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A Systematic Literature Review of Digital Marketing Strategies in Maritime Logistics

Duygu Peyman[1], Gül Denktaş Şakar[2]

[1]Dokuz Eylül University, Institute of Social Sciences, Department of Maritime Business Administration, İzmir, Türkiye
[2]Dokuz Eylül University Maritime Faculty, Department of Logistics Management, İzmir, Türkiye

Abstract

Maritime logistics is a core component of the global supply chain, enabling logistics facilities to offer value-added services including maritime transport and other modes, as well as to provide inbound and outbound logistics from the point of origin to the final destination. Despite significant advancements in fields such as operational issues, risk management, sustainability, adaptability, and outcomes of innovative technologies, research on digital marketing strategies in maritime logistics remains limited. This study aims to provide an overview of digital marketing strategies in maritime logistics by analyzing digital technologies and marketing channels through a systematic literature review (SLR). By conducting an SLR, this study aims to fill the gap concerning the importance of an integrated approach to digital marketing channels and technologies and to propose essential frameworks for scholars and practitioners to improve digital marketing strategies in maritime logistics.

Keywords: Digital marketing strategies, maritime logistics, digital marketing, systematic literature review, digital marketing channels

1. Introduction

Maritime logistics constitutes a fundamental component of the global supply chain, integrating transportation, finished goods handling, and outbound logistics [1,2]. Digitalization has considerably altered the maritime industry [3], enabling productivity and sustainability [4], and overall cost reduction [5], technological innovations, such as tracking and tracing systems, facilitate operational optimization, efficient transactions, and real-time information sharing [6,7]. Regarding digitalization within maritime logistics, scholars have concentrated on operational facilities [8], risk management [9,10], sustainability [11], benefits [12], and the drivers and challenges of digitalization [13]. Despite this progress, digital marketing strategies remain mainly unexplored [14,15], and the adoption of digital platforms has not been strategically aligned with marketing functions in maritime logistics [16].

This study seeks to address this gap by conducting an systematic literature review (SLR) on the influence of digital technologies and channels in maritime logistics, focusing on major trends, thematic focus areas, research approaches used, and assessment of a conceptual framework for digital marketing strategies. Next, the research questions are developed. Research question (RQ1): What are the major research trends and thematic focus areas, including digital technologies and marketing channels, in digital marketing strategies for maritime logistics? (RQ2): Which research approaches are employed concerning digital marketing strategies? (RQ3): How can insights from SLR be synthesized to evaluate a conceptual framework related to digital marketing strategies in maritime logistics?

2. Literature Review

2.1. Overview of Maritime Logistics

The maritime logistics industry brings together a wide range of actors, including shipping companies, port operators, freight forwarders, liner companies, terminal operators, exporters, importers, and customs authorities, whose complex and closely linked interactions make maritime logistics a largely business-to-business (B2B) oriented field [17-21]. It encompasses all ocean-based activities, including liner shipping and port-related trade [7]

Address for Correspondence: PhD Student, Duygu Peyman, Dokuz Eylül University, Institute of Social Sciences, Department of Maritime Business Administration, İzmir, Türkiye
E-mail: duygupeyman@gmail.com
ORCID iD: orcid.org/0000-0001-6558-704X

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by integrating logistics services and value-added activities [22], such as labeling, assembly, and repair services [23]. Maritime logistics, as a comprehensive maritime ecosystem, necessitates a network-level analytical framework instead of concentrating on individual entities or firm-specific strategies [17]. While logistics broadly covers the planning, execution, and control of the flow and storage of goods, services, and information from origin to destination [24], maritime logistics, as a growing subfield, builds on this by managing the cross-ocean movement of goods in an increasingly segmented and demand-driven environment, requiring the deliberate use of supply chain management concepts to stay competitive [25]. Where traditional logistics focuses on operational flow, supply chain management applies the systematic, the strategic coordination of business process within and across firms [24] to drive long-term performance and competitive differentiation [26,27]. Within this broader framework, the maritime supply chain integrates all activities from raw material procurement through manufacturing, maritime transport, port handling, and final distribution [26,27], physically and informationally distinct actors, whose combined performance shapes the efficiency and competitiveness of the entire chain [18,26,28], including logistics service providers, port operators, and liner companies [18]. Given the complex and closely linked interactions among these diverse actors, maritime logistics operates mainly within a B2B context [17,18], where value does not come from individual firms alone but grows through coordinated exchanges of resources, knowledge, and services across the network [29,30], as shown in maritime logistics settings by Vural et al. [31].

2.2. Digital Marketing: Definitions and Channels in Maritime Logistics

Digital marketing contains utilizing of digital and interactive technologies, involving websites, email, social media, mobile platforms, and search engines, to reach customers and promote services [32,33], and drive action and advocacy [34]. It includes tools such as social media marketing, content marketing, search engine optimization (SEO), search engine marketing, affiliate programs, and email marketing [33], adjustable to the needs of the target market through the digital marketing mix [17].

