"BUILDING BRAND EQUITY THROUGH SUSTAINABLE PRACTICES: A STUDY OF PRODUCT STEWARDSHIP IN INDIAN AUTOMAKERS"

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ABSTRACT

This study investigates how Indian automakers build brand equity through product stewardship and sustainable performance, positioning themselves for competitive advantage in an evolving market. With growing environmental awareness among consumers, automakers are increasingly adopting eco-friendly manufacturing processes, lifecycle accountability, and resource-efficient designs. Key initiatives, such as the development of electric vehicles, waste reduction strategies, and renewable materials, are analysed for their impact on brand loyalty, awareness, and overall equity. The research highlights how integrating product stewardship and sustainable practices enhances corporate reputation, fosters consumer trust, and provides a sustainable competitive advantage. The findings offer actionable insights into leveraging sustainability as a core strategy for brand differentiation and long-term success in the Indian automobile industry.

Keywords: Product Stewardship, Sustainable Green Performance, Brand Equity, Competitive Advantage, Indian Automakers.

INTRODUCTION

Brand equity is crucial in the Indian automobile industry, influencing consumer purchase intentions and preferences. Studies have shown that perceived quality significantly impacts purchase intention (Sahoo et al., 2023), while brand preference and loyalty are key determinants of brand equity. Marketing mix elements, both direct (e.g., price, distribution) and indirect (e.g., country of origin, peer recommendations), affect brand equity, with primary cues having individual impacts and secondary cues working in conjunction with primary ones (Tan et al., 2022, Lin & Xie 2024). Interestingly, pricing remains influential on brand equity and perceived quality even for multiple-time buyers, contrary to expectations (Khan et al., 2021; Gomez-Trujillo et al., 2020). These findings highlight the importance of coherent brand-building strategies and optimal product positioning to maximize brand equity in the Indian automobile market, especially as consumers' disposable income increases and they become more likely to change their vehicles, especially after 2010 in the Indian context (Khan et al.,2020).

According to Mahmood and Bashir (2020); Zahari et al. (2020) sustainable procurement manufacturing and reverse supply chain operations enhance brand value specifically for consumers concerned with environmental protection. Efficient waste recycling as part of reverse marketing promotes sustainability commitment through which brands gain superior equity in business-to-business markets (Ishaq & Maria, 2020). Healthy integration of sustainability principles within core brand strategies helps companies stand out from the market crowding while shaping consumer interpretations as well as customer loyalty (Rahman et al., 2020). The fast-food sector sees improved customer-oriented green brand value through its green initiatives that link directly with brand attachment (Li et al., 2020). Green skepticism creates negative effects on green brand attachment since customers need genuine sustainability initiatives. Sustainable practices play an essential function for

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improving brand equity in different global markets and industrial fields according to recent research results**.**

Product stewardship represents an approach which distributes environmental responsibility among all parties who generate products throughout their entire cycle for reduction and management of environmental effects. Managers and distributors and stores jointly execute prevention strategies and lifecycle management approaches for products (Chisholm et al., 2022; Reynolds, 2024). Companies adopt this approach because of extended supply chain liabilities which offers incentives to invest funds in cutting environmental risks (Hasan et al., 2024). A successful product stewardship system needs stakeholders to identify their concerns while analyzing the impacts and risks and opportunities that products produce in their lifetime. Top management needs active involvement to successfully promote product stewardship because chief technical officers along with development engineers serve as vital implementation leaders. The German Packaging Ordinance functions as an exemplary waste management blueprint which provides essential experience for future waste management approaches. An adoption of product stewardship practices enables businesses to generate dual public value and commercial advantages according to Herat and Le (2020).

The automotive sector initiatives for sustainable development consist of environmental stewardship as a solution for ecological issues and social stewardship that deals with community affairs (Sun, 2023; Dodd et al., 2024). Product stewardship demands proactive lifecycle management based on knowledge that generates public and commercial value according to Chisholm et al. (2022). Automobile companies that implement product stewardship principles will obtain long-term sustainability and satisfy their stakeholders and regulatory bodies simultaneously. The industry evolves toward complete sustainability outcomes thus this approach becomes compatible with the new direction (Narayanan & Singh, 2023).

