

DOI: 10.5281/zenodo.12426501

# SEARCH VISIBILITY AND KEYWORD COMPETITION FOR ECO-FRIENDLY PRODUCTS: AN SEO-BASED ANALYSIS USING SEO METRICS

S. Yazhini<sup>1\*</sup>, K. Selvasundaram<sup>2</sup>, S. Nancy<sup>3</sup>, T. Renuka Devi<sup>4</sup>, K Gomathy<sup>5</sup>

<sup>1,2,3</sup> *Department of Commerce -Corporate Secretaryship and Accounting & Finance, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu 603 203, India.*

<sup>4,5</sup> *PG & Research Department of Commerce, K.M.G. College of Arts and Science (Autonomous) Gudiyattam Thiruvalluvar University Serkadu Vellore 632115.*

Received: 01/07/2025  
Accepted: 19/02/2026

Corresponding author: S. Yazhini  
(ys3963@srmsit.edu.in)

## ABSTRACT

The increasing emphasis on sustainability has led to a growing digital presence of green marketing and eco-friendly products. While existing literature extensively examines consumer attitudes and purchase intentions toward sustainable products, limited attention has been paid to search engine visibility and keyword-level competition within the green marketing domain. Addressing this gap, the present study employs a keyword-based competitive research design to analyse organic search visibility and user search behavior related to eco-friendly products on Google. Secondary data were collected using the SEMrush platform, a widely recognized SEO and competitive analysis tool. The methodological framework consisted of three phases: organic research, keyword research, and keyword gap analysis. Initially, competing domains were identified based on actual organic presence in Google search engine result pages using the seed keyword "ecofriendly products." Subsequently, keyword research was conducted to examine search volume, search intent, keyword difficulty, and cost-per-click metrics, enabling an assessment of demand, competition, and economic value associated with green marketing keywords. Finally, keyword gap analysis was performed to compare keyword coverage and ranking performance among competing domains, with "ecofriendly products" serving as the benchmark keyword. The findings reveal significant disparities in keyword coverage, ranking strength, and traffic potential among competing green marketing websites. The study demonstrates how SEO-driven keyword analysis can uncover competitive advantages and missed opportunities within sustainable digital markets. By shifting the focus from traditional consumer perception studies to search visibility and keyword competition, this research offers novel insights for researchers and practitioners seeking to enhance the digital presence of eco-friendly and sustainable brands.

---

**KEYWORDS:** Green marketing, Eco-friendly products, Search engine optimization, Keyword analysis, SEMrush, Competitive analysis

---

## 1. INTRODUCTION

Green marketing emerged in the late 20th century as firms began to respond to increasing environmental concerns and regulatory pressures. According to Peattie and Crane (2005), green marketing involves “the promotion of products and services based on their environmental benefits”, and it extends beyond traditional marketing to include eco-friendly product design, production processes, and end-of-life disposal (Peattie & Crane, 2005). With the proliferation of online commerce, researchers have begun to examine how digital media shapes green consumption. (World Population Review, 2026) India ranks third with 5.7 billion users, reflecting the rapid growth of internet adoption, smartphone usage, and increasing dependence on Google for searching products, services, and information.

Studies suggest that search engine optimization (SEO), social media campaigns, and online reviews influence consumer discovery of eco-friendly products (Nguyen et al., 2020). Keyword research and digital visibility are increasingly seen as strategic tools for green marketers to reach environmentally conscious consumers (Gao & Zhang, 2021). Search engines play a central role in modern information access by acting as the primary interface between users and online content. They process user queries, retrieve relevant documents, and rank results using complex algorithms that consider relevance, authority, and user behavior signals (Lewandowski, 2015). Consequently, search engines strongly influence what information users encounter, trust, and ultimately choose. With Google processing more than 8.5 billion searches per day, selecting appropriate keywords has become a critical strategic task for organizations seeking to effectively engage their target audiences.

Yang et al. (2019), SSA in sponsored search advertising (SSA), keywords serve as the essential bridge linking search users, advertisers, and search engines. Advertisers bid on keywords to display ads aligned with user queries, while search engines monetize this interaction by matching ads to search intent. represents a prosperous and competitive market in which keywords function as the fundamental bond connecting all three actors.

### 1.1. Keyword Analysis in Search Engine Research

Keyword analysis is a foundational component of search engine research because keywords explicitly express users' information need. Jansen and Spink (2006), keywords act as observable indicators of user intent, enabling researchers to analyse how users

search, refine queries, and interact with search engine result pages (SERPs). Through keyword analysis, dominant topics, emerging trends, and evolving search behavior patterns can be systematically identified. (Lewandowski, 2015). keyword analysis facilitates the evaluation of search demand and competition. Metrics such as search volume indicate how frequently users search for specific queries, while keyword difficulty reflects the intensity of competition among websites attempting to rank for the same keywords. (Krasňanská et al., 2021). these indicators are widely employed in academic research to assess search visibility, ranking feasibility, and potential user exposure.

(Mahmutović et al., 2024). Advancements in web analytics tools have enabled researchers to operationalize keyword analysis using reliable, large-scale datasets. (Semrush, n.d.) SEMrush, in particular, is widely employed in both academic and professional contexts to analyse keyword performance, search intent, competition, and cost-per-click (CPC) data along with competition level for paid ads. Additionally, it highlights SERP features such as featured snippets, local packs, and image carousels, while also displaying trend graphs to show how keyword popularity changes over time.

Operationally, SSA systems require advertisers to simultaneously select keywords and determine how these keywords are matched to user queries – namely through broad, phrase, or exact match types. These decisions directly influence ad visibility, cost efficiency, and campaign performance. Effective keyword selection and matching therefore remain central challenges in search advertising management. (Semrush, n.d.) Keyword analysis helps understand user intent, optimize content to match audience needs, improve rankings in SERPs, also it incorporates search intent classification, which distinguishes between informational, navigational, commercial, and transactional searches. Broder (2002) emphasizes that user satisfaction largely depends on how well search results align with the underlying intent of a query. Intent-based keyword analysis thus improves the evaluation of content relevance, search engine effectiveness, and advertising alignment.

