



SUPPLY CHAIN MANAGEMENT AND PERFORMANCE MARKETING: EVIDENCE FROM NUMILOG WITHIN CEVITAL GROUP

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ABSTRACT

This study examines the impact of supply chain management on the performance marketing of the CEVITAL Group, given its vital role in enhancing operational efficiency and competitive advantage. The empirical study relied on questionnaires and interviews to collect data from a sample of 60 employees and executives at NUMILOG, the logistics subsidiary of the CEVITAL Group, across three platforms located in Sétif, El Khroub, and Oran. The collected data were statistically analyzed using SPSS version 26. The results demonstrated a direct impact of supply chain management and its dimensions (supplier relationship management, customer relationship management, and information technology) on performance marketing and its dimensions, namely financial, environmental, and social performance. Supplier relationship management emerged as the most influential dimension, followed by customer relationship management and information technology, whereas logistics did not have a statistically significant effect. The study concludes with recommendations and proposals aimed at improving performance marketing through the enhancement of supply chain management practices, as well as suggestions for future research.

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1 INTRODUCTION

The supply chain, often associated with procurement and logistics in management literature, is an integrated system that ensures the seamless flow of materials and information, originating from suppliers (the initial source) and concluding with the end consumer (the cornerstone of the value process). Supply Chain Management (SCM), on the other hand, is defined as an integrated philosophy for managing the overall flow of the distribution channel from supplier to end customer (Lummus & Vokurka, 1999, p. 12). As a highly strategic concept in modern business, SCM plays a pivotal role in organizational success and long-term viability by enhancing operational efficiency and driving market competitiveness. SCM systematically coordinates internal business functions and operational activities, directly elevating organizational performance. According to Nweje and Taiwo (2025, p. 1547), effective SCM enables organizations to optimize processes, lower operational costs, and satisfy customer expectations, particularly amidst contemporary market disruptions. Today's global landscape is undergoing rapid transformations, driven by intensified competition, technological advancements, artificial intelligence, shifting consumer behaviors, and heightened expectations surrounding environmental and social responsibility. Consequently, adopting robust supply chain practices has become essential for organizational resilience and growth.

These broader market transformations have compelled organizations to re-evaluate their strategic priorities and long-term continuity. Traditionally, business goals focus on maximizing profits, increasing sales revenues, expanding market share, and achieving high returns on investment (ROI) to secure future capital. However, the evolution of modern marketing concepts has introduced new corporate obligations. Institutions are now expected to comply with national and international environmental standards while actively engaging in Corporate Social Responsibility (CSR).

Internally, this entails cultivating safe, equitable work environments; externally, it involves actively supporting local community development. The aim is to create a positive dual impact environmental and social without compromising core financial

targets. Modern SCM practices achieve this balance by strengthening relationships with suppliers and customers, streamlining logistics services, ensuring transparent information flows, and embedding cutting-edge technologies into daily operations.

As crucial drivers of national development, Algerian institutions are actively seeking to strengthen their market competitiveness, broaden their customer base, and elevate their global reputation. This ambition is increasingly paired with a commitment to internal social responsibility demonstrated through safe working conditions, continuous professional development, fair wage structures, transparent promotion systems, and gender equality.

Simultaneously, Algerian enterprises are investing in local community initiatives and focusing on environmental performance by actively reducing their carbon footprints. Adopting sustainable and effective supply chain management practices serves as the core mechanism for these institutions, enabling them to enhance market responsiveness while fulfilling sustainable development goals.

As key players in supporting national development, Algerian institutions seek to strengthen their competitive position in the market, expand their activities and customer base, and improve their international reputation, including Cevital Group, which is considered one of the largest conglomerates in Algeria, with diverse activities and a wide range of products and services, including food products, windows, steel, logistics, and glass. This includes their increasing commitment to their social responsibilities towards their human resources by ensuring a safe working environment, providing continuous training opportunities, achieving fairness in wage and promotion systems, and ensuring equal opportunities for both genders. The group also pays increasing attention to contributing to community initiatives within their surrounding local environments, in parallel with their efforts to improve their environmental performance by reducing their carbon footprint. This approach is mainly embodied through the adoption of effective supply chain management practices, which enhances their competitiveness and responsiveness to the requirements of sustainable development.

1.1 Research Problem

Considering rapid environmental shifts characterized by dynamic technological progress, shifting consumer preferences, intense market competition, and the expanding scope of modern marketing. Organizations must innovate to secure market leadership, scale operations, and ensure long-term viability while remaining socially and environmentally responsible. Within this strategic context, Supply Chain Management (SCM) emerges as a vital framework directly influencing organizational performance marketing.

Accordingly, this study addresses the following central research question: What is the impact of supply chain management on performance marketing within the CEVITAL Group?

1.2 Research Objectives

This study aims to analyze the relationship between the dimensions of supply chain management and their impact on performance marketing in the organizations under study. This will be achieved by addressing the following points:

- Introducing the two study variables (supply chain management, performance marketing) and reviewing their key elements.
- Clarifying the dimensions of supply chain management from the relational perspective of economic organizations.
- Delineating the dimensions of performance marketing from a holistic marketing perspective.
- Explaining the impact of logistics on the performance of the organizations under study from financial, environmental, and social perspectives.
- Identifying the impact of information technology and its application on the performance marketing of the economic organizations under study.
- Examining the current state of performance marketing at the CEVITAL Group through its adoption of SCM via its subsidiary NUMILOG.

1.3 Thematic Justification

- Growing importance of supply chain management, particularly during economic crises, to achieve operational resilience and continuity.

- Centrality of performance marketing (the dependent variable) across its comprehensive financial, environmental, and social dimensions.
- Alignment with modern managerial trends, balancing social and environmental responsibility with financial goals.
- Examining the relationship between supply chain management and marketing performance and its impact on enhancing efficiency and competitiveness.
- Significance of the study population (Cevital Group) as one of Algeria's largest economic conglomerates (26 subsidiaries), which has not been previously studied, particularly regarding supply chain management.
- Specificity of Numilog, a subsidiary specialized in logistics and supply chain management for all Cevital Group branches, making it an ideal empirical setting to test the research variables.

2 THEORETICAL FRAMEWORK AND ORGANIZATIONAL REALITY: INSIGHTS FROM INTERVIEWS

2.1 Supply Chain Management

Most supply chain management (SCM) definitions from the 1990s focused primarily on the internal integration of diverse functions within an organization to ensure the seamless flow of goods and materials from suppliers to the end user. This traditional perspective, which remains limited to physical operational processes, is exemplified by the definition of Ellram and Cooper (1993), who conceptualize SCM as "the integration of business processes from end-user through original suppliers that provides products, services and information that add value for customers (Naslund & Hulthén, 2012, p. 483)."

