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# The Effect of Supply Chain Management Practices on Coffee Export Performance: Case of Coffee Export Firms in Addis Ababa

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**Abstract**
The key purpose of this study was to investigate the effects of SCM practice on coffee export performance in Ethiopia. The study employed an explanatory research design and used a probability sampling technique to select 226 samples of coffee exporter companies in Addis Ababa Ethiopia that currently operate in the industry. Primary data were collected through structured questionnaires. The data were analyzed using descriptive and inferential statistics by using SPSS version 26. The result of the study has shown that four measuring dimensions of SCMP has a significant effect on export performance, and SSP, and IS have a more significant effect on coffee export performance than the remaining two dimensions of SCM practices. The study suggested that the management should tailor strategies to capitalize on by giving priority to the implementation of SSP and IS practices since they have a more significant effect on coffee export performance than LI and CRM. Furthermore, the coffee exporters and industry should solidify their relationship with key suppliers or business partners, creating an encouraging landscape that maximizes supplier partnership and the momentum of information sharing with their business partners. Finally, investing in modern logistics technologies and responsive customer engagement strategies will further improve export outcomes.
**Keywords:** Export Performance, Supply Chain Management Practice and coffee exporter, Strategic Supplier Partnership and Information Sharing
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## 1. Introduction

Unpredictable environment and globalization have forced organizations to adopt new paradigms for organizational operations. To transcend internal boundaries and collaborate with independent organizations, many have turned to supply chain management (SCM).SCM encompasses planning and managerial activities associated with sourcing and procurement, conversion, and logistics management including functions such planning, shop floor operations, order management, inspections, packaging, and shipment as defined by the Council of Supply Chain Management Professionals,(CSCMP,2016).Effective SCM optimizes the flow of information, goods, and finances, and promotes business process excellence (Lambert & Cooper, 2000; Chopra & Meindl, 2016). Sustainable supply chain management (SSCM), as emphasized by Ahi & Searcy (2013), integrates environmental, economic, and social concerns, aiming to improve performance and long-term value for all stakeholders.

SCM practices are critical for competitiveness in various industries, including agriculture. In order to provide better customer value at lower costs to the entire supply chain, The voluntary integration of economic, environmental, and social factors with significant inter-organizational business systems and upstream and downstream linkages with suppliers and customers is what Ahi & Searcy , (2013) highlighted as sustainable supply chain supply management (SSCM). They also underlined that, in addition to the movement of commodities, SCM gives equal weight to business sustainability, information flows, risk, performance, integration, and the management of broader network links. Similarly in coffee industry, SCM ensures quality, consistency, and timely delivery. Utting (2005) stated that coffee, one of the most traded commodities, has a complex supply chain involving numerous stakeholders efficient SCM is important for the coffee industry's long-term viability and high performance. Changes in consumer preferences and a focus on product differentiation are transforming global coffee value chains, with a rising market for specialty and certified coffee (Daviron and Ponte, 2005). Accordingly, supply chain management (SCM) incorporates more than just product movement it also includes operational flexibility, risk management, and performance and integration enhancement (Agarwal et al., 2007; Ramos et al., 2021; Li et al., 2006).

Ethiopia, as the origin of Arabica coffee, contributes a crucial role in the global coffee market. Coffee accounted over 35% of Ethiopia's export earnings, and the livelihood of a quarter of the population depends on coffee (USDA, 2023; Misgana et al., 2024; Beshah et al., 2013). The Ethiopian coffee supply chain includes several extensive participants, such as state farms or smallholder coffee farmers, primary collectors, suppliers, processors, service cooperatives, unions, and exporters (Amamo 2014; Chauhan et al., 2015; Minten et al. 2014). Despite challenges such as inconsistent quality, inefficiencies, logistical bottlenecks, fluctuating market demands, and poor market information access (Tadese, 2015).

Although Ethiopian coffee is organic and diverse, contributing to its global appeal, the country's global market share remains low, declining to 3.7% in 2024 (ICO). Numerous inefficiencies, including long lead times, weak SCM coordination, and quality inconsistencies, reduce export competitiveness (Tadesse, 2019; Boansi & Crentsil, 2013). Furthermore, illicit trade and high transaction costs prevent full utilization of supply and production capacities (Fikre & Niguse, 2023). These issues persist despite Ethiopia's inherent advantages in coffee quality and variety (UNIDO, 2014; Minten et al., 2019).

While coffee remains central to Ethiopia's economy and identity, research on SCM's role in coffee export performance is limited. Most studies in Ethiopia emphasize manufacturing, with few addressing agricultural SCM and even fewer focusing on coffee (Fasika et al., 2014; Kabeta, 2021). Understanding SCM's influence on export performance is essential for enhancing efficiency, reducing costs, and boosting competitiveness. Therefore, there is a scarcity of comprehensive research on how supply chain management practice affects Ethiopian coffee export performance; this study aims to investigate how supply chain management practices affect coffee export performance. The outcome gives stakeholders, exporters, and policymakers useful, perceptive information that supports the long-term growth and prosperity of Ethiopia's coffee exports.

## 2. Review of Related Literature

### 2.1 Overview of Coffee Supply Chain in Ethiopia

The Ethiopian coffee supply chain is characterized by its complexity and multiple intermediaries, which hinders efficiency and export performance. Most coffee originates from smallholder farmers or collectors harvesting forest coffee, which is processed and sold through a hierarchical structure involving cooperatives, licensed collectors, suppliers, and exporters. Government reforms since 2001, such as allowing cooperative unions to bypass auction markets and the introduction of vertical integration, have aimed to streamline the supply chain (Boansi and Crentsil,2013). Despite these efforts, the presence of numerous actors, separate licensing systems, and restrictions on direct sales from farmers to exporters continue to create bottlenecks and inefficiencies.

The performance of Ethiopian coffee exports is intricately linked to the effectiveness of SCM practices. Effective SCM can increase productivity, reduced costs, and increase competitiveness in the international market Christopher (2016). For example, integrating inventory management and logistics systems can improve export performance by cutting lead times and streamlining operations (Lambert and Cooper, 2000). Research shows that a well-managed supply chain can improve coffee exports' quality and dependability, strengthening Ethiopia's position in the market (Petit, 2007).

