ETHICAL SUPPLY CHAIN PRACTICES AND MARKETING PERFORMANCE IN A DEREGULATED NIGERIAN ECONOMY

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Abstract
This study examined the effect of ethical supply chain practices on the marketing performance of petroleum companies in Nigeria. Specifically, the study assessed the influence of green procurement, ethical distribution, information transparency, and ethical sourcing on marketing performance. The study adopted a cross-sectional survey research design. A sample size of 322 respondents was determined using the Yamane (1967) sample size determination formula. A stratified random sampling technique was employed to select management-level employees and retail outlet supervisors from the Major Oil Marketers Association of Nigeria (MOMAN) and the Independent Petroleum Marketers Association of Nigeria (IPMAN) operating in Lagos and Port Harcourt. Primary data were collected from 316 valid respondents using a structured five-point Likert-scale questionnaire and analysed using descriptive statistics and multiple linear regression analysis in SPSS. The regression model was statistically significant ($F = 356.705$, $p < 0.001$) and explained 62.1 percent of the variation in marketing performance ($R^2 = 0.621$). Green procurement emerged as the strongest predictor of marketing performance ($\beta = 0.766$, $p < 0.001$), followed by information transparency ($\beta = 0.433$, $p < 0.001$), ethical sourcing ($\beta = 0.335$, $p < 0.001$), and ethical distribution ($\beta = 0.220$, $p < 0.001$). The findings indicate that ethical supply chain practices significantly enhance the marketing performance of petroleum companies in Nigeria. The study concludes that strengthening ethical supply chain practices is critical for improving marketing performance in the deregulated petroleum sector. Accordingly, petroleum marketing companies should strengthen green procurement initiatives, improve information transparency, reinforce ethical distribution processes, and institutionalize ethical sourcing practices to enhance market share, customer retention, and brand equity.

Keywords: Ethical supply chain practices, green procurement, information transparency, ethical sourcing, marketing performance.

INTRODUCTION
The petroleum industry remains the primary catalyst for Nigeria's macroeconomic stability and industrial growth, yet the downstream marketing sector is frequently undermined by systemic ethical challenges such as product adulteration, hoarding, and pump-meter manipulation (Ogbuji, 2022). These unethical practices have created a profound "trust deficit" between petroleum marketers and the Nigerian motoring public, where consumers often equate the purchase of fuel with a high risk of being cheated or damaging their vehicles (Akinyele, 2010). Consequently, ethical supply chain practices (ESCP) have evolved from mere moral obligations into critical strategic tools that allow firms to differentiate themselves in an increasingly deregulated and competitive market (Chukwu et al., 2023).

This study investigates how the integration of integrity-driven procurement and distribution processes can repair this fractured relationship by ensuring that the "chain of custody" from the depot to the final nozzle is transparent and verifiable. By adopting an environmentally conscious and socially responsible supply chain, firms can transform ethical behavior into a measurable driver of superior marketing performance, particularly in terms of increased market share and brand equity (Ali et al., 2024).

In the wake of the Petroleum Industry Act (PIA) of 2021, the industry's focus has shifted from mere product availability to the reliability of supply and the ethical conduct of retail outlets (Jeremiah, 2022). Furthermore, Nigerian consumers are becoming increasingly sophisticated, frequently bypassing closer independent filling stations in favor of major marketers perceived to uphold higher ethical standards and better-quality assurance. This research addresses the critical gap between corporate ethical claims and actual market outcomes, providing a roadmap for sustainable commercial success through moral alignment. Through a rigorous examination of dimensions such as green procurement and ethical distribution, the study highlights how moral conduct serves to reduce operational risks, regulatory fines, and litigation costs (Siddiqi et al., 2024). Ultimately, this introduction establishes a framework for understanding ethics not as a financial burden or an optional "add-on," but as a fundamental pillar for long-term survival and competitive advantage in the Nigerian oil sector (Arhinful et al., 2025). By aligning supply chain operations with global ethical benchmarks, Nigerian petroleum firms can secure a "Social License to Operate" while simultaneously maximizing their profitability and customer retention rates (Eze & Nwankwo, 2023).

Problem Statement

The Nigerian petroleum downstream sector is currently trapped in a paradox where, despite the essential nature of the product, marketing firms are struggling with stagnant growth and eroding brand loyalty. This crisis of performance is fundamentally rooted in a "Trust Deficit" caused by persistent unethical supply chain practices that have become normalized within the industry (Okafor, 2022). One of the most pressing issues is the prevalence of Pump-Meter Manipulation and Under-Dispensing, where retail outlets deliberately calibrate dispensing machines to deliver less fuel than the volume displayed on the meter (Aminu, 2022). This practice not only constitutes a direct theft from the consumer but also triggers a "Defensive Buying Behavior," where motorists bypass local independent stations in favor of major marketers, leading to a skewed distribution of market share and unfair competition (Eze & Nwankwo, 2023).