(Pan et al., 2007). Search engine and keyword analysis also support competitive research by enabling the comparison of keyword portfolios across multiple websites. Prior studies demonstrate that higher-ranked pages receive disproportionately greater user attention and trust, reinforcing the strategic importance of SERP positioning (Zhang & Cabage, 2017) By examining keyword overlap, gaps,

and ranking disparities, researchers can identify content deficiencies, competitive advantages, and strategic opportunities within search ecosystems.

(Kevork & Vrechopoulos, 2009). Keyword analysis is a multidimensional process applied across various domains to extract, examine, and interpret keywords for diverse objectives, including identifying research themes, improving SEO performance, and understanding market trends. Commonly analysed dimensions include search volume, keyword difficulty (KD), and cost-per-click (CPC), which reflects the average cost advertisers pay for clicks in paid campaigns and indicates keyword profitability.

Global and local keyword data further allow advertisers to tailor campaigns to specific geographic markets and languages, improving targeting accuracy in sponsored advertising environments. The Resource-Based View (RBV) offers a strategic framework for organizations to evaluate their internal resources to achieve a sustainable competitive advantage. (Sanjai et al., 2023; Shukla et al., 2023). Resource-Based View (RBV) highlights intangible assets including data analytics skills, marketing automation platforms, customer intelligence, and organizational learning. As e-commerce companies increasingly function within hyper-dynamic digital ecosystems, holding VRIN (valuable, rare, inimitable, and non-substitutable) resources—especially private data and artificial intelligence models—emerges as a crucial factor for differentiation.

The Resource-Based View (RBV) offers a significant theoretical framework for comprehending how organizations get competitive advantage by effectively leveraging internal resources and skills. According to the Resource-Based View (RBV), businesses can attain exceptional performance by possessing resources that are valuable, rare, inimitable, and non-substitutable (VRIN). In the realm of digital marketing and online business, these resources encompass technology infrastructure, data analytics skills, digital marketing proficiency, and proprietary knowledge assets. As companies increasingly depend on digital channels to engage consumers, the capacity to efficiently leverage these internal resources is essential for achieving a competitive edge in online markets.

### **1.2. Role of SEMrush in Keyword Analysis**

SEMrush is a widely used keyword analysis and competitive intelligence platform in both academic research and professional digital marketing practice (Vallez, 2011). It enables users to discover new keywords, analyze search volume, keyword

difficulty, CPC, and competitive density, thereby supporting data-driven keyword selection.

(Krasňanská et al., 2021) Although keyword categorization is not fully automated, SEMrush assists this process by providing insights into keyword trends and search intent, which are essential for effective classification. Furthermore, the platform offers competitor keyword analysis features that allow users to examine rival strategies, identify high-performing keywords, and leverage competitive intelligence for strategic advantage (Krasňanská et al., 2020). SEMrush has also been applied across diverse sectors, demonstrating its versatility as a research tool. Jain (2024) it adopts the SEMrush to evaluate tourism websites, showing that keyword ranking and difficulty metrics effectively benchmark industry-level visibility. Yalçın et al. (2019) extends this application to healthcare services, emphasizing that keyword structuring and indexing play a critical role in improving content discoverability in specialized domains. Usmany et al. (2024) confirms that keyword optimization, guided by tools such as SEMrush, remains a foundational SEO practice despite evolving search algorithms.

In addition, meta-analytic and conceptual studies reinforce the centrality of keyword optimization in SEO research. These studies identify keyword-related metrics as among the most influential factors driving organic traffic growth. Collectively, these studies establish SEMrush as a reliable and widely accepted platform for keyword analysis, competitive benchmarking, and search visibility assessment.

Yang, Jansen, Yang, Guo, and Zeng (2019), recognizing the complexity of keyword decision-making across advertising campaigns, proposed a Multilevel Keyword Optimization Framework (MKOF). This framework supports keyword targeting, assignment, and grouping across multiple levels—market, campaign, and ad-group—providing a systematic and computational approach to keyword optimization in sponsored search advertising. SEMrush (2025) notes that Google emphasizes content relevance as one of the most important factors when ranking search results, stating that "the most basic signal that information is relevant is when content contains the same keywords as the search query."

At the market level, keyword targeting involves selecting the most relevant keywords from a domain-specific pool to align product features, search engine characteristics, and target consumer segments. The outcome of this process is a refined set of target keywords optimized for advertising effectiveness.

## 2. REVIEW OF LITERATURE

There are certain researches done on keyword analysis and keyword-level metrics, including search volume, keyword difficulty, competition, cost per click, and search intent, providing valuable insights into consumer interest and market competitiveness and the increasing emphasis on environmental sustainability has led organizations to adopt green marketing strategies to promote eco-friendly products and appeal to environmentally conscious consumers.

(D'Souza, Taghian, & Lamb, 2007). A large body of research explores how consumers perceive and adopt eco-friendly products. Studies consistently show that environmental concern positively influences purchase intention (Biswas & Roy, 2015) Consumers who value sustainability are more likely to seek out products marketed as eco-friendly and are willing to pay price premiums for them. Nagpal and Petersen (2020) emphasize keyword selection as a critical component of search engine marketing, comparable to traditional market targeting strategies. Their study integrates SSA and SEO perspectives, addresses methodological challenges such as endogeneity, and contributes to advancing both academic research and practical digital marketing applications.

Sudhakar et al. (2019) demonstrate the application of SEO tools for extracting and organizing large-scale customer care data, highlighting the role of keyword-based techniques in improving information accessibility and reliability.

Nanda et al. (2021) argue that AI-driven digital marketing tools are becoming indispensable due to their ability to process big data and continuously optimize marketing strategies through machine learning. Similarly, Fitria (2021b) highlights the role of artificial intelligence in enhancing productivity and enabling systems to emulate human decision-making processes.

Drivas (2017) emphasizes the strategic role of keywords in search engine optimization, particularly in scientific and marketing contexts. The study highlights how structured keyword regulation improves website rankings by aligning content with search engine algorithms. Using SEO tools and performance indicators, the research demonstrates that systematic keyword extraction and allocation can significantly enhance online visibility. The study further introduces dynamic simulation modeling to optimize keyword-related resource distribution, underlining the analytical depth required for effective SEO planning.

