



Green marketing and brand image: Case study in a water distribution company

Marketing verde e imagen de marca: Caso de estudio en una empresa distribuidora de agua

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ABSTRACT

Green marketing has become an essential strategy to improve brand image, especially in emerging markets where consumers show a growing interest in responsible environmental practices. The objective of this study was to determine the relationship between green marketing and brand image in a table water distributor. A quantitative approach was used, with a non-experimental, cross-sectional design, applying surveys to a sample of 258 customers. The results revealed that 55% of the respondents perceived green marketing as fair, while 32% considered it bad and only 13% evaluated it as good. As for brand image, 56% rated it as fair, 27% as poor and 17% as good. The correlation between both variables was positive and moderate ($Rho = 0.546$; $p = 0.000$), with a coefficient of determination of 29.81 %, indicating that green marketing partially explains brand perception. These findings suggest the need to strengthen sustainable practices and effective communication to improve public perception and business competitiveness.

Keywords: business strategy; competitiveness; environmental responsibility; perception; sustainability

RESUMEN

El marketing verde se ha convertido en una estrategia esencial para mejorar la imagen de marca, especialmente en mercados emergentes donde los consumidores muestran un creciente interés por las prácticas ambientales responsables. El objetivo del presente estudio fue determinar la relación entre el marketing verde y la imagen de marca en la distribuidora de agua de mesa. Se empleó un enfoque cuantitativo, con un diseño no experimental y de corte transversal, aplicando encuestas a una muestra de 258 clientes. Los resultados revelaron que el 55% de los encuestados percibe el marketing verde como regular, mientras que el 32% lo considera malo y solo un 13% lo evalúa como bueno. En cuanto a la imagen de marca, el 56% la calificó como regular, el 27% como mala y el 17% como buena. La correlación entre ambas variables fue positiva y moderada ($Rho = 0.546$; $p = 0.000$), con un coeficiente de determinación de 29.81 %, lo que indica que el marketing verde explica parcialmente la percepción de la marca. Estos hallazgos sugieren la necesidad de fortalecer las prácticas sostenibles y la comunicación efectiva para mejorar la percepción pública y la competitividad empresarial.

Palabras clave: estrategia empresarial; competitividad; responsabilidad ambiental; percepción; sostenibilidad



1. INTRODUCTION

Green marketing has become established as an essential strategy for companies seeking to align their business practices with environmental sustainability (Ko et al., 2013; Simão & Lisboa, 2017). This approach involves the design, production, promotion, and distribution of products that minimize negative impacts on the ecosystem while simultaneously promoting a responsible and committed brand image (García-Salirrosas & Rondon-Eusebio, 2022; Wu & Liu, 2022). In this context, green marketing serves not only as a competitive tool but also as a means of strengthening public perception and consumer loyalty toward brands (Ha et al., 2022; Majeed et al., 2022).

In Peru, corporate compliance with environmental regulations continues to face major challenges, particularly in regions such as Tarapoto. La Samaritana, a table water distribution company located in this city, reflects these difficulties through its limited implementation of environmentally sustainable practices, which negatively affects its brand image. Despite global efforts to implement environmental policies, a significant gap persists between the adoption of green marketing strategies and consumers' positive perceptions of local companies (Khan et al., 2021; Nguyen-Viet, 2023).

The main causes of this issue are related to a lack of training in green marketing practices, the prioritization of immediate economic benefits over sustainability, and the limited implementation of environmental policies (Kisieliauskas & Jančaitis, 2022; Tan et al., 2022). The absence of educational campaigns for both employees and consumers has hindered the development of strong environmental awareness (Topcuoglu et al., 2022), weakening the distributor's brand image among consumers who are increasingly demanding in terms of environmental responsibility (Qayyum et al., 2023).

Consequently, the perception of the La Samaritana brand remains at a moderate level, affecting its competitiveness in the local market (Mogaji et al., 2022). The lack of concrete sustainability actions has generated distrust among consumers, who show a preference for brands that demonstrate strong environmental commitments (Kinasih et al., 2023; Mukonza et al., 2021). Furthermore, the lack of effective green marketing strategies not only limits the positive projection of the brand but also compromises its long-term growth and positioning (Hengboriboon et al., 2022).

