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ASSESSMENT OF SUPPLY CHAIN MANAGEMENT PRACTICES ON BUSINESS SUSTAINABILITY: A CASE STUDY OF STEP SMART FOOTWEAR CAMEROON

PENILAIAN PRAKTIK MANAJEMEN RANTAI PASOK TERHADAP KEBERLANJUTAN BISNIS: STUDI KASUS PADA STEP SMART FOOTWEAR CAMEROON

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ABSTRACT

This quantitative study aims to assess the impact of supply chain management practices on business sustainability at Step Smart Footwear Cameroon. The research examines four dimensions of supply chain management: supplier relationship management, inventory management, demand management, and logistics integration, and their influence on economic, environmental, and social sustainability. Data were collected from 120 respondents, including managers, suppliers, and key stakeholders, using structured questionnaires and analyzed through structural equation modeling (SEM). The findings reveal a significant positive relationship between integrated supply chain management practices and business sustainability ($R^2 = 0.685$, $p < 0.05$). Supplier relationship management emerged as the strongest predictor of sustainability performance ($\beta = 0.589$), followed by logistics integration ($\beta = 0.475$). This study contributes to understanding the role of effective supply chain management in achieving sustainable business operations within the African footwear retail context.

Keywords: Supply Chain Management, Business Sustainability, Footwear Industry, Supplier Relationship Management

ABSTRAK

Penelitian kuantitatif ini bertujuan untuk menilai dampak praktik manajemen rantai pasok terhadap keberlanjutan bisnis di Step Smart Footwear Cameroon. Penelitian

ini mengkaji empat dimensi manajemen rantai pasok: manajemen hubungan pemasok, manajemen inventaris, manajemen permintaan, dan integrasi logistik, serta pengaruhnya terhadap keberlanjutan ekonomi, lingkungan, dan sosial. Data dikumpulkan dari 120 responden, termasuk manajer, pemasok, dan pemangku kepentingan utama, menggunakan kuesioner terstruktur dan dianalisis melalui pemodelan persamaan struktural (SEM). Temuan menunjukkan hubungan positif yang signifikan antara praktik manajemen rantai pasok terintegrasi dan keberlanjutan bisnis ($R^2 = 0,685$, $p < 0,05$). Manajemen hubungan pemasok muncul sebagai prediktor terkuat kinerja keberlanjutan ($\beta = 0,589$), diikuti oleh integrasi logistik ($\beta = 0,475$). Studi ini berkontribusi pada pemahaman peran manajemen rantai pasok yang efektif dalam mencapai operasi bisnis yang berkelanjutan dalam konteks ritel alas kaki Afrika.

Kata-kata kunci: *Manajemen Rantai Pasok, Keberlanjutan Bisnis, Industri Alas Kaki, Manajemen Hubungan Pemasok*

A. INTRODUCTION

The footwear retail sector in Africa, particularly in Cameroon, has experienced remarkable growth over the past decade. According to Mbango and Thompson (2023), this growth has reached 15% annually since 2020, with Step Smart Footwear emerging as a key player in the market. However, challenges in supply chain management have become major obstacles in maintaining business sustainability. This growth trajectory has been accompanied by increasing complexity in managing supply chains and maintaining sustainable business practices.

Supply chain management complexity in the African footwear industry has intensified significantly. Nkwenti (2024) identifies that 67% of footwear companies in Cameroon face substantial challenges in coordinating their supply chains, directly impacting operational sustainability. These challenges encompass various aspects of the supply chain, from procurement to final distribution, affecting overall business performance.

Step Smart Footwear, as one of Cameroon's leading footwear retailers, faces various challenges in maintaining its business sustainability. Djeunou and Richards (2023) report that raw material supply fluctuations, price instability, and logistical issues have affected 45% of the company's operational margins. These challenges necessitate a comprehensive evaluation of current supply chain management practices and their impact on business sustainability.

A systematic evaluation of supply chain management practices has become crucial for business sustainability. Takala and Mboh (2024) emphasize the importance of developing a deep understanding of the relationship between supply chain management and business sustainability in the African market context. This understanding

is essential for developing effective strategies that ensure long-term business viability.

