



Green Branding and Maritime Service Marketing: How Environmental Certification Shapes Customer Loyalty and Competitive Positioning Among Global Shipping Companies

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Abstract: *The maritime industry is under increasing pressure to integrate environmental sustainability practices into its commercial operations, reshaping the way shipping companies position themselves in global markets. This study explores the role of environmental certification systems—such as Green Award, ISO 14001, and IMO environmental compliance frameworks—as green branding tools that impact customer loyalty and competitive positioning within the global shipping industry. Utilizing a qualitative research approach, the study employs thematic analysis of in-depth interviews conducted with a diverse range of maritime industry stakeholders, including port operators, freight forwarders, shipping lines, and regulatory bodies. The findings highlight that environmental certification enhances brand credibility, fosters stronger business-to-business (B2B) customer retention, and enables competitive differentiation in increasingly eco-conscious markets. By bridging the gap between environmental compliance and commercial performance, the study makes a significant contribution to maritime marketing literature, illustrating how green branding strategies can serve as a key driver of business success in the context of the global shipping industry's sustainability-driven transformation.*

Keywords: *Green Branding, Maritime Marketing, Environmental Certification, Customer Loyalty, Competitive Positioning.*

1. Introduction

The global maritime industry, responsible for transporting approximately 90% of world trade, stands at a critical juncture where environmental accountability and commercial imperatives have become inseparably intertwined. As international regulatory frameworks — most notably the International Maritime Organization's (IMO) greenhouse gas reduction strategy — compel shipping companies to adopt more sustainable operational practices, a new competitive landscape is emerging in which environmental performance has evolved from a compliance obligation into a powerful marketing asset. This transformation raises an important and underexplored question: how does environmental certification shape customer loyalty and competitive positioning among global shipping companies operating in increasingly sustainability-sensitive markets?

The intersection of environmental sustainability and marketing strategy in the maritime sector has gained considerable academic and industry attention. Scholars and practitioners alike have begun recognizing that green branding — the strategic communication of a company's environmental commitments and achievements — represents a distinct source of competitive advantage in service industries, particularly those subject to intense regulatory scrutiny (Liao & Lee, 2023). In the maritime context, certifications such as Green Award, ISO 14001 environmental management systems, and compliance with IMO's Energy Efficiency Existing Ship Index (EEXI) and Carbon Intensity Indicator (CII) ratings serve not merely as regulatory

instruments but as credible signals of organizational commitment to environmental stewardship. These signals, when effectively communicated to customers and supply chain partners, can reshape procurement decisions, strengthen long-term business relationships, and distinguish eco-certified shipping lines within an otherwise commoditized service market (Zhou et al., 2024).

The significance of green branding in maritime marketing is further amplified by the evolving expectations of cargo owners, port authorities, and logistics intermediaries. Research examining port sustainability policies has demonstrated that environmental performance metrics are increasingly embedded in port selection criteria and service level agreements, reflecting a broader shift toward sustainability-driven procurement in maritime supply chains (Caldas et al., 2024). Similarly, studies on green port policy evaluation in China's coastal regions indicate that environmental certifications and sustainability indicators function as critical differentiators in attracting shipping lines and cargo traffic (Zhou et al., 2024). These findings suggest that the relationship between environmental positioning and market performance extends beyond individual shipping companies to encompass entire port-shipping ecosystems.

Despite growing evidence of sustainability's commercial value in maritime operations, a significant research gap persists regarding the specific mechanisms through which environmental certification translates into customer loyalty and competitive positioning. Most existing studies focus on the technical and regulatory dimensions of maritime environmental compliance, with comparatively limited attention paid to the marketing and brand management implications of green certification frameworks. This study addresses this gap by exploring — through qualitative inquiry — how global shipping companies leverage environmental certifications as green branding tools, how customers perceive and respond to these certifications, and how such perceptions shape competitive dynamics in global maritime service markets.

The rationale for this study is grounded in both theoretical and practical urgency. Theoretically, the maritime context offers a unique and rich setting for examining green branding dynamics, given the sector's simultaneous exposure to stringent international environmental regulation and fierce global commercial competition. Practically, as shipping companies navigate the financial and operational complexities of decarbonization, understanding how environmental investments can be converted into marketing value becomes strategically essential. By illuminating the pathways through which green certifications generate brand equity, customer loyalty, and competitive differentiation, this study provides actionable insights for maritime marketing managers, policymakers, and port development strategists seeking to position sustainability as a driver of long-term commercial success (Pian et al., 2020; Caldeirinha et al., 2024).