Furthermore, the lack of Supply Chain Transparency has facilitated the "Diversion" of petroleum products from regulated channels to the black market, particularly during periods of national scarcity. According to Jeremiah (2022), when products meant for specific geographical locations are diverted for illicit profit, it results in artificial scarcity that damages the marketing reputation of the parent firm and leads to severe regulatory sanctions from the NMDPRA. Additionally, the industry faces a significant challenge regarding Product Adulteration, where high-quality fuel is blended with inferior solvents or kerosene during transit to increase volume (Ezinneamaka et al., 2025). This unethical behavior in the "Chain of Custody" results in frequent engine failures for consumers, leading to a total collapse of brand equity and long-term customer attrition (Akinyemi, 2021).

Beyond the point of sale, there is a glaring neglect of Environmental Ethics within the supply chain. Many marketers operate with leaking underground storage tanks (USTs) and poorly maintained tankers that cause frequent spills and soil contamination in host communities (Eshiett & Eshiett, 2026). These environmental externalities have led to increased litigation costs and a hostile relationship with local stakeholders, which negatively impacts the firm's "Social License to Operate" and overall marketing effectiveness (Salami, 2024). Despite these visible challenges, there is a dearth of empirical research in the Nigerian context that specifically links these ethical supply chain dimensions to Marketing Performance metrics like customer retention and relative market share. Without a clear empirical roadmap demonstrating that "Ethics Pays," many Nigerian petroleum firms continue to prioritize short-term illicit gains over sustainable market leadership (Nnamdi, 2022). Therefore, this study seeks to address this gap by investigating how ethical supply chain practices can be utilized as a strategic tool to enhance marketing performance in a deregulated Nigerian economy.

LITERATURE REVIEW

Conceptual framework

This study centered on ethical supply chain practices and marketing performance in the petroleum industry. It sought to demonstrate the causality between ethical supply chain practices and marketing performance in the petroleum industry. To this end, the following ethical supply chain practice dimensions were obtained from extant relevant studies: green procurement, ethical distribution, information transparency and ethical sourcing (Ogbuji, 2022; Ali et al., 2024; Aminu, 2022; Okafor, 2022; Akinyemi, 2021). Also, the dimensions of marketing performance, the dependent variable (relative market share, customer retention/loyalty, and brand equity), were obtained from extant relevant studies (Akinyele, 2010; Nnamdi, 2022; Bello & Salami, 2023).