Williams (2023) explores keyword usage from a user-centered perspective by analyzing discrepancies

between search terms used by patients and those optimized by healthcare providers. The study reveals that ineffective keyword alignment can hinder information accessibility, even when high-quality content exists. This work underscores the importance of understanding real user search behavior when selecting and optimizing keywords, reinforcing the role of keyword analysis in improving discoverability and trust in search results.

Ama (2025) examines the relationship between website traffic and financial performance among leading e-commerce firms using SEMrush data. The findings indicate a strong correlation between organic traffic—driven largely by effective keyword strategies—and financial indicators such as revenue and earnings per visit. This study validates keyword analysis as not only a visibility tool but also a determinant of economic performance in digital markets.

Mahmutović (2024) assesses the SEO maturity of electronics e-commerce websites in Bosnia and Herzegovina. The research highlights how keyword optimization significantly impacts organic traffic and revenue outcomes. By using SEO metrics derived from SEMrush, the study demonstrates that websites with well-structured keyword strategies outperform competitors in terms of visibility and user engagement.

Aswani (2017) focuses on identifying abnormal SEO practices such as keyword stuffing and content manipulation. The study highlights how excessive or artificial keyword use negatively affects website credibility and search rankings. This research contributes to keyword analysis literature by demonstrating the need for balanced and ethical keyword optimization strategies.

Saikia (2023) proposes a stepwise audit framework for keyword selection aimed at improving visibility for low-performing websites. The study integrates keyword metrics, ranking diagnostics, and competitive benchmarking to estimate visibility potential. The findings suggest that structured keyword audits can systematically improve search engine performance, particularly for underperforming domains.

Erdmann, Arilla & Ponzoa (2022) examine how brands can optimize keyword investment over time to improve search engine positioning in digital marketing. The study argues that keyword selection is not only a short-term tactical decision but a long-term strategic investment that significantly affects customer acquisition and marketing budgets.

While previous research has mainly treated keyword costs as direct monetary expenses in paid keyword auctions—often finding that these costs

converge toward a long-run equilibrium – this paper extends the analysis to organic keywords. It proposes using estimated cost-per-click (CPC) as a proxy for the economic cost of organic keywords, allowing long-term performance evaluation of SEO efforts.

### 2.1. Research Gap

Although a growing body of literature examines green marketing, sustainable consumption, and eco-friendly products, most studies focus on consumer attitudes, purchase intentions, or promotional strategies rather than search engine visibility and keyword-level competition. There is a clear lack of studies that comparatively analyse competitor domains and keyword overlap in the green marketing space using SEO tools. This study addresses this gap by applying SEO and keyword analysis tools to examine competition, traffic potential, and economic keyword value within the green marketing domain, offering novel insights into digital visibility strategies for sustainable and eco-friendly brands.

## 3. OBJECTIVES OF THE STUDY

- To analyse eco-friendly product-related keywords using keyword analysis metrics
- To examine the keyword overview and SERP features and identify keyword overlap among competing domains
- To compare the competitiveness of different domains, keyword performance and competitive dynamics

## 4. METHODOLOGY

This study employs a keyword-based competitive research design to investigate search engine visibility and user search behavior related to green marketing. The data required for analysis were obtained using the SEMrush platform, a well-established and widely used tool among digital marketing professionals and academic researchers for search engine optimization (SEO), competitive analysis, keyword discovery, and keyword gap analysis. SEMrush was selected due to its comprehensive database and its ability to provide dependable metrics related to keyword performance, search intent, and domain competitiveness. SEMrush has 18 years of industry experience, serves over 10 million users across 156 countries, and operates 11 global offices. Rather than direct government partnerships, its collaborations primarily involve technology companies, marketing platforms, and educational initiatives, enabling businesses, marketers, and organizations worldwide to access advanced digital marketing tools and data-driven insights.

Keyword data were collected in December 2025. Ranking stability was observed through January 2026 to mitigate short-term volatility. The primary dataset remains cross-sectional, with the second observation serving as validation rather than longitudinal analysis.

Observing keyword performance across December and January ensures that the analyzed keywords represent stable search demand and genuine competitive visibility rather than short-lived ranking spikes. The seed keyword was identified using Google Trends, where multiple sustainability-related search terms were compared. The term “eco-friendly products” showed higher search interest and consistent popularity, making it a representative keyword for analyzing search behavior in the green marketing domain. The methodological process was carried out in three structured phases: organic research, keyword research, and keyword gap analysis.

### 4.1. Organic Research

In the initial phase, Organic Research was conducted to identify websites competing within Google's organic search results for green marketing-related queries. Rather than selecting competitors based on assumed market similarity, domains were identified based on their actual presence in search engine result pages (SERPs). The primary seed keyword "ecofriendly products" was entered into the SEMrush database, and domains appearing prominently for this keyword and its associated terms were recognized as organic competitors. This approach ensured that competitor selection was grounded in real search visibility rather than subjective judgment.

### 4.2. Keyword Research

The second phase involved Keyword Research using the Keyword Overview and Keyword Magic Tool functionalities of SEMrush. By using the core seed keyword, a broad set of related keywords was generated. Each keyword was examined using key performance indicators such as monthly search volume, search intent classification (informational, commercial, and transactional), keyword difficulty (KD), and cost-per-click (CPC). This stage enabled a deeper understanding of user search patterns and helped identify keywords with high demand, varying levels of competition, and differing intent structures within the green marketing domain. Evans et al. (2022) assert that SEMrush's competitor analysis tool is essential for marketers aiming to distinguish their methods. SEMrush enables users to track competitors' keywords, PPC campaigns and content

efficacy, offering insights into effective and ineffective strategies within a specific industry.

### 4.3. Keyword Gap Analysis

In the final phase, a Keyword Gap analysis was performed to assess competitive differences in keyword coverage and ranking performance. Competitor domains were further refined based on their rankings for the closely related keyword "eco-friendly products," which consistently appeared within the top two positions of Google SERPs. This keyword was selected as a benchmark due to its

strong association with sustainable consumption, high search demand, and relevance to green marketing practices. Domains ranking for this keyword were treated as direct organic competitors and were analyzed to identify keywords they rank for, keywords absent from the focal domain, and keywords where relative ranking performance was weaker.

