer and satisfy [16,78].

In synthesising, we argue that to make the production of sustainable products economically viable, firms must strive to increase their market shares by targeting new and larger customer segments. Table 3 shows that there are numerous factors influencing consumers’ perception of sustainable products and evidence from the literature suggests that, although these factors assume different levels of importance depending on the product category, each of the sustainability dimensions can positively impact the consumption of sustainable products. Thus, we stress that companies should try to define and balance the achievement of targets related to each of the sustainability dimensions and try to understand how consumers manage the trade-offs between factors belonging to different dimensions. Furthermore, we invite managers to carefully contrast product features with market characteristics to identify new customer segments and adapt the marketing strategy accordingly.

For example, to improve the market share of a product, it is not enough to implement more sustainable production methods, but it is also necessary to effectively communicate its features to consumers. To this end, it is important to invest in transparency and certifications, and, more generally, to strive to increase consumer trust in the supply chain. Indeed, many authors note that recent “greenwashing” scandals and unclear communication have held back the spread of sustainable products among all categories of consumers [79–81]. Furthermore, consumers also seem more determined to use the new information tools to look for evidence of the ethical behaviour of companies [82]. Thus, we argue that focusing on these aspects may improve the overall perception of the value of the products offered, both from an ethical and performance point of view, contributing to the acceptance of sustainable products on the market. Finally, to attract new customer segments and compete with non-sustainable alternatives, companies must carefully consider the influence of economic factors, including price, durability, and perceived value, on consumers’ choices [13,76].

5. Conclusions

Sustainability is currently one of the most debated topics among scholars and researchers. One of the main stems of research concerns the link between consumer preferences and the purchase of sustainable products. Despite a large amount of work on the subject, the available literature often presents uncertain or inconclusive results, which make it difficult for companies to translate them into practice. This work aims to contribute to bridging this gap by analysing and synthesising the main literature results.

Specifically, this article focuses on the identification of factors influencing consumers’ perception of sustainable products and on proposing a classification of these factors useful for improving businesses marketing efforts towards sustainable products. To proceed with the identification of the factors, we performed a systematic literature review, following the PRISMA guidelines. In addition, we use a rigorous content analysis methodology to bring together the main results and emphasise the importance of the various factors. Then, we classify the identified factors according to the three sustainability dimensions of the triple bottom line framework. This framework, originally conceived to allow companies to develop the connection between sustainability and business operations, has proven effective for the classification of factors from a holistic and practical perspective.

In terms of theoretical implications, this study contributes by systematising the literature results on factors influencing consumers’ perception of sustainable products. Indeed, the results show that, while addressing the issue through a broad spectrum of theories and ideas, most studies adopt a fragmented perspective, thus leading to inconclusive results. In
this study, we make this point clear by using the triple bottom line framework to organise the factors influencing consumers’ perception of sustainable products according to the three dimensions of environmental, social, and economic sustainability. The results show that even though there are numerous factors related to each dimension, many articles focus exclusively on one dimension or a few factors. Numerous papers refer to psychological or sociological theories, investigating the antecedents of consumer behaviour. These works typically consider factors such as attitude, social norms, and personal beliefs to explain the behaviour of individuals. Thus, they provide useful information on the determinants of consumers’ choices, but neglect the investigation of economic and performance factors. On the other hand, management studies examine the relationship between consumers’ choices and sustainable products’ features, focusing on factors such as price, quality, and brand value. Finally, relevant works analyse the preferences of green customer segments, assessing the importance of environmental impact factors. However, these studies do not provide management with suggestions for expanding the customer base interested in sustainable products. The issue is exacerbated by the fact that most of the works take into consideration only one product category, consequently emphasising the impact of specific factors on consumer preferences. As a result, although researchers recognise the growing interest of consumers in sustainable products and emphasise the influence of factors belonging to different sustainability dimensions, the actual influence of these factors remains uncertain. As for practical implications, the results allow us to provide two main considerations. First, we observe that to improve the performance of sustainable products, companies should target new and wider market segments. The results show that there are niche customer segments deeply invested in sustainability issues who are willing to buy green products and change their consumption habits. At the same time, the literature suggests that environmental impact factors alone cannot drive the consumption of sustainable products among large customer segments. Thus, companies should focus on analysing how consumers manage the trade-offs between factors related to different sustainability dimensions and develop products capable of satisfying customers’ needs in full. Particularly important is being able to combine environmental advantages with competitive price and performance.

Second, we emphasise the importance of proper communication to enhance companies’ marketing efforts. The literature suggests that consumers show an increased interest in sustainability issues and pay more attention to information. Thus, to win market trust, it is not enough to focus on product features, but it is necessary to increase the transparency of the supply chain and use communication channels to provide secure and relevant information to consumers.

In synthesising, the classification we propose invites companies to evaluate the positioning and performance of products in accordance with each sustainability dimension and simplifies the identification of strengths and weaknesses. Furthermore, it is worth noting that even within a single sustainability dimension, it is possible to intervene on multiple factors. The proposed classification can provide managers with a good starting point to identify variables to leverage to enhance the offer and identify the actions to be taken.

Finally, by reviewing the literature, we are able to highlight some under-investigated research areas and provide suggestions for future studies. First, as noticeable in Figure 4, we point out the lack of case studies. Most of the works focus on socio-demographic surveys and use quantitative statistical methodologies, such as SEM. These studies provide an assessment of the influence of psychological variables and other relevant factors, useful in explaining consumer choices and the characteristics of different market segments. However, there is a lack of empirical work investigating how companies can leverage information on consumer preferences to improve their marketing strategies for sustainable products. Thus, how different factors can influence market performance remains elusive. In this context, the analysis of exemplary cases might be extremely valuable to understand how companies translate their know-how and strategies into practice.
Moving on, we once again stress the lack of studies combining multiple perspectives on sustainability. As already mentioned, most studies adopt a fragmented perspective, focusing the analysis on specific aspects of the problem. Thus, the results are sometimes inconclusive and the literature lacks well-established foundations to build upon. In this regard, we believe the literature would welcome both empirical papers and theoretical contributions striving to reconcile the multiple dimensions of sustainability to provide a comprehensive perspective on the factors influencing consumers’ perception of sustainable products.

Finally, we observed how most studies focus on a single product category or on a specific consumer segment. Future empirical research could help bridge this gap by comparing how factors pertaining to different sustainability dimensions can influence consumer perception, depending on the type of product and the characteristics of different customer segments.

Despite its contribution, this study is not exempt from limitations. First, being based on a literature review, the results presented in this paper are of a general and qualitative nature and are not adequately supported by empirical evidence. Secondly, the uncertainty of the main literature results is partially transferred to the present work, which does not draw definitive conclusions on the subject. Finally, the proposed factors’ classification, while providing a new perspective and offering some useful practical implications, does not provide managers with specific tools to intervene, constituting just a starting point and a reference for sustainability-oriented business operations.

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