Several research papers (Lin et al., 2021; Wang et al., 2021) demonstrate how crucial sustainable practices remain together with brand equity for the Indian automotive sector. Indian firms achieve product differentiation by using stakeholder collaboration and eco-efficient design approaches according to Bhupendra and Sangle (2018). Green business methods build superior brand perception and stronger customer relations which attract younger generations to companies. Brand equity within the Indian car industry chiefly depends on consumer brand preferences and their loyalty patterns (Olubodun et al., 2023). The increasing consumer interest in buying green products alongside green brand trust seems to shape preferences for environmentally friendly vehicles. The market dynamics in India have demonstrated that cultural standards together with economic elements determine how people react to green brand products. Sustainable practices together with significant brand equity present Indian automakers with chances to acquire competitive advantages in their marketplace.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

Sustainable Green Practices

The global auto manufacturing Car Company's use multiple sustainable green practices through efficient energy systems while embracing eco-compatible materials and creating electric and hybrid vehicle technology. The combination of cost reduction and environment protection is achieved through these sustainable green practices.

Use of Green Technologies

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Research establishes that green technology adoption combined with green products will enhance brand equity values. Green brand image together with trust and satisfaction functions as primary factors that lead to green brand equity. Green brand image drives brand equity because it operates as an intermediary element with green trust (Sahoo et al.,2023). Brand personality stands as the key indicator between environmental legitimacy from green products adoption and brand equity according to Pimonenko et al. (2020) and Lin et al. (2024). When it comes to white goods both green brand image and satisfaction affect green trust but green trust and satisfaction create a direct impact on green brand equity. It is essential to make strategic investments in factors that enhance antecedents to increase green brand equity. Organizations need to adopt green products for enhancing brand equity as they drive product sales and customer conversion to environmentally friendly options (Kirca et al., 2020; Lin et al., 2021).

Focus on Alternative Fuels

Management teams use brand associations to influence consumer perceptions of the brand as well as their brand-related attitudes. Brand equity evaluation through individual brand associations represents a better measurement strategy than analyzing financial summarizes of brand equity (Zameer et al., 2020). Marketers use brand equity by creating new assets within their own organization and through strategic business partnerships and by acquiring established brands through strategic purchase operations. The substantial brand equity serves as a fundamental success factor in alternative fuel adoption as well as overall market performance in the fuel industry because it benefits all stakeholders including firms and trade partners and consumers (Nguyen-Viet et al., 2023).

The recent studies show both sustainable practice adoption and green marketing for building brand equity and guiding consumer choices. Product innovation has significantly impacted brand equity dimensions like awareness, loyalty, image, and leadership (Rehman et al., 2023). Green brand trust can lead to preferences for eco-friendly vehicles, though cultural and economic factors also play a role (Agrawal et al., 2022). Green marketing practices positively influence brand resonance and repurchase behavior (Gupta, 2021). In the Indian automotive industry, green logistics and power are prioritized, while green procurement receives less attention. Innovation is ranked highest for competitive environmental policies, followed by morale, flexibility, and productivity. However, challenges in adopting greener technologies include high costs, low returns, and limited top management dedication (Beheshti et al., 2021). These findings underscore the complex relationship between sustainable practices, brand equity, and consumer behavior in the automotive sector. So, it can be hypothesized that,

H1*: The use of green technologies (SGPUGT) of sustainable green practices significantly impacts Brand equity (BE).*

H2: *Alternative fuel (SGPAF) of sustainable green practices significantly impacts brand equity (BE).*

Product Stewardship

Product stewardship is an approach where manufacturers, suppliers, and stakeholders take responsibility for a product's environmental and social impacts throughout its lifecycle. This includes design, production, use, and disposal to minimize waste, pollution, and resource depletion. It promotes sustainable practices, regulatory compliance, and accountability for long-term environmental benefits.

