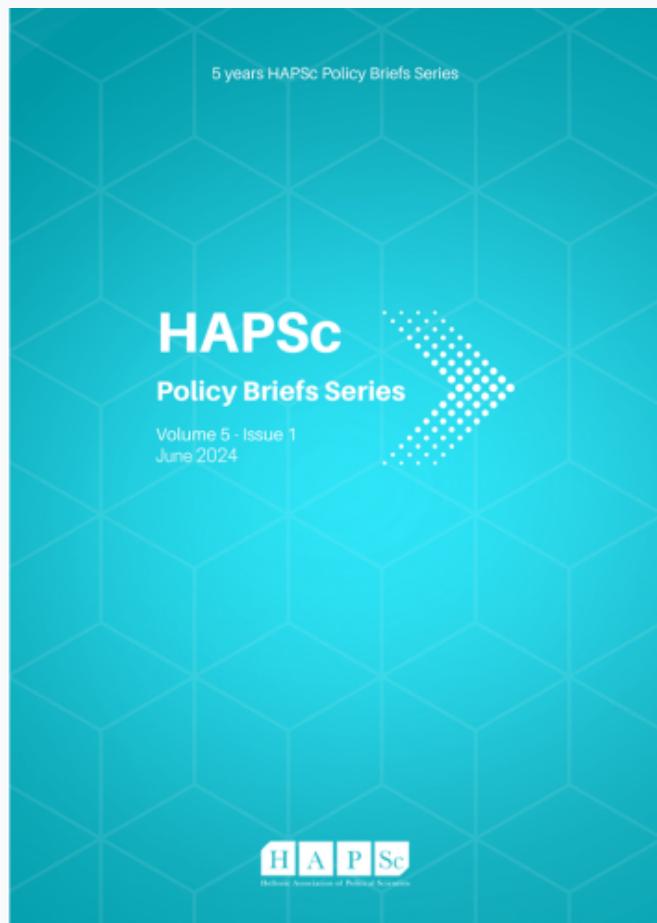


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ESG as a Competitive Intelligence Source in the Shipping Industry¹

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Abstract

The present paper explores the emerging role of Environmental, Social, and Governance (ESG) factors as a potent source of Competitive Intelligence (CI) within the Shipping industry. With increasing global focus on sustainability and responsible corporate practices, stakeholders in Shipping are recognizing the significance of integrating ESG considerations into their strategic decision-making processes. This paper investigates how ESG data can serve as a valuable tool for gaining competitive advantage, enhancing risk management, and fostering long-term sustainability within the Shipping industry. Through a comprehensive review of literature, case studies, and industry reports, this paper offers insights into the evolving landscape of ESG implications for CI in Shipping.

Key words: Environmental, Social, and Governance (ESG), Competitive Intelligence (CI), Shipping Industry, Resilience.

Introduction

The Shipping industry plays a pivotal role in global trade, facilitating the movement of goods across vast distances and connecting economies worldwide (Grammenos, 2010). However, alongside its economic significance, the Shipping also faces mounting pressure to address environmental concerns, social impacts, and governance practices (Jiang et al., 2020). In recent years, there has been a paradigm shift towards sustainable business practices, driven by heightened awareness of climate change, social inequalities, and corporate governance failures. Consequently, stakeholders within the Shipping industry are increasingly recognizing the importance of integrating Environmental, Social, and Governance (ESG) factors into their strategic decision-making processes (Dong-Wook, 2022).

Moreover, ESG encompasses a broad set of criteria that evaluate a company's performance in areas such as environmental stewardship, social responsibility, and corporate governance practices. This holistic approach to assessing corporate behavior goes beyond traditional financial metrics, providing insights into a company's long-term sustainability and resilience. In the context of the Shipping industry, where operational activities have significant environmental and social impacts, the integration of ESG considerations is becoming increasingly imperative (Hill, 2020).