Digital marketing is managed differently in B2B contexts than in consumer markets. Instead, it focuses on creating and sustaining long-term relationships among companies, increasing the visibility of services, supporting account-based marketing, and enabling networked actors to co-create value [17,29]. In a B2B setting, the concept of "brand" extends beyond a single business or actor, since value is created through interactions among multiple actors, rather than by a single company alone [29,30]. This process works through three connected areas: understanding customer journeys, providing personalized digital content, and encouraging customer engagement [35]. These areas support cooperation, servitization, innovation networks, relational dynamics, branding, and trust [17]. This network-level, multi-actor approach fits with the broader digital marketing literature, where studies such as Pandey et al. [29] and Cioppi et al. [36] examine digital marketing across industries rather than focusing on specific entities, an approach that is relevant to maritime logistics, where digital marketing helps companies stay competitive by adopting new technologies and bringing stakeholders into value creation [14].

As maritime logistics shifts from purely operational models to customer-centric networks [5], digital marketing has taken on a bigger role, operating through relational dynamics within B2B networks rather than at the individual company level [17]. Recent studies reflect this shift: Hofacker et al. [17] point to B2B trust and relational dynamics as key digital marketing components, Zeng et al. [20] show how Digital Freight Forwarders (DFFs) use platforms to organize traditional service delivery, Yang and Lin [16] find that digital logistics platform adoption impacts in organizational performance, and Al Muala [37] regards digital marketing integration as a core part of strategic management in maritime logistics. Despite digital marketing strategies in maritime logistics remaining understudied, existing studies have mostly centered on operational efficiency [4], physical distribution, and risk management [10], necessitating an SLR that takes a network-based approach to map how digital marketing is currently used within the maritime logistics ecosystem.

3. Methodology

This study employs an SLR informed by the PRISMA protocol [38] to investigate digital marketing strategies in maritime logistics, focusing on the co-occurrence of digital marketing channels and digital technologies. Integrating content analysis for reliable thematic evaluation [39] with bibliometric analysis for tracking large-scale trends [40] provides the overall validity of the findings [41], supports an ideal methodological approach for mapping the interdisciplinary field of digital marketing in maritime logistics.

For RQ1, bibliometric analysis (Biblioshiny/R) covers general research themes, while content analysis traces the co-occurrence of digital technologies and marketing channels. For RQ2, content analysis was used to determine the main research methodologies. To address RQ3, both analyses are combined to assess a conceptual framework for digital marketing strategies in maritime logistics.

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3.1. Database and Search Strategy

The study is being carried out without time constraints through October 25, 2025. During the SLR process, the two leading academic databases in the world were used, namely Scopus and Web of Science (WoS), to provide a wide coverage related to the subject study, following the suggestions of Yu et al. [40], and Zhang et al. [42]. Search terms were enclosed in quotation marks and executed as separate and independent queries in both databases, applied to the Title, Abstract, and Keywords fields in Scopus, and to the Topic (Title, Abstract, Author Keywords, and Keywords Plus) fields in WoS. The Boolean AND operator was used throughout; parentheses were applied only where OR operators were combined, as in: "digital marketing" AND ("sea transport*" OR "sea transportation*"), with the wildcard (*) capturing variant endings, and the search strategy was guided by Bahoo et al. [43]. Searches were restricted to Article and Early Access document types and the English language. Results were pooled and de-duplicated prior to screening [40].

Initially, a keyword search for digital marketing using the term "maritime" was conducted; however, the term "maritime" yielded very few results, as shown in Table 1. As a result, the combinations "digital marketing" AND "supply chain" and "digital marketing" AND "logistics" yielded extensive results and formed the primary basis for the literature analyzed. This combined keyword approach aligns with established SLR practices in the maritime domain. Muñoz-Sánchez et al. [44] paired "blockchain" with "supply chain" and "logistics" without restricting to "maritime logistics," applying maritime relevance criteria during screening. Basulo-Ribeiro and Teixeira [45] used "logistics," "supply chain," and "transport" to investigate Industry 4.0 and smart port logistics, rather than port-specific terms. Fruth and Teuteberg [13] combined digitalization-related terms as "digital," "big data," "digitalization," and "digital transformation" with maritime-specific terms including "maritime logistics," "shipping industry," and "maritime transportation".

3.2. Selection Criteria

The PRISMA protocol was employed to ensure rigorous and transparent selection through multiple stages, database search, title and abstract screening, and full-text evaluation by minimizing selection bias [38], and providing conceptual clarity for inclusion and exclusion criteria [46].