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Product design, manufacturing, usage, and end-of-life phases significantly impact brand equity. Design visual elements influence employee-brand-based equity, mediated by green concepts (Pellow, et al., 2020; Verma et al., 2021). Product family design through component sharing affects end-of-life management profitability, with increased component interchangeability playing a crucial role (Alamerew, et al., 2020). Economic analysis of end-of-life strategies that uses Life Cycle Commonality Metrics helps generate maximum recovered product values while reducing environmental effects (Sazvar et al., 2024). The implementation of waste management initiatives under end-of-use programs generates positive effects on fashion industry brand equity. Effective end-of-life management programs can develop as brand assets which lead to competitive opportunities through proper marketing strategies together with sustained business planning and clear communication (Singhal et al., 2020). At each life phase of products businesses should incorporate sustainability and end-of-life management practices to both boost brand equity and establish more environmentally-friendly manufacturing systems.So it can be hypothesized that,

H_3: *The Design phase (PSDP) of product stewardship significantly impacts Brand equity (BE).*

H_4: *Product stewardship's Manufacturing phase (PSMP) significantly impacts Brand equity (BE).*

H_5: *The Usage phase (UPDP) of product stewardship significantly impacts Brand equity (BE).*

H_6: *Product stewardship's end-of-life management phase (EOLMDP) significantly impacts brand equity (BE).*

Competitive Advantage

Competitive advantage prediction depends heavily on brand awareness and customer loyalty in combination with perceived quality assessment in different business sectors (Agaba & Kalu 2019 / Raji 2020). Two matching assets called brand equity and customer equity create competitive advantage through marketing capabilities (Frias,et al., 2020). Smartphone customers report higher satisfaction from brand equity components because different competitive advantages through cost-leadership or differentiation shape these connections according to Wang et al. (2020) and Lee et al. (2020). Brand loyalty shows great potential in forming competitive advantage through its role in brand equity which assists global companies in fighting country-of-origin effects that are fading (Rizwan et al.,2021). Brand and customer equity management as a combined strategy proves essential for businesses operating under present-day globalization to achieve both profitability growth and industry leadership.

A business's ability to achieve competitive advantage depends heavily on its brand equity operations throughout multiple industries. Brand awareness together with customer loyalty and perceived quality components create positive impacts on competitive advantage according to Cowan et al. (2020). Companies build mutually beneficial assets through similar marketing capabilities which then lead to competitive advantage formation. The primary function of brand equity helps companies enhance pricing but customer equity produces better loyalty results (Mordue et al., 2020; Rehman et al., 2022). Studies have proven that smartphone brand equity elements boost customer satisfaction but the specific competitive advantage strategies (cost advantage or differentiation) modify this correlation between brand equity and customer satisfaction (Beheshti,et al., 2022;). Brand equity management creates opportunities to improve market success through competitive advantages while increasing customer satisfaction in various market sectors. So, it can be hypothesized that,

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H7: *Brand equity (BE) significantly impacts getting a competitive advantage (CA)for automobile organizations.*

RESEARCH OBJECTIVES

Sustainability and brand equity are increasingly interconnected in the automotive industry, with green practices and product stewardship playing a crucial role. This study explores how sustainable initiatives influence brand perception and competitive advantage with the following objectives Figures 1 & 2.

- Assess the impact of sustainable green practices on brand equity in the automobile industry.
- Examine how product stewardship (design, manufacturing, usage, and disposal) enhances brand equity.
- Analyze the relationship between brand equity and competitive advantage in the automotive sector.

