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Supplier Integration and Performance of Commercial State Corporations Within the Energy Sector in Nairobi County, Kenya

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Abstract: *Commercial state corporations are central to national development as they provide essential services and create employment opportunities. Within the energy sector, their role is especially critical since they guarantee the steady supply, transmission, and distribution of energy, which is a key driver of economic growth and industrialization. Nevertheless, despite their significance, many commercial state corporations in Kenya's energy sector continue to face recurring performance challenges that undermine their efficiency and long-term sustainability. The current study examined the effect of supplier integration on performance of commercial state corporations within the energy sector in Nairobi County, Kenya. It was grounded on knowledge-based view theory. The study used correlational research design. The unit of analysis was the 7 commercial state corporations in the energy sectors while the unit of observation was supply chain officers at the corporation's headquarters. Since the target population was small the study adopted census technique to incorporate all the 63 targeted. Inferential and descriptive statistics was employed for analysis of quantitative data with the aid of Statistical Package for Social Sciences (SPSS). The results indicate a strong positive correlation ($r = .756$, $p < .001$) between supplier integration and performance of commercial state corporations in the energy sector. The coefficient of determination ($R^2 = 0.572$) shows that supplier integration explains 57.2% of the variation in performance. In conclusion, supplier integration serves as a critical driver of enhanced performance for commercial state corporations in the energy sector by improving operational efficiency, strengthening responsiveness, and fostering competitive advantage. It is recommended that the commercial state corporations in the energy sector adopt digital platforms that enable real-time collaboration with suppliers, ensuring accuracy and timeliness in supply processes. Additionally, they should invest in supplier development initiatives and establish long-term strategic partnerships that encourage innovation, cost-effectiveness, and continuous performance improvement.*

Key Words: *Supplier Integration, Performance, Commercial State Corporations, Energy Sector*

I. Introduction

Supplier integration strengthens supply chain linkages by fostering closer collaboration with suppliers and embedding them into core operational and strategic processes (Müller & Schmidt, 2021). Beyond the exchange of goods and services, it involves joint planning, demand forecasting, and collaborative innovation that improve both efficiency and adaptability. Establishing long-term partnerships provides stability, while involving suppliers in decision-making aligns their capacities with shifting operational requirements (Handfield & Nichols, 2019). The use of rigorous performance evaluation systems promotes accountability and continuous improvement, reducing inefficiencies and enhancing reliability across supply chains. When suppliers are fully integrated into organizational processes, procurement agility is enhanced, risks of disruption are minimized, and consistency in service delivery is better sustained (Ahmed, Munir, & Sameer, 2020).

Within the supply chains, the integration of customers enhances responsiveness by ensuring that the needs and expectations of end-users are systematically incorporated into supply chain processes (Cao & Zhang, 2024). Collecting and analyzing feedback allows organizations to identify service gaps and implement timely adjustments. Customer relationship management systems provide a structured mechanism for building trust and improving communication,

while digital platforms enable real-time interaction and greater transparency. By embedding customers into decision-making and operational frameworks, services can be tailored more precisely, inefficiencies in meeting demand are reduced, and overall performance outcomes are strengthened (Ahmed et al., 2020. Ultimately, this approach not only heightens responsiveness but also reinforces legitimacy and confidence in service delivery.

Commercial state corporations in Kenya's energy sector play a crucial role in driving the country's economic growth, as they are tasked with electricity generation, transmission, and distribution while also advancing renewable energy initiatives. Examples include KenGen, which generates electricity, Kenya Power, which distributes it to consumers, and KETRACO, which develops and maintains transmission infrastructure. Their operations are directed toward ensuring a steady supply of energy, supporting industrial activities, and increasing access to electricity, all of which are vital for national development and public service delivery. Within this framework, supplier integration involves aligning suppliers with both operational and strategic processes to ensure the steady availability of key inputs such as fuel, spare parts, machinery, and technical services needed to sustain energy production and distribution. However, persistent supply chain challenges weaken efficiency and performance, particularly long procurement procedures that delay resource delivery and extend project timelines. Variations in supplier quality also create problems, as unreliable materials and equipment compromise service reliability and consistency. Weak coordination between suppliers and internal departments further limits planning accuracy, leading to mismatches between supply and demand, while minimal use of digital information systems reduces visibility across the chain.