The search has no time constraint; however, no studies were identified prior to 2019. Only English-language studies were included. The literature covers multidisciplinary fields including marketing, logistics, information technology (IT), sustainability, economics, and operations management. The review is limited to peer-reviewed journal articles and early access papers; books, reports, and conference proceedings are excluded, although selected books are cited in Section 2 for theoretical context. An actor-based conceptual mapping was applied to filter the broad search results. Studies were included if they addressed industrial actors inherent to maritime logistics, namely shippers, exporters/importers, freight forwarders, liner companies, and terminal operators [13,20,21,25,31] or if they examined B2B interactions directly relevant to international trade and shipping. The term consumer behavior is used here as a screening criterion to identify and exclude studies that focus exclusively on individual consumer markets, as the study is grounded in a B2B organizational context throughout. The only two studies which are based on B2C were included as exceptions due to their direct relevance to maritime B2B contexts: (1) Oliveira

Table 1. *Keyword search results in Scopus and Web of Science (WoS)*

Keyword combination	Scopus	WoS
"digital marketing" AND "maritime"	2	1
"digital marketing" AND "shipping"	6	5
"digital marketing" AND "maritime transport"	1	1
"digital marketing" AND "sea"	4	1
"digital marketing" AND "maritime transportation"	0	0
"digital marketing" AND "sea transport"	0	0
"digital marketing" AND "sea transportation"	0	0
"digital marketing" AND ("sea transport*" OR "sea transportation*")	0	0
"digital marketing" AND "maritime logistics"	0	0
"digital marketing" AND "maritime supply chain"	0	0
"digital marketing" AND "supply chain"	89	67
"digital marketing" AND "logistics"	85	35

Note: 0=No results found for that keyword combination. Sources: Scopus and Web of Science (WoS)

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et al. [47] evaluate digital platform pricing dynamics within a B2B supply chain context applicable to maritime logistics actors; and (2) Al Muala [37] discusses the digital marketing practices of major logistics companies whose operational field intersects with maritime logistics.

4. Findings

In the initial stage of the database search, 187 records from Scopus and 110 from WoS were identified, resulting in a total of 297 raw records. After removing intra-database duplicates (n=23 from Scopus; n=20 from WoS), 254 records remained. Following cross-database de-duplication (n=62), 192 records were retained for title and abstract screening. Using the PRISMA protocol (see Figure 1) [48], which outlines the inclusion and exclusion criteria, a total of 62 papers were identified as addressing the research questions.

4.1. Research Trends and Topics

To address RQ1, bibliometric analysis (Biblioshiny/R) and content analysis were used to map keyword trends, abstract themes, and co-occurrences between digital technologies and marketing channels.

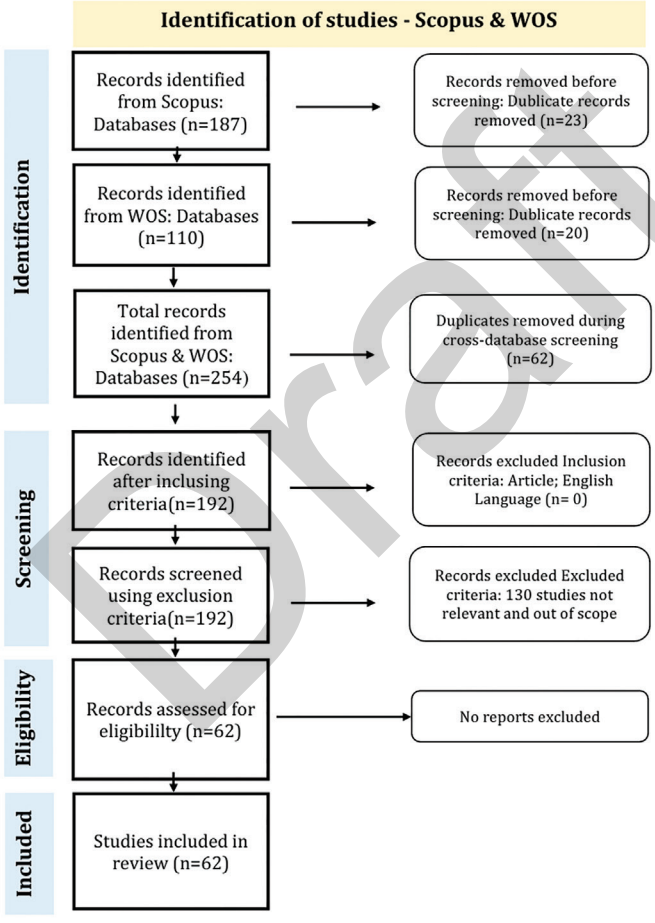


Figure 1. *Search results based on the selection criteria of PRISMA adapted from [48]*

In the keyword analysis, the most frequent terms are digital marketing, e-commerce, and supply chain. Thus, other dominant keywords include small- and medium-sized enterprises (SMEs), digital transformation, big data, digital marketing capabilities, social media marketing, and digital marketing strategies. Figure 2 shows that trend topic analysis began in 2020, as the SLR identified only two studies published in 2019. It illustrates shifts in research interests over time, showing that SMEs, e-commerce, and supply chains were the main topics in 2023-2024, while digital marketing, social media marketing, and marketing channels emerged in 2022. Fuzzy cognitive mapping and blockchain technology emerged as research topics in 2022, while digital transformation became important after 2021. From 2024 onward, recent developments include digital technology, SEO, and sustainability.

