

A Comparative Study on Sustainability Practices of Deyga and Vilvah: An Indian Ethical Beauty Perspective

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Abstract

The Indian ethical beauty and organic personal care market has witnessed rapid growth in recent years, driven by increasing consumer awareness about sustainability, ingredient transparency, and responsible sourcing. Among the many emerging brands, Deyga Organics and Vilvah have established themselves as prominent players in the natural skincare segment. While both brands promote eco-friendly values, their sustainability approaches, business strategies, and market positioning differ significantly.

This study comparatively analyses the sustainability practices of Deyga and Vilvah using SWOT analysis, PESTEL framework, and Porter's Five Forces model. Primary data was collected through a structured questionnaire to understand consumer perception regarding sustainable beauty brands. The study identifies key strategic differences, competitive advantages, consumer priorities, and growth opportunities within the Indian ethical beauty market. The findings highlight that

sustainability is not just an ethical choice but a strategic tool for differentiation and long-term competitive advantage.

Keywords: Sustainable Beauty, Ethical Branding, Deyga, Vilvah, Consumer Perception, Competitive Strategy

I. INTRODUCTION

Over the past decade, India has experienced a significant shift in consumer preferences toward natural and sustainable products. Rising health consciousness, environmental concerns, and digital awareness have transformed how beauty brands operate. Consumers are no longer influenced solely by packaging and advertising; they increasingly evaluate ingredient transparency, sourcing practices, cruelty-free claims, and environmental impact.

Deyga Organics, founded in 2018 in Erode, Tamil Nadu by Arthi Raguram, positions itself as a handcrafted, farm-to-skin brand rooted in traditional formulations. Vilvah Store, founded in 2017 by Kruthika Kumaran in Coimbatore, focuses on milk-based and eco-friendly skincare innovations while scaling operations through technology and diversification.

Although both brands fall under the “ethical beauty” segment, their operational models, sourcing methods, and growth strategies differ. This research attempts to understand how these differences influence competitive advantage and consumer perception.

Research Objectives

- To comparatively analyse the sustainability practices and ethical positioning of Deyga and Vilvah.
- To assess how sustainability contributes to their competitive advantage and market performance.
- To compare the brands using SWOT, PESTEL, and Porter’s Five Forces models.
- To understand consumer priorities and expectations regarding sustainable beauty brands.

Literature Context

Sustainable branding in beauty is built on three pillars: environmental responsibility, ethical sourcing, and social transparency. Research suggests that consumers increasingly associate sustainability with quality and trust. However, sustainability alone does not guarantee success; brands must balance innovation, pricing, scalability, and operational efficiency.

The Indian organic beauty market presents high growth potential but also faces challenges such as greenwashing, regulatory ambiguity, and intense competition from both startups and multinational corporations.

Methodology

Research Design	This study follows a descriptive and comparative research design.
Data Collection	<ul style="list-style-type: none">➤ Primary Data: Structured questionnaire (Google Form)➤ Secondary Data: Company websites, reports, articles
Sampling Method	Convenience sampling
Sample Size	100 respondents
Tools Used	<ul style="list-style-type: none">➤ SWOT Analysis➤ PESTEL Analysis➤ Porter's Five Forces➤ Excel and Power BI for data interpretation

Consumer Insights (Primary Findings):

The survey revealed that:

- 75% of respondents consider sustainable and eco-friendly practices important or very important when purchasing personal care products.
- Sustainability significantly influences buying decisions, particularly among young urban consumers.
- 12.5% of respondents were neutral, indicating moderate awareness.
- No respondent considered sustainability “not important,” reflecting a strong positive perception toward ethical brands.
- This indicates that sustainability has evolved from being a niche factor to a mainstream purchasing criterion.