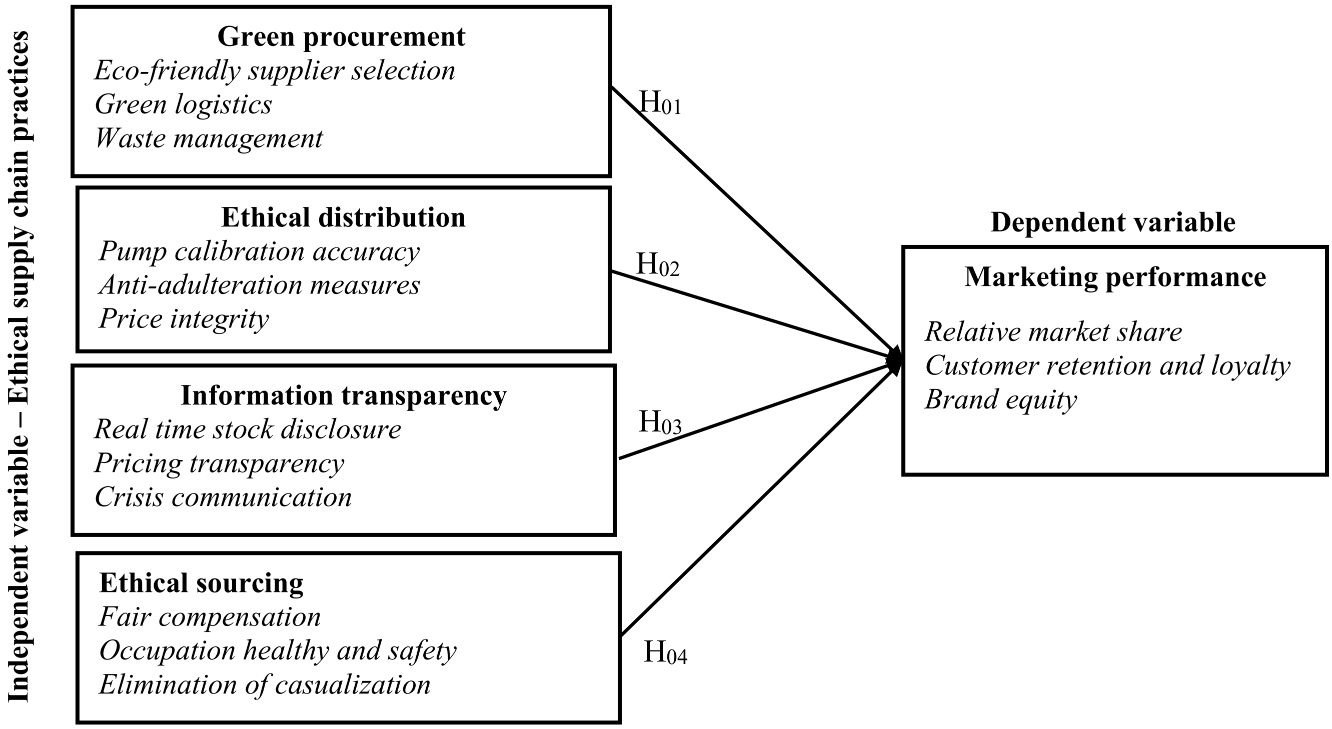

FIG. 1: Conceptual model of the study
Source: Independent variable parameters adapted from Ogbuji (2022); Ali et al. (2024); Aminu (2022); Okafor (2022); Akinyemi (2021). Dependent variable parameters adapted from Akinyele (2010); Nnamdi (2022); Bello and Salami (2023).

For the sake of clarity in the context of this study, the dimension 'green procurement' is operationalized as the extent to which a petroleum firm integrates environmental sustainability into its purchasing decisions these decisions are supplier environmental audit, eco labeling and compliance and logistics optimization. 'Ethical distribution' is operationalized as the quality and quantity assurance provided at the final point of sale which includes: meter integrity, product purity and price transparency. 'Information transparency' is operationalized as the reduction of 'information asymmetry' between the marketer and the motoring public. These actions are real time availability, pricing disclosure and open communication. Also, 'ethical sourcing and Labour standards' dimension is operationalized as the "social ethics" applied to the human links in the supply chain. These social ethics includes; fair compensation, workplace safety and anti-casualization. In the context of this study, it is presumed that these dimensions of ethical supply chain practices could have a role to play in enhancing marketing performance in the petroleum industry in Nigeria. This presumption has been integrated into a conceptual model (see FIG. 1.) showing the hypothesized relationship between the independent and dependent variables in the context of petroleum industry.

Ethical Supply Chain Practices (ESCP)

The concept of an ethical supply chain in the petroleum industry transcends the traditional logistics of moving crude or refined products; it encompasses the systemic integration of moral philosophy into commercial operations (Etim, et al., 2024; Siddiqi et al., 2024). In the Nigerian downstream sector, ESCP is defined as a multi-dimensional construct that ensures the "Chain of Custody" remains untainted by corruption, environmental neglect, or consumer exploitation (Ogbuji, 2022). According to Chukwu et al. (2023), an ethical supply chain must be "transparent, traceable, and transformative," providing value not just to the firm's bottom line but to the broader ecosystem of stakeholders. For Nigerian oil marketers, adopting these practices is a response to the "Institutional Voids" where regulatory enforcement is often replaced by corporate self-regulation to maintain market relevance (Akinyemi, 2021).

Marketing Performance

Marketing performance in the contemporary business landscape is no longer viewed through a singular financial lens but is instead conceptualized as a multi-dimensional construct that reflects an organization's strategic success in navigating competitive environments (Acheampong et al., 2023). Within the capital-intensive petroleum industry, this performance is predominantly evaluated through the integrated metrics of market share, customer loyalty, and brand equity, which together signal a firm's long-term viability (Beta et al., 2025). Market share serves as a foundational barometer for operational scale, representing the specific proportion of total industry demand captured by a firm through its distribution efficiency and pricing strategies. However, recent scholarship suggests that maintaining a dominant market share in emerging economies like Nigeria is increasingly dependent on the transparency of the supply chain and the reliability of product availability.

Beyond mere volume, customer loyalty has emerged as a critical psychological asset that buffers a firm against market volatility and aggressive competitor entry. This loyalty is characterized by a deep-seated commitment to repeat patronage, which Pradja et al. (2024) argue is driven by the consistent delivery of value and the cultivation of trust between the brand and the consumer. In the petroleum sector, where product differentiation is minimal, this loyalty is often a direct byproduct of "ethical salience," where consumers align their purchasing power with firms that demonstrate integrity and social responsibility (Jamaludin et al., 2022). Consequently, a loyal customer base provides a stable foundation upon which brand equity is built, representing the intangible value and prestige that a brand name adds to the physical product.

High brand equity functions as a formidable competitive advantage, enhancing a firm's reputation and allowing it to command a premium position in the minds of stakeholders. Furthermore, the modern marketing paradigm suggests that these non-financial indicators are often leading predictors of future financial health, as they capture the underlying strength of the firm's market relationships (Akinyele et al., 2023). Ultimately, a comprehensive assessment of marketing performance must account for the fluid interaction between these variables, as they collectively dictate a firm's ability to sustain growth amidst shifting regulatory and economic pressures (Acheampong et al., 2023). By prioritizing the alignment of ethical supply chain practices with these performance outcomes, petroleum firms can transition from short-term transactional gains to enduring market leadership (Beta et al., 2025).