A vibrant energy sector underpins industrial growth and strengthens investor confidence, yet many commercial state corporations in Kenya's energy industry continue to grapple with performance challenges that compromise efficiency and financial stability. According to KETRACO (2024), the country's total installed generation capacity of 2,818 MW is only marginally above the peak demand of 1,952 MW, placing significant strain on supply reliability. Financial difficulties are widespread, with Kenya Power and KenGen recording heavy losses in recent years (African Development Bank, 2024), while KETRACO is burdened with KES 23 billion in debt, limiting its capacity to expand critical transmission infrastructure (OAG, 2024). The consequences of these challenges extend to the wider economy, with the World Bank (2021) noting that frequent outages cost businesses an average of KES 6.3 million per month and reduce sales revenues by 7.1%, forcing many industries to consider alternative energy solutions. At the same time, electricity tariffs remain uncompetitive, with manufacturers in Kenya paying up to $0.15 per kWh compared to $0.04 in Ethiopia, weakening industrial competitiveness (Kenya Association of Manufacturers, 2022). The escalating debts and rising costs have drawn parliamentary scrutiny, with Cabinet Secretaries summoned to explain Kenya Power's liabilities, which now exceed KES 30 billion, alongside the continued increase in electricity charges.

Scholarly work has examined supply chain integration and its effect on organizational performance, though most research remains sector-specific. Njagi and Muli (2020) analyzed practices at Kenya Breweries Limited, Omondi and Wachiuri (2022) investigated firms in the metal and allied sector, while Mutwiri et al. (2020) focused on Kenya's public health supply chains. Although these studies enrich understanding, they reveal critical gaps. Contextually, attention has leaned heavily toward manufacturing and healthcare, overlooking the distinct dynamics of the energy sector, where regulatory restrictions and high capital intensity shape operations. Additionally, most research treats supply chain integration as a broad construct without elaborating specific dimensions such as supplier integration. The current study examined the effect of supplier integration on commercial state corporations within the energy sector in Nairobi County, Kenya.

II. Objective of the Study

The objective of the study was to assess the effect of supplier integration on performance of commercial state corporations within the energy sector in Nairobi County, Kenya.

III. Literature Review

Supplier integration is increasingly recognized as a central dimension of supply chain management, reflecting the need for stronger collaboration between firms and their external partners (Agyabeng-Mensah, Afum, & Ahenkorah, 2020). It is understood as the structured alignment of activities, processes, and knowledge flows between organizations and their suppliers, with the aim of achieving greater coordination and responsiveness in supply chains. This alignment has become especially critical in today's interconnected markets, where operational disruptions and volatile demand patterns require supply networks to operate with high levels of interdependence (Tsolakis, Keramydas, Toka, & Aidonis, 2021). By embedding suppliers into planning and operational cycles, organizations are able to establish closer synchronization of resources, processes, and timelines, reflecting the growing emphasis on integrated supply chain ecosystems. A fundamental aspect of supplier integration lies in the coordination of procurement and supply activities with organizational production and distribution requirements. This coordination ensures that resource availability, inventory

flows, and delivery schedules are managed with minimal fragmentation, reducing inconsistencies between projected and actual demand. In practice, this calls for the joint development of forecasting and planning mechanisms, where suppliers actively contribute data and insights that support accurate decision-making across the supply chain (Dubey, Gunasekaran, & Childe, 2020).