According to Tadese (2015), the coffee market has been hampered by several factors, including a fragmented sector, high transaction costs, significant seasonal price fluctuations, market regulation, a lack of an appropriate marketing information system, underdeveloped market infrastructure, and most importantly a longer marketing channel. Geber (2020). Moreover, information, infrastructure, marketing, and lower-level coffee production are the main barriers to realizing Ethiopian coffee's full potential

Strategic supplier partnerships, customer relationship management, information sharing, and logistics integration are critical dimensions of supply chain management that significantly impact coffee export performance in Ethiopia.

### 2.2 Strategic Supplier Partnership and Export erformance

Strategic supplier partnerships foster long-term collaboration and mutual benefit through trust, openness, and shared planning. These relationships improve supply chain efficiency, ensure consistent quality, and lower trade costs, ultimately enhancing export outcomes. According to Li et al. (2006) is a long-term cooperation between an organization and its suppliers allows each participating firm to gain significant, long-term benefits by utilizing their distinct operational and strategic capabilities. These collaborations place a high value on open communication, long-term planning, and collaborative problem solving, all of which are essential for improving coffee bean quality, guaranteeing on-time delivery, and cutting costs. According to Tompkins (2000), these alliances ought to be founded on a shared desire to work together and mutual trust, with no barriers preventing information sharing. Similarly, Oliver and Delbridge (2002) stress that win-win partnerships and long-term, trust-based relationships must be based on established, agreed-upon guidelines for sharing risks and rewards rather than relying on price-based competition. Li et al. (2006) assert that guiding supply chain management requires strong supplier relationships.

Strategic supplier relationships can benefit supply chain participants monetarily, technologically, and managerially. Long-term dedication, increased reliance on one another, a greater desire to share information and knowledge, and the utilization of emerging technologies are some of these advantages. For example, Strong relationships with suppliers may ensure a consistent flow of high-quality coffee beans, improving the quality and dependability of exported goods. Trade costs can have a big influence on the price of traded goods when they are being delivered from exporters to final customers, as Abe and Wilson (2009) note. Hoekman and Nicita (2011) estimated that a 10 percent reduction in the local cost of exporting items could result in a 4.8 percent rise in exports performance. Because they reduce trade costs and increase the overall effectiveness and efficiency of the company's supply chain, developing strong, strategic supplier relationships is essential to increasing export success. The debate above leads to the following hypothesis:

***H1***:- *The existence of a Strategic supplier partnership affects the firm's export performance positively.*

**2.3 Customer relationship Management and Export Performance**

Similarly, customer relationship management enhances customer satisfaction, loyalty, and retention by building sustainable relationships and aligning contributions with customer needs. Strong customer relationships create competitive advantages, raise repeat business, and support continuous market presence, which contributes to better export performance, especially in contexts like Ethiopian coffee exports where customer satisfaction is vital.

Managing and improving interactions with customers across the supply chain requires the use of customer relationship management (CRM). It includes a range of procedures meant to resolve complaints from customers, build enduring relationships, and eventually increase customer satisfaction (Li et al. 2006).The primary focus of CRM initiatives connected enhancing customer happiness and service quality, both upstream with suppliers and downstream with final consumers or users of products and services (Xu & Walton, 2005).

Devoted customer relationships, as highlighted by Day (2000), present formidable barriers to competition and are considered sustainable advantages in the marketplace. Businesses can better understand and meet the needs of their customers by putting a high priority on and upholding strong customer relationships. This will increase customer loyalty, encourage repeat business, and increase the willingness to pay more for superior products. Research highlights the significance of customer relationships by illustrating their impact on organizational performance and competitive advantage. Businesses are realizing more and more that better customer relationships lead to higher customer retention rates, increased profitability, and a more competitive edge (Christopher, 2016).

In summary, good CRM practices greatly improve customer satisfaction, loyalty, and eventually export performance in addition to ensuring that exporters fulfill customer needs and expectations. By investing in robust CRM strategies, businesses can create enduring value propositions that resonate with customers, thereby solidifying their market presence and competitiveness in an increasingly dynamic global marketplace. Customer relationship management according to Li et al. (2006), is the whole spectrum of procedures used to handle customer complaints, develop durable ties with customers, and enhance customer satisfaction. For this study, customers are found in another nation to the firm's national border; thus, export performance is measured, and testing is done using customer satisfaction, which is our buyer satisfaction measured in terms of performing payment on terms and conditions of the sale agreement, repetitiveness of buying, and building continuing relationships with customers. According to Robertson and Chetty (2000, cited by Jraisat (2013) export performance is measured by non-financial metrics, including satisfaction, relationship quality, relationship continuity, and the launch of new products are used as a gauge of export performance.

***H2:*** *Effective customer relationship management (CRM) practices positively influence export performance.*

**2.4 Information Sharing and Export Performance**

In addition, efficient information sharing and logistics integration are central to improving supply chain responsiveness and competitiveness. Accurate and timely data sharing boosts coordination, reduces uncertainty, and enhances agility, facilitating smoother export operations. Technological tools, such as ICT systems, promote traceability and operational transparency.

Information sharing is the process by which companies in a supply chain exchange tactical and strategic data, such as forecasts, inventory levels, sales promotion plans, and marketing strategies (Cao and Zhang, 2013; cited in Ahmed, 2019). This approach improves decision-making, coordination, and transparency, which makes supply chains more flexible and responsive. Open information exchange improves performance and lowers uncertainty, especially in processes involving planning and monitoring. The Ethiopian coffee supply chain benefits from increased transparency, and traceability brought about by information and communication technology (ICT) tools like blockchain and mobile applications.

Implementing effective supply chain management that combines financial, material, and information flows is necessary to meet customer demands. According to Sufian (2010), controlling and incorporating key information elements can lead to lower overall costs, higher order fulfillment rates, and shorter order cycle times. Sharing information increases the responsiveness and agility of the supply chain, which boosts overall export performance

(Cao & Zhang 2013). Similarly, Sherwin and Ibrahim (2012) discovered that information exchange and upstream (supplier) and downstream (customer) links were positively associated with supply chain and export performance.

Level of information sharing and quality of information sharing are the two streams into which Li et al. (2006) separated information sharing. He claims that the former is the degree to which supply chain partners acquire important and confidential information, whereas the latter refers to the timeliness, correctness, adequacy, and trustworthiness of the information conveyed. According to Zhao et al. (2002), sharing information with suppliers can lower costs and significantly impact supply chain performance. Information sharing facilitates export efforts and has a positive effect on supply chain and export performance, a study by Sherwat and Ibrahim (2012) shows. In summary, effective information sharing enhances supply chain performance by improving coordination, reducing uncertainty, and increasing responsiveness. Consequently, this leads to improved export performance, as efficient supply chain management practices enable firms to better meet international demand.