Furthermore, Competitive Intelligence (CI), as a strategic business practice, involves the systematic collection, analysis, and interpretation of information about competitors, customers, and market

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trends to inform decision-making processes and gain a competitive advantage. Within the Shipping industry, CI is utilized to understand market dynamics, anticipate competitors' strategies, and identify emerging opportunities and threats. This paper aims to explore the evolving role of ESG factors as a source of CI within the Shipping industry. Adopting a literature review approach, it examines the growing significance of ESG metrics and indicators in informing strategic decision-making processes among Shipping companies.

ESG Metrics and Indicators in the Shipping Industry

The Shipping industry operates within a complex web of ESG challenges, necessitating a robust framework of standardized metrics and indicators tailored to its unique characteristics. As the global community intensifies its focus on sustainability and responsible business practices, shipping companies find themselves under increasing scrutiny to address these multifaceted concerns (Dong-Wook, 2022). Therefore, it is imperative to delve into each of the key areas of focus—environmental performance metrics, social impact indicators, and governance criteria—to understand the nuanced challenges and opportunities facing the maritime sector (Naffa and Fain, 2022).

Environmental Performance Metrics

The environmental footprint of the shipping industry is significant, with vessels accounting for a considerable portion of global carbon emissions and pollutant discharges. Carbon emissions, fuel efficiency, and pollutant discharges are pivotal indicators that reflect the industry's environmental impact. With growing concerns over climate change and marine pollution, shipping companies face mounting pressure to mitigate their environmental footprint and adhere to stringent regulations (Bradley, 2021).

Carbon emissions represent one of the most pressing challenges for the shipping industry, as they contribute to climate change and global warming. The International Maritime Organization (IMO) has implemented regulations such as the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, which sets limits on vessel emissions and mandates the adoption of cleaner fuels and technologies (Thomas, 2011; Daniels, 2024). Shipping companies are increasingly investing in fuel-efficient vessels, exploring alternative fuels such as liquefied natural gas (LNG) and hydrogen, and optimizing voyage planning to reduce fuel consumption and emissions (Kapellas and Jeong, 2022).

Additionally, fuel efficiency is another critical metric for evaluating environmental performance in the shipping industry. Improving fuel efficiency not only reduces operating costs but also decreases greenhouse gas emissions and enhances overall environmental sustainability. Shipping companies

are deploying advanced technologies such as hull coatings, propeller modifications, and energy-efficient engines to enhance fuel efficiency and optimize vessel performance (Brynolf et al., 2016).

Social Impact Indicators

The Shipping industry's global operations have far-reaching social implications, ranging from labor practices and human rights to community engagement and stakeholder relations. Ensuring fair and ethical treatment of workers, as well as fostering positive relationships with local communities, is essential for maintaining social license to operate and upholding corporate reputation (Hill, 2020; Dong-Wook, 2022).

Specifically, labor practices within the Shipping industry have historically been a source of contention, with concerns over crew welfare, working conditions, and labor rights (Caesar and Fei, 2018). Seafarers often face long working hours, inadequate rest periods, and limited access to essential services, posing risks to their health and well-being. Shipping companies are under increasing pressure to comply with international labor standards, such as the International Labor Organization's Maritime Labor Convention (MLC), which establishes minimum requirements for seafarers' working and living conditions (Grammenos, 2010; Giannakopoulou et al., 2016).

Governance Criteria

Strong corporate governance practices are essential for ensuring transparency, accountability, and ethical leadership within the Shipping industry. Board diversity, transparency, and ethical conduct are key governance criteria that reflect a company's commitment to responsible business practices and stakeholder trust (Hill, 2020; Dong-Wook, 2022).

Board diversity encompasses factors such as gender, ethnicity, age, and expertise, reflecting the variety of perspectives and experiences needed for effective decision-making. Shipping companies are increasingly recognizing the importance of diverse boards in driving innovation, managing risks, and enhancing corporate performance. By promoting diversity and inclusion at the board level, companies can strengthen governance practices and better reflect the interests of their stakeholders.