Proposed Research Model

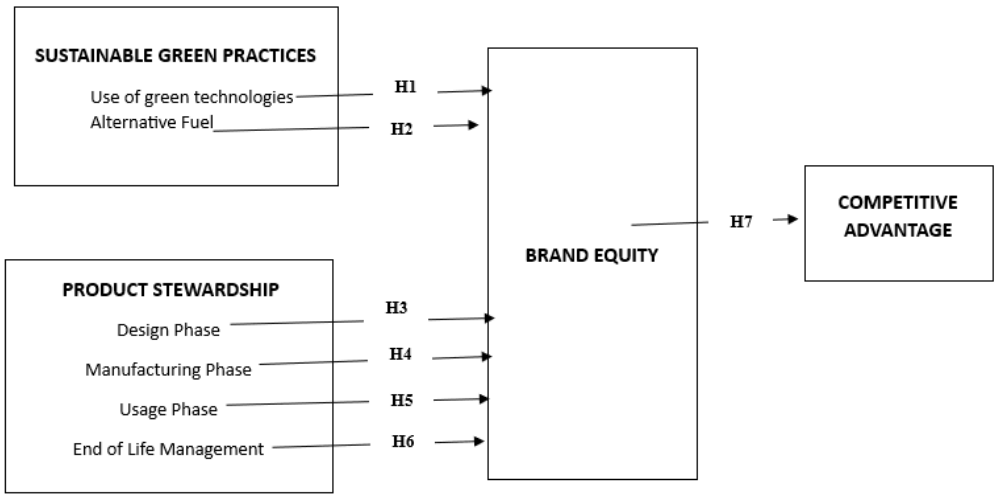

FIGURE 1
PROPOSED RESEARCH MODEL

RESEARCH METHODOLOGY

Measurement Instrument

A questionnaire (Annexure Table 1) was designed, and the items selected were taken from past studies conducted on Product stewardship, Sustainable green practices, Brand equity, and Competitive advantage. The number of items in each construct and their authors are given below:

All multi-scale items were assessed on a 7-point Likert scale, with 1 as completely disagree to 7 as completely agree (Alwin, 1997).

Data was collected from 223 automobile companies from different geographical locations in Maharashtra. This region includes Pune, Nashik, Aurangabad, and Nagpur. Stratified sampling is used to finalize the respondents. A questionnaire in Google Docs format was shared with 700 employees working in the sustainability domain. The researcher received a total of 498 responses, with a response rate of 72%.

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Demographic Profile

The demographic profile of the respondents is given below:

Common Method Variance

A systematic error variance known as "common method variance" results from a consistent approach to measuring the study's constructs (Podsakoff et al., 2003; Richardson et al., 2009). When the independent and dependent variables are measured using the same response approach in a single survey, common method bias may arise. The validity and dependability of the empirical findings may be impacted by this (Baumgartner & Steenkamp, 2001; Mackenzie & Podsakoff, 2012). In this study, brand equity and competitive advantage are dependent variables that were assessed using a single questionnaire, whereas product stewardship and sustainable green practices are independent variables. The most popular method for identifying common method bias is Harman's single-factor test (Fuller et al., 2016; Podsakoff et al., 2003).The total variance on a single factor of all the items is only 46.055%, less than 50%. This indicates that no common method bias is present in the data.

Normality Test

The basic premise of statistical analysis is that data should be distributed normally. Hair et al. (2010) define normality as the form of the data distribution for each metric variable and how closely it matches the benchmark statistical method's normal distribution. A statistical technique of skewness and kurtosis was used to verify the normality (Hair et al., 2010; Kline, 2011). Kurtosis should be between -10 and +10, and skewness should be between -2 and +2 (Collier, 2020).Values of skewness and kurtosis for constructs and individual indicators are as follows:

Normality Test

All constructs and indicators have a standard deviation that ranges from 0.861 to 1.896. Skewness values range from -0.207 to +2.963 for all of the constructs and indicators in the current data set. These fall into the permissible range. Kurtosis values range from -0.074 to +2.345 for all structures and indicators. Additionally, these values are inside the permissible range. Consequently, the dataset's normality is established.