Green Procurement and Marketing Performance

Green Procurement in the Nigerian petroleum industry involves the strategic selection of suppliers and logistics providers who adhere to strict environmental standards, such as low-emission transportation and spill-prevention protocols (Salami, 2024). By sourcing products through "clean" channels, oil marketers in Nigeria can significantly reduce the risk of environmental litigations and regulatory fines from the NMDPRA, which otherwise drain marketing budgets and damage brand reputation (Ekpo et al., 2025). According to Ali et al. (2024), green procurement acts as a powerful "Brand Signal" to the growing demographic of environmentally conscious Nigerian consumers who prefer to patronize firms that demonstrate a commitment to sustainability. This ethical sourcing strategy directly enhances Brand Equity, as the firm is perceived not just as a fuel seller but as a responsible corporate citizen contributing to Nigeria's climate goals (Eshiett & Eshiett, 2026). Furthermore, green procurement reduces long-term operational costs by minimizing waste and optimizing the "Life Cycle" of supply chain assets, allowing for more competitive pricing strategies that capture a larger Market Share (Siddiqi et al., 2024). In a market often criticized for "oil soot" and pollution, firms that market their "Green Credentials" experience higher levels of customer advocacy and positive word-of-mouth. Ultimately, green procurement transforms the supply chain from a hidden back-end operation into a visible marketing asset that drives Customer Retention (Okafor, 2022). By ensuring that every drop of fuel is sourced responsibly, Nigerian marketers build a "Resilient Brand" that can withstand the global shift toward "Energy Transition" (Arhinful et al., 2025). This dimension proves that environmental ethics are no longer a luxury but a fundamental driver of profitability and market positioning in the downstream sector (Ogbuji, 2022).

Ho_1: Green procurement has no significant effect on marketing performance in the petroleum sector.

Ethical Distribution and Marketing Performance

Ethical Distribution centers on the integrity of the "Last Mile" delivery, ensuring that petroleum products reach the consumer without being subjected to adulteration, price gouging, or artificial scarcity (Aminu, 2022). In Nigeria, where "Sharp Practices" at the pump are a major pain point, maintaining strict ethical standards in distribution acts as the primary differentiator for Customer Loyalty (Eze & Nwankwo, 2023). When a firm guarantee that its meters are accurately calibrated and its fuel is unadulterated, it creates a "Trust Premium" that allows it to maintain high sales volumes even when competitors attempt to lure customers with lower, albeit suspect, prices (Ezinneamaka et al., 2025). According to Jeremiah (2022), ethical distribution eliminates the negative marketing impact of "Product Diversion," where fuel meant for retail stations is diverted to the black market, causing stockouts that frustrate loyal customers. This consistency in product availability directly boosts Relative Market Share, as motorists will always gravitate toward brands that are perceived as "Reliable" during periods of national fuel volatility. Furthermore, ethical distribution reduces the "Marketing Friction" caused by customer complaints and engine-damage claims, which can otherwise lead to a total collapse of Brand Image (Akinyemi, 2021). Firms that utilize digital tracking and "Tamper-Proof" seals on tankers provide a visible commitment to ethics that enhances their Competitive Advantage (Chukwu et al., 2023). By protecting the "Chain of Custody," Nigerian marketers ensure that their marketing promises regarding "Quality and Quantity" are actually delivered at the point of sale (Nnamdi, 2022). Consequently, ethical distribution serves as the most direct link between supply chain management and the firm’s ability to dominate the local retail market (Ogbuji, 2022).

Ho_2: Ethical distribution has no significant effect on marketing performance in the petroleum sector

Information Transparency and Marketing Performance

Information Transparency involves the real-time disclosure of stock levels, pump prices, and sourcing origins to the public, effectively reducing the "Information Asymmetry" that often leads to panic buying in Nigeria (Jeremiah, 2024). According to Arhinful et al. (2025), when petroleum marketers use digital displays or mobile apps to update customers on product availability, they build a psychological bond of "Reliability" that significantly improves Customer Retention. Transparency acts as a "Trust Signal" in a market where consumers are traditionally skeptical of oil firms' motives, allowing transparent companies to achieve higher Brand Resonance (Akinyele, 2010). Transparency in pricing (showing the breakdown of regulated costs versus market margins) reduces the friction at the retail outlet and enhances the perceived "Fairness" of the brand. This openness directly impacts Marketing Performance by reducing the "Cognitive Dissonance" consumers feel during price hikes, leading to more stable sales volumes even in inflationary periods (Eze & Nwankwo, 2023). Furthermore, transparency discourages internal corruption and "under-the-table" deals at the depot, ensuring that products are sold through official channels to maximize the firm's recorded Market Share (Okafor, 2022). Firms that are transparent about their supply chain failures, such as delays in vessel berthing, actually gain more "Brand Respect" than those that hide information, as honesty is a rare commodity in the Nigerian downstream sector (Nnamdi, 2022). By digitizing the "Information Flow," marketers can provide personalized services to bulk buyers, further expanding their B2B Marketing Reach (Ezinneamaka et al., 2025). Ultimately, information transparency serves as the "Digital Bridge" between a complex supply chain and a satisfied, loyal customer base (Siddiqi et al., 2024).