Transparency is fundamental to building trust and credibility among stakeholders, including investors, customers, employees, and regulators. Shipping companies are expected to maintain open and transparent communication channels, disclose relevant information, and adhere to high standards of corporate reporting and disclosure. Transparency enhances accountability, reduces information asymmetry, and fosters confidence in the company's operations and financial performance (Giannakopoulou et al., 2016; Dong-Wook, 2022).

Furthermore, ethical leadership entails upholding ethical values, integrity, and responsible decision-making at all levels of the organization. Ethical leaders demonstrate a commitment to ethical conduct, respect for human rights, and compliance with laws and regulations. Shipping companies are investing in ethical leadership training, establishing codes of conduct and ethical guidelines, and fostering a culture of integrity and accountability throughout the organization. By promoting ethical leadership, companies can enhance governance practices, mitigate risks, and build long-term relationships based on trust and integrity (Heizer et al., 2023).

The Role of ESG in Competitive Intelligence

Understanding Competitive Intelligence

CI stands as a cornerstone in modern business strategy, deeply entrenched within the dynamic and multifaceted macro business environment. Its origins trace back to military intelligence practices, initially serving as a strategic tool for gaining advantage (Greene, 1966; Franco et al., 2011). Over time, CI has morphed into a structured framework widely employed by businesses to collect, analyze, and interpret qualitative data related to specific industries and their competitive dynamics (Carvalho, 2021). This systematic approach empowers organizations to extract profound insights into competitor behaviors, customer preferences, and broader market trends, thereby facilitating informed decision-making processes vital for sustaining competitiveness and achieving strategic goals (Dabrowski, 2018).

Scholarly discourse on CI has yielded a myriad of definitions, reflecting its multifaceted nature and strategic importance within organizational contexts. Sawka (1996) defines CI as the acquisition of knowledge and foresight regarding the external operational environment, emphasizing its pivotal role in shaping decision-making processes and providing a comprehensive understanding of the business landscape. Calof (1997) expands on this, portraying CI as the timely dissemination of fact-based data crucial for decision-making and strategy development, encompassing industry analysis, competitive assessment, and benchmarking practices. Prescott (1999) further extends this conceptualization, framing CI as an iterative process aimed at generating actionable insights into competitive dynamics and non-market forces, with the aim of conferring sustainable competitive advantages to organizations. Moreover, Leibowitz (2006) underscores CI as a meticulously structured program aimed at capturing, managing, and analyzing intelligence to enhance strategic decision-making processes. McGonagle and Vella (2002) adopt a data-centric perspective, viewing CI as the strategic utilization of publicly available data to uncover insights into competitor behaviors and prevailing market conditions. Dishman and Pearson (2003) emphasize CI as a proactive endeavor focused on

gathering information and intelligence to preempt competitors in the competitive business landscape. Bose (2008) portrays CI as an ongoing process of vigilantly monitoring the competitive landscape to inform strategic and operational maneuvers effectively. Additionally, within this academic discourse, Strauss and Du Toit (2010) frame CI as an evolutionary assessment of business environment opportunities and developments, each carrying strategic implications for corporate decision-making endeavors. Pellissier and Nenzhelele (2013) contribute by conceptualizing CI as a holistic process synthesizing actionable intelligence through meticulous data collection, processing, and analysis, both internally and externally. Bouthillier and Jin (2005) underscore the value-added proposition of CI, emphasizing its role in collecting, analyzing, and disseminating intelligence within a legal framework conducive to strategic advantage.

Moreover, CI functions as a multifaceted framework aimed at providing decision-makers with actionable insights crucial for navigating the intricacies of contemporary business environments (Prescott, 1999). CI initiatives serve as invaluable assets in maintaining organizational leadership amidst evolving landscapes by proactively identifying and managing emerging challenges and uncertainties through informed intelligence acquisition (Cloutier, 2013; Barnea, 2021). The dissemination of intelligence and knowledge to executive stakeholders underscores the pivotal role of CI in shaping strategic business outcomes (García-Madurga and Esteban-Navarro, 2020). However, the integration of CI into organizational decision-making processes often faces challenges due to decision-makers' reluctance to acknowledge the value of CI products, preferring personal knowledge and experiences (Dabrowski, 2018).