***H3:*** *Effective information sharing between supply chain partners positively influences export performance.*

**2.5 Logistics Integration and Export performance**

Furthermore, logistics integration streamlines warehousing, inventory, and transportation, reducing trade costs and improving delivery predictability. In Ethiopia's coffee export industry, deficiencies in logistics and poor coordination extend export lead times and lower product quality. Addressing these gaps by investing in integrated logistics systems is essential to strengthen Ethiopia's competitiveness in international markets and ensure consistent, high-quality exports.

To guarantee the efficient flow of products, data, and services throughout supply chains and ultimately boost output and customer satisfaction, logistics integration is essential (Christopher, 2016). To improve supply chain performance by increasing visibility, reducing costs, and improving responsiveness to market demands, logistics integration includes order processing, coordinating, warehousing, inventory management, and transportation (Karayun et al., 2012). Arvis et al. (2007) remark that the effectiveness of logistics integration is a main factor of trade performance, influencing cost, time, reliability, and predictability, which, in turn, affects a country's competitiveness in the international export market.

Despite the known benefits of logistics integration, its failure can lead to significant challenges. Ineffective logistics lowers the possibility for global integration and affects the trade performance of a nation it raises cost, reduces reliability, affects delivery time and predictability; in general affects export competitiveness in international markets Arvis et al., 2007).

Ethiopian coffee exporters, in particular, suffer greatly from poor logistics integration, which causes them to lose out on market opportunities, lose weight, and lower the coffee's test quality. Additionally, because they are unsure of the time and trade costs, they spend as much money and time as possible interacting with buyers. Therefore, it is essential to keep stock in order to provide a price to a customer; otherwise, it takes longer and drives exporters out of the market. Unfortunately, a long and uncertain supply chain and inadequate logistics integration prevent Ethiopian coffee exporters from accelerating delivery, even at the expense of extra expenses. According to Kebede and Hussen (2015), ineffective logistics integration and coordination hinder Ethiopia's trade facilities and supply connectivity, which lengthens the export process and leaves exporters unsure of the time and expense involved.

Effective logistics integration is essential to improving export performance, according to the literature. Improving logistics coordination in Ethiopia's coffee export industry is crucial to lowering trade costs, guaranteeing on-time delivery, and raising product quality. By lowering uncertainty and delays, exporters may be better equipped to compete in global markets if logistics integration is strengthened. Therefore, enhancing logistics performance ought to be a top priority in order to improve export results.

***H4****: Effective* logistics *integration between supply chain partners positively influences export performance.*

**2.6 Export performance and Theoretical Review**

Export performance is a vital indicator of a country's economic resilience and a firm's strategic capacity to compete globally, especially in the context of developing economies like Ethiopia**.** Scholars such as Wagner (2007) and Boehe & Jiménez (2016) highlight how exports contribute to employment creation, foreign exchange earnings, and national development by extending firms' resource utilization and capability building. Export performance is commonly assessed using both financial and strategic dimensions, encompassing metrics such as export sales volume, market share, profitability, customer satisfaction, and the number of foreign markets served (Azar & Ciabuschi, 2017; Sadeghi et al., 2021; Alolayyan et al., 2022). This dual approach reflects a broad consensus that effective export strategies must align operational objectives with strategic market positioning. For firms in emerging markets, improving export performance is not only a business imperative but also a pathway to economic transformation, as it enables access to new markets and international competitiveness (Chugan & Singh, 2015; Alhalalmeh et al., 2022).

To understand how supply chain management practices (SCMP) influence export performance, scholars have applied key theoretical models such as the Transaction Cost Theory (TCT), the Resource-Based View (RBV), and the SCOR model. TCT, developed by Williamson (1996), emphasizes minimizing costs associated with coordination, negotiation, and enforcement within supply chains making it highly relevant to the Ethiopian coffee sector, which faces high transaction costs due to fragmented supply chains. Complementing this, RBV offers a strategic lens by asserting that unique internal resources such as strong supplier ties, efficient logistics, and reliable customer relationships can serve as enduring competitive advantages. These concepts converge within the SCOR model framework, which guides practical supply chain activities such as supplier selection, demand planning, production standardization, and export logistics. Applied to Ethiopia's coffee export landscape, these frameworks suggest that strategic SCM practices can reduce costs, enhance quality, and boost responsiveness factors that directly influence export performance. However, a gap remains in localized, empirically grounded applications of these models within the Ethiopian context, especially in connecting theoretical insights with operational challenges unique to agricultural exports.