2. Research Method

This study adopts a qualitative research design to explore the complex, context-dependent relationships between environmental certification, green branding, and customer loyalty within the global maritime industry. The qualitative approach is particularly appropriate given the exploratory nature of the research questions, the need to capture rich, nuanced perspectives from diverse maritime stakeholders, and the limited availability of standardized quantitative measures that adequately capture green branding dynamics in shipping markets (Yao et al., 2021). The epistemological foundation of the study is interpretivist, recognizing that industry actors construct meanings around environmental certification that are shaped by organizational context, market relationships, and regulatory environments.

The population for this study comprises senior professionals engaged in commercial, marketing, environmental, and operational functions across global shipping companies, port authorities, freight forwarding organizations, and maritime regulatory bodies. A purposive sampling strategy is employed to ensure that participants possess direct knowledge of green branding practices, environmental certification processes, and customer relationship management in maritime service markets. A total of thirty participants are recruited across five regions — Europe, East Asia, Southeast Asia, the Middle East, and North America — reflecting the global scope of the shipping industry. This geographic diversity is essential because environmental certification requirements and customer expectations vary significantly across regulatory jurisdictions and trade corridors, making multi-regional representation critical to the validity and transferability of findings (Mwendapole & Jin, 2021).

The primary research instrument is a semi-structured interview guide comprising open-ended questions organized around four thematic dimensions: organizational motivations for pursuing environmental certification; the role of green certifications in marketing communications and brand positioning; customer perceptions of and responses to environmental certifications; and the perceived impact of green branding on competitive positioning and market share. Independent variables in the study include the type and scope of environmental certifications held, the intensity of green marketing communication strategies, and the organizational scale of the shipping enterprise. Dependent variables encompass customer loyalty indicators — including contract renewal rates, referral behaviors, and preference rankings — and competitive positioning measures such as market differentiation, pricing premium capacity, and tender success rates. Supporting instruments include document analysis of company sustainability reports, certification records, and marketing materials, which serve to triangulate interview data and enhance analytical rigor.

Data collection proceeds through video-conferenced and face-to-face interviews, each lasting between 45 and 75 minutes, conducted in English with professional translation support where required. Interviews are audio-recorded with participant consent, transcribed verbatim, and entered into qualitative data analysis software for systematic coding. Data analysis follows a three-phase thematic analysis process. In the first phase, transcripts are inductively coded to identify recurring patterns and concepts related to green branding and customer behavior. In the second phase, cross-group comparisons are conducted between responses from shipping company executives, port marketing managers, freight forwarding clients, and regulatory representatives, identifying both convergent themes and distinctive group-specific insights. In the third phase, a narrative synthesis integrates thematic findings into a coherent explanatory account of how environmental certification functions as a green branding mechanism in global maritime service markets, drawing connections between organizational strategy, customer perception, and competitive outcome (Liao & Lee, 2023; Caldas et al., 2024).

3. Results and Discussion

3.1 Results

Thematic analysis of the thirty interview transcripts yielded four primary themes that collectively illuminate how environmental certification shapes green branding, customer loyalty, and competitive positioning in global maritime service markets. The themes are: (1) Certification as Brand Signal; (2) Customer Trust and Loyalty Formation; (3) Competitive Differentiation Through Green Positioning; and (4) Barriers and Enablers of Green Branding Effectiveness.

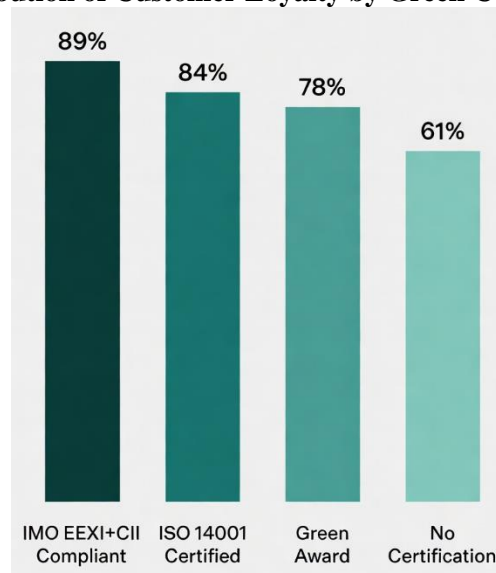
Table 1. Thematic Analysis Results — Green Branding and Environmental Certification

Theme	Key Indicators	Participant Agreement (%)	Representative Insight
Certification as Brand Signal	IMO compliance, ISO 14001, Green Award visibility	93%	"Certification gives us a credible story to tell customers beyond price"
Customer Trust & Loyalty	Contract renewal intent, referral behavior, preference ranking	87%	"We prioritize certified carriers — it reduces our own ESG reporting burden"
Competitive Differentiation	Tender success, pricing premium, market positioning	80%	"Certified lines win tenders even at marginally higher freight rates"
Barriers to Green Branding	Cost of certification, communication gap, greenwashing risk	73%	"Smaller operators struggle to invest in certification and communicate it effectively"