Although studies have explored the relationship between green marketing and brand image, the scientific literature reveals a lack of specific research addressing this relationship in the context of small and medium-sized enterprises in traditional sectors within emerging regions such as Tarapoto. This research gap highlights the need for a deeper analysis of how green marketing practices can directly influence brand perception in local markets, providing valuable insights for strategic decision-making (Rahman & Nguyen-Viet, 2023; Tran, 2023). In this regard, the main objective of the present study is to determine the relationship between green marketing and brand image at La Samaritana, a table water distribution company.

2. MATERIALS AND METHODS

2.1. Research Design

The research was characterized as basic research, with the purpose of generating theoretical knowledge without the immediate intention of applying it to specific practical situations. A quantitative approach was adopted, allowing for the collection, analysis, and numerical representation of data to examine the relationships between the study variables (Pimienta & de la Orden, 2017). Regarding its scope, the study was descriptive-correlational, as it sought not only to describe the characteristics and behavior of the variables involved but also to determine the existence and degree of association between them. Likewise, the research followed a non-experimental, cross-sectional design. As a non-experimental study, data were collected without deliberately manipulating the variables, observing them as they occurred in the real-

world context. The cross-sectional design allowed data to be collected at a single point in time, providing a snapshot of customers' perceptions of green marketing and brand image (Hernández Sampieri et al., 2014).

2.2. Study Variables

The research considered two main variables: green marketing and brand image. The green marketing variable was operationalized through four dimensions: product, price, place, and promotion, encompassing a total of 16 specific indicators that made it possible to assess the degree of adoption of sustainable practices in each of these areas. The brand image variable, in turn, was structured into three dimensions: functional image, affective image, and reputation, with a total of 14 indicators designed to measure customers' perceptions of the La Samaritana brand. Overall, 30 indicators were analyzed, providing a detailed understanding of both variables and their interactions.

2.3. Unit of Analysis

The unit of analysis consisted of customers of La Samaritana, a table water distribution company in Tarapoto. The total population comprised 781 customers registered in the company's sales department. To determine the sample, simple random probability sampling was applied, ensuring that all members of the population had an equal probability of being selected. The final sample consisted of 258 customers who met the established inclusion criteria, such as having made at least three recent purchases and being between 18 and 65 years of age.

2.4. Data Collection Instrument

The technique used for data collection was a survey, given its efficiency in obtaining direct information from customers regarding their perceptions and experiences. The instrument used was a structured questionnaire designed based on the indicators defined for each dimension of the variables. An ordinal measurement scale with five response levels was adopted: Never (1), Almost never (2), Sometimes (3), Almost always (4), and Always (5). Regarding the instrument validation process, an expert judgment assessment was conducted using Aiken's V coefficient, which reached a value of 0.96 for both variables, indicating adequate validity. The reliability of the instrument was verified using Cronbach's alpha coefficient, obtaining a value of 0.919 for both the green marketing and brand image variables, confirming the questionnaire's internal consistency and reliability.

2.5. Data Analysis

Data analysis was performed using Microsoft Excel and SPSS v.25. Initially, descriptive analyses were conducted to obtain frequencies, percentages, and measures of central tendency, allowing for a preliminary understanding of the results. Subsequently, the Kolmogorov-Smirnov normality test was performed, revealing a non-normal distribution of the data and thus justifying the use of Spearman's rho coefficient for the correlational analysis.

3. RESULTS

Table 1 shows customers' perceptions of the degree of green marketing implementation at La Samaritana, a table water distribution company. The results reveal that 55% of respondents consider the company's green marketing to be at a moderate level, while 32% rate it as poor and only 13% perceive it as good. This distribution indicates that, although efforts have been made to adopt sustainable practices, most customers do not perceive them as sufficient or effective. The prevalence of negative and moderate ratings suggests a significant gap in the company's sustainability strategy, highlighting the need to strengthen and communicate its environmental initiatives more clearly and effectively in order to improve public perception and consolidate a positive and responsible image.

Table 1. Degree of green marketing implementation

Level	Range	f	%
Poor	16-37	82	32%
Moderate	38-59	142	55%
Good	60-80	34	13%
Total		258	100%

On the other hand, Table 2 shows customers' perceptions of the degree of brand image of La Samaritana, a table water distribution company. The data reveal that 56% of respondents consider the brand image to be at a moderate level, while 27% rate it as poor and only 17% perceive it as good. This distribution reflects a predominantly intermediate perception, suggesting that current efforts to strengthen the brand image are not sufficiently effective to generate a clearly positive perception. The high proportion of moderate and negative ratings indicates the need to implement stronger and more visible strategies aimed at improving both the perception of quality and the company's environmental commitment. The limited proportion of favorable opinions (17%) underscores the urgency of reviewing and optimizing communication policies and business practices to project a more trustworthy brand image among consumers.