An effective collaboration within supply chains depends heavily on the timely sharing of accurate and consistent data (Khan, Yu, Belhadi, & Kamble, 2021). The adoption of digital tools such as supplier relationship management (SRM) systems and advanced enterprise resource planning (ERP) platforms has transformed the way organizations manage supplier interactions. These support transparency and accountability in procurement and logistics processes. Through such digital infrastructures, supplier integration evolves beyond transactional interactions into a sustained process of operational alignment, where both parties have visibility into shared activities and can adjust plans accordingly (Kamble, Gunasekaran, & Sharma, 2020). Relational aspects also underpin supplier integration, where trust, commitment, and joint responsibility influence the depth and effectiveness of collaboration. Recent studies emphasize that without relational governance, integration risks being undermined by opportunistic behavior and fragmented communication (Agyabeng-Mensah et al., 2020). Trust encourages suppliers and organizations to share sensitive information, engage in problem-solving, and commit resources to long-term partnerships. The social dimension of supplier integration, therefore, remains indispensable to the operational one, as it creates a foundation for both stability and adaptability in dynamic supply environments.

Papadopoulos, Gunasekaran, Dubey, and Wamba (2022) asserts that integrated supplier relationships allow organizations to identify vulnerabilities in advance and establish joint mechanisms for disruption management Recent disruptions in global supply chains, triggered by the COVID-19 pandemic, highlighted the extent to which supplier integration can determine resilience, as firms with stronger supplier linkages demonstrated greater adaptability in adjusting procurement and delivery processes (Golan, Jernegan, & Linkov, 2020). This suggests that supplier integration not only facilitates smoother day-to-day operations but also plays a vital role in enabling organizations to navigate uncertainty and volatility. Another emerging dimension of supplier integration is the role of sustainability and regulatory compliance in shaping procurement relationships. Organizations are increasingly required to ensure that suppliers adhere to environmental and social standards, making compliance monitoring part of integration processes. This has led to the development of collaborative frameworks where suppliers are actively engaged in aligning procurement practices with sustainability objectives, such as reducing carbon emissions or adopting responsible sourcing practices (Yawar & Seuring, 2020). Supplier integration in this regard extends beyond efficiency concerns and reflects broader institutional and policy expectations.

Suppliers often contribute expertise, technologies, and process innovations that organizations can embed into their own systems (Golan et al., 2020). In knowledge-intensive industries, integration thus functions as a conduit for the transfer and co-creation of knowledge across organizational boundaries. The knowledge-based view provides a useful lens here, emphasizing that such collaborations enable organizations to harness supplier knowledge as a strategic resource that contributes to long-term adaptability and performance (Ali, Gongbing, & Mehreen, 2021). The knowledge-based view (KBV) theory emphasizes that organizations capable of systematically generating, storing, sharing, and applying knowledge are better positioned to achieve superior levels of performance. Within this framework, knowledge is broadly categorized into explicit knowledge, which is codified and easily transferable through documents, reports, and databases, and tacit knowledge, which resides in the experiences, skills, and insights of individuals. KBV argues that firms must establish robust mechanisms to capture, integrate, and utilize both forms of knowledge in ways that strengthen decision-making, foster innovation, and improve operational efficiency (Nonaka & Takeuchi, 2019).

A key strength of KBV is its recognition of knowledge as a vital and sustainable source of competitive advantage, especially in dynamic and fast-changing environments (Azmi, Erlina, Muda, & Erwin, 2024). In contrast to traditional resource-based perspectives that emphasize tangible resources, KBV underscores the central role of intellectual capital, organizational learning, and innovation as essential drivers of long-term success. Another notable strength is its emphasis on continuous learning and structured knowledge-sharing processes, which encourage collaboration, adaptability, and the development of a learning culture. This perspective is especially relevant in industries where expertise, research, and technological advancement form the backbone of operations. Additionally, KBV resonates strongly with the realities of the digital economy, where organizations increasingly depend on advanced tools such as data analytics, artificial intelligence, and knowledge management systems to streamline processes, improve strategic planning, and sustain competitive advantage environments (Azmi et al., 2024). It is conceptualized that there is a relationship between the supplier integration and performance of commercial state corporations as depicted in figure 1.