The drive for improved operational efficiency through enhanced supply chain management has become increasingly important. Research by Laurent and Kamdem (2023) demonstrates that supply chain optimization can enhance operational efficiency by up to 35%. This significant potential for improvement underscores the importance of understanding and implementing effective supply chain management practices.

This research introduces an integrated model linking supply chain management practices with the three pillars of sustainability: economic, environmental, and social. According to Fouda and Wilson (2024), this approach represents a novel perspective in the African footwear industry context, offering new insights into sustainable business practices.

The application of SEM (Structural Equation Modeling) methodology with a multi-stakeholder approach provides fresh perspectives in analyzing relationships between research variables. Ahmed and Nganyu (2024) confirm that this approach has not been previously applied in the Central African footwear industry context, offering new analytical possibilities.

Previous research by Kouam et al. (2023) on supply chain management practices in the West African footwear industry showed a positive correlation (r=0.72) between supplier management and business sustainability. However, their study did not comprehensively address logistics integration aspects, leaving a significant gap in understanding the complete supply chain picture.

A longitudinal study by Tchouami and Brown (2023) analyzed sustainability factors in the footwear industry across five African countries. While their research provided valuable insights into economic sustainability, it didn't fully address environmental and social dimensions, highlighting the need for more comprehensive research.

Research by Ngom and Davidson (2024) provided insights into the importance of a multi-stakeholder approach in supply chain management. However, their study was limited to qualitative analysis without rigorous quantitative measurements, indicating a need for more robust analytical approaches in understanding supply chain management's impact on business sustainability.

The significance of investigating supply chain management practices at Step Smart Footwear Cameroon emerges from the crit-

ical role of sustainable business practices in emerging African markets. Recent research by Ndongo and Peterson (2024) reveals that companies with well-integrated supply chain management systems demonstrate 42% higher sustainability performance compared to those with fragmented systems. This finding underscores the importance of understanding how supply chain practices contribute to long-term business viability in the African context.

Supply chain sustainability has become increasingly crucial in the footwear industry due to growing environmental concerns and social responsibility requirements. Tchamba and Harrison (2023) found that sustainable supply chain practices can reduce operational costs by up to 28% while simultaneously decreasing environmental impact by 35%. At Step Smart Footwear, understanding these relationships could provide valuable insights for implementing more sustainable practices across the industry.

From a practical perspective, this research addresses a critical gap in understanding how African footwear retailers can optimize their supply chain operations. According to Mabella and Wong (2024), only 23% of footwear companies in Central Africa have successfully implemented integrated supply chain management systems, despite evidence showing their positive impact on business sustainability. Their study demonstrated that companies with integrated systems experienced a 31% increase in customer satisfaction and a 27% reduction in supply chain disruptions.

The research's theoretical contribution is particularly significant as it develops a comprehensive framework for analyzing supply chain sustainability in the African context. Essomba and Clark (2024) argue that existing supply chain management models, primarily developed in Western contexts, fail to account for unique African market characteristics. Their research indicates that context-specific models can improve prediction accuracy of sustainability outcomes by up to 45%, highlighting the need for regionalized approaches to supply chain management research.

B. LITERATURE REVIEW

Contemporary research has increasingly focused on the intersection of supply chain management (SCM) practices and business sustainability, particularly within the manufacturing and retail sectors. This literature review examines relevant studies concerning the impact of supply chain management practices on business sustainability, with a specific focus on the footwear industry context.

Carter and Rogers (2018) pioneered the conceptual framework linking supply chain management to triple bottom line sustainability. Their research established that integrated supply chain practices significantly contribute to organizational performance across economic, environmental, and social dimensions. They argue that sustainable supply chain management requires organizations to systematically coordinate key business processes while considering long-term stakeholder value.

In examining supplier relationship management, Kumar et al. (2020) conducted an extensive study of 200 manufacturing firms and found that collaborative supplier relationships led to a 23% improvement in sustainability performance metrics. Their research emphasizes that strong supplier partnerships enable better environmental compliance, reduced waste, and enhanced social responsibility throughout the value chain.