In contrast, more recent literature offers a comprehensive paradigm shift, encompassing the integration of multiple activities that transcend organizational boundaries, such as strategic planning, information flow management, process control, and reverse logistics. This modern approach directly contributes to improved operational efficiency and enhanced competitiveness for organizations. Aligning with this broader view, Xiwen (2026, p. 29) defines SCM as "the integration of key business

processes from end users to original suppliers who provide products, services, and information to add value to customers and other stakeholders."

Further expanding on this collaborative dynamic, Hugos (2018, p. 04) emphasizes the operational balance required across the network, defining SCM as "the coordination of production, storage, placement, and transportation among participants in the supply chain to achieve the best mix of responsiveness and efficiency for the market being served." Ultimately, this multi-participant coordination extends beyond mere physical logistics to dictate a firm's strategic performance. As synthesized by Duan et al. (2023, p. 245), SCM fundamentally involves the comprehensive and coordinated management of the flow of information, products, processes, and cash, significantly impacting a company's competitiveness in terms of production cost, speed to market, working capital requirements, return on investment (ROI), and profitability.

2.2 Performance Marketing

Performance marketing reflects an organization's internal and external policies, especially since it is an activity that targets the behavior of individuals inside and outside the organization, including customers, suppliers, competitors from other organizations, and other active and effective members in the market. It is also one of the crucial factors in the success of companies and organizations, as it reflects the effectiveness of their activities.

The performance marketing of companies includes the goals to be achieved, which constitute a fundamental factor in their success or failure in the long or short term, internally or externally. Performance marketing is also defined as the "extent of the organization's success in the market, which it achieves through the products it provides, and it's defined as the outputs provided by the organization that reflect its achievements" (Boukabara & Guechari, 2024, p.693).

Furthermore, Kotler and Keller (2007) stated that performance marketing focuses on meeting consumer needs and wants but also seeks to engage with the community most invested in the organization. According to Sisodia, Wolfe, and Jag (2007), performance marketing involves understanding the returns from marketing

activities and programs, as well as considering broader legal, ethical, social, and environmental implications (Nasef et al., 2022, p. 22). Kotler and Keller defined performance marketing as understanding the financial and non-financial returns to businesses and society from marketing activities and programs. Senior marketers are increasingly looking beyond sales revenue to examine the marketing scorecard and interpret what is happening to market share, customer loss rate, customer satisfaction, product quality, and other measures. They also take into account the legal, ethical, social, and environmental implications of marketing activities and programs (Kotler & Keller, 2012).

2.3 SCM and Performance Marketing

The relationship between supply chain management and marketing performance is also defined by a relationship of mutual influence and integration; as supply chain management (SCM) represents the operational engine that transforms the promises made by the organization, pricing, distribution, and marketing promotion into real, tangible value received by the end customer, the relationship between them will be identified below:

2.3.1 CRM and Performance Marketing

Customer satisfaction has been linked to increased financial performance of an organization and the practice of customer relationship management. Anderson et al. (1994) and Ohaka (2015) also identified a strong positive relationship between customer satisfaction, market share, and profitability (Opara & Opara, 2016, p. 13). On the other hand, Dey and Cheffi (2013) considered customer relationship management as part of the supply chain and its operations, which contributes to the development of an innovative green supply chain (GSC). Dubey et al. (2015) also highlighted customer relationship management as an enabling tool for green supply chain management (GSCM). In addition, Duque-Uribe et al. (2019) proposed a framework for identifying sustainable supply chain management practices consisting of 12 categories, including customer relationship management (Ferrer-Estévez & Chalmeta, 2023, p. 255)

The extent of any organization's success in a competitive business environment, as well as the evaluation of its success, is largely determined

today by its ability to manage its relationships with internal and external customers efficiently and positively. As many studies have proven, the achievement in creating and managing these relationships is the implementation of Customer Relationship Management (CRM) within organizations (Abdullateef, 2014, p. 305). Customer relationship management can also provide an organization with an important metric for understanding and measuring its social performance, as it provides customer feedback that will help the organization modify or enhance its social initiatives.

2.3.2 SRM and Performance Marketing

Supplier relationship management (SRM) plays a crucial role in reducing costs and improving performance in organizations (Mettler & Rohner, 2009, p. 58). It also contributes to company profitability by optimizing procurement processes between the organization and its suppliers, which in turn improves product quality and reduces risks the organization may face along the supply chain.

Through supplier relationship management (SRM), an organization can move towards an environmentally conscious approach, starting with selecting sustainable sources by choosing environmentally friendly raw materials. This extends to producing products that can be recycled in the future or are easily disposed of without negatively impacting the surrounding environment. Among the areas influenced by SRM is the establishment of an environmental protection strategy in the global supply value chain. This strategy relies on implementing green supply chain management practices, such as adopting eco-design, environmental innovations, and the ISO 14001 management system while fulfilling clients' environmental requirements. It also drives sustainability across the entire network through joint planning of environmental goals, green purchasing, and greening and developing suppliers (Sosnowski, 2019, p. 333).

SRM is instrumental in enhancing social performance and advancing corporate social responsibility. This is reflected in achieving the organization's social mission through adherence to ethical standards, improvement of working conditions, enhancement of societal well-being, and promotion of community sustainability.

2.3.3 Logistics and Performance Marketing

In a competitive environment, maximizing profit plays a key role in the success of the enterprise. Logistics costs constitute a large part of the total costs of enterprises, but they can be reduced by improving the supply chain (Yan & Zhang, 2015, p. 01). Transportation also plays a multi-dimensional role in managing the supply chain in general and in logistics in particular, as efficient transportation systems contribute significantly to reducing costs by reducing delivery times, improving route planning, and reducing storage costs (Abu Sied, 2024, p. 08).

Among the tools that enable the organization to achieve environmental performance are the following green strategies within warehouses, such as reducing energy use in lighting, heating, ventilation, and handling equipment. This is what was concluded in the study by Dhooma and Baker (2012, p. 40)

The impact of logistics on social performance is also related to the quality of working conditions within institutions. By enhancing workplace environment indicators, both the physical and social work environments, and the institution's commitment to them, the work environment becomes more suitable and can improve the working atmosphere for employees (Indriyanto, 2023, p. 5158).