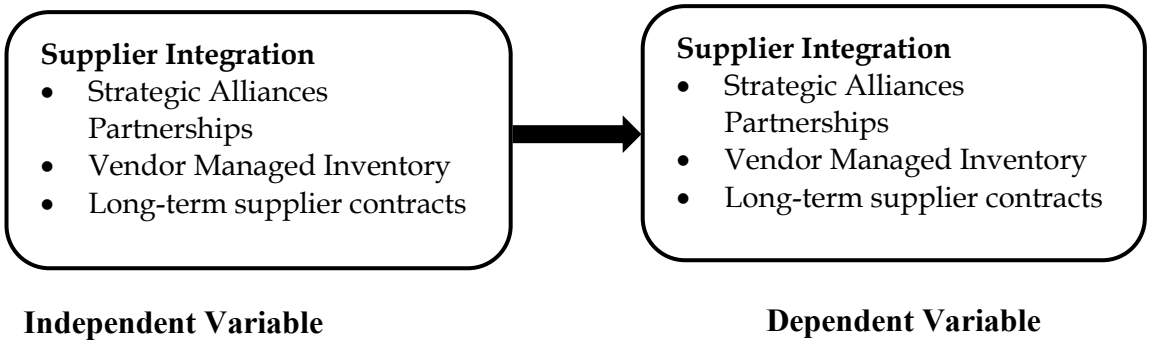

Figure 1: Conceptual Framework

Existing empirical research has examined supply chain integration and its effect on organizational performance in organizations. Mareks (2021) studied the impact of supplier integration on procurement efficiency in the UK retail sector. The study used a descriptive research design, 98 procurement managers from leading retail chains was selected using stratified sampling. Data was collected using structured surveys and analyzed using regression analysis. Descriptive findings showed that companies with closer supplier integration had fewer procurement delays and lower costs. Inferential analysis confirmed that supplier integration significantly improves procurement efficiency. The study concluded that retail firms should foster strong supplier relationships to enhance procurement effectiveness.

Lopez (2020) examined the role of supplier integration in reducing lead times in Spanish automotive firms. A case study approach was adopted, focusing on five major automobile manufacturers. The study sampled 113 supply chain managers through purposive sampling. Data was collected using semi-structured interviews and analyzed using thematic and regression analysis. Descriptive findings indicated that firms with stronger supplier integration had shorter lead times and fewer supply disruptions. Inferential results confirmed a strong positive correlation between supplier integration and lead time reduction. The study concluded that automotive companies should integrate suppliers into their planning processes to enhance efficiency. Osei and Kwame (2021) investigated the influence of supplier integration on cost reduction in Ghana's textile industry. The study used a cross-sectional research design, targeting 75 procurement officers from textile firms selected through random sampling. Data was gathered through questionnaires and analyzed using correlation and regression analysis. Descriptive findings showed that firms with well-integrated suppliers had lower production costs and better raw material availability. Inferential analysis revealed a strong positive relationship between supplier integration and cost efficiency. The study concluded that textile firms should establish supplier partnerships to improve cost management.

Adebayo and Chukwu (2022) assessed the impact of supplier integration on product quality in Nigerian food processing companies. A mixed-methods research design was employed, with 67 quality assurance managers selected through stratified sampling. Data was collected using surveys and focus groups and analyzed using thematic and regression analysis. Descriptive findings showed that companies with higher supplier integration had fewer product defects and improved consistency. Inferential results confirmed that supplier integration significantly enhances product quality. The study concluded that food processing companies should integrate suppliers into their quality control processes to maintain high standards. Most prior studies on supplier integration have tended to emphasize general aspects such as information exchange, compliance mechanisms, and coordination processes, yet they have not sufficiently examined how structured integration practices function within capital-intensive and highly regulated sectors. This has left a gap in understanding the operational mechanisms that link supplier integration to organizational performance in contexts where procurement risks, resource dependencies, and long-term commitments are critical. The current study addressed this by focusing specifically on commercial state corporations in the energy sector and examining supplier integration through three key dimensions: strategic alliances and partnerships, vendor-managed inventory, and long-term supplier contracts. By anchoring the analysis on these dimensions, the study moved beyond broad descriptions to provide a sector-specific perspective on how integration practices are operationalized and aligned with organizational performance.