Ho_3: Information transparency has no significant effect on marketing performance in the petroleum sector

Ethical Sourcing and Marketing Performance

Ethical Sourcing and Labor Standards (ESLS) ensure that every human participant in the supply chain (from tanker drivers to pump attendants) is treated fairly and works under safe, dignified conditions (Siddiqi et al., 2024). In the Nigerian petroleum industry, the "Frontline Employee" (the pump attendant) is the face of the brand; if they are underpaid or poorly treated, they are more likely to engage in "Short-Changing" customers, which destroys Customer Loyalty (Akinyemi, 2021). According to Eshiett and Eshiett (2026), high labor standards lead to motivated employees who provide superior customer service, directly enhancing the "Service Quality" dimension of Marketing Performance. Firms that implement strict safety protocols for tanker drivers reduce the frequency of road accidents, thereby protecting the brand from the massive negative publicity associated with fuel-tanker explosions (Salami, 2024). Furthermore, ethical sourcing of labor ensures that the firm maintains its "Social License to Operate" in host communities, preventing disruptions that could lead to loss of Market Share. Ali et al. (2024) argue that corporate "Social Performance" is a strong predictor of "Marketing Performance," as modern Nigerian motorists increasingly factor in a company's "Human Rights" record when choosing a brand. By investing in fair wages and health insurance for supply chain staff, marketers reduce employee turnover, ensuring that experienced "Brand Ambassadors" remain at the retail stations (Okafor, 2022). This dimension of ethics ensures that the "People" element of the marketing mix (the 7Ps) is robust, professional, and aligned with the firm's strategic goals (Ogbuji, 2022). Ultimately, a supply chain that respects labor rights produces a "Trustworthy Brand" that can command a higher price premium and a more dedicated following (Arhinful et al., 2025).

Ho_4: Ethical sourcing has no significant effect on marketing performance in the petroleum sector.

Review of Empirical Studies

TABLE 1 summarizes available literature on ethical supply chain practices and marketing performance and also provides a granular analysis of existing research linking supply chain ethics, sustainability, and marketing outcomes, highlighting their research purpose, methodologies, key findings, conclusions, and observed gaps.

TABLE 1
Review of empirical studies

S/N	Author(s) & Year	Purpose of Research	Methodology	Findings	Observed Gaps
1	Ezinneamaka et al. (2025)	To examine the link between pump integrity and brand equity in Lagos.	Survey of 400 motorists; Regression analysis.	Found that 62% of brand preference is driven by "perceived honesty" at the pump.	Did not account for the impact of digital transparency tools.
2	Bolaji et al. (2024)	Impact of Green SCM on the profitability of Northern oil firms.	Longitudinal study; Secondary data (10 years).	Green practices reduce long-term waste costs but require high initial CAPEX.	Used financial ratios only; ignored consumer-centric marketing metrics.
3	Nwachukwu (2024)	Transparency and customer loyalty in Port Harcourt filling stations.	Quasi-experimental; Observation of 15 stations.	Stations with real-time digital price boards had 30% higher repeat patronage.	Small geographic scope (limited to Rivers State).
4	Ali et al. (2024)	Sustainability practices and market share in emerging markets.	Cross-sectional survey; SEM modeling.	Social and economic ethics positively correlate with market penetration.	General study; not specific to the Nigerian petroleum downstream sector.
5	Okafor & Benson (2023)	Ethics in fuel distribution and brand resonance in the SE.	Descriptive survey; 320 respondents.	Product diversion significantly erodes brand trust and resonance.	Focused on "Major Marketers" while ignoring the "Independent" sector.
6	Ekpo et al. (2025)	Green procurement and regulatory compliance in Nigeria.	Qualitative interviews with 20 supply chain managers.	Green sourcing acts as a buffer against NMDPRA penalties.	Lacks quantitative validation of marketing outcomes.
7	Aminu (2022)	Impact of meter tampering on consumer buying behavior.	Survey and focus group discussions.	Motorists engage in "defensive buying," bypassing local stations for major brands.	Did not provide a model for reversing this trend via ethics.
8	Bello & Salami (2023)	Ethical sourcing and employee-driven marketing performance.	Correlation analysis; 150 employees surveyed.	Fair wages for pump attendants reduce meter manipulation and improve service.	Did not link labor standards directly to "Market Share."
9	Jeremiah (2024)	Digitization of the oil supply chain and transparency in Nigeria.	Content analysis of	Digital tracking reduces "Information	Focused on B2B transparency

			corporate reports.	Asymmetry" and increases investor trust.	rather than the B2C retail experience.
10	Arhinful et al. (2025)	Corporate Social Responsibility (CSR) and brand equity in oil firms.	Path analysis; 500 consumers.	Ethical community engagement prevents boycotts and enhances brand image.	Does not distinguish between "External CSR" and "Internal SCM Ethics."