2.3.4 IT and Performance Marketing

Automation techniques and advanced technologies contribute to reducing human error, thus improving operational efficiency and reducing costs due to waste. Chris Ewan and Mahmudin (2008) stated that information technology provides numerous opportunities to reduce costs, increase efficiency, and boost effectiveness and revenue (Elvin & Munawar, 2020, p. 490). Digital technologies allow firms to respond faster and more effectively to supply and demand shocks during crises. By adopting these digital tools, businesses can rapidly pivot their operations, marketing, and business models to endure challenging economic environments (Ganotakis et al., 2023, p. 16)

"Further, technology also fueled innovation sustainably. Regarding environmental performance, technology contributed to environmental preservation. Technology also

emphasized clean technology (Arsawan et al., 2024, p. 3). IT also helps organizations implement supply chain management solutions that reduce waste and increase the efficiency of natural resource use, such as improving inventory and distribution management, which leads to reduced waste and lower raw material consumption, as well as tracking energy consumption in the organization's branches, which helps it make environmental decisions that reduce its carbon footprint.

3 CEVITAL GROUP AND NUMILOG

Founded in 1998 by businessman Issad Rebrab, CEVITAL is a leading Algerian conglomerate operating primarily across the agri-food, steel, building materials, and retail distribution sectors. Within agri-food, the group has established itself as a market leader notably in the production of edible oils, sugar, flour, and dairy products. CEVITAL is widely recognized for its strategic investments in modern manufacturing infrastructure and its pivotal role in meeting rising domestic consumer demand (Djemai & Berrahrah, 2025, p. 7). The CEVITAL Group comprises over 26 subsidiaries operating across diverse industries. In 2007, the Group established its logistics subsidiary, NUMILOG, to provide centralized supply chain support across all business units and strengthen overall operational synergy. This strategic initiative aligned with a period of rapid diversification for CEVITAL, which saw expanded investments in agri-food products, home appliances, mass distribution, and the construction sector.

The following analysis presents the key findings derived from interviews conducted with the staff of the NUMILOG Foundation:

3.1 The Operational Reality of Supply Chain Management in CEVITAL Group

The group handles all logistical operations through its subsidiary, NUMILOG. It operates across three primary functions: logistics, transportation, and a comprehensive solution that integrates transportation and logistics services. Through interviews, we identified the reality of the study variables as follows.

3.1.1 SRM in NUMILOG

The materials required from suppliers consist of raw materials, semi-finished products, and packaging materials stored in warehouses. The relationship between the organization and its suppliers is based on strength, continuity, and transparency. The customer service coordinator serves as the liaison between the organization and its suppliers, who are selected based on criteria of quality, price, and their reliability and commitment to supplying subsidiaries with the agreed-upon materials on time. Raw materials are procured through a reciprocal process, either by direct delivery from the supplier to the organization or by the organization's own trucks collecting them. In the event of disputes, problems, or misunderstandings between suppliers and subsidiaries, these are resolved immediately, utilizing the opinions and guidance of the organization's staff and overseen by the logistics manager.

3.1.2 CRM in NUMILOG

NUMILOG, functioning as the dedicated logistics subsidiary for the CEVITAL Group, employs an integrated Customer Relationship Management (CRM) framework to coordinate transportation and supply chain operations across its regional hubs (including El Khroub, Setif). The company maintains strong B2B relationships through continuous multi-channel communication (phone, email, and direct meetings) while coordinating with subsidiaries to fulfill end-customer requirements. Customer satisfaction and operational efficacy are systematically evaluated through monthly surveys, structured complaint management, and quantitative Key Performance Indicators (KPIs). Furthermore, NUMILOG actively involves clients in operational customization, adapting storage criteria such as shelving specs, stacking height, packaging materials, and cold-room temperature controls to guarantee product safety and punctual delivery. To support its digital transformation strategy, the organization invests in integrating CRM with core operational systems and utilizes Artificial Intelligence (AI) tools to forecast customer preferences, increase retention, and acquire new business.

3.1.3 Logistics in NUMILOG

The organization's logistics relies on positioning and optimization methods to ensure efficient management of product storage and

transportation, whether for refrigerated or temperature-controlled products. This is achieved through precise inventory management, optimized shipping processes, and the efficient movement of necessary materials in response to customer needs, resulting in a flexible and high-performance supply chain. The organization's key activities include preparing and analyzing logistics procedures, receiving materials and products, preparing them through packaging and shipping, and executing unloading, storage, preparation, shipping, transportation, sorting, labeling, and tagging operations. The organization operates through two types of logistics structures: Logistics Platforms, which represent a central infrastructure for organizing and coordinating storage, transportation, distribution, and inventory management activities on a large scale; and Regional Logistics Hubs, which are distribution points serving specific geographic areas. The organization's transportation system relies on designing and implementing diverse logistics plans and organizing and optimizing initial and final flows. This includes dedicated transport using white trucks for products requiring low temperatures to ensure their safety, in addition to regular transport using blue trucks. The organization's fleet comprises over 800 trucks of various types. Warehousing, known internally as the "logistics solution," depends on efficient inventory management and handling products according to their type and storage requirements, particularly temperature, to ensure an efficient and flexible supply chain. This includes a range of operational activities: Receipt Processing, Order Processing, Document Printing, Inventory Counting, and Steering Committee.

3.1.4 IT in NUMILOG

The organization relies on information technology to manage its operations, employing specialized applications and systems and a technological infrastructure tailored to its nature of work. This includes a Warehouse Management System (WMS), Transportation Management System (TMS), Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), RFID, port terminals, and temperature control, all of which support various logistical processes. The logistics manager also explained that the organization utilizes cloud data storage technology to ensure rapid access to necessary

information and employs advanced technologies to protect its systems and data from disruption, theft, and cyberattacks. Furthermore, it is moving towards adopting artificial intelligence technologies to improve demand forecasting, inventory management, and data analysis, and plans to implement blockchain technology in the future to provide a transparent and secure record of all logistical operations.

3.2 Operational Reality of Performance Marketing in CEVITAL Group

3.2.1 Financial Performance in NUMILOG

Platform officials confirmed that the organization continuously measures profitability, with results discussed and presented during regular management meetings in Algiers. These meetings include financial analysis to monitor performance and the achievement of strategic objectives. They explained that the group is experiencing growth in sales across its various products due to its ongoing commitment to improving product and service quality, ensuring their delivery to end customers. This is complemented by regular analyses of internal customer satisfaction, particularly within subsidiaries, to guide decisions that foster the group's growth and market expansion. They further emphasized the group's aim to increase its market share both domestically and internationally by enhancing product quality, presenting innovative offerings, and strengthening marketing efforts, as exemplified by the OXXO and MFG products. This is coupled with regular return on investment (ROI) evaluations to ensure the efficient use of financial resources through the analysis and balancing of revenues, profits, and costs associated with various projects and investments.