Building on the bibliometric analysis, content analysis examined digital marketing channels, applied technologies, and their strategic outcomes using a coding scheme adapted from Maas et al. [49]. Digital technologies and marketing channels were coded according to the research question, subject matter, or methodology of the reviewed studies.

Studies that engaged with digitalization in general terms, without naming specific technologies or channels, were categorized as "non-specific digital technologies (non-SDTs)" and "non-specific digital marketing channels (non-SDMCs)", respectively.

Figure 3 presents a treemap illustrating the co-occurrence between digital marketing channels (top of each box) and digital technologies (bottom of each box) within the SLR. For the purposes of this analysis, co-occurrence indicates that both elements appeared within the same study, rather than suggesting any direct strategic or functional link between them. The numbers at the bottom of each box represent the number of studies that mentioned both the corresponding channel and technology. Of the 62 studies reviewed, only 21 explicitly identified SDMCs; Figure 3 is based on these studies. Two studies addressed marketing channels as non-SDMCs [50,51]; since no specific channel was noted, they are excluded from Figure 3 but included in Figure 4. One additional study addresses social media as a marketing channel, but does not reference any digital technology, neither specific nor in general terms, as a subject of investigation [52]; as no technological topic is discussed in the study, it is excluded from both Figure 3 and Figure 4. The most frequent co-occurrence was observed between social media and non-SDTs (11 studies). Ten studies specifically linked named technologies to channels, often social media and websites, with big data analytics identified as the dominant technology in the logistics context.

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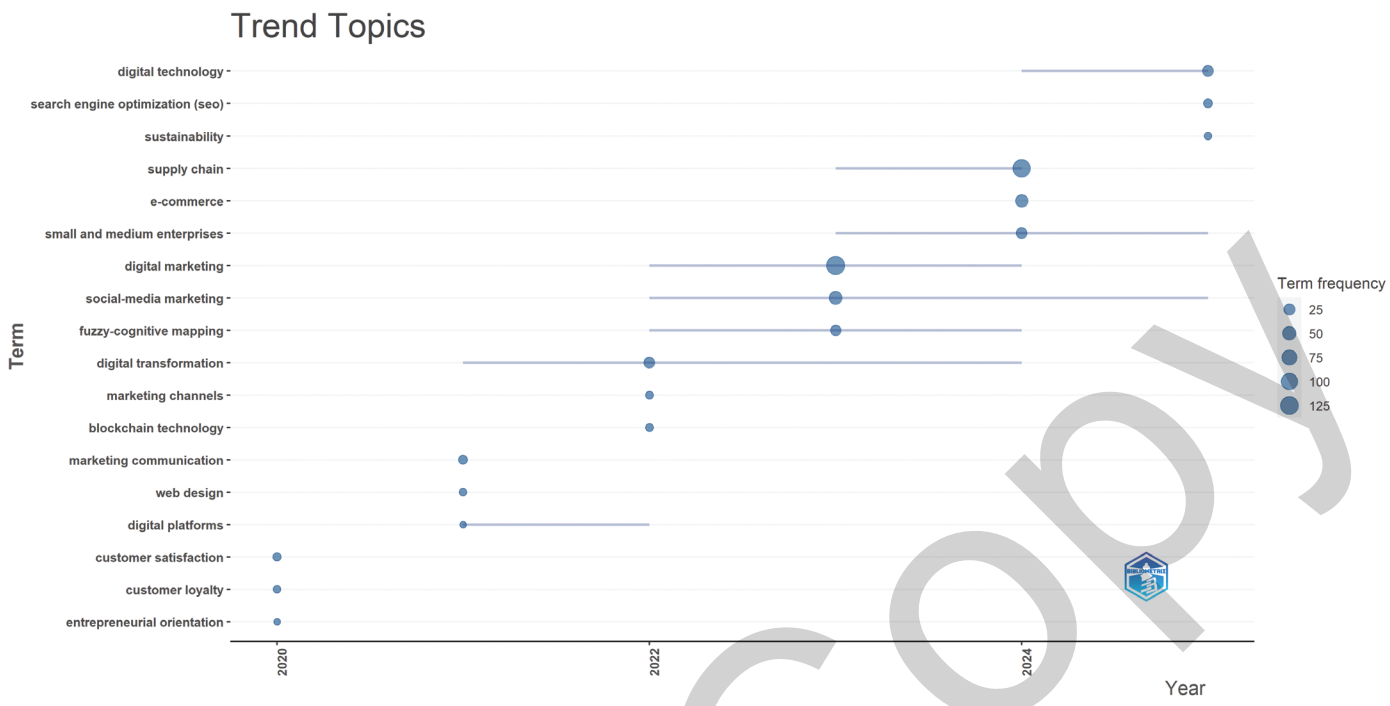