## 5. RESULTS AND ANALYSIS

### 5.1. Keyword Performance Analysis

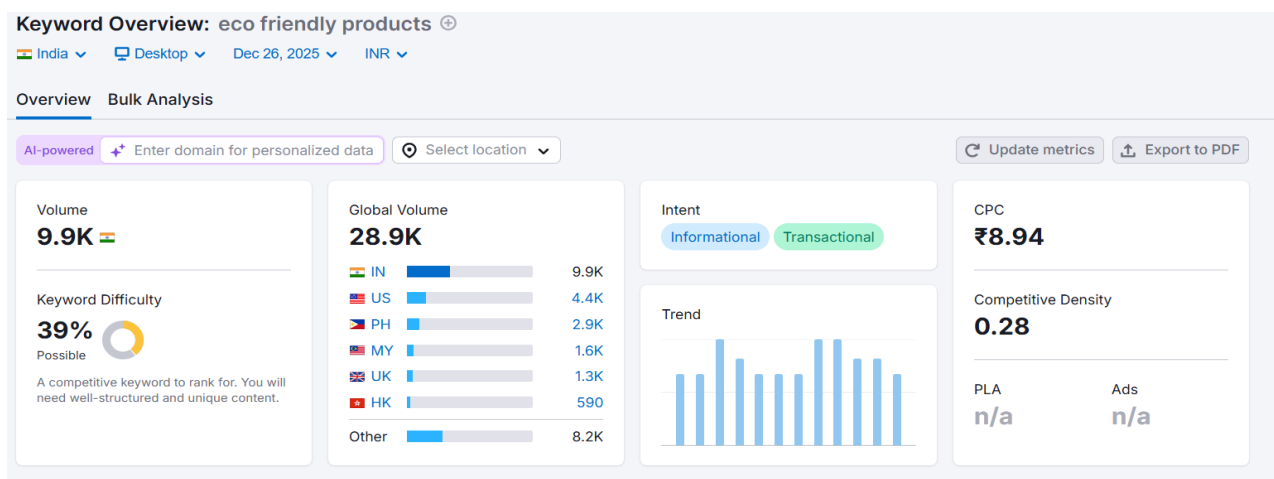


Figure 1: Keyword overview

The keyword "ecofriendly products" shows strong search demand, with 9.9K monthly searches in India and 28.9K globally, indicating high relevance in green marketing. It has informational and transactional intent, meaning users seek both knowledge and purchasing options. With moderate keyword

difficulty (39%) and reasonable CPC (₹8.94), the keyword is competitive but achievable. Overall, it offers good potential for long-term SEO and content strategies in the eco-friendly product space.

### 5.2. SERP Analysis

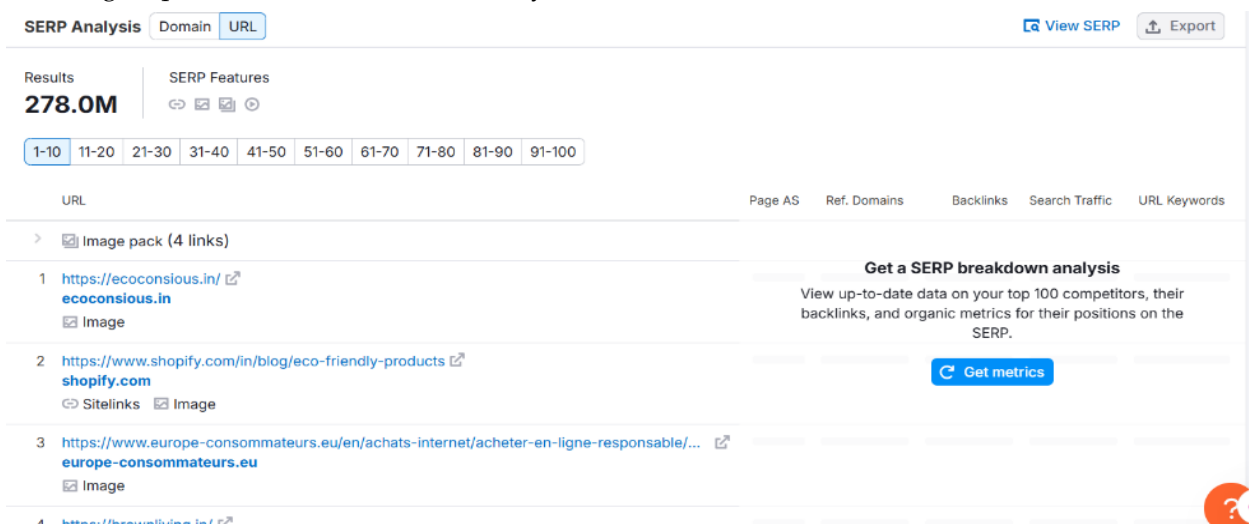


Figure 2: SERP Analysis

### Interpretation

The SERP study reveals that the examined keyword has over 278 million competing pages,

indicating a very competitive search landscape on Google. The search engine results page presents multiple top-ranking URLs, indicating the websites

that now attain greater visibility for this keyword. The existence of SERP features like an image pack implies that Google displays visual information alongside organic results, suggesting that picture-based content may affect ranking and user engagement for this search query. The research moreover presents essential performance characteristics for each ranked page, encompassing Page Authority Score, quantity of referring domains, backlinks, search traffic, and the count of ranking

keywords, which assist in assessing the strength and reliability of rival websites. For instance, names including econconscious.in, shopify.com, europe-consommateurs.eu, and brownliving.to show among the top-ranking results, signifying that these websites presently dominate search visibility for the chosen term

### 5.3. Interpretation and Summary Analysis of Keyword Overlap

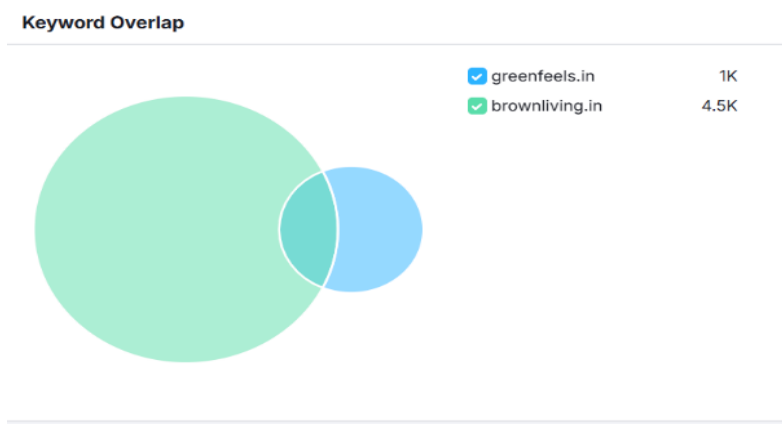


Figure 3: Keyword Overlap  
Source: SEMrush

#### Interpretation

The keyword overlap analysis compares the organic keyword portfolios of greenfeels.in and brownliving.in. Brownliving.in ranks for

approximately 4.5K keywords, indicating a significantly broader search visibility and stronger organic presence. In contrast, greenfeels.in ranks for around 1K keywords, reflecting a relatively limited keyword footprint.