3.2.2 Environmental Performance in NUMILOG

The case study highlights the commitment of NUMILOG, the logistics arm of the CEVITAL group, to adopting a green logistics strategy and complying with national and international environmental standards. The fleet relies on low-emission trucks that meet European standards and are managed using intelligent transport technologies, a real-time GPS tracking system, and IDENET software for route planning, minimizing empty mileage and fuel consumption.

This strategy is complemented by improved energy efficiency in warehouses through eco-design based on sunlight, LED lighting systems, thermal control technologies, and the complete replacement of gas-powered handling vehicles with electric ones. The organization also implements recycling policies for waste and packaging materials in collaboration with specialized institutions and is actively pursuing digital transformation to reduce paperwork through automated order management, inventory, customer and supplier relations, and digital filtering. This culminates in an annual environmental impact assessment and the pursuit of ISO 14000 and ISO 14001 certifications.

3.2.3 Social performance in CEVITAL

The organization adopts a set of policies to ensure the safety and health of its employees. These policies include providing protective clothing and equipment such as protective suits, footwear, gloves, goggles, and ear protection. Regular monitoring and maintenance of handling and loading equipment, cranes, and trucks are also conducted, with inspections performed before each use. The organization prioritizes visitor safety by ensuring appropriate footwear and providing helmets and boots suitable for the site of the visit. Furthermore, it focuses on employee health and well-being through awareness campaigns on breast cancer, prostate cancer, diabetes, and smoking cessation. Vaccination campaigns are also conducted within the organization under the supervision of a medical team. The organization provides comprehensive care for employees in cases of illness or occupational injury, including financial compensation for the family of an employee who dies as a result of a work-related injury. The organization also supports university students and researchers by offering internship and field research opportunities, training and employment programs, and sharing its expertise with other institutions and sectors. It also organizes volunteer activities including tree planting, an annual clean-up campaign with the participation of all employees called "Tornado Blanche," and blood donation drives. Company officials emphasized that the CEVITAL Group implements these policies across all its subsidiaries by providing a safe and healthy work environment, investing in occupational safety standards,

offering health and social insurance, providing social benefits and fair wages, supporting personal development, and promoting the values of integrity, respect, initiative, and solidarity, in addition to supporting gender balance, particularly in administrative positions.

Grounded in this conceptual framework, the study proposes the following hypotheses:

- **Main Hypothesis (H1):** Supply Chain Management (SCM) has a statistically significant positive effect on the performance marketing of CEVITAL Group.
- **Sub-Hypothesis (H2):** The individual dimensions of Supply Chain Management (Supplier Relationship Management, Customer Relationship Management, Information Technology, and Logistics) have a statistically significant positive effect on the performance marketing of CEVITAL Group.

4 METHODOLOGY

4.1 Questionnaire Survey and Interview

The questionnaire was designed to operationalize and identify the study variables and establish their measurement scales. We conducted a comprehensive review of the literature related to supply chain management and performance marketing and were guided by relevant theoretical frameworks and empirical research. Two primary variables were identified:

- Supply chain management (independent variable).
- Performance marketing (dependent variable).

The questionnaire comprised closed questions, structured into two main sections. The first section gathered demographic and professional information about the respondents. The second section was divided into two distinct parts: the first part measured the independent variable, which is supply chain management, assessed through four core dimensions: "SRM, CRM, Logistics, and IT," and the second part measured the dependent variable, performance marketing, evaluated along three key dimensions: "Financial performance, environmental performance, and social performance."

To evaluate the items that operationalize these variables, a five-point Likert scale was utilized.

Respondents rated their level of agreement with each of the 74 statements according to the following scoring system:

- 1 – Strongly Disagree
- 2 – Disagree
- 3 – Neutral
- 4 – Agree
- 5 – Strongly Agree

4.2 Data Collection

This study utilizes a non-random sample of executives and managers at NUMILOG, the subsidiary handling logistics and transportation for the CEVITAL Group, to investigate the impact of supply chain management on the group's overall marketing performance. Due to the impracticality of reaching the entire population across more than 26 branches, focusing on NUMILOG directly serves the study's objectives, with the sample size aligning with Roscoe's (1975) rule of thumb recommending between 30 and 500 respondents (Sekaran & Bougie, 2016). Primary data were gathered between January 20 and January 30, 2025, across operational platforms in El Khroub, Sétif, and Oran using a bilingual (Arabic/French) paper questionnaire, yielding 60 valid responses

for SPSS (Version 26.0) statistical analysis. Additionally, semi-structured interviews were conducted during working hours with 10 staff members across key operational departments, including HR, warehousing, transportation, IT, quality control, and health and safety, to provide deeper insight into the research topic.

5 RESEARCH RESULTS

5.1 Evaluating the reliability and validity of the study instrument

This test evaluates the internal consistency of a research instrument by assessing the correlation between two halved subsets of items. The instrument is divided into two equivalent halves, and the degree of agreement between them is measured to determine whether the scale items reliably measure the targeted variable. The initial correlation between the halves is calculated using Spearman's rank correlation coefficient, while the overall split-half reliability adjusted for full-test length is determined using the Guttman split-half coefficient (or Spearman-Brown formula). These results are summarized in the table below:

Table 1. Split-Half Reliability Test

Items	Content	Spearman-Brown Coefficient			Cronbach's Alpha	
		Items N	Correlation Between Forms	Guttman Split-Half Coefficient	Part 1	Part 2
1	Supply Chain Management	39	0.901	0.948	0.941	0.954
2	Performance Marketing	35	0.870	0.930	0.938	0.942
Total		74	0.960	0.959	0.939	0.948

Source: Prepared by the authors based on SPSS outputs

The results presented in the table indicate strong reliability across both sections, evidenced by high Guttman split-half coefficients of 0.948 for the first section and 0.930 for the second. These values confirm the high reliability and validity of the study instrument, which is the questionnaire, demonstrating its suitability for replication under equivalent conditions.

5.2 Cronbach's Alpha Test

Cronbach's alpha coefficient was calculated to evaluate the internal consistency reliability of the research instrument, ensuring that all scale items reliably measure their designated constructs. A

Cronbach's alpha value of 0.70 or higher is generally accepted as demonstrating good internal reliability, with values near 0.70 considered acceptable in exploratory research. Furthermore, construct validity was estimated using the virtue of content/intrinsic validity (calculated as the square root of the reliability). The resulting reliability and validity coefficients are presented in Table 2.

As presented in Table 2, all studied dimensions exhibited remarkably high internal consistency, with Cronbach's alpha values ranging from 0.865 for Information Technology to 0.972 for Supply Chain Management. The overall questionnaire

demonstrated an exceptionally strong reliability score of 0.984. Furthermore, criterion validity values ranged from 0.935 to 0.983 across individual dimensions, reaching 0.991 for the

instrument as a whole. These psychometric properties confirm that the survey instrument possesses high reliability, construct integrity, and internal consistency.