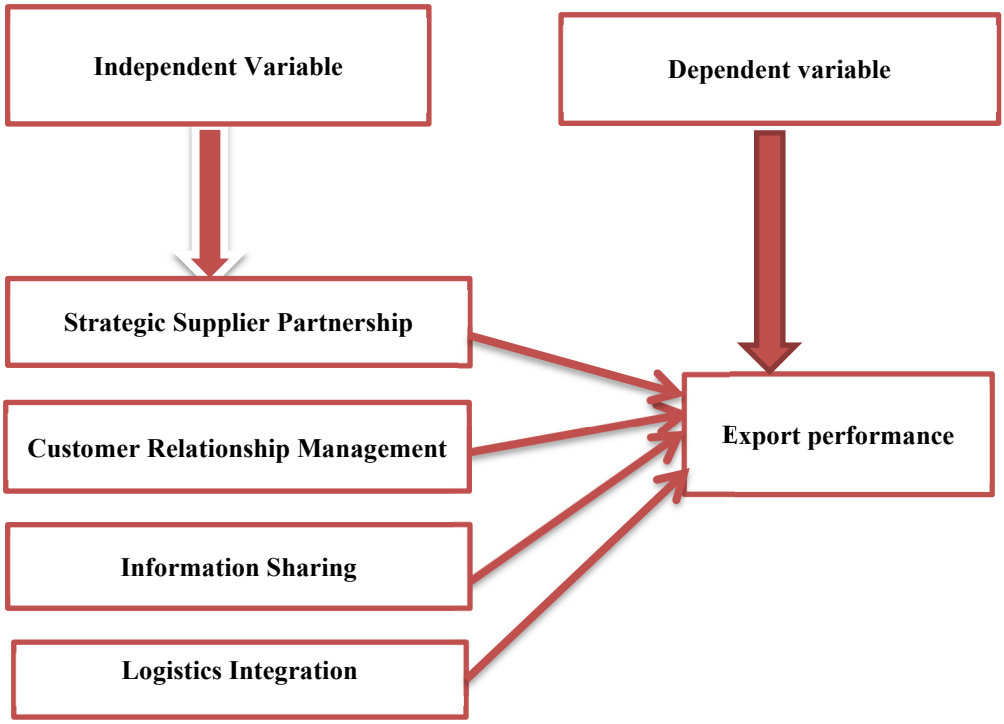
### 2.7 Empirical Review

Empirical research on supply chain management (SCM) and export performance underscores a growing recognition of SCM's role in driving export success across industries and contexts. Scholars have consistently emphasized that firms with effective SCM strategies tend to outperform others in foreign markets due to their ability to efficiently allocate resources, optimize operations, and respond to international demand. Studies such as Boehe & Jiménez (2016), Azar & Ciabuschi (2017), and Lages et al. (2008) identify key performance indicators like export sales volume, market share, delivery efficiency, responsiveness, product quality, and compliance with international standards as essential metrics. Empirical results from Abdallah et al. (2021) in Jordan and Nguyen (2023) in Vietnam highlight a strong positive correlation between supply chain integration and both financial and strategic export performance. Additionally, the role of Corporate Social Responsibility (CSR) and supply chain cooperation, particularly in the context of Ethiopian coffee exporters, has been shown to enhance sustainability and long-term competitiveness (Shonte & Ji, 2022; Tadesse et al., 2024).

At the sectoral and regional level, the Ethiopian coffee export supply chain presents both challenges and opportunities that reflect broader trends in developing economies. While firms in Ethiopia enjoy a natural comparative advantage in coffee production (Boansi & Crentsil, 2013), inefficiencies related to logistics, bureaucratic processes, and fragmented stakeholder relationships undermine this potential. For instance, Kebede and Hussen (2015) identify critical bottlenecks in logistics and stock availability that lead to costly delays and variability in delivery times, while Hoekman & Nicita (2011) quantify the potential trade gains from reducing these costs. Moreover, Desalegn and Nadeem (2024) show that sustainable SCM practices across Ethiopia's agricultural sector can unlock performance improvements and reduce structural barriers. Despite these insights, a key gap remains in integrating theoretical models such as the Transaction Cost Theory (TCT) and Resource-Based View (RBV) into empirical investigations tailored to Ethiopia's coffee sector. Future research could deepen this integration to generate actionable strategies for optimizing export performance through context-sensitive SCM practices.

The conceptual framework of this study focuses on how export performance is affected by SCM practices (customer relations management (CRM), information sharing (IS), logistics integration (LI), and strategic supplier partnership (SSP). Many of the research covered in the previous section approach each of the aforementioned concepts and hypotheses in a different way. Additionally, by showing how SCM practices impact coffee export success, the empirical literature supports the theoretical framework. This is based on the authors' conceptual model visualization, which was developed based on findings from the literature review.




### 3.1 Research Design

Research design offers the specifics and useful elements for implementing the general approach to the problem that the research method has already generated. Effective and efficient execution of the research project is guaranteed by a strong research design (Malhotra and Birks, 2017). To achieve research objective the researcher used a survey-based descriptive and explanatory research design. In particular, a causal/explanatory research design was adopted to obtain evidence of cause-and-effect links. According to Malhotra and Birks (2017) and Kothari (2004), causal research aim to understand the relationship between cause (independent variables) and the effect (dependent variables), to testing hypotheses. In line with this, the study utilized an explanatory research design to explore how various aspects of supply chain management practices such as strategic supplier partnerships, customer relationship management, information sharing, and logistical integration affect coffee exports performance.

### 3.2 Data gathering and sampling

Managers and pertinent employees from 518 coffee export firms based in Addis Ababa made up the study's target population. Sample size was determined based on the data obtain from Ethiopian Coffee Export Association. According to the data obtained from Ethiopian coffee Export Association there are 518 coffee exporters are found in Addis Ababa. Based on this sampling frame, the researcher randomly chose a sample of 226 active export companies.

Both primary and secondary data collection methods were employed in the study to achieve the research objectives. Primary data was gathered through structured questionnaires which were prepared questions on the aspect the SCM practices derived from extensive literature. Accordingly, the respondents were asked to respond all of the questions using a Likert scale rating from 1 to 5 (strongly disagree to strongly agree). Secondary data was collected from various sources, including the Coffee and Tea Authority, Ministry of Trade, and Ethiopian Coffee Association. This included annual reports, policies, procedures, manuals, books, internet sources, articles, and journals.

### 3.3 Method of data analysis

Primary quantitative data was collected, organized, edited, categorized, coded (assigning numerical values), and screened to identify and correct missing values, outliers, and errors. This processed data was then encoded into SPSS (Version 26) software for analyzing both descriptive and inferential analysis. Based on the outline by Saunders et al. (2019), descriptive statistical analysis was presented with results using tables, frequency distributions, and percentages, describing the demographic characteristics of respondents, dimensions of SCMP, and export performance through measures of central tendency (mean) and dispersion (standard deviation). The distribution of observations and consistency among respondents' answers were examined by mean scores and

standard deviations. To examine the relationships between the independent variables (customer relationships, information sharing, logistical integration, and strategic supplier partnership) and the dependent variable (export performance), inferential analysis and Pearson correlation analysis were used, and to examine cause-and-effect relationships, test for linear relationships, and identify significant independent variables, multiple linear regression analysis was utilized. These analyses ensure that the assumptions required for linear regression, such as the measurement level of variables, multicollinearity, and independence of observations, linearity, and normality, are met and addressed in the fourth chapter of the study.

The study employed multiple regression models to examine the causal effect between a dependent variable (export performance) and independent factors (SSP, IS, LI, and CRM).

## 4 Results and Discussion

The data presentation, analysis, and interpretation of the findings are presented in this chapter; data was gathered from Addis Ababa coffee exporting companies via questionnaire. 190 (84%) of the 226 total questionnaires that were given to the respondents were correctly completed and returned. Therefore, 190 respondents from the targeted population served as the basis for the data presentation, analysis, and bases for interpretation in this study. Senior staff members of Addis Ababa-based coffee exporting companies were the target population of the study.