Ultimately, the success of CI processes relies on decision-makers' recognition of its value proposition and their commitment to integrating intelligence into strategic decision-making processes (Miller, 2001). By leveraging CI insights, organizations gain a competitive edge in swiftly adapting to market dynamics and making informed decisions that drive sustainable growth (Kars-Unluoglu and Kevill, 2021). The ongoing refinement of the CI process ensures that decision-makers are equipped with timely and relevant intelligence, enabling them to navigate the complexities of the business landscape with confidence and foresight (Sapkauskiene and Leitoniene, 2010). In essence, CI serves as a strategic imperative for organizations seeking to sustain a competitive advantage in an increasingly dynamic and uncertain business environment.

Eventually, in the shipping industry, where competition is fierce and margins are often slim, access to timely and relevant information is critical for maintaining market leadership. ESG factors have emerged as a key component of CI, offering insights into a company's operational efficiency, risk exposure, and reputation. By systematically assessing ESG performance, Shipping companies can

identify areas for improvement, anticipate regulatory changes, and differentiate themselves in the market. Moreover, integrating ESG considerations into decision-making processes can enhance stakeholder trust, attract investment, and drive long-term value creation.

Linking ESG Factors to Competitive Advantage

As already explained, ESG data presents a wealth of opportunities for Shipping companies to conduct comprehensive competitive analysis, offering insights into their own performance and that of their industry peers. Leveraging ESG data enables Shipping companies to benchmark their performance, identify industry trends, and proactively manage risks and opportunities.

1. ESG Ratings and Rankings

Numerous ESG rating agencies and indices evaluate companies' performance based on predefined criteria, providing standardized assessments of their environmental, social, and governance practices. Shipping companies can utilize these ratings and rankings to benchmark their ESG performance against industry peers, gaining valuable insights into their relative standing within the sector. By identifying areas of strength and weakness compared to competitors, companies can tailor their ESG strategies and initiatives to enhance their competitive positioning.

2. Benchmarking Against Industry Peers

Comparing ESG performance metrics with those of industry peers allows Shipping companies to gain a deeper understanding of prevailing industry standards and best practices. By analyzing the ESG practices of leading competitors, companies can identify areas for improvement and prioritize strategic initiatives accordingly. This benchmarking exercise facilitates continuous improvement and helps companies stay abreast of evolving ESG trends and regulatory requirements, ultimately enhancing their competitive advantage.

3. Identifying Risks and Opportunities

ESG data serves as a powerful tool for identifying potential risks and opportunities that may impact a company's performance and reputation. For Shipping companies, ESG-related risks may include regulatory non-compliance, supply chain disruptions, environmental incidents, and reputational damage. By analyzing ESG data, companies can proactively identify and mitigate these risks, thereby safeguarding their operations and preserving shareholder value. Moreover, ESG data can also reveal emerging opportunities for value creation, such as investments in sustainable technologies, green financing initiatives, and partnerships with socially responsible stakeholders.

4. Enhancing Stakeholder Engagement

Effective stakeholder engagement is crucial for maintaining trust and credibility in the Shipping industry. ESG data provides valuable insights into the expectations and preferences of key stakeholders, including investors, customers, employees, regulators, and communities. By aligning their ESG practices with stakeholder interests, Shipping companies can strengthen relationships, build goodwill, and enhance their competitive position in the market. Transparent reporting and disclosure of ESG performance metrics demonstrate a company's commitment to accountability and responsible business practices, fostering trust and confidence among stakeholders.