Table 2. Degree of brand image

Level	Range	f	%
Poor	14-32	71	27%
Moderate	33-51	144	56%
Good	52-70	43	17%
Total		258	100%

Continuing with the analysis, Table 3 shows the relationship between the green marketing dimensions (product, price, place, and promotion) and brand image at La Samaritana, a table water distribution company, based on Spearman's rho coefficient. The results reveal a strong positive correlation between the product dimension and brand image, with a coefficient of 0.764 and a significance level of 0.000, indicating that a positive perception of sustainable products is significantly associated with an improved brand image. This strong correlation suggests that the green marketing strategy should prioritize the development and effective communication of environmentally responsible products to consolidate a positive image among consumers.

Table 3. Relationship between green marketing dimensions and brand image

Dimensions	Spearman's rho coefficient	Relationship	Sig. (two-tailed)	Significant correlation
Product	0.764	Strong positive	0.000	Si (0.01)
Price	0.403	Moderate positive	0.000	Si (0.01)
Place	0.174	Weak positive	0.005	Si (0.01)
Promotion	0.388	Weak positive	0.000	Si (0.01)

Likewise, the price dimension shows a moderate positive correlation with brand image ($\rho = 0.403$, $p = 0.000$), indicating that pricing policies aligned with sustainable practices contribute meaningfully to a favorable perception of the brand. In contrast, the place and promotion dimensions show weak positive correlations, with values of 0.174 ($p = 0.005$) and 0.388 ($p = 0.000$), respectively. These results suggest that although the implementation of sustainable strategies in distribution and promotion is associated with brand image, the relationships are weaker than those observed for the product and price dimensions.

Regarding the relationship between green marketing and brand image at La Samaritana, a table water distribution company (Table 4), there is a moderate positive correlation between the two variables, with a coefficient of 0.546 and a two-tailed significance level of 0.000, confirming that the relationship is statistically significant at the 0.01 level. This finding suggests that as the perception of green marketing efforts improves, brand image also tends to strengthen. The magnitude of the correlation indicates that,

although green marketing is not the only factor associated with brand image, its relationship is relevant and should be strategically considered by the company to improve its positioning and reputation among consumers.

Table 4. Relationship between green marketing and brand image

			Green marketing	Brand image
Spearman's rho	Green marketing	Correlation coefficient	1.000	.546**
		Sig. (two-tailed)	.	.000
		N	258	258

** . Correlation is significant at the 0.01 level (two-tailed).

Finally, Figure 1 shows a scatter plot illustrating the relationship between green marketing and brand image at La Samaritana, a table water distribution company. The regression line equation indicates that approximately 29.81% of the variability in brand image can be explained by green marketing. The positive slope reflects a direct relationship between the two variables: as the perception of green marketing improves, brand image also improves. However, the R^2 value suggests that additional factors not considered in this analysis also significantly influence the perception of brand image, highlighting the need to explore and strengthen other strategic aspects of business management.