Reliability and Validity

‘Reliability’ is the degree of consistency or dependability of a construct's measure. The degree to which a measure accurately captures the underlying construct it is intended to measure is known as ‘validity’. The measurement model was tested using AMOS (version 28.0) in confirmatory factor analysis. Each item's factor loading was evaluated as part of the reliability analysis, and all factor loadings were more than 0.5 (Falk & Miller, 1992). For each of the 51 indicators, factor loadings varied from 0.720 to 0.952. Cronbach's alpha was used to evaluate construct dependability. Every construct in the study had Cronbach's alpha values above the necessary threshold of 0.70 (Nunnally & Bernstein, 1994). Composite Reliability was higher than the norm of 0.70, ranging from 0.978 to 0.911 (Hair et al., 2010). For each construct, construct dependability was thus determined. The Average Variance Extracted was used to measure the scale items' convergent validity. For every construct, the Average Variance Extracted values were more than the cutoff point of 0.50 (Fornell & Lacker, 1981).

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Reliability and Validity Analysis

This section will cover the main statistical methods for evaluating the reliability and validity of measurement models. We will specifically go over Factor Analysis, Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE), which are tools used to assess internal consistency and construct validity in research.

Discriminant Validity is established if the shared variance between the constructs is lower than the AVE for each construct (Fornell & Larcker, 1981).

Hypothesis Testing: Relationship between Sustainable Green Practices and Brand Equity

H_1: *The use of green technologies (SGPUGT) of sustainable green practices has a significant impact on Brand equity (BE).*

The hypothesis postulated that an organization's brand equity (BE) is greatly impacted by the use of green technology and sustainable practices (SGPUOGT). The hypothesis was tested by regressing the dependent variable BE to the predictive variable SGPUOGT. There is a substantial function for SGPUOGT in playing BE, as evidenced by the fact that it strongly predicted BE (1,588) =427.786 where p <0.001 (b=0.644, p <0.001). This outcome guides SGPUOGT's effect on BE in a positive direction. Additionally, as seen in the below, R2 = 0.345 indicates that the model accounts for 34% of the variance in BE.

H_2: *There is a significant impact of alternative fuel (SGPAF) of sustainable green practices on the Brand equity (BE).*

F (1,588)=392099, where p <0.001, shows that SGPOAF strongly predicted BE, suggesting that SGPUOGT considerably shapes BE (b=0.644, p <0.001). This finding suggests that SGPUOAF has a beneficial effect on BE. Furthermore, the below summarizes that the model accounts for 36% of the variance in the BE, as indicated by R2 = 0.345.

The Relationship between Product Stewardship and Brand Equity

H_3: *The Design phase (PSDP) of product stewardship has a significant impact on Brand equity (BE).*

PSDP had a considerable influence on BE (b=0.562, p<0.001), as evidenced by the fact that it significantly predicted BE, F (1,588) = 309.493 p <0.001. This outcome shows that PSDP has a positive impact on BE. Furthermore, the model accounts for 33% of the variance in the BE, as indicated by the R2 = 0.335.

H_4: *The Manufacturing phase (PSMP) of product stewardship significantly impacts Brand equity (BE).*

PSMP significantly predicted BE, F (1,588) = 384 p <0.001, which indicates that PSMP plays an important role in shaping BE (b=0.622, p <0.001). This result positively indicates the impact of PSDP on BE. Moreover, the R2 = 0.384 depicts that the model explains 38% of the variance in the BE.

H_5: *The Usage phase (UPDP) of product stewardship has a significant impact on Brand equity (BE).*

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PSMP had significant impacts on BE (b=0.655, p<0.001), as evidenced by the fact that PSUP significantly predicted BE, F (1,588) = 384 p <0.001. This outcome shows that PSUP has a beneficial effect on BE. Furthermore, R2 = 0.398 shows that 39% of the variance in the BE can be explained by the model.

H_6: *Product stewardship's end-of-life management phase (EOLMDP) significantly impacts brand equity (BE).*

EOLMPS had a significant impact on BE (b=0.564, p<0.001), as evidenced by the fact that it significantly predicted BE, F (1,588) = 384 p <0.001. This outcome shows that EOLMPS has a beneficial effect on BE. Furthermore, the model accounts for 38% of the variance in the BE, as indicated by the R2 = 0.387.