Table 1: Comparative Analysis of Domain Competitiveness

Domain	Competition Level	Common Keywords	SE Keywords	Estimated Traffic	Traffic Cost
renouve.net	29%	2	13	2.5K	752
indiasourcing.net	29%	2	6	80	4
europe-consommateurs.eu	27%	2	4	423	377
upcycluxe.com	27%	2	7	867	42
unbottle.com	21%	1	4	534	25
goodenergy.co.uk	20%	1	5	397	157
rythmnfoundation.org	20%	1	2	0	0
ecofreaky.com	20%	1	5	166	1
junglebound.in	19%	1	4	496	14
wonderlab.org	19%	1	4	5	0

#### Interpretation

The table offers a domain competitiveness study showing many websites that compete within comparable keyword areas connected to eco-friendly or sustainable items. There is moderate rivalry in this specialized sector, as seen by the range of 19% to 29% among the listed domains. Renouve.net and indiasourcing.net exhibit the greatest amount of competition among the domains at 29%, indicating that they are comparatively more formidable rivals in terms of keyword overlap and SEO visibility. Domain performance is further highlighted by the projected

traffic metric. With 2.5K visits, renouve.net has the greatest estimated traffic, demonstrating good organic exposure. With 867 visits, upcycluxe.com also shows significant traffic, followed by unbottle.com (534 visitors) and junglebound.in (496 visitors). On the other hand, certain domains, like rythmnfoundation.org and wonderlab.org, have little to no estimated traffic, suggesting a weak search engine presence. Overall, the study reveals that renouve.net is the most formidable rival because of its high traffic value, substantial anticipated traffic, and greater keyword coverage. websites like

junglebound, unbottle.com, and upcycleluxe.com. While websites like rythmnfoundation.org and wonderlab.org show less SEO competition, they perform moderately. The results show that wider keyword targeting, increased

search exposure, and the capacity to draw in important organic traffic are critical components of SEO success in the eco-friendly and sustainability sector.

**Table 2: Keyword Performance and Competitive Analysis for Eco-Friendly Products**

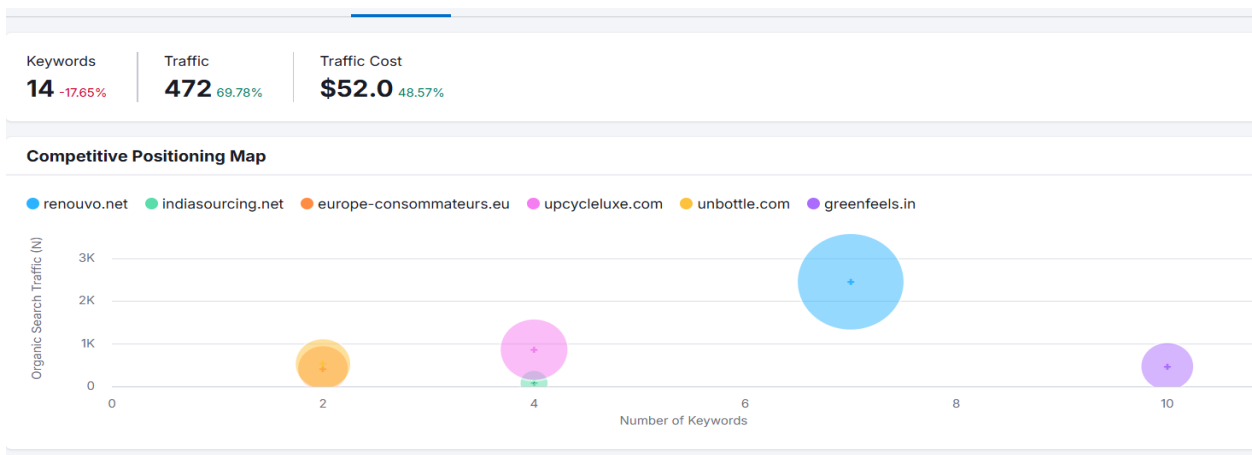
Keyword	Intent	greenfeels.in	brownliving.in	Volume	KD%	CPC	Com.	Results
essential oils	C	61	48	27.1K	70	0.07	0.92	350M
eco friendly	I	19	41	18.1K	70	0.17	0	1.1B
paper tape	I	7	14	14.8K	27	0.04	0.94	390M
eco-friendly products	C, I	3	5	9.9K	47	0.1	0.28	280M
washing powder	C	51	19	9.9K	30	0.02	0.93	603M
bamboo products	I, T	37	3	5.4K	30	0.04	0.78	130M
organic shampoo	C	67	40	4.4K	23	0.19	1	327M
Natural lip balm	C	20	8	3.6K	21	0.06	1	75.5M

**Interpretation:**

The table presents the search rankings of two domains, brownliving and greenfeels.in, using a keyword performance and competition analysis from the SEO analytics tool SEMrush across a number of natural and eco-friendly product phrases. The popularity of each keyword among users is shown by the search volume statistics. For example, with 27.1K monthly searches, "essential oils" has the largest demand, followed by "eco-friendly" with 18.1K searches, indicating a high level of customer interest in items connected to sustainability. While searches like "organic shampoo," "bamboo products," and "natural lip balm" have relatively smaller but nonetheless significant search volumes, keywords like "paper tape" (14.8K) and "eco-friendly products" (9.9K) show moderate demand. Greenfeels, in terms of ranking performance. In comparison to brownliving, it does comparatively better in specialized natural product keywords like organic

shampoo, essential oils, washing powder, and bamboo items. It has a greater presence in more general sustainability queries, such those for essential and eco-friendly oils. The keyword difficulty analysis further reveals that keywords like essential oils and eco-friendly have very high competition (KD 70), making them difficult for smaller websites to rank for, while keywords such as organic shampoo (KD 23) and natural lip balm (KD 21) offer better SEO opportunities due to lower competition. Organic shampoo and eco-friendly have comparatively greater commercial value than other terms, according to the cost per click (CPC) values, which highlight the importance of advertising. The degree of market rivalry is also demonstrated by the total number of search results and the level of competitiveness; for instance, eco-friendly has over 1.1 billion search results, suggesting very strong competition.