Figure 2. *Abstract trend topic analysis*

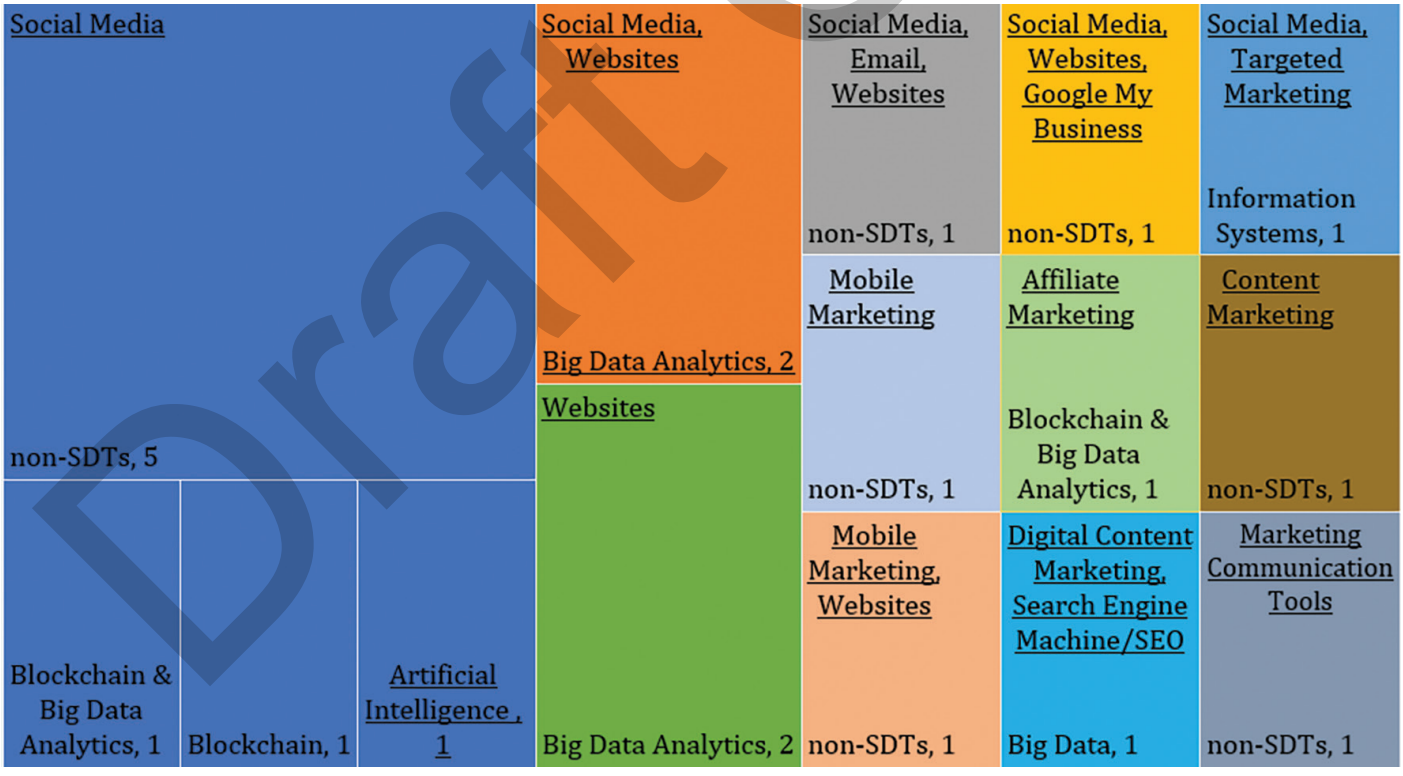


Figure 3. *Tree map of co-occurrence between digital marketing channels and associated digital technologies*