Source: Authors' literature review

The reviewed empirical studies collectively highlight the critical intersection of ethical operations, technological transparency, and consumer loyalty within the Nigerian petroleum sector. Ezinneamaka et al. (2025) and Aminu (2022) establish that "perceived honesty" at the pump is a primary driver of brand preference, noting that meter tampering often leads to "defensive buying" behaviors among motorists. To combat these integrity issues, Nwachukwu (2024) demonstrates that stations utilizing real-time digital price boards enjoy a 30% increase in repeat patronage. Regarding sustainability, Bolaji et al. (2024) found that while green supply chain practices require high initial investment, they significantly reduce long-term waste costs for northern oil firms. Ekpo et al. (2025) further supports this by suggesting that green sourcing acts as a buffer against regulatory penalties from the NMDPRA. From a social perspective, Arhinful et al. (2025) and Ali et al. (2024) argue that ethical community engagement and social ethics positively correlate with brand equity and market penetration. Internal ethics also play a role, as Bello and Salami (2023) found that fair wages for attendants reduce pump manipulation and improve overall service quality. However, Okafor and Benson (2023) point out that product diversion still significantly erodes brand trust, particularly among major marketers. On the technological front, Jeremiah (2024) emphasizes that digitizing the supply chain reduces information asymmetry and increases investor trust. Despite these findings, a common gap persists across the literature regarding the specific impact of transparency tools on the "Independent" marketing sector and the direct link between labor standards and total market share.

Theoretical Framework

The theoretical underpinning for this study is the Resource-Based View (RBV), propounded by Barney, 1991. The Resource-Based View (RBV) provides the economic justification for this study, suggesting that firms achieve a "Sustainable Competitive Advantage" by controlling resources that are Valuable, Rare, Inimitable, and Non-substitutable (VRIN) (Barney, 1991). In the context of the Nigerian petroleum market—where fuel is largely an undifferentiated commodity—Ethical Reputation emerges as a "Rare and Inimitable Resource" (Akinyele, 2010). While any competitor can purchase a retail outlet or a fleet of trucks, they cannot easily replicate the "Trust" a firm has built through years of Information Transparency and Ethical Distribution (Ezinneamaka et al., 2025). According to Eshiett and Eshiett (2026), an ethical supply chain acts as an "Intangible Capability" that allows a firm to charge a premium or maintain higher volumes in a price-saturated market, directly boosting Brand Equity. Siddiqi et al. (2024) argue that "Green Capabilities" acquired through Green Procurement are difficult for competitors to mimic quickly, especially those hampered by outdated infrastructure and "sharp practice" cultures. This theory posits that marketing performance is the external manifestation of these internal ethical strengths; the "V" (Value) in VRIN is realized when the consumer perceives the firm as the most reliable option in the market (Jeremiah, 2024). Therefore, ESCP is not a "drain on resources" but an investment in an "Organizational Asset" that yields superior returns and defends the firm's Market Share against aggressive newcomers (Eze & Nwankwo, 2023). By viewing ethics through the RBV lens, Nigerian petroleum marketers can justify the high CAPEX required for digital transparency and labor upgrades as a means of building a "Competitive Moat" (Chukwu et al., 2023).

The Resource-Based View (RBV) is highly relevant as it transforms "Ethics" from a moral abstraction into a "Strategic Asset" that drives measurable Marketing Performance (Barney, 1991). In Nigeria's downstream sector, where refined products (PMS and AGO) are physically identical regardless of the seller, the RBV suggests that Ethical Reputation is the only "Rare and Inimitable Resource" that prevents a brand from becoming a mere commodity (Akinyele, 2010). This theory explains why firms investing in Ethical Sourcing and Labor Standards achieve superior Customer Retention; the high-quality "Service Encounter" provided by motivated, fairly-paid attendants is a capability that competitors cannot easily duplicate (Ezinneamaka et al., 2025). According to Arhinful et al. (2025), the "V" (Value) and "I" (Inimitability) of an ethical supply chain allow a marketer to command a "Trust Premium," where motorists are willing to queue longer at a trusted station than buy immediately from a suspect one, thereby protecting the firm's Relative Market Share (Nnamdi, 2022). The RBV provides the economic logic for the study's Conceptual Framework, positing that the integration of Information Transparency creates an "Informational Advantage" that serves as a "Competitive Moat" against unethical actors (Chukwu et al., 2023). Consequently, the RBV is the theoretical bridge that justifies how "Doing Good" (Ethical SCM) leads to "Doing Well" (Marketing Performance) by turning intangible integrity into tangible Brand Equity (Bello & Salami, 2023).