**5.4. Competitive Positioning Map**



**Figure 4: Competitive Positioning Map**

**Interpretation:**

Overall, the positioning map shows that the quality and ranking of keywords have a greater impact on organic traffic than the sheer amount of keywords.

Compared to websites that target a wider but less effective keyword set, those that concentrate on carefully chosen high-volume keywords typically see an increase in search exposure and traffic.

SEMrush's Competitive Positioning Map contrasts rival websites according to the quantity of ranking keywords (X-axis) and organic search traffic (Y-axis).

Despite ranking for a moderate amount of keywords, the data reveals that *renouvo.net* generates the best organic traffic, suggesting that it targets high-volume or high-ranked keywords. *greenfeels.in* rankings for the greatest amount of keywords, yet its traffic is very modest, indicating that many of its keywords may have lower search volume or ranking positions. While *unbottle.com* and *indiasourcing.net* exhibit comparatively poor keyword coverage and restricted organic traffic, *upcycleluxe.com* exhibits efficient keyword performance by producing noticeable traffic from a small range of phrases

## 6 DISCUSSION

The study's conclusions offer significant new information on how search engine visibility and keyword analytics influence competitive positioning in the market for environmentally friendly products. The findings show that as customers depend more and more on online search engines to find sustainable and eco-friendly items, digital search behavior has emerged as a key factor in market rivalry.

(Teece et al., 1997) while dynamic capabilities enable firms to adapt these resources to changing digital environments. The fierce competitiveness in this online sector is demonstrated by the abundance of rival pages for eco-friendly product keywords. This implies that in order to increase their visibility and stay competitive, businesses in the green marketing industry need to implement advanced SEO techniques. Websites with bigger backlink profiles, better keyword strategy, and stronger domain authority are more likely to rank higher in search engine results, according to the SERP research. This finding is consistent with current studies on digital marketing, which highlights the significance of SEO skills and digital knowledge resources in improving online exposure and business performance. The findings also show that companies that use analytics tools strategically are in a better position to analyze competition strategies, decipher search patterns, and adjust their content. Businesses can strengthen their competitive positioning and digital marketing strategies by turning search data into meaningful information.

The connection between search demand and competitiveness is another important finding of this study. High search numbers for terms like "eco-friendly" and "essential oils" indicate that consumers are very interested in sustainable products. Smaller websites find it harder to rank higher for these keywords due to their high levels of competition and keyword complexity. This result implies that

although high-volume keywords have a higher potential for traffic, they might not necessarily offer the best option to increase visibility. Instead, targeting niche keywords with moderate search demand and lower competition may offer better opportunities for emerging firms to establish their presence in the market.

The keyword performance analysis reveals variations in the examined websites' SEO tactics. While some websites target particular product-related keywords, others concentrate on more general sustainability-related terms. (Berman & Katona, 2013) keyword strategies in improving digital visibility and competitive positioning. This finding aligns with Nagpal and Petersen's (2020) emphasis on strategic keyword selection as a market targeting decision. This suggests that businesses use various keyword tactics according to their product emphasis and market placement. Websites targeting niche keywords, such as organic personal care products, tend to face lower competition and attract more focused search traffic, making niche keyword strategies effective for specialized eco-friendly product markets.

Search engine visibility depends not only on the number of keywords a website targets but also on the quality and relevance of those keywords. Websites that rank for fewer but more valuable keywords can attract higher organic traffic than those targeting many low-impact keywords. This shows the importance of choosing the right keywords and optimizing content based on consumer search intent.

The findings also indicate a growing interest in sustainability-related searches, suggesting that consumers are increasingly looking for eco-friendly products online. Businesses that clearly communicate their sustainability practices through well-optimized digital content can gain greater visibility and build consumer trust. (Ghose & Yang, 2009) Studies on keyword competition and search advertising demonstrate that effective keyword selection significantly influences online marketing performance.

Overall, the results highlight that effective keyword analysis and SEO strategies are essential for improving online visibility and competitiveness in the eco-friendly product (Jansen & Spink, 2006). The evaluation of search engine result pages also shows that higher ranking positions significantly affect website traffic and user engagement

## 7. IMPLICATIONS

### 7.1. Theoretical Implications

This study illustrates how keyword analytics and search engine visibility affect competitive positioning in green marketing. It adds to the expanding corpus

of research on digital marketing, search engine optimization (SEO), and online consumer search behavior. The results corroborate the premises of the Resource-Based View, which contends that valuable and strategically employed resources give businesses a competitive edge. Keyword intelligence, SEO knowledge, and data analytics skills are strategic tools that assist businesses in improving their exposure in search engine results in the context of digital marketing.

According to the data, websites with higher backlink profiles, stronger authority scores, and more effective keyword optimization techniques are more likely to rank higher on Google. This bolsters theoretical stances that highlight the value of digital knowledge resources and analytical skills in enhancing organizational performance. Businesses can turn raw search data into strategic insights by using SEO analytics solutions like SEMrush. This enables them to track rival strategies, find high-value keywords, and enhance content optimization.

By showing that keywords associated with sustainable and eco-friendly items have significant search demand, the study also advances research on online consumer search behavior. This suggests that consumers are becoming more conscious of and interested in eco-friendly items. Thus, the results broaden theoretical knowledge of how shifting consumer values are reflected in digital search patterns, especially in relation to green marketing and sustainable purchasing.