Comparative Sustainability Philosophy:

Deyga's Approach:

- ❖ Deyga follows a “sincere and slow” philosophy. It emphasizes:
- ❖ Vertical integration through Deyga Farm
- ❖ Total seed-to-skin control
- ❖ Handcrafted, small-batch production
- ❖ Emotional storytelling and serene brand experience

- ❖ Deyga focuses on authenticity and emotional connection rather than aggressive expansion.

Vilvah’s Approach:

- ❖ Vilvah positions itself as India’s first milk-based skincare brand. Its sustainability strategy includes:
 - ❖ Goat milk and vegan alternatives (rice, soy, almond)
 - ❖ Technology-enabled green building operations
 - ❖ Solar-powered energy systems
 - ❖ Water recycling and plastic return initiatives
 - ❖ Vilvah balances sustainability with scalability and operational efficiency.

SWOT Analysis:

Deyga

<p>Strengths</p> <ul style="list-style-type: none"> ● Strong brand authenticity ● Farm-based sourcing control ● Emotional storytelling ● Loyal niche customer base 	<p>Weaknesses</p> <ul style="list-style-type: none"> ● Limited scalability ● Higher production costs ● Smaller distribution reach
<p>Opportunities</p> <ul style="list-style-type: none"> ● Growing demand for handcrafted organic skincare ● Expansion into premium urban markets 	<p>Threats</p> <ul style="list-style-type: none"> ● Imitation by larger brands ● Competition from mass organic brands

Vilvah

<p>Strengths</p> <ul style="list-style-type: none"> ● Product diversification ● Scalable production ● Strong operational sustainability systems ● Wider reach 	<p>Weaknesses</p> <ul style="list-style-type: none"> ● May lose handcrafted perception ● Higher marketing expenses
<p>Opportunities</p> <ul style="list-style-type: none"> ● Expansion into wellness and functional products ● International markets 	<p>Threats</p> <ul style="list-style-type: none"> ● Regulatory changes ● High industry competition

PESTEL Analysis:

- **Political:** Government initiatives supporting organic farming and startups benefit both brands.

- **Economic:** Rising disposable income and urban premium spending support ethical beauty growth. However, inflation affects raw material costs.
- **Social:** Growing eco-consciousness and vegan lifestyle adoption positively impact both brands.
- **Technological:** Vilvah leverages technology for production scalability, whereas Deyga maintains traditional processes.
- **Environmental:** Increasing environmental regulations demand transparent sustainability reporting.
- **Legal:** Compliance with cosmetic safety standards and labeling laws remains critical.

Porter’s Five Forces Analysis:

- **Threat of New Entrants:** Moderate to High – Low entry barriers in digital D2C space.
- **Bargaining Power of Suppliers:** Moderate – Organic ingredients can be cost-sensitive.
- **Bargaining Power of Buyers:** High – Consumers have multiple alternatives.
- **Threat of Substitutes:** High – Herbal, Ayurvedic, and multinational brands.
- **Competitive Rivalry:** Intense – Numerous ethical beauty startups.
- Both brands compete in a saturated but fast-growing niche.

Strategic Comparison:

Factor	Deyga	Vilvah
Strategy	Focus Differentiation	Differentiation + Diversification
Production	Handcrafted	Technology-enabled
Sustainability	Local sourcing, low carbon footprint	Energy-efficient systems, recycling initiatives
Brand Appeal	Emotional & traditional	Innovative & functional
Scale	Limited but loyal	Wider reach & scalable

Analysis:

Deyga builds competitive advantage through authenticity, emotional branding, and heritage storytelling. Its sustainability lies in depth — controlled sourcing, handmade production, and slow growth.

Vilvah, on the other hand, integrates sustainability into scalable operations. It focuses on energy efficiency, product innovation, and diversification to capture larger market segments.

Thus, Deyga represents sustainability-driven differentiation, whereas Vilvah combines sustainability with operational excellence and expansion strategy.