Table 2. Cronbach's Alpha Coefficient Test and Construct Validity

Dimensions	No.	alpha	Criterion Validity	Correlation coefficient	SIG
SRM	10	0.875	0.935	0.939	0.000
CRM	11	0.941	0.970	0.853	0.000
Logistics	11	0.934	0.966	0.941	0.000
IT	7	0.865	0.933	0.944	0.000
SCM	39	0.972	0.985	—	0.000
Financial performance	12	0.936	0.967	0.887	0.000
En	10	0.927	0.962	0.875	0.000
Social	13	0.929	0.963	0.941	0.000
Performance marketing	35	0.967	0.983	—	0.000
TOTAL	74	0.984	0.991	—	

Source: Prepared by the authors based on SPSS outputs

5.3 Construct Validity of the Study Instrument's Axes

The table reveals that all correlation coefficients across the various questionnaire domains are statistically significant at the $p < 0.01$ level. This indicates strong construct validity between each domain of the study and the total score of the questionnaire. Consequently, it can be concluded

that all domains accurately reflect the underlying concepts they were designed to measure.

5.4 Descriptive Statistics

To provide a comprehensive profile of the study sample comprising employees of the NUMILOG Company, the descriptive statistics gathered from the questionnaire are presented in Table 3.

Table 3. Descriptive Statistics

	Description	Frequency	Percentage
Platform	Setif	21	35
	Oran	19	33.3
	El-khroub	20	31.7
Gender	Male	60	100
	Female	0	0
Age	Under 30 years old	13	21.7
	30 to under 40 years old	34	56.7
	40 to under 50 years old	12	20
	50 years old and over	1	1.7
Educational level	Secondary or lower	2	3.3
	Vocational training	3	5
	University	54	90
	Postgraduate studies	1	1.7
Experience	Under five years old	12	20
	5 to under 10 years old	36	60
	10 years and over	12	20
Departement	SCM Department	35	58.3
	HR Department	6	10
	IT Department	9	15
	Quality and Industrial	10	16.7
	Safety Department		

Source: Prepared by the authors based on SPSS outputs

The sample is distributed almost evenly across the three studied platforms, with the highest proportion recorded at the Setif platform (35%), followed by Oran (33.3%) and El Khroub (31.7%), reflecting a balanced representation of NUMILOG's workforce. Regarding gender composition, the sample consists entirely of male employees (100%). This distribution is largely attributable to the operational nature of logistics platforms encompassing warehousing, cargo handling, transportation, and heavy vehicle driving, which have traditionally been male-dominated roles. In terms of age demographics, the 30–40 age bracket constitutes the largest segment (56.7%), followed by respondents under 30 years of age (21.7%), pointing to an optimal equilibrium between dynamic productivity and industry experience. Regarding educational attainment, a substantial majority (90%) hold a university degree. This underscores NUMILOG's strong reliance on a highly educated workforce capable of adapting to rapid organizational and technological advancements. With respect to professional seniority, the predominant concentration of employees possessing 5 to less than 10 years of experience indicates that the organization relies primarily on mid-career staff who effectively bridge theoretical knowledge with practical expertise. Finally, across functional divisions, over half of the sample (58.3%) operates within the Supply Chain Management (SCM) department. Given that logistics and transport constitute NUMILOG's core business model, this concentration reflects the critical need for specialized personnel to maintain logistical efficiency across operations.

5.5 Analysis of Sample Responses across the Study's Two Main Axes

This section presents a descriptive statistical analysis of the respondents' evaluations across the two main axes of the study instrument: the independent variable (Supply Chain Management) and the dependent variable (Marketing Performance). The analysis evaluates the arithmetic means, standard deviations, and overall degrees of agreement for each dimension, followed by an interpretation of the empirical findings.

Table 4. Analysis of Sample Responses: Supply Chain Management

Dimensions	Mean	Std. Dev	Agreement Level	A
SRM	4.3817	0.32806	Strongly agree	4
CRM	4.4803	0.40762	Strongly agree	2
Logistics	4.5136	0.39354	Strongly agree	1
IT	4.4143	0.36322	Strongly agree	3
SCM	4.4475	0.34397	Strongly Agree	

Source: Prepared by the authors based on SPSS outputs

Table 4 shows that there is a high degree of agreement among the sample members, reflecting a positive perception of the importance of these dimensions in supply chain management. The supply chain management dimension achieved a mean score of 4.4475 and a standard deviation of 0.34397.

The statements regarding Logistics ranked first, followed by Customer Relationship Management, then Information Technology, and finally Supplier Relationship Management.

Table 5 shows that there is a high degree of agreement among the sample members, reflecting a positive perception of the importance of these dimensions in marketing performance. The performance marketing dimension achieved a mean score of 4.3648 and a standard deviation of 0.33200. The statements regarding Social Performance ranked first, followed by Financial Performance, and finally Environmental Performance.

Table 5. Analysis of Sample Responses: Performance Marketing

Dimensions	Mean	Std. Dev	Agreement Level	A
FP	4.3904	0.38678	Strongly agree	2
EP	4.3067	0.35884	Strongly agree	3
SP	4.3974	0.36029	Strongly agree	1
PM	4.3648	0.33200	Strongly agree	

Source: Prepared by the authors based on SPSS outputs

6 TESTING THE STUDY HYPOTHESES

Hypothesis testing is a fundamental step in scientific research, serving to confirm the relationships between studied variables using appropriate statistical and econometric methods. Once the study model is evaluated and its fit and validity are confirmed, the analysis proceeds to hypothesis testing. This stage determines the extent to which empirical data supports the theoretical predictions derived from literature. Finally, the findings are analyzed and interpreted relative to the research objectives to draw definitive conclusions regarding the effect of the independent variable on the dependent variable.

Table 6. Normality Test

Variables	Skewness		Kurtosis	
	Statistical values	Std. Error	Statistical values	Std. Error
SRM	0.353	0.309	-1.060	0.608
CRM	-0.100	0.309	-1.606	0.608
Logistics	0.259	0.309	-1.594	0.608
IT	0.148	0.309	-1.383	0.608
SCM	-0.061	0.309	-1.375	0.608
FP	0.201	0.309	-1.437	0.608
EP	0.909	0.309	-0.657	0.608
SP	0.400	0.309	-1.141	0.608
PM	0.432	0.309	-0.838	0.608

Source: Prepared by the authors based on SPSS outputs

From Table 6, it is observed that all study variables approximate a normal distribution, as the skewness values range between -0.061 and -0.909, and the kurtosis values fall between -0.657 and -1.606. These values fall within acceptable limits for normality, justifying the use of parametric statistical tools for subsequent hypothesis testing and structural model analysis.