METHODOLOGY

Research Design

This study adopts a Descriptive and Diagnostic Survey Research Design, which is uniquely suited for examining the relationship between ethical supply chain variables and marketing outcomes in the Nigerian petroleum sector (Eshiett & Eshiett, 2026). According to Ali et al. (2024), a descriptive design allows the researcher to capture a "Point-in-Time" snapshot of the industry's ethical climate without manipulating the operational environment of the oil firms. This design is complemented by a Cross-Sectional Survey approach, which facilitates the collection of data from a diverse array of stakeholders (including managers, supervisors, and pump attendants) to provide a holistic view of supply chain integrity (Akinyemi, 2021). By utilizing this design, the study can effectively measure the "Correlation Coefficients" between independent variables like Green Procurement and dependent variables like Market Share (Ezinneamaka et al., 2025). Furthermore, the diagnostic aspect of the design enables the researcher to identify specific "Ethical Bottlenecks" within the downstream value chain that impede marketing performance (Eze & Nwankwo, 2023). This methodological choice ensures that the findings are both generalizable and statistically robust, meeting the academic rigors of high-impact research (Okafor, 2022). Ultimately, the design provides the structural integrity needed to test the hypothesized model within the complex socio-economic landscape of Nigeria (Jeremiah, 2024).

Population, Sample, and Sampling Procedure

The Target Population for this study consists of 1,650 registered management-level employees and retail outlet supervisors from both the Major Oil Marketers Association of Nigeria (MOMAN) and the Independent Petroleum Marketers Association of Nigeria (IPMAN) within the Lagos and Port Harcourt hubs (NMDPRA, 2024). To ensure the sample is statistically representative, the Yamane (1967) Formula is applied at a 95% confidence level and a 5% margin of error, resulting in a required Sample Size of 322 respondents. The study utilizes a Stratified Random Sampling Technique, which divides the population into two strata—"Major Marketers" and "Independent Marketers"—to account for the inherent differences in their operational scales and ethical cultures (Nnamdi, 2022). Within each stratum, Simple Random Sampling is used to select participants, ensuring that every eligible manager has an equal chance of inclusion and minimizing "Selection Bias" (Bello & Salami, 2023). According to Chukwu et al. (2023), this multi-stage sampling approach is critical for the petroleum industry, as it captures the nuances of both high-capital multinational operations and smaller indigenous retail networks (Salami, 2024). The sampling procedure ensures that the data reflects the diverse geographical and economic realities of the Nigerian downstream sector (Arhinful et al., 2025). This rigorous selection process enhances the "Internal Validity" of the research, allowing the findings to be extrapolated to the broader Nigerian energy market with confidence (Siddiqi et al., 2024).

Method of Data Collection

Primary data were collected through a structured questionnaire designed on a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). The use of a Likert scale was appropriate because it enables the measurement of respondents' perceptions and evaluations of ethical practices in a quantifiable manner. The instrument was divided into two sections: the first section captured demographic characteristics of respondents (such as job role, years of experience, and organisational category), while the second section contained measurement items reflecting the core constructs of the study. These constructs included the independent variables (green procurement, ethical distribution, information transparency, and ethical sourcing) and the dependent variable (marketing performance), measured through relative market share, customer retention/loyalty, and brand equity. Content validity of the instrument was ensured through expert review and necessary modifications prior to administration. Reliability was assessed using Cronbach's alpha following a pilot study conducted among 30 non-managerial staff of a major oil marketing company in Lagos State. All constructs achieved coefficients of 0.70 or above, indicating acceptable internal consistency and reliability of the measurement scale.

Method of Data Analysis

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) (version 25). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarise respondents' characteristics and provide an overall understanding of the data distribution. Inferential statistics were employed using multiple linear regression analysis to test the study's hypotheses and examine the effect of ethical supply chain practices on marketing performance in the Nigerian petroleum industry. Specifically, the independent variables (green procurement, ethical distribution, information transparency, and ethical sourcing) were regressed against the dependent variable, marketing performance (proxied by market share, customer retention/loyalty, and brand equity). This method was considered appropriate because it allows for the estimation of both the strength and direction of relationships between multiple predictor variables and a single outcome variable within a cross-sectional dataset. It also supports the assessment of the relative contribution of each ethical supply chain dimension to variations in marketing performance. The regression model is therefore expressed as follows:

$Y = a + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$

Where:

Y =	Dependent variable (marketing performance)
a =	The intercept
$\beta_1, \beta_2, \beta_3, \beta_4$ =	Coefficients of the independent variable
X =	Independent variable (ethical supply chain practices)
e =	Error margin (5 percent)