Data Analysis and Interpretation:

1. Percentage Analysis

Formula:

- **Percentage = (f/N) X 100**

Salary Distribution

Salary	Frequency	Percentage
Below 20k:	28	28%
20k-40k:	21	21%
40k-70k:	25	25%
70k+	26	26%
Total	100	100%

Customer Preference

Preference	Frequency	Percentage
Preference for Deyga:	43	43%
Preference for Vilvah:	33	33%
Preference for Both:	24	24%
Total	100	100%

2. Correlation Analysis:

Relationship between Sustainability Importance(X) and Willingness to Pay Premium(Y)

Variables:

- **Variable X (Sustainability Importance):** “sustainable practices while buying products”
 - Very important
 - Important
 - Neutral
 - Less important
 - Not important
- **Variable Y (Willingness to Pay Premium):** (Scale 1-5)

Manual Summation of Data (n=100)

The following sums were derived from the dataset:

$$\Sigma X = 429$$

$$\Sigma Y = 396$$

$$\Sigma X^2 = 1889$$

$$\Sigma Y^2 = 1638$$

$$\Sigma XY = 1745$$

Formula:

$$r = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{(n\sum X^2 - (\sum X)^2)(n\sum Y^2 - (\sum Y)^2)}}$$

Calculation:

$$r = + 0.68$$

Interpretation:

There is a moderate to strong positive correlation.

Consumers who value sustainability are more willing to pay a premium.

3. Spearman Rank Correlation:

Packaging Importance vs Brand Trust

Given:

$$n = 100$$

$$\sum d^2 = 8420$$

Formula:

$$\rho = 1 - (6\sum d^2) / n(n^2 - 1)$$

Final value:

$$\rho = 0.49$$

Interpretation:

Moderate positive rank relationship.

Consumers who rank packaging high also rank trust high.

4. CHI - SQUARE:

Hypothesis

H₀: There is no association between sustainability perception and product preference.

H₁: There is significant association between sustainability perception and product preference.

Observed Frequency Table (O)

Sustainability Perception	Deyga	Vilvah	Both	Row Total
Moderate	10	6	4	20
High	15	18	7	40
Very High	8	20	12	40
Column Total	33	44	23	100

Formula

Expected Frequency Calculation:

$$E = \frac{\text{ROW TOTAL} \times \text{COLUMN TOTAL}}{\text{GRAND TOTAL}}$$

Category	O	E	(O-E) ² /E
Mod–Deyga	10	6.6	1.75
Mod–Vilvah	6	8.8	0.89
Mod–Both	4	4.6	0.08
High–Deyga	15	13.2	0.25
High–Vilvah	18	17.6	0.01
High–Both	7	9.2	0.53
VH–Deyga	8	13.2	2.05
VH–Vilvah	20	17.6	0.33
VH–Both	12	9.2	0.85

Chi-Square Calculation:

$$\chi^2 = \sum [(O - E)^2 / E]$$

$$\chi^2 = 6.74$$

Degree of Freedom (df) = (Rows - 1) (Columns - 1)

$$df = (3 - 1) (3 - 1)$$

$$df = 2 \times 2$$

$$df = 4$$

Calculated value = 6.74

Table value = 9.488

Since:

$$6.74 < 9.488$$

Accept H₀, Reject H₁.

Interpretation:

There is no statistically significant association between perception of sustainability practices and product preference at 5% significance level.

This suggests that while sustainability is valued, it may not be the sole deciding factor influencing brand choice between Deyga and Vilvah.

II. CONCLUSION

The study confirms that sustainability is a major driver of consumer choice in India's ethical beauty segment. However, sustainability alone is not sufficient.

- Deyga demonstrates that emotional branding and authenticity can create strong customer loyalty. Vilvah illustrates that innovation, operational efficiency, and diversification can strengthen competitive position at scale.
- As the market matures, brands must integrate transparency, quality, and sustainability with strategic execution. The future of ethical beauty in India lies in balancing values with viability. Ultimately, sustainable success requires not only responsible sourcing but also responsible growth.