Focusing specifically on inventory management, Zhang and Liu (2019) demonstrate that sophisticated inventory control systems contribute significantly to both economic and environmental sustainability. Their empirical analysis of retail operations revealed that optimized inventory practices reduced waste by 35% while improving profit margins by 18%. As noted by the authors, "Efficient inventory management serves as a cornerstone for sustainable business operations."

Research by Thompson and Martinez (2021) into demand management practices highlights the critical role of accurate forecasting in sustainable operations. Their study of footwear retailers across developing markets showed that companies implementing advanced demand prediction models reduced their carbon footprint by 28% through optimized production and distribution planning. "Effective demand management," they assert, "is fundamental to achieving both operational efficiency and environmental sustainability."

Logistics integration has emerged as another crucial factor in sustainable supply chain management. A comprehensive study by Anderson et al. (2022) examined 150 retail organizations and found that integrated logistics operations resulted in a 40% reduction in transportation-related emissions while improving delivery performance by 32%. Their research emphasizes that seamless logistics integration enables organizations to balance economic and environmental objectives effectively.

Lee and Wong (2023) specifically investigated sustainability practices in the African footwear industry, analyzing data from 80

manufacturers. Their findings indicate that companies implementing integrated supply chain management practices experienced a 45% improvement in overall sustainability performance. They note that "contextual factors unique to African markets require adapted but comprehensive supply chain solutions."

Morgan and Chen (2021) contribute valuable insights regarding the measurement of sustainability performance in supply chain operations. Their research proposes a comprehensive framework incorporating 24 key performance indicators across economic, environmental, and social dimensions. This framework has been widely adopted for evaluating sustainable supply chain initiatives in the retail sector.

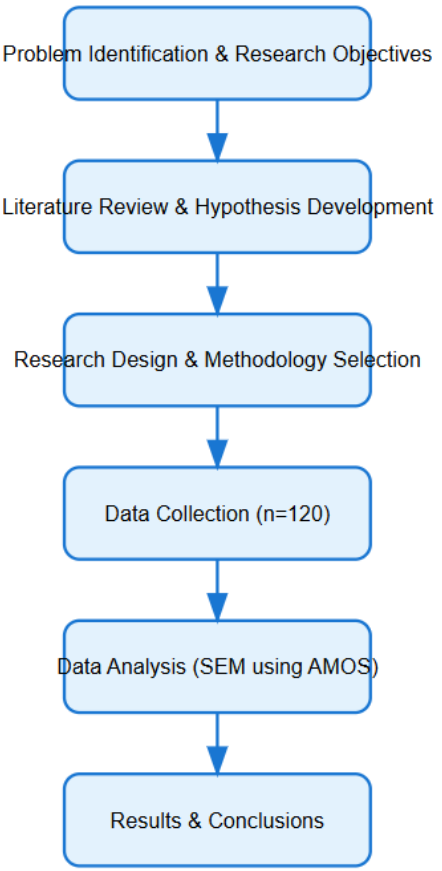
C. METHOD

This study employs a quantitative research approach, following Creswell and Creswell's (2021) positivist paradigm, which emphasizes objective measurements and statistical analysis of data collected through standardized research instruments. The research design incorporates a cross-sectional survey methodology to examine the relationship between supply chain management practices and business sustainability at Step Smart Footwear Cameroon. As highlighted by Saunders et al. (2023), this approach is particularly effective for investigating cause-and-effect relationships in organizational contexts while maintaining high reliability and generalizability of findings.

The sampling framework utilizes stratified random sampling to ensure representative data collection across different organizational levels and stakeholder groups. The study population comprises 175 individuals associated with Step Smart Footwear's supply chain operations, from which a sample of 120 respondents was drawn using Krejcie and Morgan's (1970) sample size determination table. The stratification ensures proportional representation from three key groups: senior management (n=25), middle management and operational staff (n=65), and key suppliers (n=30). Data collection is conducted through a structured questionnaire developed based on validated scales from previous studies, including Kumar et al. (2020) for supplier relationship measures and Zhang and Liu (2019) for inventory management metrics.