6.1 Testing the main hypothesis

6.1.1 Normality test

Prior to testing the research hypotheses, it is essential to evaluate the univariate normality of the study variables. Normality was assessed using the coefficients of Skewness and Kurtosis. According to established statistical guidelines (Kline, 2011), absolute skewness values within the range of -3 to +3 and absolute kurtosis values within -7 to +7 indicate an acceptable threshold for normal distribution. Table 6 presents the calculated skewness and kurtosis metrics for each dimension.

6.1.2 Regression Analysis of Variance (ANOVA)

Before testing the main hypothesis, an Analysis of Variance (ANOVA) for the regression model was conducted to confirm the model's overall fit and suitability for hypothesis testing. The results are presented in Table 7.

Table 7. Analysis Of Variance

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.533	1	5.533	330.913	.000 ^b
	Residual	0.970	58	0.017		
	Total	6.503	59			
a. Dependent Variable: Performance marketing						
b. Predictors: (Constant), Supply chain management						

Source: Prepared by the authors based on SPSS outputs

Table 7 displays the Analysis of Variance (ANOVA) used to assess the overall significance and validity of the regression model for testing the main hypothesis, specifically, the effect of the independent variable (supply chain management) on the dependent variable (marketing Performance). The calculated F value of 330.913 with a significance level of $p < 0.001$ (which is less than the standard threshold of 0.05) indicates that the overall regression model is statistically significant. This confirms the goodness-of-fit of the model, demonstrating that supply chain

management significantly predicts performance marketing and validating the model for subsequent hypothesis testing.

6.1.3 Model Summary and the Coefficient of Determination (R^2)

This analysis evaluates the explanatory power of the regression model by measuring the extent to which variations in the dependent variable are explained by the independent variable. This relationship is quantified using the coefficient of determination (R^2), as presented in Table 8.

Table 8. Correlation coefficient for testing the main hypothesis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.922 ^a	0.851	0.848	0.12931
a. Predictors: (Constant), Supply chain management)				

Source: Prepared by the authors based on SPSS outputs

Table 8 presents the model summary for testing the main hypothesis, illustrating the strength of the relationship between the independent variable (Supply Chain Management) and the dependent variable (Performance Marketing). The correlation coefficient ($R = 0.922$) indicates a strong positive relationship between the two variables. The coefficient of determination ($R^2 = 0.851$) shows that 85.1% of the variance in performance marketing is explained by supply chain management. Furthermore, the adjusted coefficient of determination (Adjusted $R^2 = 0.848$) confirms that 84.8% of the variance is accounted for after

adjusting for the model's degrees of freedom. Finally, the standard error of the estimate 0.12931 reflects high estimation accuracy, as values closer to zero indicate a better model fit.

6.1.4 Simple linear regression analysis to test the main hypothesis

This section presents the results of the simple linear regression analysis conducted to evaluate the effect of the independent variable on the dependent variable. The detailed statistical metrics are summarized in Table 9

Table 9. Simple Linear Regression Analysis to Test the Main Hypothesis

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	0.405	0.218		1.855	0.066
	SCM	0.890	0.046	0.922	19.191	0.000
a. Dependent Variable: Performance marketing						

Source: Prepared by the authors based on SPSS outputs

The table presents the results of the simple linear regression analysis conducted to evaluate the impact of Supply Chain Management on performance marketing. The unstandardized constant ($\beta = 0.405$, $t = 1.855$, $p = 0.066$) represents the baseline level of performance

marketing when SCM is zero. The unstandardized regression coefficient ($\beta = 0.890$) indicates that a one-unit increase in supply chain management leads to a 0.890-unit increase in performance marketing. This strong positive effect is further supported by the standardized coefficient

($\beta = 0.922$). The calculated t-statistic for SCM ($t = 19.191$, $p < 0.001$) is statistically significant at the $\alpha = 0.05$ level. Consequently, the null hypothesis (**H0**) is rejected, and the main alternative hypothesis (**H1**) is accepted, confirming that Supply Chain Management has a statistically significant positive effect on the performance marketing of CEVITAL Group.

Subhypotheses, both the null (**H0**) and alternative (**H1**), were formulated to assess the statistical significance of the effect of the independent variable dimensions on the dependent variable:

H0: Supply chain management, across its individual dimensions, has no statistically significant effect on the performance

marketing of the CEVITAL Group at the $\alpha = 0.05$ significance level.

H1: Supply chain management, across its individual dimensions, has a statistically significant effect on the performance marketing of the CEVITAL Group at the $\alpha = 0.05$ significance level.

6.2 Testing the Subhypothesis

6.2.1 Analysis of Variance (ANOVA) for Regression to Test the Subhypothesis

Before proceeding to test the sub-hypothesis, the results of the Analysis of Variance (ANOVA) were used to ensure the model's suitability for testing this hypothesis, as shown in Table 10.

Table 10. Analysis of Variance

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.583	4	1.396	83.407	0.000 ^b
	Residual	0.920	55	0.017		
	Total	6.503	59			
a. Dependent Variable: Performance marketing						
b. Predictors: (Constant), SRM, CRM, Logistics, IT						

Source: Prepared by the authors based on SPSS outputs

The table presents the Analysis of Variance (ANOVA) results used to evaluate the overall validity of the multiple regression model for testing the first sub-hypothesis. This hypothesis examines the impact of the dimensions of supply chain management (independent variables) on performance marketing (dependent variable). The

calculated F-statistic of 83.407 with a significance level of $p < 0.001$ (less than the threshold of 0.05) demonstrates that the overall model is statistically significant. These results confirm the goodness-of-fit of the model, establishing its validity and reliability for testing the sub-hypothesis.

Table 11. Coefficient of determination for testing the sub-hypothesis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.927 ^a	0.858	0.848	0.12936
a. Predictors: (Constant), dimensions of SCM				

Source: Prepared by the authors based on SPSS outputs

Table 11 presents the model summary for testing the sub-hypothesis, illustrating the strength of the relationship between the independent dimensions of (Supply Chain Management) and the dependent variable (Performance Marketing). The correlation coefficient ($R = 0.927$) indicates a strong positive relationship between the variables. Specifically, the coefficient of determination ($R^2 = 0.858$) shows that 85.8% of the variance in performance marketing is explained by the SCM

dimensions. Furthermore, the adjusted coefficient of determination (Adjusted $R^2 = 0.848$) confirms that 84.8% of the variance remains reliably accounted for after adjusting for the degrees of freedom. Finally, the standard error of the estimate 0.12936 reflects high estimation accuracy, as values closer to zero indicate a better model fit.