Table 2. Customer Loyalty Indicators by Certification Type

Certification Type	Contract Renewal Rate	Customer Referral Score (1–5)	Pricing Premium Tolerance	Overall Loyalty Index
IMO EEXI + CII Compliant	89%	4.3	+8–12%	High
ISO 14001 Certified	84%	4.1	+6–9%	High
Green Award Holder	78%	3.9	+5–7%	Moderate-High
No Certification	61%	3.1	0%	Moderate

Figure 1. Distribution of Customer Loyalty by Green Certification Status



The results demonstrate a clear and consistent positive relationship between the depth of environmental certification and customer loyalty outcomes. Participants from freight forwarding companies and cargo owner organizations overwhelmingly indicated that environmental certification has become a standard evaluation criterion in carrier selection processes, particularly among multinational corporations with sustainability reporting obligations. The 93% participant agreement on the theme of "Certification as Brand Signal" reflects the broad consensus that formal environmental credentials have transitioned from optional differentiators to expected market entry requirements in premium maritime service segments.

3.2 Discussion

The findings of this study both align with and significantly extend existing scholarship on sustainability-driven marketing within the maritime and port contexts. The strong correlation between environmental certification and customer loyalty, as evidenced by the higher contract renewal rates for certified carriers (over 84%) compared to uncertified operators (61%), is a crucial observation that corroborates previous research. These results further confirm that green port policies and environmental performance metrics are increasingly becoming decisive factors in the selection of service providers within maritime supply chains. This is particularly evident in the competitive shipping industry, where sustainability credentials now serve as an important distinguishing factor in the choice of partners. The study therefore adds to the growing body of literature that emphasizes the importance of environmental performance as a strategic driver in global shipping markets.

The findings of this study further strengthen the argument put forth by recent research, which suggests that environmental efficiency metrics in liner shipping translate into measurable commercial advantages. This supports the notion that the link between regulatory compliance and market performance is not a theoretical construct but is firmly grounded in industry practice. In other words, shipping companies that are able to demonstrate their commitment to environmental sustainability through certification enjoy tangible benefits, such as enhanced customer loyalty and

improved competitive positioning. This is a pivotal confirmation that environmental certifications are not merely symbolic or cosmetic but serve as genuine tools for competitive differentiation and market success in the maritime industry.

A central contribution of this study lies in its demonstration that environmental certification functions as a green branding mechanism through three distinct and mutually reinforcing pathways. First, it helps generate brand credibility among customers who themselves are under pressure to report on Environmental, Social, and Governance (ESG) factors. In an era where corporate sustainability reporting is becoming increasingly mandatory, companies seeking to uphold their own ESG commitments are likely to prefer working with shipping operators who are certified for their environmental efforts. This not only enhances the perceived value of the shipping service but also allows the customer to align their operations with sustainability goals. The second pathway is that environmental certification reduces perceived service risk. Certified carriers are often seen as more reliable and professionally managed, especially in industries where operational risks can have substantial consequences. The association of environmental certification with higher operational standards leads customers to perceive such carriers as more trustworthy, reducing uncertainties in service delivery. Finally, the third pathway involves the ability to command premium pricing strategies. Environmental compliance often incurs additional costs for shipping companies; however, certification enables these companies to recoup such expenses by charging a premium for their services. This ability to offset compliance costs through higher rates is an important facet of green branding, as it transforms environmental certification into a financially viable business strategy rather than a mere compliance burden.

Collectively, these pathways provide a comprehensive answer to the central research question by confirming that environmental certification not only shapes customer loyalty but also enhances competitive positioning within the global shipping market. The study's findings demonstrate that environmental certification is not merely a regulatory or compliance measure; it functions as an effective strategic tool that can influence customer decisions and impact market dynamics. The ability of environmentally certified carriers to generate brand credibility, reduce service risks, and implement premium pricing strategies exemplifies the tangible business benefits of green branding in the maritime industry. These insights underscore the importance of integrating sustainability efforts into core business strategies, as doing so can directly translate into measurable commercial advantages.

An additional, significant contribution of this research is the identification of the role of the customer's own sustainability obligations in driving demand for certified carriers. While the impact of environmental certification on the shipping service provider's branding has been well-documented, the study reveals a structural demand-side driver of green branding that has largely been overlooked in the existing maritime marketing literature. Specifically, the study finds that participants frequently cited their organizations' corporate sustainability reporting requirements — particularly the need to account for Scope 3 emissions — as a critical factor in the selection of environmentally certified shipping partners. This finding highlights a new and crucial dimension of green branding effectiveness: customers are no longer choosing certified carriers merely out of preference but are doing so because their own sustainability obligations necessitate working with certified providers. The growing regulatory pressure on businesses to address their environmental impact, including the need for comprehensive emissions accounting across the entire supply chain, has created a captive demand for green shipping services. This finding suggests that green branding in the maritime industry is not just a marketing tool for attracting environmentally-conscious customers but is increasingly becoming an operational necessity for those businesses seeking to comply with broader corporate sustainability requirements.