Correlations between Brand Equity and Competitive Advantage

H_7: *Brand equity (BE) significantly impacts getting a competitive advantage (CA)for automobile organizations.*

To test hypothesis H7, Pearson Correlation analysis was employed. Brand equity and competitive advantage had a moderately favorable and statistically significant Pearson product correlation (r = 0.543, p<.001). H7 was therefore endorsed.

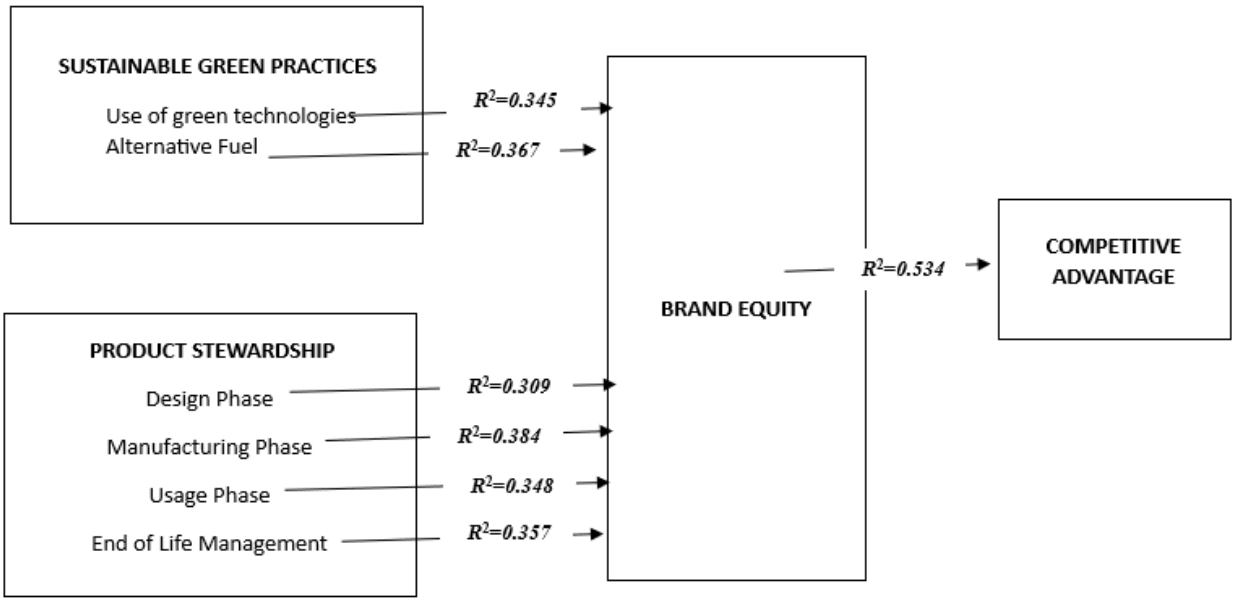

FIGURE 2
ASSESSMENT OF RESEARCH MODEL

CONCLUSION

This study examines the impact of sustainable green practices and product stewardship on brand equity in the automobile industry. The findings confirm that adopting green technologies (SGPUGT) and alternative fuels (SGPAF) enhances brand reputation and consumer trust. Product stewardship across the design (PSDP), manufacturing (PSMP), usage (UPDP), and end-of-life management (EOLMDP) phases significantly strengthens brand

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equity. Furthermore, strong brand equity (BE) enhances an organization's competitive advantage (CA), driving long-term market leadership. The study highlights that integrating sustainability into business strategies is essential for brand positioning and success in an increasingly eco-conscious market.

Implications: Managerial Implications

Technical managers working in automobile corporations must establish sustainable green-oriented approaches and product stewardship actions in every operational section to boost their brand value and competitive standing. The investment in green technologies along with alternative fuel solutions helps companies reach better brand reputation standards and gain environmentally-conscious consumers while meeting all relevant regulations. Both sustainable designs and processing methods should receive high priority because they accomplish environmental reduction efforts without diminishing manufacturing performance. Product users who practice responsibility along with proper end-of-life product management build stronger connections with customers and their brands. Core strategic integration of sustainability creates opportunities for firms to obtain market differentiation and higher prices and sustain lasting financial success.