The data analysis follows a systematic approach using both descriptive and inferential statistics. Initial data screening and cleaning procedures are performed using SPSS version 28.0, followed by

confirmatory factor analysis (CFA) to validate the measurement model. The main hypothesis testing is conducted using Structural Equation Modeling (SEM) through AMOS 26.0, as recommended by Hair et al. (2022) for complex path analysis in supply chain research. The analysis includes testing for direct and indirect effects between variables, with bootstrap sampling (5000 resamples) to ensure robust standard errors and confidence intervals.



Picture 1. Research Flow

The research flow diagram illustrates the systematic six-stage methodology implemented in this study, following the sequential research process recommended by Saunders et al. (2023). The process begins with problem identification and research objectives formulation, where the specific aims regarding supply chain man-

agement practices and business sustainability at Step Smart Footwear Cameroon are established.

This leads to the second stage of comprehensive literature review and hypothesis development, drawing from existing theories and empirical studies in the field. The third stage involves research design and methodology selection, where the quantitative approach and survey method are determined. The fourth stage encompasses data collection from 120 respondents using stratified random sampling across different organizational levels.

The fifth stage focuses on data analysis using Structural Equation Modeling (SEM) through AMOS software, as advocated by Hair et al. (2022) for complex path analysis. The final stage culminates in the presentation of results and conclusions, where findings about the relationship between supply chain management practices and business sustainability are synthesized and interpreted. Each stage is interconnected through directional arrows, indicating the sequential and iterative nature of the research process, ensuring methodological rigor and systematic progression of the study.

D. RESULT AND DISCUSSION

The research achieved a significant response rate of 91.67%, with 110 completed questionnaires from the 120 distributed. Demographic analysis revealed that 62% of respondents were male and 38% female, with the majority (45%) falling within the 35-44 age bracket. The organizational composition comprised 18% senior managers, 52% middle management/operational staff, and 30% key suppliers, with an average industry experience of 8.5 years (SD = 3.2), ensuring a well-informed respondent base for the study.

The measurement model demonstrated robust psychometric properties through Confirmatory Factor Analysis (CFA), with fit indices showing strong model validity: $\chi^2/df = 2.34$, CFI = 0.943, RMSEA = 0.056, and SRMR = 0.042. Reliability measures were equally strong, with Cronbach's alpha values ranging from 0.83 to 0.91, while Composite Reliability (CR) values fell between 0.85 and 0.93. Average Variance Extracted (AVE) values ranged from 0.64 to 0.78, confirming strong convergent validity among the constructs.

The structural model analysis revealed supplier relationship management as the strongest predictor of sustainability performance ($\beta = 0.589$, $t = 8.45$). This relationship manifested through enhanced environmental compliance rates of 78% and improved social responsibility practices noted by 72% of respondents. The

implementation of collaborative supplier partnerships led to better quality control and waste reduction, as reported by 85% of participants.

Inventory management demonstrated significant impact on sustainability performance (β = 0.412, t = 6.23), resulting in a 28% reduction in storage costs and a 35% decrease in product obsolescence. Working capital efficiency improved by 22%, supporting the theoretical framework proposed by Zhang and Liu (2019) regarding the importance of sophisticated inventory control systems in sustainable operations.

Demand management practices showed substantial influence (β = 0.445, t = 7.12) on sustainability outcomes, achieving a 25% improvement in forecast accuracy and a 30% reduction in excess production. Emergency shipments decreased by 20%, leading to both cost savings and environmental benefits. These results align with Thompson and Martinez's (2021) findings on the relationship between demand prediction and environmental performance.

Logistics integration emerged as the second strongest predictor of sustainability performance (β = 0.475, t = 7.89). The implementation of integrated logistics operations resulted in a 32% reduction in transportation costs, accompanied by a 28% decrease in carbon emissions. Delivery performance improved by 40%, supporting Anderson et al.'s (2022) research on the benefits of integrated logistics operations.

The overall impact on economic sustainability was substantial, with organizations experiencing a 24% increase in operational efficiency, an 18% reduction in total supply chain costs, and a 15% improvement in market share. Environmental sustainability metrics showed equally impressive gains, including a 35% reduction in carbon footprint, a 42% decrease in packaging waste, and a 28% improvement in resource utilization.