### 4.1 Descriptive Statistics Analysis and Interpretation

The following detailed tables in each SCM practice analyze and discuss the descriptive statistics of the mean scores and standard deviation. Respondent's perception about the effect of SCMP on the performance of export. 190 respondents used a five-point rating system to rate each of the four independent variables and export performance; all items had a maximum score of 5.00.

**Supply Chain Management Practices and Export performance**

The descriptive statistics of the mean scores and standard deviation analyzed and discussed in the below table summarized that information sharing is rated slightly higher than other variables, with an average score of 3.62. Customer relationship management, strategic supplier partnership and with a mean value of 3.58, and 3.49 respectively export performance rates at 3.59 average mean indicating moderately high export performances. However, logistics integration has the lowest mean score (3.41) among the variables, indicating a moderately favorable perception but slightly weaker compared to other factors. On the other hand, high standard deviation is scored for customer relationship management (.71) has variation, suggesting mixed perceptions among respondents followed by information sharing among the entire practices implying that variability in responses compared to export performance, indicating more diverse opinions on the effectiveness of information sharing. Strategic supplier relation and logistics integration have moderate variability in ratings, suggesting some differences in perceptions among respondents. In general, according to the data available in the above table the mean of variables above average, slightly lower in logistics integration.

**Table 1 Descriptive statistics**

| S.N | Variables | N | Mean | Std. Deviation |
|---|---|---|---|---|
| 1 | Strategic Supplier Partnership | 190 | 3.49 | .64 |
| 2 | Information sharing | 190 | 3.62 | .68 |
| 3 | Logistics integration | 190 | 3.41 | .63 |
| 4 | Customer Relationship Management | 190 | 3.58 | .71 |
| 5 | Export Performance | 190 | 3.59 | .53 |

**Source: Own Survey, 2025**

### 4.2 Analysis of Inferential Statistics and Interpretation

**Correlation Analysis between SCMP and Coffee Export Performance**

The linear relationship between two quantitative variables is measured by the correlation, which also indicates its strength. The strength and direction of a linear relationship between two quantitative variables are measured by the correlation coefficient, which is from sample data measures (Bluman, 2012). Karl Pearson first used the correlation coefficient around 1900. It shows the degree of relationship between two sets of interval-scaled or ratio-scaled variables. Designated "*r,* it is often referred to as *Pearson's r* and as the *Pearson product-moment correlation coefficient"*. "A correlation coefficient has a value ranging from -1 to 1. Values that are closer to the absolute value of 1 indicate that there is a strong relationship between the variables being correlated whereas values closer to 0 indicates that there is little or no linear relationship"

**Table 2 Correlation Results between SCM Practices and Export Performance**

| Correlations | | | | | | |
|---|---|---|---|---|---|---|
| **Variables** | | SSR | IS | LI | CRM | EP |
| SSP | Pearson Correlation | 1 | | | | |
| | Sig. (2-tailed) | | | | | |
| | N | 190 | | | | |
| IS | Pearson Correlation | .425** | 1 | | | |
| | Sig. (2-tailed) | .000 | | | | |
| | N | 190 | 190 | | | |
| LI | Pearson Correlation | .502** | .523** | 1 | | |
| | Sig. (2-tailed) | .000 | .000 | | | |
| | N | 190 | 190 | 190 | | |
| CR M | Pearson Correlation | .322** | .302** | .362** | 1 | |
| | Sig. (2-tailed) | .000 | .000 | .000 | | |
| | N | 190 | 190 | 190 | 190 | |
| EP | Pearson Correlation | .637** | .631** | .640** | .481** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | |
| | N | 190 | 190 | 190 | 190 | 190 |
| Correlation is significant at the 0.01 level (2-tailed). | | | | | | |

**Source: Own Survey, 2025**.

Table 2 demonstrates a positive correlation between the independent variables of information sharing, logistical integration, customer relationship management, and strategic supplier connections and the dependent variable, export performance, at a 95% confidence level (P<0.01). Logistics integration has the highest correlation of all the variables, with a Pearson Correlation value of r=.640** and a significant value of p<0.001, suggesting a positive and statistically significant relationship between logistics integration and export performance. The significant value (p<0.001) and Pearson Correlation coefficient (r=.637**) between export performance and strategic supplier relationships indicate a positive and statistically significant relationship between the two variables. Export performance and information sharing have a positive and statistically significant relationship, according to the correlation values between the two variables (r=.631**) and the significant value (p<0.001). Finally, the preceding table's Pearson Correlation coefficient (r=.481**) shows that export performance and customer relationship management are positively correlated. SCM practice with the characteristics of information sharing, logistical integration, strategic supplier relationships, and customer relationship management generally has a favorable link with export success, according to the Pearson correlation finding displayed in table 4.6.

### 4.3 Regression Analysis between SCM practices and Export Performance

**Testing Assumption of Multiple regression**

A linear relationship between each independent variable and the dependent variable, multi-collinearity, normally distributed errors, and constant variance of the residuals (difference between actual and predicted scores) are the next crucial assumptions that must be considered and tested prior to performing multiple regressions. The following tests were run to see if the multiple linear regressions' assumptions were violated.

**Tests of Multi-collinearity**

When two or more independent variables have an approximately linear relationship, multicollinearity becomes a problem. It happens when a group of predictor variables exhibits a significant degree of inters correlation. According to Gujarati and porter (2010) “the existence of multi collinearity can be identified by analyzing the values of tolerance and Variance Inflation Factors (VIF). A tolerance value less than 0.10 and/or Variance Inflation Factors (VIF) greater than 10 indicate a multicollinearity problem in the model”.

**Table 3 Multi-collinearity Test**

| S.N | Independent Variables | Tolerance Value | VIF |
|---|---|---|---|
| 1 | Strategic Supplier Relationship (SSR) | .696 | 1.437 |
| 2 | Information sharing (IS) | .684 | 1.463 |
| 3 | Logistics integration (LI) | .609 | 1.643 |
| 4 | Customer Relationship Management (CRM) | .833 | 1.201 |

**Source: Own Survey, 2025**

Since each independent variable's tolerance value is greater than 0.1 and its Variance Inflation Factor (VIF) value is less than 10, as can be seen from the above table, there is no problem with multi-collinearity among predictor variables.