IV. Methodology

The study adopted correlational research design. The target population was the 7 commercial state corporations in the energy sector including the Kenya Power, Kenya Electricity Generating Company (KenGen), Geothermal Development Company Ltd, Kenya Electricity Transmission Company Ltd (KETRACO), Kenya Pipeline Company (KPC), Rural Electrification and Renewable Energy Corporation (REREC), and National Oil Corporation. The unit of observation was

63 supply chain officers at the corporation's headquarters. Due to the small-size population, a census technique was employed to include all the supply chain officers. This study used a Likert scaled questionnaire to collect the primary data for the study. Inferential and descriptive statistics were employed in analysis, which was aided by Statistical Package for Social Sciences (SPSS). In regression analysis, the following model was applied:

$Y=\beta_0+\beta_1X_1+\varepsilon$
Where;
Y = Performance
β_0 = Constant
β_1 = Beta Coefficient
X_1= Supplier Integration
ε = Error term

V. Results

This section presents the study findings derived from a structured analysis of the collected data. It highlights both descriptive statistics and inferential analyses conducted to address the research objective.

5.1 Descriptive Statistics

The study sought to establish the effect of supplier integration on performance of commercial state corporations within the energy sector in Nairobi County, Kenya. The findings are presented in Tables in 1 and 2:

Table 1: Effect of Supplier Integration on Performance of Commercial State Corporations

	N	SA	A	N	D	SD	Mean	Std. Dev.
Our organization maintains strong partnerships with key suppliers.	47	27.7%	31.9 %	12.8%	23.4%	4.3%	4.043	1.1025
Strategic supplier alliances have improved supply chain efficiency and performance.	47	17.0%	53.2%	17.0%	12.8%	0%	4.149	1.0830
Suppliers effectively manage and replenish our inventory.	47	14.9%	48.9%	19.1%	17%	0%	4.000	.9089
Vendor-managed inventory has reduced stockouts, optimizing operational performance.	47	21.3%	36.2%	17.0%	12.8%	12.8%	3.702	1.2321
Our organization establishes long-term contracts with suppliers.	47	31.9%	34.0%	14.9%	8.5%	0%	4.085	.9742
Long-term supplier contracts have improved supply reliability and financial stability.	47	46.8%	29.8%	14.9%	8.5%	0%	3.787	1.0202

Key: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

The findings indicate that 27.7% of respondents strongly agreed that their organization maintains strong partnerships with key suppliers, 31.9% agreed, 12.8% were neutral, 23.4% disagreed, and 4.3% strongly disagreed, with a mean of 4.043 and a standard deviation of 1.103. This suggests that supplier relationship management is valued, fostering collaboration and trust, which are essential for a consistent and efficient supply chain. Regarding whether strategic supplier alliances have improved supply chain efficiency and performance, 17.0% strongly agreed, 53.2% agreed, 17.0% were neutral, and 12.8% disagreed, with none strongly disagreeing, yielding a mean of 4.149 and a standard deviation of 1.083. This implies that strategic partnerships with suppliers enhance coordination, reduce lead times, and improve overall supply chain performance.