6.2.2 Multiple Linear Regression Analysis for Testing the Sub-Hypothesis

Multiple linear regression analysis was conducted to assess the impact of the independent variables

(supply chain management dimensions) on the dependent variable (marketing performance). The resulting statistical parameters were used to evaluate and verify the proposed sub-hypothesis.

Table 12. Results of multiple linear regression analysis for testing the first sub-hypothesis

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.307	0.233		1.317	0.190
SRM x1	0.319	0.080	0.316	4.015	0.000
CRM x2	0.248	0.090	0.305	2.763	0.008
Logistics x3	0.088	0.098	0.104	0.902	0.396
IT x4	0.260	0.109	0.285	2.392	0.020

a. Dependent Variable: Performance marketing

Source: Prepared by the authors based on SPSS outputs

The multiple linear regression analysis examined the effect of supply chain management dimensions on performance marketing in CEVITAL Group. The findings indicate that the three dimensions “supplier relationship management, customer relationship management, information technology” have positive and statistically significant effects on performance marketing ($p < 0.05$). Among these, supplier relationship management had the strongest influence ($\beta = 0.316$), followed by customer relationship management ($\beta = 0.305$) and information technology ($\beta = 0.285$). The results revealed that logistics did not have a statistically significant effect ($\beta = 0.104$, $p > 0.05$), indicating that its impact on enhancing performance marketing remains insignificant within the current study sample. Overall, the findings confirm that effective supply chain management enhances marketing performance through the other dimensions, with supplier relationships playing the most paramount role. Consequently, the alternative hypotheses were accepted for the remaining three dimensions, whereas the null hypothesis was accepted for the logistics dimension. This confirms the presence of statistically significant positive effects for most supply chain management dimensions on performance marketing at the $\alpha \leq 0.05$ significance level, with the exception of logistics.

7 DISCUSSION

The study results showed that supplier relationship management (SRM) ranked first in terms of its impact on CEVITAL 's performance marketing, given its role in securing the raw materials, supplies, and packaging necessary for production. Within the subsidiary NUMILOG, which is responsible for supply chain management, SRM directly and effectively enhances the performance marketing of the Cevital Group, as strong partnerships ensure the timely provision of raw and packaging materials in the required quality and quantity. This continuous flow helps guarantee the uninterrupted continuity of the production process for various products and enables swift fulfillment of customer orders, while reducing the risk of stock shortages. Furthermore, the role of suppliers goes beyond traditional supply to become strategic partners who provide the group with modern technologies, innovative ideas, and eco-friendly materials, thereby enhancing its market reputation and meeting the expectations of customers concerned with sustainability and social responsibility.

SRM contributes to cost reduction, consistent with the study by Sinthiya (2023), which confirmed that SRM plays a pivotal role in enhancing the efficiency of procurement processes, especially in reducing organizational costs. It also improves the quality of raw materials, enhances the group's profitability, and increases its market share through price negotiation, ensuring supply

continuity, and preventing disruptions and delays. This guarantees uninterrupted production and a steady flow of products to markets, boosting sales and reducing costs. Furthermore, suppliers' commitment to quality is reflected in product quality and a reduction in returns and complaints. This result is consistent with the study by Amoako-Gyampah et al. (2019), which found that local companies in Ghana derive greater benefits from investments in Supplier Relationship Management (SRM) compared to foreign firms. Furthermore, it highlighted the need for the studied companies to fully understand the benefits and advantages of SRM (Amiri et al., 2025). It also demonstrates how companies can deploy social sustainability practices across their supply chains through the effective management of supplier relationships. On the other hand, SRM directly influences environmental performance, as evidenced by Sosnowski (2019). Through the synthesis of Polish and international literature, that study identified key theoretical frameworks linking environmental cooperation and coordination to enhanced supplier relationships.

Customer relationship management (CRM) came in second place, contributing to building strong and sustainable relationships with customers, which enhances their satisfaction and increases sales and profitability. This is achieved by understanding their needs and designing services that meet their requirements, in addition to reducing customer churn. These findings are consistent with the study by Bright & Dumo (2016), which identified a positive relationship between customer satisfaction and increased market share, and with the study by Ijomah et al. (2024), which demonstrated the role of CRM tools in boosting sales growth and improving customer data management.

At CEVITAL Group, the customer base consists of subsidiaries that utilize NUMILOG for transportation and inventory management. The relationship is characterized by transparency, continuous evaluation, and complaint handling, leading to increased sales, reduced costs, and enhanced profitability, as demonstrated by the study of Boukabara et al. (2024). Furthermore, electronic communication tools, such as email and social media platforms, help reduce paper waste and lower the company's carbon footprint, a finding corroborated by the study by Ferrer-

Estévez and Chalmeta (2023), which has generated a significant and important positive social and environmental impact on society, as it will lead to an increase in the number of environmentally and socially conscious customers who adopt ethical behavior, as well as transforming business processes, products, and services, and making them more sustainable. This was also confirmed by the company's staff. The group's customer relationship management system measures its social performance and promotes its initiatives through surveys and interviews with internal and external customers, facilitating interaction with various stakeholders, as demonstrated by the study by Lee and Yang (2022).

Information technology (IT) ranked third in its impact on performance marketing, providing solutions for digital transformation, market expansion, improved understanding of customer needs, and operational efficiency. As confirmed by Wahyudi (2024), the research findings confirmed that supply chain management and information technology have a significant and positive impact on the operational performance of SMEs in Makassar. Furthermore, the research results by Al Habsi et al. (2023) highlighted the significant benefits of leveraging information technology in warehouse management, including increased profitability and accelerated workflow, particularly within inventory management. Transportation officials also emphasized that efficient transportation systems significantly reduce costs by shortening delivery times, improving route planning, and lowering storage costs, as confirmed by Abu Sied (2024). Furthermore, information technology supports supply chain management through enterprise resource planning (ERP) systems, improving information flow, reducing delays and excess inventory, automating warehouses, streamlining transportation, and lowering operational costs and financial risks, thereby increasing operational efficiency and revenue, as confirmed by Elvin and Munawar (2020). The study results showed that information technology has a positive impact on increasing cost-effectiveness, and that these capabilities contribute to improving the performance of small and medium-sized enterprises.