**Normality test**

The distribution of scores on the dependent variable should be "normal" describing asymmetrical, bell-shaped curve, having the greatest frequency of scores around the mean, with smaller frequencies towards the extremes. In order to test normality of the data, observation on the shape of the histogram, was checked using SPSS and the result indicates that data used in the study is normally distributed.

**Linearity Assumption**

Using the P-P plot test, the linearity assumption of multiple linear regressions was examined, and it was discovered that the independent and dependent variables had a linear relationship. The linearity result shows that the data distribution is in accordance with the expected value and is close to the mean zero.

**Multiple Linear Regression Analysis**

After testing the assumptions of multiple regressions and assuring the model is free from multi-collinearity issues, the regression analysis was conducted as follows.

The goal of multiple linear regression analysis is to forecast a single dependent variable by combining a number of independent variable. Multiple linear regression analysis was used in this study to predict how four independent supply chain management practices information sharing, logistical integration, strategic supplier partnerships, and customer relationship management would affect the success of coffee exports performance. The regression coefficient value of each significant independent variable is compared in order to examine the impact of each significant independent variable; the variable with the largest coefficient is regarded as the most influential variable. In order to determine which of the four independent variables had the greatest impact on the entire coffee export sector, the researcher develops a regression model. The following are the regression analysis's findings.

**Model Summery**

The model summary presents the findings of summarized multiple regression analysis, along with the significance and the extent to which variation in the dependent variables of overall export performance can be explained by independent variables (supply chain management practice).

**Table 4 Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .806[a] | .650 | .643 | .31952 | 1.847 |
| a. Predictors: (Constant), CRM, IS, SSR, LI | | | | | |
| b. Dependent Variable: EXP | | | | | |

**Source: Own Survey, 2025**

The above model summary table reveals that using all the predictors at once, the multiple correlation coefficient (R) is 0.81 and the adjusted R-square is 0.64. This indicates that the 64% variation in the performance of coffee export firms can be explained by combining the four supply chain management practices, i.e., customer relationship management, information sharing, strategic supplier partnerships, and logistics integration, with the remaining 36% of the variation remaining unexplained in this study, possibly due to other factors not included in the model. The performance of Ethiopian coffee export firms is influenced by 36% of other factors that were not examined in this study.

**ANOVA**

The ANOVA test, The F statistics shows the overall significance of the model.

**Table 5 ANOVA**

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 35.142 | 4 | 8.785 | 86.055 | .000[b] |
| Residual | 18.887 | 185 | .102 | | |
| Total | 54.028 | 189 | | | |
| a. Dependent Variable: EXP | | | | | |
| b. Predictors: (Constant), CRM, IS, SSR, LI | | | | | |

**Source: Own Survey, 2025**

The above-mentioned ANOVA table demonstrates how the independent variables explained the variance of the dependent variable. The F value of 86.05 shows the measures of the ratio of variance explained by the model to variance unexplained (residual variance); in other words, the F-ratio measures the probability of chance departure from a straight line. The residual sum of squares (18.887) represents the variation in export performance that remains unexplained by the model. And the significance (sig) P-value is .000, which is less than the conventional threshold of 0.05, indicating that the combination of the predictors (CRM, IS, SSR, and LI) significantly predicts the performance of coffee exports in Ethiopia. Thus, the above table shows the model is statistically significant at F (4, 185) =86.055, P<0.05, $R^2$=18.89%.

**Coefficient of Determination**

The coefficient table demonstrates those independent variables that are individually significant predictors of the dependent variable. When all other independent variables are held constant, the beta weight is the average increase in the dependent variable that occurs when the independent variable increases by one standard deviation. The goal of the coefficients table is to determine which predictors contributed significantly to Y's 65% explained variance (i.e., $R^2$ =.65) and which did not.

**Table 6 Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| | (Constant) | .534 | .168 | | 3.174 | .002 |
| | Strategic Supplier Relationship | .266 | .043 | .319 | 6.125 | .000 |
| | Information sharing | .243 | .042 | .307 | 5.836 | .000 |
| | Logistics integration | .211 | .047 | .248 | 4.457 | .000 |
| | Customer Relationship Management | .149 | .036 | .196 | 4.117 | .000 |
| a. Dependent Variable: Export Performance | | | | | | |

**Source: Own Survey, 2025**

The table shows how the dependent variable (export performance) is influenced by the independent factors (information sharing, logistical integration, strategic supplier relationships, and customer relationship management).

The regression model is as follows: -

$Y=\beta0+\beta1X1+\beta2X2+\beta3X3+ \beta4X4+\epsilon$

Where:

- Y export performance (The dependent variable)
- β0 is the intercept
- β1, β2, β3 and β4 are the unstandardized coefficients representing the change in Y for a one unit change in the respective X variables.
- the independent variables X1, X2, X3 and X4
- ϵ is the error term.

$Y= 0.534+0.266X1+0.243X2+0.211X3+ 0.149X4+.168$

The results demonstrate that all predictors have significant ($p < 0.05$) positive effects on export performance. Strategic supplier relationship standardized Beta=0.319 has the greatest impact, followed by information sharing Beta= 0.307, logistics integration Beta= 0.248, and customer relationship management Beta= 0.196.The standardize beta value indicated how many standard deviations the outcome would vary if the predictor changed by one standard deviation. Because the standard deviation units are directly comparable, they offer a more accurate understanding of a predictor's significance in the model. An independent variable's high beta coefficient value is a more significant predictor of the dependent variable.

**Hypothesis Testing**

The multiple regression analysis, whose findings are incorporated into the model, provides a more comprehensive and accurate study of the research hypothesis. The model's results were used to test for statistical significance and determine whether to accept or reject previously generated hypotheses based on multiple linear regression results. Based on the regression result conducted on the effect of supplier relationships, information sharing, logistics integration, and customer relationship management on firms coffee exports performance and the total combined effect, the next hypotheses were tested, and the outcomes of the hypothesis testing were as follows:

**Table.7 Summary of the overall outcome of research hypothesis decision**

| Hypothesis | Description | Beta value | p-value | Decision |
|---|---|---|---|---|
| ***Ha1:*** | The existence of Strategic supplier partnership affects the firm's export performance positively. | b=0.266 | p=0.00 | Accepted |
| ***Ha2:*** | Effective customer relationship management (CRM) practices positively influence export performance | b=0.149 | p=0.00 | Accepted |
| ***Ha3:*** | Effective information sharing between supply chain partners positively influences export performance. | b=0.243 | p=0.00 | Accepted |
| ***Ha4:*** | Effective logistics integration between supply chain partners positively influence export performance. | b=0.211 | p=0.00 | Accepted |

***Ha1:*** **The existence of Strategic supplier partnership affects the firm's export performance positively.**

It is evident from the multiple regression analysis result shown in table above that strategic supplier relationship activities have a positive impact on a firm's export performance ($p < 0.05$). Furthermore, the value of $t = 6.125$ and beta ($\beta = 0.266$) indicates that the firm's export performance is directly impacted by strategic supplier relationship management practices. This suggests that an average improvement of 26% in a firm's export performance is linked to a one unit rise in the results of strategic supplier relationships. The results also show that a company's export performance is statistically significantly impacted by strategic supplier partnerships. Since the p-value is smaller than the level of the coefficient (0.05), at.000. The study's findings are in line with a substantial amount of empirical data showing that strategic supplier partnerships have an impact on export performance.