In addition, 14.9% of respondents strongly agreed that suppliers effectively manage and replenish their inventory, 48.9% agreed, 19.1% were neutral, and 17.0% disagreed, with none strongly disagreeing, producing a mean of 4.000 and a standard deviation of 0.909. This indicates that supplier integration goes beyond transactional dealings to include collaborative inventory management, reducing inefficiencies and procurement gaps. When asked whether vendor-managed inventory has reduced stockouts and optimized operational performance, 21.3% strongly agreed, 36.2% agreed, 17.0% were neutral, 12.8% disagreed, and 12.8% strongly disagreed, with a mean of 3.702 and a standard deviation of 1.232. This suggests that supplier involvement in inventory control supports continuous stock availability, boosting operational effectiveness.

Furthermore, 31.9% of respondents strongly agreed that their organization establishes long-term contracts with suppliers, 34.0% agreed, 14.9% were neutral, and 8.5% disagreed, with none strongly disagreeing, giving a mean of 4.085 and a standard deviation of 0.974. This indicates that long-term supplier engagements are generally practiced, although consistency may vary across projects. Lastly, 46.8% of respondents strongly agreed that long-term supplier contracts have improved supply reliability and financial stability, 29.8% agreed, 14.9% were neutral, and 8.5% disagreed, with none strongly disagreeing, resulting in a mean of 3.787 and a standard deviation of 1.020. This suggests that enduring supplier relationships contribute to supply reliability, financial predictability, and cost control.

Table 2: Performance of Commercial State Corporations within the Energy Sector

	N	SA	A	N	D	SD	Mean	Std. Dev.
The organization has consistently met its financial targets in the past three financial years.	47	34.0%	31.9 %	21.3%	10.6%	2.1%	4.0426	1.1025
There has been a significant improvement in revenue generation and cost control in our operations.	47	34.0%	36.2%	14.9%	12.8%	2.1%	4.1489	1.0831
The organization has streamlined its supply chain processes to reduce operational costs and delays.	47	25.5%	34.0%	25.5%	14.9%	0%	4.0000	.9089
There is minimal wastage of resources in daily operations due to effective planning and coordination.	47	42.6%	34.0%	10.6%	12.8%	0%	3.7021	1.2321
Customer complaints are handled promptly and effectively in our organization.	47	31.9%	48.9%	8.5%	8.5%	2.1%	4.0851	.9742
Our organization meets its service delivery timelines as committed to clients and stakeholders.	47	44.7%	36.2%	10.6%	8.5%	0%	3.7872	1.0202

Key: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

The findings indicate that 34.0% of respondents strongly agreed that their organization has consistently met its financial targets over the past three financial years, 31.9% agreed, 21.3% were neutral, 10.6% disagreed, and 2.1% strongly disagreed, giving a mean of 4.043 and a standard deviation of 1.103. This suggests that commercial state corporations in the energy sector maintain financial stability and meet established revenue and performance benchmarks. Regarding whether there has been a significant improvement in revenue generation and cost control, 34.0% strongly agreed, 36.2% agreed, 14.9% were neutral, 12.8% disagreed, and 2.1% strongly disagreed, resulting in a mean of 4.149 and a standard deviation of 1.083. This implies the presence of effective financial management practices that enhance profitability and maintain expenditure control.

In addition, 25.5% of respondents strongly agreed that their organization has streamlined supply chain processes to reduce costs and delays, 34.0% agreed, 25.5% were neutral, and 14.9% disagreed, with none strongly disagreeing. The mean was 4.000 and the standard deviation 0.909, indicating that supply chain optimization is contributing to greater efficiency and timely service delivery. When asked whether there is minimal wastage of resources due to effective planning and

coordination, 42.6% strongly agreed, 34.0% agreed, 10.6% were neutral, and 12.8% disagreed, with none strongly disagreeing, yielding a mean of 3.702 and a standard deviation of 1.232. This suggests that resource management practices are generally effective, though variations in implementation may exist.