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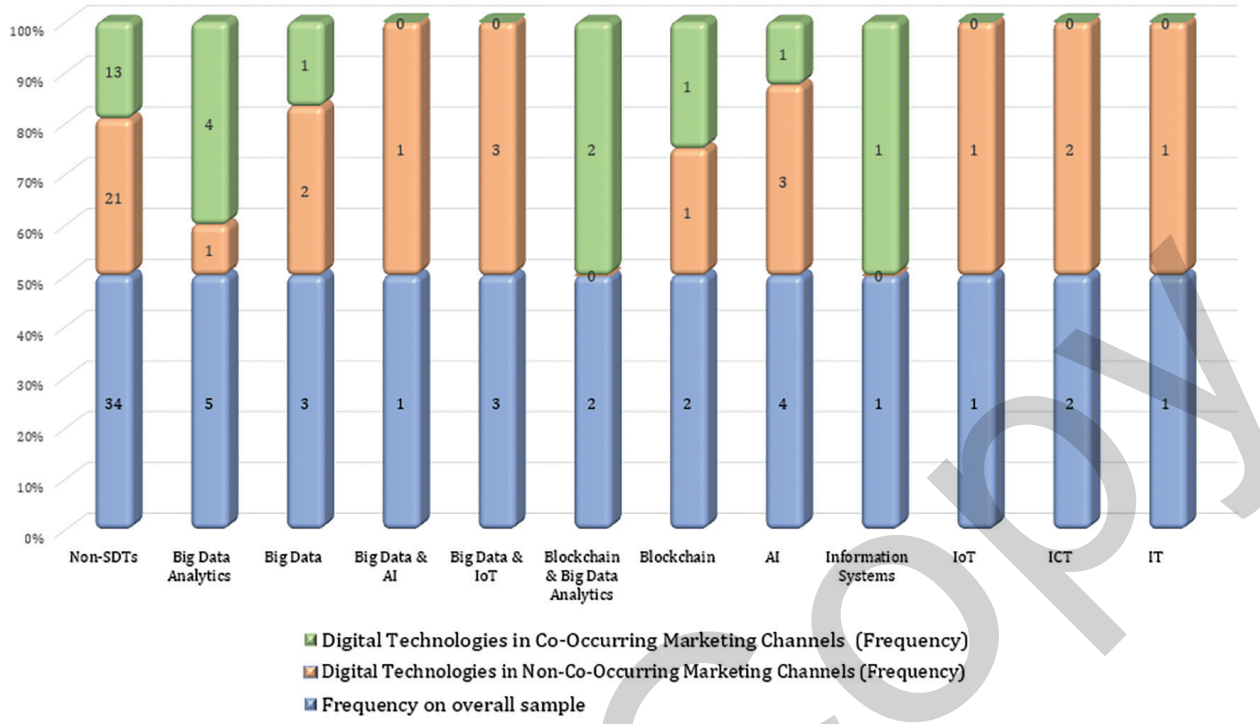


Figure 4. *Distribution of digital technologies across co-occurring and non-co-occurring marketing channels*

Note: non-SDTs: Non-specific digital technologies, AI: Artificial intelligence, IoT: Internet of Things, ICT: Information and communication technologies, IT: Information technology

Figure 4 illustrates the distribution of digital technologies and marketing channels in terms of co-occurrence. Of the 34 non-SDT studies, 13 co-occur with marketing channels and 21 appear without any channel linkage, and two address channels in broad non-SDMC terms. Big data and big data analytics are treated separately, given their differing channel associations. Artificial intelligence (AI) appears in four studies; in one study, it co-occurs with a channel, while the remaining three studies have no channel linkage. Information and communication technologies (ICT), the Internet of Things (IoT), and IT show no channel co-occurrence. In two studies, platforms are classified as digital trading interfaces rather than technologies [47,53], consistent with Madanaguli et al. [54], and are therefore excluded from the technological analysis.

4.2. Research Approaches

To address RQ2, Tables 2 and 3 show the distribution of studies by research approach and method. Empirical studies have the largest share (58.1%), followed by theoretical/conceptual studies (24.2%) and review studies (17.7%). Quantitative approaches are the most common (59.7%). The most widely used methods are structural equation modeling (SEM), partial least squares-SEM, analysis of moment structures, regression, confirmatory factor analysis and descriptive statistics. Fuzzy hybrid methods and simulation modeling also appear, especially in web analytics studies, along with a smaller number using deep learning, text mining, and hybrid approaches. Only one qualitative study [55] used interviews and case studies to explore social media, and one mixed-method study [56] combined surveys and interviews across social media, websites, and Google My Business.

Among review studies, digital technologies are mostly handled in broad non-SDT terms; only three address specific channels: social media [41], content marketing [57], and

Table 2. *Distribution of studies by research approach*

	No. of papers	%
Empirical	36	58.1
Theoretical/conceptual	15	24.2
Review studies	11	17.7
Total	62	100.0

Table 3. *Distribution of documents by research method*

	No. of papers	%
Quantitative method	37	59.7
Qualitative method	1	1.6
Mixed method (qualitative & quantitative)	1	1.6
Other (conceptual & review methods)	23	37.1
Total	62	100.0

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mobile marketing [58]. Theoretical and conceptual studies tend to favor ICT, big data, IoT, and blockchain over specific marketing channels. Surveys were the most common data collection method (17 studies); four studies centered on social media, one study covered marketing communication tools, and 12 studies did not target any particular channel. Web analytics ranked second (11 studies), while fuzzy mapping and simulation appeared most frequently in this group (8 studies).

5. Conclusion

This SLR examines the intersection of digital marketing strategies and maritime logistics through bibliometric and content analyses, revealing key thematic trends, research gaps, and co-occurrence patterns between digital technologies and marketing channels. With no time constraint applied, publications were identified from 2019, with a marked increase from 2020 onward.