According to Li et al. (2006), effective partnerships with suppliers are critical for guiding supply chain management. Strategic supplier partnerships' effects on exporter logistics and export performance were examined in a study by Yeung et al. (2010) titled "Exporters' Strategic Orientation towards Third-Party Logistics Suppliers: Impacts on Exporters' Logistics Competence and Export Performance." It was concluded that exporters' logistical proficiency and export performance are significantly improved by strategic supplier partnerships. As (Li, E et al., 2017) revealed that knowledge integration and innovation through supplier partnership enhance market oriented environmental sustainability and improve export performance. Supply chain parties can gain profit financially, technologically, and managerially from strategic supplier alliances. These benefits include long-term commitment, increased mutual dependence, and a higher desire to exchange information and knowledge, and the exploitation of new technologies. Strong supplier ties may guarantee a steady supply of premium coffee beans, improving the quality and reliability of exported goods. Similarly (Siregar et al. 2019) suggested that supplier selection and strategic partnerships with suppliers are determines of price, quality, production and delivery of coffee and essential for meeting coffee export market demands.

Therefore, building strong, strategic supplier partnerships is essential for improving export performance, as these relationships help reduce trade costs and enhance the overall efficiency and effectiveness of the supply chain. Thus, the researchers accept the alternative hypothesis in light of the above-mentioned evidence.

***Ha2:*** **Effective customer relationship management (CRM) practices positively influence export performance**

The results of unstandardized coefficients and p-values for customer relationship management on export performance are shown in the coefficients regression analysis tables 8 and 9 above. These were b=0.149 and p=0.00, respectively. This indicates that a unit improvement in customer relationship management will result in a 14.9% increase in export performance when all other independent variables are set to zero. Additionally, the figures show that export performance is positively impacted by customer relationship management. Since the p-value is 0.00, which is below the coefficient 0.05 threshold. According to the findings of a study by Reinartz et al. (2004), they similarly argued that strong CRM increases the capability of better customer retention, satisfaction, and loyalty; consequently, organizational performance and higher sales growth. According to Li et al. (2006), strong ties with customer organizations enable businesses to stand out from the competition and keep customers loyal, both of which are values that are mainly protected from customers.

In addition, Lengler et al. (2016) found that customer relationships and customer-oriented approaches optimize export performance. Similarly, Abdallah et al. (2021) conclude that internal and customer relationships positively impact supply chain performance and export performance. Thus, the researcher accepts the alternative hypothesis in light of the aforementioned evidence.

***Ha3:*** Effective information sharing between supply chain partners positively influences export performance.

The results of the multiple regression analysis, which are shown in tables 8 and 9 above, unequivocally show that supply chain partners' information-sharing practices improve firms' export performance ($p < 0.05$). Furthermore, the firm's export performance is directly impacted by supply chain partners' information sharing, as indicated by the values of beta ($\beta = 0.243$) and $t = 5.836$. This implies that an average increase in export performance of 24% will result from a one unit increase in information sharing management, when all other factors are set to zero. The data also show that firms' export performance is positively impacted by information sharing among supply chain partners. Since the p-value is smaller than the level of the coefficient (0.05), at.000. Therefore, based on the above facts the researchers accept the alternative hypothesis.

The result of this study has consistency with other empirical evidences, like Thatte, A (2007), information sharing with business partners enables firms to make fast and accurate decisions and take action based on improved visibility. In addition Zhou and Benton (2007) found that timely and accurate information sharing and effective supply chain practice improve operational efficiency by reducing supply chain interruption enables organization making better decisions and on time action. Li, S and Lin (2006) also argued that information sharing provide to firms the advantage of batter demand forecasting, reduced lead times, and create higher operational efficiency and improves performance. Similarly Tadesse, M.D. et al. (2024) and Negeri, A. & Ji, Q. (2023), improving the performance of coffee exports in the international market requires strong information-sharing practices, such as the distribution of export expertise and supply chain transparency. Tadesse et al. (2024) further emphasize that building a traceable information-sharing system among Ethiopian coffee supply chain members is vital for

securing the European coffee market, particularly in light of the European Union's Deforestation Regulation (EUDR) program.

***Ha4:*** Effective logistics integration between supply chain partners positively influence export performance.

The findings of the unstandardized coefficients and p-value for logistics integration on export performance are shown in the coefficients regression analysis tables 8 and 9 above, respectively, with b=0.211 and p=0.00. This indicates that a unit increase in logistics integration will result in a 21% increase in export performance when all other independent variables are set to zero. The values also indicate that logistics integration has **a** positive effect on export performance because the p-value of 0.00 is below the coefficient 0.05 level.

The result of this study has consistency with other empirical evidence: logistics integration is critical for eliminating avoidable delays, reducing costs, creating reliability, and enhancing predictability of export delivery. Arvis et al. (2014) concluded that effective logistics integration creates the possibility for global integration and raises trade performance of a country in terms of reduced cost and delivery time while at the same time increasing reliability and predictability of export delivery. In general, effectiveness of supply chain and predictability of export delivery are strongly associated with a country's logistics integration performance. Similar to Kebede and Hussen (2015), logistical integration is crucial for guaranteeing consistency and predictability in the coffee supply chain in Ethiopia, which has a big impact on export competitiveness. They pointed out that predictability and reliability depend on stock availability, time variance, and prices of preparation; shipping clearance via all Ethiopian legal procedures; and transportation to the loading port of Djibouti, which vary greatly and affect the total cost of coffee export significantly. Therefore, based on the above facts, the researcher accepts *the* alternate hypothesis.