Furthermore, 31.9% of respondents strongly agreed that customer complaints are handled promptly and effectively, 48.9% agreed, 8.5% were neutral, 8.5% disagreed, and 2.1% strongly disagreed, with a mean of 4.085 and a standard deviation of 0.974. This implies that timely and effective complaint resolution supports customer satisfaction and service quality. Lastly, 44.7% of respondents strongly agreed that their organization meets its service delivery timelines, 36.2% agreed, 10.6% were neutral, and 8.5% disagreed, with none strongly disagreeing. The mean was 3.787 and the standard deviation 1.020, indicating that commitments to clients and stakeholders are generally met, though some improvement potential remains.

5.2 Inferential Statistics

Inferential analysis was conducted to establish the relationship between the supplier integration and performance. These included the correlation and regression analysis methods.

5.2.1 Correlation Analysis

The researcher undertook correlation analysis to establish the nature and strength of the relationships between the independent and the dependent variable of the study. Findings are shown in Table 3:

Table 3: Correlation between Supplier Integration and Performance

		Performance
Supplier Integration	Pearson Correlation	.756**
	Sig. (2-tailed)	.000
	N	47

Supplier integration also shows a strong positive correlation with organizational performance, with a Pearson correlation coefficient of r = 0.756 and a p-value of 0.000. This implies that organizations that maintain close relationships with suppliers, including joint planning and inventory management, tend to experience superior performance.

5.2.2 Regression Analysis

The study carried out a regression analysis to predict the performance from supplier integration. Findings are displayed in Tables 4, 5, and 6:

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756[a]	.572	.562	.51665

a. Predictors: (Constant), Supplier Integration

The model summary in Table 4 shows that supplier integration recorded an R value of 0.756, with an R Square of 0.572, indicating that 57.2% of the variation in organizational performance is explained by supplier integration. The adjusted R Square of 0.562 suggests that the model remains reliable with minimal reduction when adjusted for the number of predictors, while the standard error of 0.51665 reflects a relatively close alignment between predicted and actual performance outcomes. These results suggest that supplier integration plays a substantial role in explaining variations in organizational performance among commercial state corporations in the energy sector.

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.029	1	16.029	60.051	.000[b]
	Residual	12.012	45	.267		
	Total	28.041	46			

a. Dependent Variable: Performance

b. Predictors: (Constant), Supplier Integration

Table 5 indicates that the regression model is statistically significant, with an F-statistic of 60.051 and a p-value of 0.000, showing that supplier integration has a meaningful influence on organizational performance. The large regression sum of squares (16.029) compared to the residual (12.012) further demonstrates that a considerable proportion of the variation in performance is explained by the model, confirming its robustness and reliability in assessing the effect of supplier integration within commercial state corporations in the energy sector.

Table 6: Regression Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.988	.387		2.553	.014
	Supplier Integration	.798	.103	.756	7.749	.000

a. Dependent Variable: Performance

The findings indicate that the beta coefficient of 0.798 signifies that a unit increase in supplier integration leads to a corresponding increase of 0.798 units in the performance. The t-value of 7.749 and the p-value of 0.000 confirm that the relationship is strong and significant at 95% confidence level. Therefore, supplier integration affects the performance of commercial state corporations in the energy sector.

VI. Conclusion

The study concluded that supplier integration is a major contributor to organizational performance. Establishing strong partnerships with suppliers, engaging in joint planning, and adopting long-term contractual arrangements were found to significantly enhance supply chain efficiency and reduce costs. The study emphasized that supplier collaboration ensures reliability, timely deliveries, and optimized inventory management. It was further concluded that a strong positive and significant relationship exists between supplier integration and performance of commercial state corporations within the energy sector.

Recommendation

Furthermore, the study recommends that commercial state corporations establish strong, long-term partnerships with suppliers to ensure reliability, continuity, and efficiency of supply chains. Such partnerships can be strengthened through the adoption of practices such as vendor-managed inventory, collaborative forecasting, and joint planning, which would minimize stockouts and improve service delivery. To maintain high standards, supplier performance should be monitored and evaluated continuously using clear key performance indicators. Corporations are also encouraged to embrace digital supplier management platforms that enhance transparency, trust, and information sharing, thereby deepening collaboration and driving supply chain efficiency.