Social media and websites are the most common marketing channels, mainly used to increase brand visibility, awareness, and customer interaction [55,59,60]. Big data analytics supports behavioral data collection via social media, while blockchain combined with big data enhances supply chain transparency [61] and trust in the B2B context. SMEs primarily rely on non-SDTs, with social media the preferred channel. Content marketing has drawn little research attention [57]; just one study ties it directly to SEO [62]. Thus, studies on named technologies such as AI, blockchain, and IoT tend to focus on competitiveness, risk management, and sustainability, with limited attention to their integration with specific marketing channels. Newer technologies, such as digital twins and Generative AI (Gen AI), are not presented, pointing to a gap between technological advancements and their application in digital marketing within maritime logistics. The literature indicates a lack of the interaction between human resources and automation within maritime logistics: evidence from other fields demonstrates that human-robotics interaction [63] can improve digital marketing outcomes [64], facilitate extensive customization [65], and assist in predicting customer behavior [66], factors largely missing from the review studies.

For RQ2, quantitative approaches are the most common, with surveys and web analytics being the main methods used. In survey-based studies of SMEs and supply chains, digitalization and marketing capabilities have received the most attention, whereas SDTs have largely been overlooked. Fuzzy hybrid simulations [59], machine learning [67], and AI are gaining ground in web analytics [60] for studying customer behavior, marketing performance, and logistics optimization. That said, predictive modeling of customer behavior and customer perceptions in targeted marketing strategies has yet to be sufficiently explored. The absence of qualitative and mixed-method research constrains the understanding of stakeholder viewpoints and contextual dynamics in the adoption of digital marketing. Addressing RQ3, the co-occurrence of digital marketing channels and technologies found in the SLR points to a strategic alignment that could support integrated digital marketing strategies, yet many do not cover both dimensions within the same study. Figure 5 presents a proposed framework drawn from SLR findings, and supplemented by three external studies included to fill technological gaps. Parola et al. [12] add operational technologies, including robotization, smart sensors, and human-machine interfaces, as marketing infrastructure components, grounded in the service-dominant logic framework [68]. Hermann and Puntoni [69] and Cillo and Rubera [70] bring in Gen AI, which is still underrepresented in the SLR but has clear implications for hyper-customization and content-driven marketing strategies in maritime logistics.

Based on the SLR findings, the effectiveness of the interaction between digital technologies and marketing channels is evaluated through marketing outcomes that are categorized into two groups in Figure 5. Customer-related outcomes include value derived from customers [32], including satisfaction, brand awareness, visibility, loyalty, participation, and value co-creation [68]. Internal business outcomes deal with marketing [69], financial [71], and operational [67] success, enabling measurable factors for companies. Bridging these two outcome dimensions, digital trade platforms function as interfaces that bridge between digital marketing channels and emerging technologies [53,54] by enabling end-to-end integration of marketing and logistics functions within the maritime ecosystem [20], as illustrated in Figure 5. The SLR reveals a lack of studies that quantitatively examine marketing outcomes of channel-technology integration, highlighting the need for future research to establish measurable links between integration and performance.

Limited research draws on established marketing theories, such as the resource-based view [72,73] and service-dominant logic [74], despite their relevance to value co-creation and actor coordination in maritime logistics. The DART model (dialogue, access, risk assessment, transparency) [75] and marketing mix framework [76] are similarly underutilized, discussing a theoretical gap in how coordination and interaction among maritime logistics actors are conceptualized in digital marketing research.

This study has several limitations. The SLR takes a broad, phenomenon-driven scope to map the overall landscape of digital marketing strategies across the maritime logistics ecosystem [13], which enabled comprehensive thematic