In conclusion, the data analysis offered empirical proof of the significant influence that supply chain management practices have an impact coffee exports performance. Among the practices tested information sharing, strategic supplier partnership, customer relationship management and logistics integration all have an impact on the export performance of coffee exporting businesses in Ethiopia. Customer relationship management had a valuable effect as well, but it was not as such a significant effect as the other factors. These results highlight the significance of improving SCM practices can lead to increased export competitiveness and are consistent with the theoretical and empirical frameworks previously stated. A summary of the key findings, analysis conclusions, and useful suggestions for interested parties, decision-makers, and coffee exporters is given in the following chapter.

## 5. Findings and Conclusion

In the case of coffee export companies in Addis Ababa, the study investigate ascertain how supply chain management (SCM) practices affected Ethiopian coffee export performance. It specifically looks at how information sharing, logistics integration, customer relationship management, and strategic supplier partnerships affect export performance. The main findings are summarized as follows.

- Finding from descriptive analysis result shows that information sharing score the highest mean value (3.62) followed by customer relationship management score (3.58), strategic supplier relationship (3.49) and logistics integration (3.41).
- Logistics integration had the highest correlation coefficient (r=.640) among the supply chain management practices assessed in this study. It is followed by strategic supplier partnerships (r=.637), information exchange (r=.631), and customer relationships (r=.481).
- Multiple regression analysis revealed that all four SCM practices significantly and positive effect export performance. The most significant impact was found in strategic supplier partnerships, with a beta value of b=0.266, p<0.05. Information sharing, logistics integration, and customer relationship management followed with beta values of b=0.243, p<0.05, and b=0.149, p<0.05, respectively.
- Generally, the summary of hypothesis testing result shows that the alternative hypothesis (from ***Ha1*** *to* ***Ha4***) are accepted with the significance level of p=0.00 which is p<0.05 less than the acceptable significance level, that is, the entire dimensions of supply chain management practices used in the study has positive effect on export performance

### 5.1 Conclusion

The purpose of this study is to determine how supply chain management practices affect coffee export performance. The next conclusion was reached when a quantitative analysis was conducted:

The analysis's result shows that coffee export performance was significantly and positively affected by all the variables employed in the study. There is a positive correlation between the independent variables used to measure supply chain management practices in this study and export performance, indicating that the independent variables have an impact on coffee export performance. Logistics integration has the highest correlation coefficient among the supply chain management practices examined in this study, followed by strategic supplier partnerships, information sharing, and customer relationships, in that order. This suggests that the practice should gain the majority of attention in order to develop sustainable coffee export performance.

The findings of the regression analysis demonstrated that export performance is significantly positively impacted by the standardized beta value for each of the four SCM practices. Strategic supplier partnerships develop long-term collaboration between coffee exporters and suppliers, improving consistency in quality, reliability, and delivery. Customer relationship management helps firms meet and exceed customer expectations, which improves satisfaction and loyalty. Information sharing boosts coordination and responsiveness across the supply chain, enabling better decision-making. Logistics integration contributes to more efficient, timely, and cost-effective delivery processes. These practices collectively contribute to a significant improvement in the overall performance of Ethiopian coffee exports. All of these SCMP work together to significantly boost Ethiopian coffee exports' overall performance in the international market.

The alternative hypotheses (from ***Ha1 to Ha4***) are accepted, according to the summary of the results of the hypothesis testing; that is, every aspects and dimension of the supply chain management techniques used in the study have a statistically significant impact on export performance. These findings provide credence to the claim that improving Ethiopia's coffee export performance requires efficient SCM practice

**5.2 Recommendation**

The study's conclusions led to the following suggestions being put out to enhance Ethiopia's coffee export sector's performance.

- Based on the analysis of calculating the mean value of each value, all of the variables are good. For Ethiopia's coffee exporting sectors to remain competitive in the global market, supply chain management techniques must be used effectively. By comparing the best practices of the world's top coffee-exporting nations with local SCMP best practices, the sector should also determine how to sustain and improve SCMP implementation. In order to enhance export performance, the exporting companies and stakeholders of the coffee supply chain should make continuous efforts to practice strategic supplier partnerships, improve the information-sharing system, and integrate logistics operations and customer relationship management, which have significant effects on coffee export performance.
- The results of the regression analysis show that information sharing and strategic supplier partnerships significantly improve export performance. Based on this finding, the researcher suggests that the industry should strategically prioritize the adoption of developing strategic supplier partnership and information exchange, even though applying all SCMP principles is necessary. To guarantee constant quality and supply chain stability, coffee exporters should create and preserve long-term strategic alliances with their suppliers. Joint ventures, supplier development initiatives, and fair trade agreements can all help achieve this. Additionally, by investing in digital platforms and technology that enable real-time information exchange among supply chain participants. Given the aforementioned suggestion, the industry ought to modify its tactics in order to preserve and leverage the impact of SCMP on export performance as well as to implement advanced SCMP inside the sector.
- The results of the regression study indicate that customer relationship management has the least, but still considerable, impact on export performance compared to information sharing and strategic supplier partnerships, while logistics integration has a moderate influence. Given the information presented above, the industry stakeholders and government could strengthen their impact on logistics integration by optimizing inventory management, streamlining transportation networks, and implementing cutting-edge supply chain technologies like block chain and the Internet of Things. Creating an encouraging landscape that maximizes customer relationship management with international buyers and, finally, exporters should strengthen customer feedback mechanisms and enhance loyalty.

**Limitation of the Study and Area of Further Research**

This section of the study highlights its limitations, but it may also point to directions for further research.

- The findings indicate that 64% of the difference in export performance may be explained by SCM practices. Future studies could examine additional impacting elements such global market trends, sustainable supply chain management, other supply chain management techniques, and technical developments in the supply chain, distribution, and production of coffee. Furthermore, qualitative research may shed further light on how supply chain management strategies affect coffee export performance.
- Due to time and resource limitations, the researcher gathered data about the impact of supply chain management practices on coffee export performance directly from Addis Ababa's coffee exporter companies. So this research has a limitation in incorporating the opinions of the upstream suppliers and downstream customers in the data-gathering process. Future research should be conducted by incorporating the upstream suppliers, downstream customers, and important stakeholders in the supply chain of the industry.

Finally, this study contributes to a better understanding of how SCM practices influence coffee export performance in Ethiopia and provides a basis for further research and policy development.

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