5. Driving Innovation and Differentiation

Analyzing ESG data can inspire innovation and drive differentiation within the Shipping industry. Companies that prioritize sustainability, social responsibility, and good governance can differentiate themselves from competitors, attract investment capital, and access new markets. By leveraging ESG data to identify emerging trends and market opportunities, Shipping companies can innovate their products, services, and business models to meet evolving customer demands and regulatory expectations. Embracing sustainability-driven innovation not only enhances a company's competitiveness but also contributes to long-term value creation and industry leadership.

Discussion over challenges and limitations

Integrating ESG factors into CI holds significant promise, yet it comes with its fair share of challenges and limitations that organizations must navigate.

- **Data Availability and Quality:** A fundamental challenge lies in the availability and quality of ESG data. Often, this data is fragmented, inconsistent, and challenging to access, particularly for small and mid-sized companies with limited resources. Moreover, the reliability and accuracy of ESG data vary widely across different sources, making it difficult for analysts to conduct meaningful analysis and comparison. This disparity in data quality hampers the effectiveness of CI efforts, as decision-makers may struggle to draw actionable insights from unreliable or incomplete information.
- **Standardization and Comparability Issues:** Another obstacle to effective ESG integration is the lack of standardized metrics and reporting frameworks for ESG disclosure. Without universally accepted guidelines, companies often employ disparate reporting methodologies, hindering comparability across sectors and regions. Efforts to harmonize ESG reporting standards, such as those led by the Task Force on Climate-related Financial Disclosures (TCFD) and the Sustainability Accounting Standards Board (SASB), are underway (Achenbach, 2021; García-Torea, 2023). However, widespread adoption of these standards

remains a work in progress, further complicating efforts to benchmark ESG performance across companies and industries.

- **Resistance to Change and Stakeholder Alignment:** Resistance to change presents a significant barrier to the integration of ESG principles into CI. Some companies may be hesitant to embrace ESG initiatives due to concerns about potential costs, perceived impacts on competitiveness, and shareholder expectations. Moreover, achieving alignment among internal stakeholders—such as management, employees, and investors—can be challenging, particularly in organizations with diverse interests and priorities. Overcoming this resistance and fostering stakeholder alignment are critical steps in successfully integrating ESG considerations into CI processes.
- **Complexity of ESG Factors:** ESG factors encompass a broad range of considerations, including environmental sustainability, social responsibility, and corporate governance. Analyzing these multifaceted dimensions requires specialized expertise and resources, which may be lacking in some organizations. Furthermore, the interconnectedness of ESG issues adds another layer of complexity, making it challenging to assess their individual impacts on competitive positioning accurately.
- **Evolving Regulatory Landscape:** The regulatory landscape governing ESG disclosure is continually evolving, with new regulations and reporting requirements being introduced at both national and international levels. Navigating this complex regulatory environment requires companies to stay abreast of legislative developments and adapt their ESG strategies and reporting practices accordingly.

Conclusions

Summing up, the integration of ESG factors into CI processes represents a pivotal opportunity to catalyze transformative change within the Shipping industry. Beyond merely complying with regulatory requirements, embracing ESG principles allows Shipping companies to proactively manage risks and capitalize on emerging opportunities, thereby enhancing sustainability, resilience, and competitiveness. By systematically assessing and leveraging ESG information and data, Shipping companies can drive innovation, improve operational efficiency, and create long-term value for stakeholders. ESG considerations enable companies to optimize their decision-making processes by incorporating broader environmental, social, and governance perspectives, thereby enhancing their ability to navigate complex market dynamics and stakeholder expectations. Moreover, by aligning their business strategies with ESG objectives, Shipping companies can enhance their reputations, attract investment capital, and maintain a competitive edge in the global marketplace. However,

realizing the full potential of ESG integration in CI processes will require concerted efforts from industry stakeholders, policymakers, and investors. Addressing challenges related to data availability, standardization, and stakeholder alignment is crucial to unlocking the transformative power of ESG within the Shipping industry. By collaborating to overcome these barriers, industry participants can foster a culture of sustainability, innovation, and responsible governance that drives positive outcomes for both businesses and society as a whole.

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