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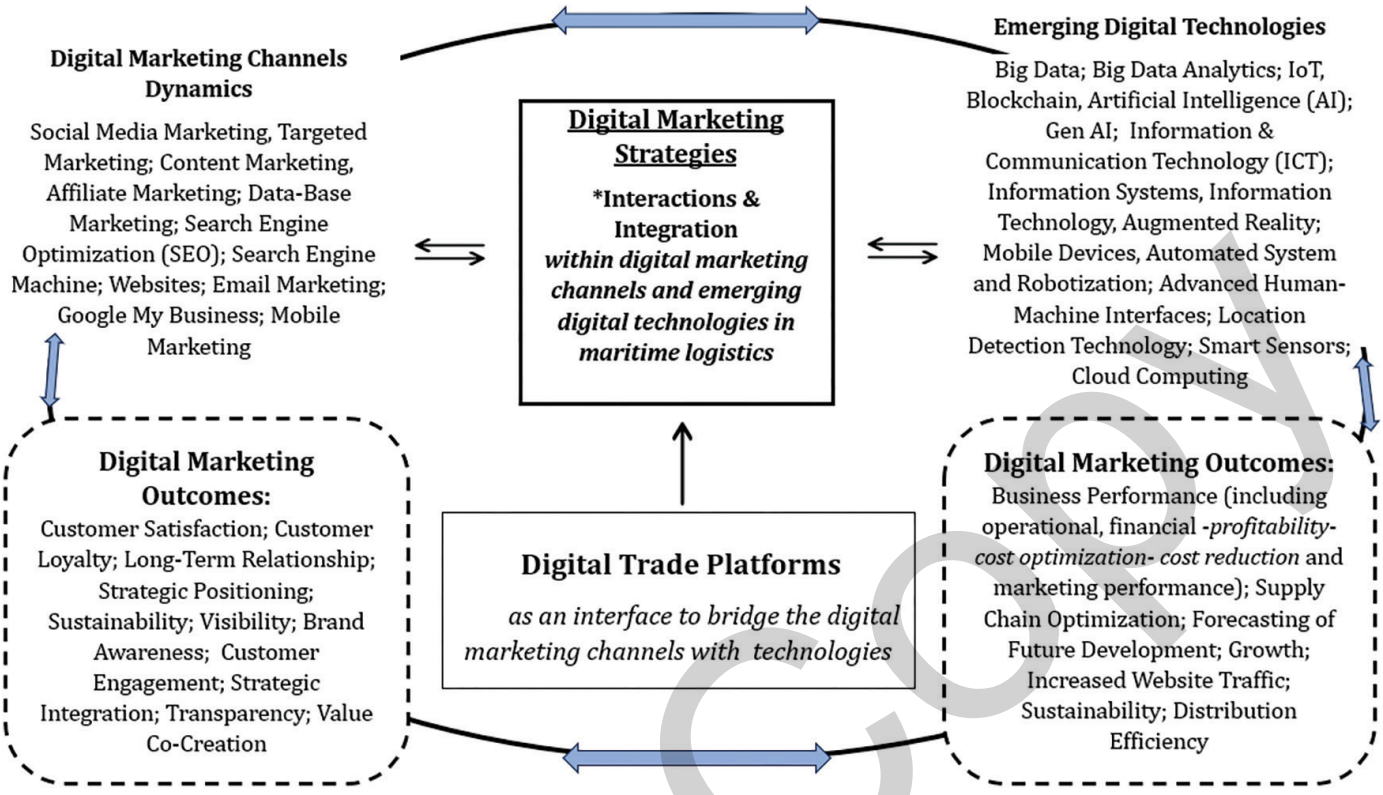


Figure 5. *Proposed model of digital marketing strategies and outcomes through the integration of emerging technologies and channels in maritime logistics*

coverage but does not capture actor-specific dynamics at the macro-ecosystem level. Fruth and Teuteberg [13] also note that the maritime digitization literature lacks explanatory frameworks for particular actors. Both the database selection (Scopus and WoS) and the search terms used may limit generalizability; future reviews could incorporate adjacent terms such as B2B, service industry, and digital transformation to broaden coverage. Social media is the most common marketing channel; however, how specific actors deploy these channels in practice falls outside the scope of this review.

Future research could explore these gaps through several avenues. Segment-specific studies could investigate how digital marketing strategies differ across shipping market segments in response to distinct customer expectations and business structures [5]. Actor-specific studies are needed, concentrating on individual participants such as ship owners, operators, or freight forwarders, to explore their digital marketing maturity and brand-building strategies; while existing research has primarily examined these actors from an operational perspective [6,44], digital marketing strategies remain mostly unexplored. Comparative analyses that bring together SLR findings and primary data from official industry sources, and that are cross-referenced with actual digital marketing activities of leading maritime actors, would allow a more grounded evaluation across different actor types. Furthermore, digital technologies could be seen not merely as technical tools but as strategic marketing components with measurable outcomes and a special focus on Gen AI for hyper-customization and on newer tools, such as digital quotation systems, online pricing tools, and chatbot-based implementations. Evaluating digital marketing performance using dual measures, namely external indicators (satisfaction, loyalty, brand awareness) and internal indicators (profitability, efficiency, business performance), can contribute to a more extensive framework. Thus, the digital marketing strategies of SMEs and DFFs need to be compared with those of large incumbent players, while also tracing adoption across geographically distinct maritime markets [29,34].

This study contributes to the literature by mapping the intersection of digital marketing and maritime logistics and by presenting key research trends, gaps, and theoretical deficiencies. From a practical perspective, the study provides insights for maritime logistics firms and B2B marketers to build more data-driven and customer-focused digital strategies. It highlights how technologies such as AI, big data analytics, and blockchain can strengthen

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customer interaction, trust, and marketing efficiency. The findings also enable practitioners to project current digital marketing trends into future strategic planning and to align digital marketing channels with broader organizational goals, thereby improving both marketing performance and competitive advantage in a rapidly digitalizing maritime logistics environment.

Footnotes

Authorship Contributions

Concept design: D. Peyman, and G. Denktaş Şakar, Data Collection or Processing: D. Peyman, and G. Denktaş Şakar, Analysis or Interpretation: D. Peyman, and G. Denktaş Şakar, Literature Review: D. Peyman, and G. Denktaş Şakar, Writing, Reviewing and Editing: D. Peyman, and G. Denktaş Şakar.

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