The findings also show that a high search volume does not always translate into a competitive advantage because highly searched terms frequently have higher keyword difficulty and more competition. This discovery bolsters theoretical debates in the literature on digital marketing that highlight niche targeting and strategic keyword selection as crucial elements of successful SEO tactics. Businesses can increase their chances of reaching better search rankings and becoming visible in competitive online markets by concentrating on moderate-volume keywords with less competition.

Overall, this study strengthens theoretical understanding of how SEO analytics, keyword intelligence, and search visibility function as strategic digital resources that influence market competitiveness in the eco-friendly product sector.

## 7.2. Practical Implications

The study's conclusions have a number of useful ramifications for e-commerce companies, digital marketers, SEO specialists, and manufacturers of sustainable products.

First, the data emphasizes how crucial it is to

choose keywords strategically in order to increase search engine visibility. Companies in the eco-friendly goods industry can give priority to terms like "organic shampoo" or "natural lip balm," which show modest search demand but less competition. Compared to extremely competitive phrases like "ecofriendly" or "essential oils," these keywords offer more chances for ranking improvement.

Second, the study highlights how backlink building and SEO optimization contribute to increased website authority. Businesses looking to improve their online visibility should spend money on link-building techniques, content marketing, and high-caliber educational content on sustainable products. Websites that consistently publish informative articles, product guides, and sustainability insights are more likely to attract backlinks and improve their search rankings.

Third, the results indicate that businesses should use SEO analytics tools like SEMrush to implement a data-driven digital marketing strategy. Businesses can use these tools to track term trends, assess competitor performance, examine SERP architecture, and spot new consumer search trends. Businesses can make better decisions about content production and product promotion by incorporating keyword analytics into their marketing plans.

Fourth, the findings show that search visibility and user engagement can be impacted by visual content and SERP elements like picture packs. In order to improve user experience and increase the likelihood of appearing in SERP features, firms should optimize their digital content by using multimedia elements, visual instructions, and high-quality product photos. As noted by Laura A. Granka et al. (2004), users strongly prefer the first results displayed on the SERP. These results appear in the "visible area" of the page, and results located in this area receive more attention and are more likely to be noticed.

Additionally, businesses in the market for sustainable products should acknowledge that consumers are becoming more interested in eco-friendly items and adjust their digital marketing tactics accordingly. Creating informative content, sustainability blogs, and SEO-optimized product descriptions can help businesses draw in customers and gain the trust of eco-aware consumers.

Lastly, the competitive positioning study advises companies to assess their SEO performance and keep an eye on rival websites. Businesses can find market gaps and create more successful digital marketing strategies by understanding competitors' keyword strategies and traffic sources, helping businesses draw in customers and gain the trust of eco-aware

consumers.

## 8. CONCLUSION

This study looked at term competition and search engine visibility in the eco-friendly product industry using SEO analytics data. It shows that online visibility and competitive positioning in digital markets are significantly influenced by search engine optimization. Growing customer knowledge and interest in environmentally conscious consumption is reflected in the high search demand for sustainable and eco-friendly product keywords. But the data also shows that highly sought-after terms frequently face fierce competition, which makes it challenging for smaller websites to score highly in search results. As a result, companies looking to increase their online presence should use strategic keyword targeting techniques that give moderate-volume and lower-

difficulty phrases priority. These tactics can raise the possibility of obtaining better rankings and drawing in natural traffic. It also emphasizes how crucial it is to use digital marketing analytics tools like SEMrush to track rival tactics, evaluate keyword performance, and improve search engine exposure. Businesses can improve their competitive stance in the sustainable products industry and fortify their digital marketing strategy by utilizing keyword information and SEO capabilities. The study concludes by showing that competitive advantage and online visibility in the eco-friendly goods industry are mostly dependent on efficient keyword analysis and SEO optimization. In the ever-changing field of green marketing, businesses who proactively use keyword analytics, create compelling content strategies, and regularly track search trends are more likely to experience sustained growth and improved online visibility.

## REFERENCES

- Aswani, R., Kar, A. K., Ilavarasan, P. V., & Dwivedi, Y. K. (2017). Outlier detection among influencer blogs based on off-site web analytics data. *Lecture Notes in Computer Science*, 10234, 195–207. [https://doi.org/10.1007/978-3-319-56538-5\\_16](https://doi.org/10.1007/978-3-319-56538-5_16)
- Broder, A. (2002). A taxonomy of web search. *ACM SIGIR Forum*, 36(2), 3–10. <https://doi.org/10.1145/792550.792552>
- Drivas, I. (2017). Keyword stuffing regulation in search engine optimization for scientific marketing conferences. In *Springer Proceedings in Business and Economics*. Springer. <https://doi.org/10.1007/978-3-319-57351-9>
- Jain, S., & Gupta, H. (2024). SEO indexing strategies for physiotherapy services in healthcare: A case study. In *Proceedings of the Intelligent Systems and Machine Learning Conference*. Springer.
- Jansen, B. J., & Spink, A. (2006). How are we searching the World Wide Web? A comparison of nine search engine transaction logs. *Information Processing & Management*, 42(1), 248–263. <https://doi.org/10.1016/j.ipm.2004.10.007>
- Kevork, E. K., & Vrechopoulos, A. P. (2009). Keyword analysis in online research. *Journal of Business Research*, 62(4), 449–454. <https://doi.org/10.1016/j.jbusres.2008.02.005>
- Kevork, E. K., & Vrechopoulos, A. P. (2009). CRM literature: Conceptual and functional insights by keyword analysis. *Marketing Intelligence & Planning*, 27(1), 48–85. <https://doi.org/10.1108/02634500910928362>
- Krasňanská, D., Greguš, M., & Chovanec, M. (2020). Keyword analysis using statistical methods. *Procedia Computer Science*, 171, 1719–1726. <https://doi.org/10.1016/j.procs.2020.04.184>
- Lewandowski, D. (2015). Evaluating the retrieval effectiveness of web search engines. *ACM Transactions on Information Systems*, 33(3), Article 13. <https://doi.org/10.1145/2749400>
- Lewandowski, D. (2015). *Search engine user behaviour: How users search and evaluate search engine results*. Emerald Group Publishing.
- Mahmutović, E. (2024). The state of SEO of e-commerce websites that sell electronics in Bosnia and Herzegovina and the impact of SEO factors on traffic and revenue. *Ekonomski Vjesnik*, 37(1), 45–60.
- Nagpal, M., & Petersen, J. A. (2021). Keyword selection strategies in search engine optimization: How relevant is relevance? *Journal of Retailing*, 97(4), 746–763. <https://doi.org/10.1016/j.jretai.2020.12.002>
- Nanda, J. K., Hay, J. L., & Marchetti, M. A. (2021). Analysis of keywords used in internet searches for melanoma information: Observational study. *JMIR Dermatology*, 4(1), e25720. <https://doi.org/10.2196/25720>
- Pan, B., Hembrooke, H., Joachims, T., Lorigo, L., Gay, G., & Granka, L. (2007). In Google we trust: Users' decisions on rank, position, and relevance. *Journal of Computer-Mediated Communication*, 12(3), 801–823. <https://doi.org/10.1111/j.1083-6101.2007.00351.x>
- Ponomarenko, I., Pavlenko, V., Morhulets, O., Ponomarenko, D. V., & Ukhna, N. M. (2023). Application of artificial intelligence in digital marketing. In *CS&SE@SW* (pp. 155–166). Springer.