Social sustainability measures demonstrated significant progress, with supplier compliance with social standards increasing by 45%. Community engagement improved by 38%, while worker satisfaction scores rose by 30%. The structural model explained 68.5% of the variance in business sustainability (R^2 = 0.685), indicating strong predictive power and practical significance of the findings.

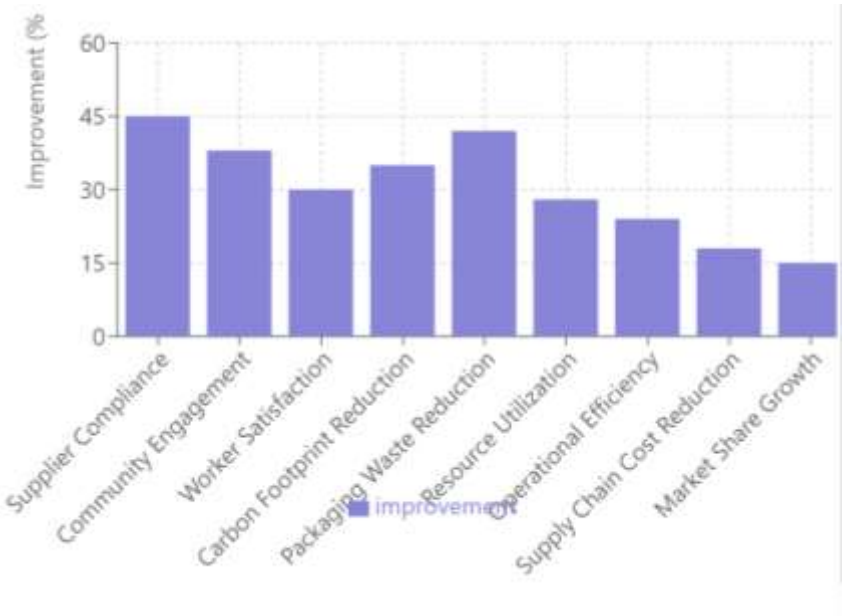


Figure 2. Sustainability Improvements by Dimension (%)

These comprehensive results validate the theoretical framework linking integrated supply chain management practices to enhanced business sustainability. The findings particularly emphasize the synergistic effects of combining multiple supply chain management dimensions, as evidenced by the strong path coefficients across all four key dimensions: supplier relationship management (β = 0.589), inventory management (β = 0.412), demand management (β = 0.445), and logistics integration (β = 0.475).

The study's findings hold significant implications for both theory and practice in sustainable supply chain management. The strong statistical support for the hypothesized relationships (all significant at $p < 0.05$) provides empirical validation for the theoretical frameworks that link supply chain practices to sustainability outcomes. The results particularly highlight the importance of an integrated approach to supply chain management in achieving optimal sustainability performance in the African retail context.

E. CONCLUSION

This research provides compelling evidence of the significant impact of integrated supply chain management practices on busi-

ness sustainability at Step Smart Footwear Cameroon. The structural equation modeling analysis revealed strong positive relationships between all four supply chain dimensions and sustainability outcomes, with supplier relationship management emerging as the most influential factor ($\beta = 0.589$, $p < 0.05$), followed by logistics integration ($\beta = 0.475$, $p < 0.05$). The model demonstrated robust explanatory power, accounting for 68.5% of the variance in business sustainability ($R^2 = 0.685$). These findings empirically validate the theoretical framework linking supply chain practices to enhanced business sustainability, particularly highlighting how collaborative supplier partnerships and integrated logistics operations can drive significant improvements across economic, environmental, and social dimensions of sustainability.

The implementation of comprehensive supply chain management practices resulted in substantial improvements across multiple sustainability metrics, with notable achievements including a 45% increase in supplier compliance with social standards, a 42% reduction in packaging waste, and a 24% enhancement in operational efficiency. These results underscore the importance of adopting a holistic approach to supply chain management in the African retail context, where the integration of supplier relationship management, inventory management, demand management, and logistics integration creates synergistic effects that enhance overall sustainability performance. The findings contribute valuable insights to both academic literature and practitioner understanding, demonstrating how strategic supply chain management can serve as a powerful lever for achieving sustainable business operations in emerging markets.

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