Theoretical Implications

The research document adds to both brand equity research along with sustainability literature through identifying connections that exist between environmental practices and stewardship of products and brand worth evaluation. The study strengthens the resource-based view (RBV) because sustainability-driven initiatives lead to improved competitive advantage. Research seeking to create a complete framework for future investigation receives extension from product stewardship theory through its focus on design alongside manufacturing and usage and disposal processes that affect brand perception.

Limitations & Scope for Future Research

This study delivers important findings about sustainable green practices together with product stewardship but it encounters specific restrictions. The research fixes its analysis on the automotive industry which restricts universal application to other business sectors. Future research should expand the evaluation of these relationships into three distinct sectors which include electronics and consumer goods as well as heavy machinery to support generalized findings. The research methodology depends on cross-sectional data because it gathers information at one specific point in time. The observation of sustainable initiatives across longer periods would generate advanced understanding about their impacts on brand equity value. Long-term effectiveness related to green practices can face changes from regulatory elements as well as market dynamics along with shifts in consumer preferences.

Future Directions

The scientific community requires additional research to address multiple crucial aspects related to sustainability together with technology implementation.The initial requirement is to discover how modern technologies including AI and blockchain assist environmental sustainability targets and enhance brand worth. The analysis concentrates on particular business applications as well as concrete sustainability outcomes.The study needs to examine which population segments demonstrate what responses toward sustainability initiatives. The analytical approach would uncover the most efficient green practices for

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generating customer brand loyalty among different market segments. Research must establish how businesses generate financial gains through their investment in green technology systems. The analysis reveals direct and indirect financial aspects of sustainability programs in addition to their linkages to precise business results. Research expanded to cover multiple companies operating in various global markets will deliver a full picture about which sustainability strategies generate maximum business success within different scenarios. The wider scope of analysis will reveal fundamental best practices as well as the market-based factors which affect success rates.

Annexure Table 1 **QUESTIONNAIRE**		
No.	**Item**	**Description of Indicator**
		Product Stewardship -Design Phase (PSDP)
1	PSDP-1	Integrating sustainable design principles in product development enhances my perception of the brand's credibility.
2	PSDP-2	Using environmentally friendly materials in product design increases my loyalty to the brand.
3	PSDP-3	A brand that prioritizes sustainable design is likelier to stand out from its competitors.
4	PSDP-4	Products designed for durability and minimal environmental impact strengthen my trust in the brand.
5	PSDP-5	A brand that openly communicates its environmentally responsible design choices has a better reputation in my view.
6	PSDP-6	I am more likely to purchase from a brand incorporating ethical and sustainable considerations into its product design phase.
		Product Stewardship-Manufacturing Phase (PSMP)
7	PSMD-1	A brand that follows environmentally responsible manufacturing processes improves my perception of its credibility.
8	PSMD-2	I am more loyal to brands that use energy-efficient and low-emission manufacturing processes.
9	PSMD-3	A brand that ensures fair labor practices and safe working conditions strengthens my trust in its products.
10	PSMD-4	A brand that minimizes waste and pollution during manufacturing has a more substantial reputation in my view.
11	PSMD-5	I am likelier to buy from a transparent brand about its sustainable manufacturing practices.
12	PSMD-6	Brands that prioritize the use of recycled or sustainable materials in manufacturing are more valuable to me.
		Product Stewardship- Usage Phase (PSUP)
13	PSUP-1	A brand that designs products for ease of use and efficiency enhances my perception of its credibility.
14	PSUP-2	I am more loyal to brands that offer energy-efficient products that reduce environmental impact during use.
15	PSUP-3	I trust a brand more if its products are designed to last longer and require minimal replacements.
16	PSUP-4	A brand that ensures its products are safe to use and minimizes risks strengthens my confidence in its offerings.
17	PSUP-5	In my view, brands that educate consumers on responsible usage and disposal of their products have a more substantial reputation.
18	PSUP-6	A brand that provides repairability, maintenance support, and upgrade options increases my perceived value of the brand.
		Product Stewardship -End of-life Management (PSEOLM)
19	PSEOLM-1	A brand that designs products for easy recycling enhances my perception of its environmental responsibility.
20	PSEOLM-2	I am more loyal to brands that offer take-back or recycling programs for used products.
21	PSEOLM-3	A brand incorporating biodegradable or eco-friendly disposal options strengthens my trust in its sustainability efforts.
22	PSEOLM-4	A brand that actively works to minimize landfill waste through responsible end-of-life