Information technology also contributes to improved energy efficiency through energy management and warehouse monitoring systems, the use of intelligent transportation systems to optimize routes and reduce fuel consumption and emissions, and the adoption of electric equipment for loading and handling, which was explicitly validated by the IT and the quality and environment managers during the field interviews. Conversely, it helps to improve job satisfaction, reduce arduous work and injuries, achieve work-life balance, and enhance communication and coordination among employees. By improving workplace environment indicators, whether physical or social, and the organization's commitment to them, the workplace becomes more suitable and can improve the work atmosphere for employees. This is consistent with the study of Indriyanto (2023). Furthermore, it helps improve job satisfaction, reduce strenuous work and injuries, achieve work-life balance, enhance communication and coordination among employees, and supports the implementation of social responsibility programs through data collection and the organization of community initiatives, as is the case with the group, a point emphasized by the research of Ratna & Kaur (2015).

Contrary to expectations, logistics services did not show a statistically significant impact on marketing performance. While logistics ranked fourth in relative weight, its statistical effect remained insignificant within the study sample. This finding presents an insightful paradox given the strong logistical infrastructure of the CEVITAL group, where NUMILOG operates an advanced network of dry and cold storage platforms and a modern transport fleet.

Conceptually, this result can be best interpreted through the lens of the Ceiling Effect. In organizational theory, a Ceiling Effect occurs when a core operational dimension reaches such an advanced level of maturity and standardization that further performance variations no longer yield statistically detectable impacts on market outcomes. "Ceiling effects are related to, but different from, performance asymptotes. Asymptotes occur when participants' scores cannot exceed a specific value with more information, additional practice, or retests" (Wang et al. 2014, p. 477).

Rather than indicating a weakness, this non-significant result implies that high-level logistics has become a standardized, baseline operational requirement within the group. Because NUMILOG already operates at high efficiency in streamlining transport, reducing storage costs, and eliminating waste, these operations ensure business continuity, but no longer serve as a direct driver for marketing differentiation or sales growth. Consequently, this finding contrasts directly with previous literature. It diverges from Abu Sied (2024) and Zimon (2015), who reported a direct, significant influence of logistics efficiency on corporate financial and overall performance. Furthermore, it contrasts with the works of Dhooma & Baker (2012) and McKinnon (2018) regarding the statistical impact of sustainable logistics practices such as warehouse energy optimization, LED lighting adoption, shifting to electric handling equipment, waste recycling, and optimizing vehicle routes to minimize carbon emissions. While these green and operational practices are rigorously applied by NUMILOG, their direct influence in this study remains limited to operational resilience and environmental compliance rather than driving statistical variance in performance marketing. Qualitative insights from field visits to NUMILOG platforms further confirm that logistics also plays a fundamental social role by generating employment across CEVITAL's 18,000+ workforce, enforcing rigorous workplace safety standards, and engaging with local communities through the NUMILOG Foundation. In conclusion, while NUMILOG's logistical prowess is essential for operational excellence and corporate social responsibility (CSR), it acts as an indispensable structural pillar rather than a direct statistical determinant of performance marketing.

8 CONCLUSION

Given the importance of supply chain management and its increasing impact on various aspects of organizations, especially considering contemporary economic and environmental challenges, our study aimed to answer the research question: «What is the impact of supply chain management on performance marketing within the CEVITAL Group?» To test the hypotheses, a review of literature on supply chain management and performance marketing was

presented, clarifying the relationship between the two variables. The study also examined the current state of supply chain management and performance marketing at CEVITAL Group, which relies on its subsidiary NUMILOG for its logistics activities. A questionnaire was distributed to NUMILOG, and interviews were conducted with managers and staff from the three platforms. Our study found that the sample consisted of 60 male employees from NUMILOG, the supply chain subsidiary of the CEVITAL Group, and revealed a workforce characterized by a balanced age distribution and a high educational level, with 90% holding university degrees to support technological adaptability. The all-male composition of the participants was attributed to the physically demanding nature of warehousing and logistics roles. Ultimately, the research concluded that major dimensions of supply chain management, specifically supplier relationship management, customer relationship management, and information technology, significantly impact the performance marketing of the CEVITAL Group, whereas the effect of logistics was found to be not statistically significant.

Based on our theoretical study, drawing on various references and previous studies that addressed these two variables, as well as the results of the applied study, we can offer a set of proposals and recommendations. These include working to sustain relationships with suppliers and customers, as they are the primary drivers of the supply chain, and strengthening the environmental and social responsibility of organizations. It is also essential to promote modern technologies in supply chain management, including the Internet of Things (IoT) and artificial intelligence (AI) tools, especially given the rapid changes occurring in global markets. On the other hand, our study also suggests developing marketing and logistics policies based on Smart Data Analytics, which leads to higher levels of marketing performance, especially in the dynamic business environment. This requires constant commitment to maintenance and monitoring of warehouses, trucks, and handling equipment, as all these elements play a crucial role in ensuring the safety of all employees, creating a safe working environment, and protecting them from all risks

that may occur while performing their work. Our study also suggests adopting renewable energy within warehouses, especially with the increasing need for environmental sustainability and reducing operational costs. Adopting renewable energy within warehouses has become a strategic step that contributes to improving logistics operations and reducing the environmental footprint of institutions.

9 FUTURE DIRECTIONS AND RESEARCH HORIZONS

Although this study attempted to address the primary dimensions governing the relationship between the core research variables, the theoretical framework and empirical model can be further expanded. To extend the scope of this inquiry and address emerging research gaps, several promising avenues for future research are proposed:

- Integrating Artificial Intelligence (AI) and the Internet of Things (IoT) in SCM: Investigating the deployment of AI and IoT within supply chain operations and evaluating their downstream impacts on organizational marketing performance.
- Blockchain Technology, Supply Chain Transparency, and Cost Reduction: Examining the influence of blockchain integration on enhancing supply chain transparency and mitigating operational costs, alongside its indirect effect on building customer trust and elevating marketing performance.
- Lean Supply Chain Strategies and Marketing Performance: Assessing the impact of lean supply chain practices on the marketing performance of economic enterprises, with a specific analytical focus on customer satisfaction and market share expansion.
- Customer Relationship Management (CRM) and Environmental Performance: Analyzing the direct and indirect effects of CRM strategies on driving environmental performance within the logistics services sector.
- Big Data Analytics in Strategic Marketing Decisions: Exploring the role of big data analytics in optimizing marketing decision-making processes and enhancing the overall

- marketing performance of multinational corporations.
- Reverse Logistics Policies and Environmental Sustainability: Evaluating reverse logistics practices and their measurable outcomes on the environmental performance of industrial and economic entities.
- Furthermore, scholars are encouraged to replicate and revalidate the conceptual model established in this study across distinct sectoral contexts. Specifically, extending the empirical investigation to the pharmaceutical sector and medical supply chains would provide valuable cross-industry generalizability and comparative insights.

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