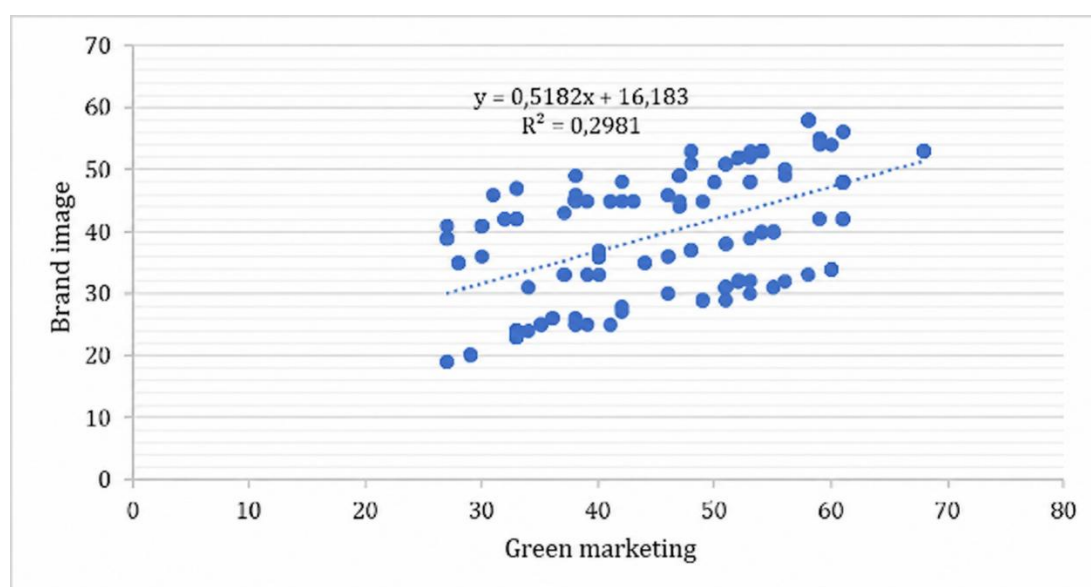


Figure 1. Scatter plot of green marketing and brand image

4. DISCUSSION

The results obtained in the present study show that green marketing has a moderate positive correlation with brand image, with a Spearman's rho coefficient of 0.546 and a significance level of 0.000. This suggests that although green marketing is not the only determinant of brand perception, its influence is significant. These findings are consistent with the results reported by García-Salirrosas and Rondon-Eusebio (2022), who identified that green marketing practices contribute significantly to a favorable perception of the brand, particularly when the environmental benefits of products are communicated clearly and transparently. The positive relationship found in this study highlights the importance of strengthening green marketing strategies to improve corporate image.

In contrast to Majeed et al. (2022), who argue that green marketing has a greater impact when accompanied by effective strategies aimed at building customer trust and satisfaction, the results of the present study show that the impact of green marketing, although positive, is limited in the absence of more robust and effective communication. The low perception of sustainable practices at La Samaritana suggests that

implementing concrete environmental actions alone is not sufficient; a clear and continuous communication strategy is also required to strengthen public perception of the company's environmental commitment.

The product dimension showed the highest correlation with brand image ($\rho = 0.764$), indicating that consumers place considerable value on products perceived as sustainable. This is consistent with Hengboriboon et al. (2022), who state that the perception of environmentally friendly products substantially improves brand image and purchase intention, particularly in emerging markets. This result underscores the need for the distributor to prioritize offering products with clear environmental certifications, thereby strengthening consumer trust and loyalty.

The price, place, and promotion dimensions showed positive but weak correlations with brand image, which partially coincides with the findings of Nguyen-Viet (2023), who notes that consumers in emerging markets tend to prioritize product perception over other aspects of green marketing. The limited perception of these dimensions may be related to the lack of clear and visible strategies regarding fair pricing for sustainable products and effective promotional campaigns highlighting environmental benefits. This suggests that the company should reconsider its strategies in these areas to maximize the impact of green marketing.

The present study contributes to the existing literature by empirically demonstrating the correlation between green marketing and brand image in a regional context, thereby helping to address the research gap identified by Rahman & Nguyen-Viet (2023) regarding the scarcity of specific studies in emerging markets such as Tarapoto. However, the results also reveal the need for further analysis of other factors that may influence brand perception, such as corporate social responsibility and transparency in production processes, which were not addressed in this study.

The findings suggest that implementing effective green marketing strategies can improve brand perception; however, to achieve a significant impact, these strategies should be accompanied by awareness-raising and transparency initiatives. In line with the recommendations of Khan et al. (2021), La Samaritana is encouraged to develop clear sustainability policies and adopt visible environmental certifications to strengthen the credibility of its green initiatives. Furthermore, integrating digital platforms to effectively communicate its environmental practices could help maximize their reach and enhance positive brand perception.

CONCLUSIONS

The results of the present study show that green marketing has a moderate positive correlation with brand image at La Samaritana, a table water distribution company, with the product dimension showing the greatest impact. This suggests that consumers place considerable value on products perceived as sustainable, highlighting the importance of strengthening this dimension through clear and effective strategies. Despite the positive correlation, the coefficient of determination ($R^2 = 0.2981$) indicates that other relevant factors influence brand perception and were not considered in this study, such as corporate social responsibility and transparency in production processes. Therefore, future research could focus on exploring these additional factors to gain a more comprehensive understanding of the determinants of brand image.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest related to the development of this study.

AUTHOR CONTRIBUTIONS

Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Visualization, Writing – original draft, Writing – review and editing: All authors.

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