References

[1] Adebayo, T., & Chukwu, E. (2022). Impact of supplier integration on product quality in Nigerian food processing companies. *Journal of Food Industry Management, 9*(4), 110- 128.

[2] Agyabeng-Mensah, Y., Afum, E., & Ahenkorah, E. (2020). Exploring the mediating effects of performance. Benchmarking: An International Journal, 27(6), 1793–1811.

[3] Ali, S., Gongbing, B., & Mehreen, A. (2021). Supplier integration and firm performance: The moderating role of technology orientation. *Sustainability, 13*(2), 713.

[4] Azmi, Z., Erlina, E., Muda, I., & Erwin, K. (2024). Exploring the use of Knowledge-Based view In accounting and the business environment. *Scientific Journal of Economics and Business,* 12(3), 3203-3212.

[5] Cao, M., & Zhang, Q. (2024). Information integration and supply chain performance: The role of IT-enabled coordination. Supply Chain Management Review, 30(1), 45-62.

[6] Dubey, R., Gunasekaran, A., & Childe, S. J. (2020). Big data analytics capability in supply chain agility: The moderating effect of organizational flexibility. *Management Decision, 58*(8), 1671–1688.

[7] Golan, M. S., Jernegan, L. H., & Linkov, I. (2020). Trends and applications of resilience analytics in supply chain modeling: Systematic literature review in the context of the COVID-19 pandemic. *Environment Systems and Decisions, 40*(2), 222–243.

[8] Government of Kenya. (2019). State Corporation Act, CAP 446. Nairobi: Government Printer.

[9] Kamble, S. S., Gunasekaran, A., & Sharma, R. (2020). Big data-driven supply chain performance measurement system: A review and framework for implementation. *International Journal of Production Research, 58*(1), 65–86.

[10] Khan, S. A. R., Yu, Z., Belhadi, A., & Kamble, S. S. (2021). Big data analytics and supply chain management: A review and bibliometric analysis. *Annals of Operations Research,* 1- 38.

[11] Mareks, D. (2021). The impact of supplier integration on procurement efficiency in the UK retail sector. *Retail Supply Chain Review, 25*(2), 90-108.

[12] Müller, F., & Schmidt, H. (2021). The impact of internal integration on production efficiency in German automobile manufacturing firms. *International Journal of Production Management, 29*(4), 56-72.

[13] Mutwiri, J., et al. (2020). Public sector supply chain integration: A case study of KEMSA. *Journal of Public Administration and Supply Chain, 24*(3), 189-205.

[14] Njagi, P., & Muli, K. (2020). Supply chain integration and business performance in Kenya. *Journal of Kenyan Business Research, 15*(4), 289-310.

[15] Nonaka, I., & Takeuchi, H. (1995). The knowledge-creating company: How Japanese companies create the dynamics of innovation. Oxford University Press.

[16] Nonaka, I., & Takeuchi, H. (2019). The wise company: How companies create continuous innovation. Oxford University Press.

[17] Osei, M., & Kwame, J. (2021). Influence of supplier integration on cost reduction in Ghana's textile industry. *West African Journal of Business Strategies, 14*(1), 45-61.

[18] Papadopoulos, T., Gunasekaran, A., Dubey, R., & Wamba, S. F. (2022). Big data analytics in operations and supply chain management: State-of-the-art and future directions. *International Journal of Production Research, 60*(5), 1582–1604.

[19] Republic of Kenya. (2017). National economic development strategy and the role of state corporations. Nairobi: Government Printer.

[20] Tsolakis, N. K., Keramydas, C. A., Toka, A. K., & Aidonis, D. A. (2021). Supply chain design under uncertainty: *A review and future research directions.*

[21] Yawar, S. A., & Seuring, S. (2020). Management of social issues in supply chains: A review of the empirical evidence. *International Journal of Physical Distribution & Logistics Management, 50*(7/8), 724–747.