- [https://doi.org/10.1007/978-3-031-26999-1\\_13](https://doi.org/10.1007/978-3-031-26999-1_13)
- Saikia, D. (2023). A stepwise audit framework for keyword selection and estimating visibility for low-performing websites: A study of cmsdu.org. *International Journal of Web-Based Learning and Teaching Technologies*, 18(2), 1–15.
- SEMrush. (n.d.). *Keyword overview: Eco friendly products* [Data analytics page]. <https://www.semrush.com/analytics/keywordoverview/>
- Vallez, M. (2011). Keyword research: Métodos y herramientas para identificar palabras clave. *El Profesional de la Información*, 20(4), 398–405. <https://doi.org/10.3145/epi.2011.jul.07>
- Williams, A. (2023). Improve your online findability: Search engine optimization for providers of patients with vulvovaginal pain. *The Journal of Sexual Medicine*, 20(5), 789–796. <https://doi.org/10.1093/jsxmed/qdad030>
- Yang, Y., Jansen, B. J., Guo, X., & Zeng, D. (2019). Keyword optimization in sponsored search advertising: A multilevel computational framework. *IEEE Intelligent Systems*, 34(1), 32–42. <https://doi.org/10.1109/MIS.2019.2893590>
- Zhang, S., & Cabage, N. (2017). Search engine optimization: Comparison of link building and social sharing. *Journal of Computer Information Systems*, 57(2), 148–159. <https://doi.org/10.1080/08874417.2016.1183447>
- Biswas, A., & Roy, M. (2015). Green products: An exploratory study on consumer behaviour in emerging economies. *Journal of Cleaner Production*, 87, 463–468. <https://doi.org/10.1016/j.jclepro.2014.09.075>
- Chen, Y.-S. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, 93(2), 307–319. <https://doi.org/10.1007/s10551-009-0223-9>
- Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64–87. <https://doi.org/10.1525/cmr.2011.54.1.64>
- D'Souza, C., Taghian, M., & Lamb, P. (2007). An empirical study on the influence of environmental labels on consumers. *Corporate Communications: An International Journal*, 12(2), 162–173. <https://doi.org/10.1108/13563280710744847>
- Hartmann, P., & Apaolaza-Ibañez, V. (2009). Green value added. *Journal of Consumer Marketing*, 26(2), 103–115. <https://doi.org/10.1108/07363760910940430>
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 3(1–2), 128–143. <https://doi.org/10.1016/j.ism.2015.04.001>
- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503–520. <https://doi.org/10.1108/EUM00000000006155>
- Leonidou, L. C., Katsikeas, C. S., & Morgan, N. A. (2013). “Greening” the marketing mix: Do greener lead to greener? *International Journal of Business Studies*, 21(2), 123–150.
- Ottman, J. A. (2011). *The new rules of green marketing: Strategies, tools, and inspiration for sustainable branding*. Berrett-Koehler Publishers.
- Peattie, K. (2010). Green consumption: Behavior and norms. *Annual Review of Environment and Resources*, 35, 195–228. <https://doi.org/10.1146/annurev-environ-032609-094328>
- Peattie, K., & Collins, A. (2009). Guest editorial: Perspectives on sustainable consumption. *International Journal of Consumer Studies*, 33(2), 107–112. <https://doi.org/10.1111/j.1470-6431.2009.00758.x>
- Peattie, K., & Crane, A. (2005). Green marketing: Legend, myth, farce or prophecy? *Qualitative Market Research: An International Journal*, 8(4), 357–370. <https://doi.org/10.1108/13522750510619733>
- S, N., Dutta, S., Sahu, T., Das, S., Singh, R., & Vishnoi, H. (2025b). A Study on Data-driven Marketing: The Impact of Real-time Website Traffic Analytics on the Decision-making Process with Reference to eBay Using SEMRUSH Tool. *MDIM Journal of Management Review and Practice*. <https://doi.org/10.1177/mjmrp.241310959>
- Shukla, S., Bisht, K., Tiwari, K., & Bashir, S. (2023). Comparative study of the global Data Economy. In *Data-intensive research* (pp. 63–86). [https://doi.org/10.1007/978-981-99-7677-5\\_4](https://doi.org/10.1007/978-981-99-7677-5_4)
- Olarinde, E. S., Idem, U. J., O, A. E., & Obieze, I. D. (2024). Analysis of Electronic Commerce for the Promotion of Sustainable Development in Nigeria: Addressing Challenges and Envisaging Future Prospects. *IEEE Explorer*, 1–6. <https://doi.org/10.1109/dasa63652.2024.10836394>
- Berman, R., & Katona, Z. (2013). The role of search engine optimization in search marketing. *Marketing Science*, 32(4), 644–651. <https://doi.org/10.1287/mksc.2013.0783>

- Ghose, A., & Yang, S. (2009). An empirical analysis of search engine advertising: Sponsored search in electronic markets. *Management Science*, 55(10), 1605–1622. <https://doi.org/10.1287/mnsc.1090.1014>
- Jansen, B. J., & Spink, A. (2006). How are we searching the World Wide Web? A comparison of nine search engine transaction logs. *Information Processing & Management*, 42(1), 248–263. <https://doi.org/10.1016/j.ipm.2004.10.007>