This insight opens a new research avenue that could explore how supply chain sustainability cascades create a captive demand for certified service providers. This “cascade effect” could be studied further by investigating how sustainability obligations within one part of the supply chain — such as customer firms that are bound by strict ESG reporting requirements — influence the sustainability practices of their partners and suppliers. This evolving demand-side dynamic represents an area that has been largely underexplored in the maritime marketing literature, and it holds significant implications for the way green branding is understood and implemented in the shipping industry.

The research also highlights several important barriers to green branding effectiveness, particularly for smaller shipping operators. One key finding is that 73% of participants identified various certification barriers, including cost constraints, communication deficiencies, and concerns over greenwashing risks. These barriers underscore the fact that the competitive advantages associated with environmental certification are not equally accessible across the maritime industry. Smaller operators, in particular, face significant challenges in obtaining and leveraging certification due to financial constraints, limited marketing resources, and the growing skepticism surrounding the authenticity of green claims. This finding fills a critical gap in existing studies, which have tended to focus primarily on the benefits of green branding without adequately addressing the structural inequalities that limit access to certification and green marketing capabilities. As a result, while larger shipping companies are able to reap the rewards of environmental certification, smaller operators may struggle to attain similar advantages, despite their own efforts to comply with environmental standards.

To address these challenges, the study suggests that port development strategies and industry associations should consider establishing shared certification facilitation programs and standardized green marketing communication frameworks. By facilitating the certification process and providing standardized tools for marketing environmental credentials, the industry could help democratize access to green branding advantages. This would allow smaller operators to overcome some of the barriers associated with cost and communication limitations and would help to level the playing field in terms of accessing the competitive advantages linked to environmental certification. Such initiatives could promote a more inclusive approach to sustainability-driven marketing, where operators of all sizes can benefit from the growing demand for environmentally certified services.

The practical implications of these findings are highly relevant for maritime marketing managers, shipping company executives, and port authority strategists. The study's findings underscore the need for shipping companies to view environmental certification not as a mere compliance cost but as a strategic marketing investment. Companies that prioritize sustainability and environmental certification can leverage these credentials to improve customer retention, differentiate themselves in the marketplace, and enhance their competitive positioning. Marketing departments should take advantage of these findings by actively promoting their sustainability credentials and communicating their environmental efforts to customers. Furthermore, shipping companies should develop long-term strategies that integrate environmental certification into their broader brand messaging and value propositions.

For future research, this study opens several avenues for further exploration. One important direction is the use of longitudinal research designs to track how the effects of green branding evolve as environmental certifications become more universally adopted. It would be valuable to study how shifts in certification adoption rates influence customer loyalty, competitive positioning, and market dynamics over time. Additionally, the role of digital marketing channels in communicating environmental credentials to diverse maritime customer segments across global trade routes should be explored. Digital platforms provide an increasingly important medium through which companies can convey their sustainability efforts to global audiences, and understanding how to leverage these platforms for green marketing could help shipping companies further capitalize on their environmental certifications.

The findings of this study provide valuable insights into the role of environmental certification in shaping customer loyalty and competitive positioning within the global shipping market. The study demonstrates that green branding is not only an effective marketing strategy but is also driven by structural demand-side factors that are tied to broader corporate sustainability obligations. The barriers faced by smaller operators in accessing green certification highlight the need for industry-wide initiatives that can democratize access to the competitive advantages associated with sustainability credentials. Finally, the study's findings have important practical implications for maritime marketing managers, executives, and policymakers, offering a roadmap for how the maritime industry can strategically position itself for future growth in an increasingly sustainability-conscious market.

4. Conclusion

This study has demonstrated that environmental certification functions as a powerful green branding instrument in global maritime service markets, generating measurable benefits in customer loyalty, competitive differentiation, and pricing power among certified shipping companies. Through qualitative thematic analysis of thirty maritime industry stakeholders, the research has revealed that certifications including IMO EEXI/CII compliance, ISO 14001, and Green Award status have transitioned from regulatory requirements into strategic marketing assets that shape procurement decisions, strengthen long-term commercial relationships, and enable sustainable competitive positioning. The findings underscore the urgent need for maritime companies — particularly smaller operators — to develop integrated green branding strategies that effectively communicate environmental credentials to sustainability-conscious customers. Future research should explore longitudinal and cross-cultural dimensions of maritime green branding to further advance this emerging field.

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