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		management has a more substantial reputation.
23	PSEOLM-5	A brand that provides clear instructions on responsible product disposal increases my confidence in its commitment to sustainability.
24	PSEOLM-6	Brands that promote circular economy practices (such as product refurbishment, remanufacturing, or repurposing) are more valuable to me.
25	PSEOLM-7	I prefer brands that take responsibility for safely managing e-waste and hazardous materials at the end of a product's life.
		Sustainable Green Practices- Use of Green Technologies (SGPUGT)
26	SGPUGT-1	In my opinion, a brand that invests in green technologies is more innovative and forward-thinking.
27	SGPUGT-2	I am more loyal to brands that use renewable energy sources in their operations and production processes.
28	SGPUGT-3	I trust a brand more when it actively reduces its carbon footprint through sustainable technologies.
29	SGPUGT-4	A brand with recognized green certifications (e.g., Energy Star, LEED, Carbon Neutral) has a more substantial reputation in my view.
30	SGPUGT-5	I am more likely to purchase from a brand incorporating green technologies into its products and services.
		Sustainable Green Practices-Alternative Fuel (SGPAF)
31	SGPAF-1	A brand that adopts alternative fuels (e.g., biofuels, hydrogen, electric, or solar-powered systems) is more environmentally responsible in my view.
32	SGPAF-2	I am more loyal to brands that use alternative fuels to reduce their environmental impact.
33	SGPAF-3	I trust a brand more when it actively reduces carbon emissions through alternative fuels.
34	SGPAF-4	A brand that pioneers alternative fuel usage is seen as a market leader with a strong reputation.
35	SGPAF-5	I am more likely to support or purchase from a brand incorporating alternative fuels into its operations or products.
36	SGPAF-6	A brand investing in alternative fuel technologies is more innovative and has a competitive advantage.
37	SGPAF-7	Brands that commit to alternative fuels contribute to a sustainable future, increasing their long-term value in my perception.
		Brand Equity (BE)
38	BE-1	Indian automakers that adopt sustainable practices enhance my perception of their brand credibility.
39	BE-2	I am more loyal to Indian automakers that offer electric or hybrid vehicles as part of their sustainability efforts.
40	BE-3	I trust Indian automakers more when they actively reduce their carbon footprint through cleaner manufacturing and fuel-efficient technologies.
41	BE-4	Indian automakers that invest in alternative fuels (such as biofuels, hydrogen, or EVs) have a stronger reputation in my view.
42	BE-5	I am more likely to purchase a vehicle from an Indian automaker with recognized sustainability certifications (e.g., BSVI compliance, LEED-certified plants).
43	BE-6	I value Indian automakers implementing vehicle recycling programs and promoting a circular economy approach.
44	BE-7	Indian automakers that align with government sustainability policies (such as FAME initiatives) are more attractive to me as a consumer.
		Competitive Advantage (CA)
45	CA-1	A company that consistently introduces innovative products has a significant competitive advantage in the market.
46	CA-2	A strong brand reputation provides a significant competitive advantage over other companies in the same industry.
47	CA-3	Providing superior customer service is a key factor in gaining and maintaining a competitive advantage.
48	CA-4	Companies that lead in technological advancements hold a distinct competitive advantage over their competitors.
49	CA-5	Offering unique products that are difficult to replicate is an effective strategy for gaining a competitive advantage.

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