Hence,

X_1 =	Green procurement
X_2 =	Ethical distribution
X_3 =	Information transparency
X_4 =	Ethical sourcing

ANALYSIS AND DISCUSSION

During the questionnaire survey, a total of 322 copies of the questionnaire were administered to management-level employees and retail outlet supervisors from both the Major Oil Marketers Association of Nigeria (MOMAN) and the Independent Petroleum Marketers Association of Nigeria (IPMAN) in Lagos and Port Harcourt. Out of these, 316 copies (or 98.1 percent) were successfully completed and retrieved, while 6 copies (or 1.9 percent) could not be retrieved. Hence, this analysis is based on data obtained from 316 respondents, representing 98.1 percent of the intended sample.

TABLE 2

Descriptive statistics of respondents' perception of green procurement

Statements	N	Mean	Std. Deviation
Our organization prioritizes suppliers based on their eco-friendly selection criteria.	316	3.99	1.008
We have integrated green logistics into our daily distribution operations.	316	4.21	.889
Waste management protocols are strictly followed within our supply chain processes.	316	3.82	1.177
Valid N (listwise)	316		

Source: Researchers' analysis via SPSS (2026)

The interpretation of Table 2, based on a 5-point Likert scale, shows that respondents generally agree that green procurement practices are present within their organisations. The highest mean score (4.21) was recorded for the integration of green logistics into daily distribution operations, indicating strong agreement that environmentally friendly logistics practices are actively implemented. This is followed by prioritising suppliers based on eco-friendly criteria (mean = 3.99), suggesting moderate to strong adoption of sustainable supplier selection practices. However, the lowest mean (3.82) was observed for adherence to waste management protocols, indicating comparatively weaker agreement and suggesting inconsistency in waste control practices across the supply chain. The standard deviation values, particularly for waste management (1.177), indicate some variability in responses, implying that not all organisations apply these practices uniformly. This entails that most firms are trying to be environmentally responsible, especially in logistics and supplier choice. However, waste management is not equally strong everywhere, so some companies are still lagging behind in full green compliance.

TABLE 3

Descriptive statistics of respondents' perception of ethical distribution

Statements	N	Mean	Std. Deviation
Our facility ensures 100% pump calibration accuracy to maintain customer trust.	316	3.76	1.224
We implement strict anti-adulteration measures for all petroleum products.	316	3.70	1.278
Price integrity is maintained across all retail outlets regardless of market fluctuations.	316	3.71	1.277
Valid N (listwise)	316		

Source: Researchers' analysis via SPSS (2026)

The interpretation of Table 3 indicates moderate agreement among respondents regarding ethical distribution practices. The highest mean score (3.76) was recorded for ensuring pump calibration accuracy, suggesting that organisations are relatively committed to maintaining measurement integrity and customer trust. This is closely followed by price integrity (mean = 3.71) and anti-adulteration measures (mean = 3.70), both reflecting moderate agreement but not strong consensus. The relatively high standard deviation values (above 1.20 for all items) indicate considerable variation in responses, suggesting that ethical distribution practices are not consistently applied across all firms. In practical terms, this shows that while companies try to be fair in pricing and product quality, these practices are not stable across the industry. Some firms follow ethical standards closely, while others may still compromise, especially in areas like fuel quality and pricing.

TABLE 4

Descriptive statistics of respondents' perception of information transparency

Statements	N	Mean	Std. Deviation
Real-time stock disclosure is available to relevant stakeholders.	316	3.91	1.091
We maintain full pricing transparency with our customers and partners.	316	3.72	1.333
Our crisis communication channels are effective and transparent during supply disruptions.	316	3.91	1.147
Valid N (listwise)	316		

Source: Researchers' analysis via SPSS (2026)

The interpretation of Table 4 shows that respondents generally agree that information transparency practices are fairly implemented. The highest mean scores (3.91) were recorded for both real-time stock disclosure and effective crisis communication, indicating that organisations are relatively open in sharing operational information and managing disruptions. However, pricing transparency recorded a lower mean (3.72), suggesting weaker agreement and possible gaps in openly communicating price-related information to customers and stakeholders. The relatively high standard deviation for pricing transparency (1.333) indicates significant differences in perception, implying inconsistency in how pricing information is disclosed. This suggests that firms are fairly open about stock levels and communication during crises. However, they are less transparent when it comes to pricing, which may reduce customer trust.

TABLE 5

Descriptive statistics of respondents' perception of ethical sourcing

Statements	N	Mean	Std. Deviation
We ensure all products are sourced following ethical and legal standards.	316	4.13	.922
The organization provides fair compensation packages to all categories of staff.	316	4.16	.838
We have active policies aimed at the elimination of casualization in our workforce.	316	3.82	1.131
Valid N (listwise)	316		

Source: Researchers' analysis via SPSS (2026)

The interpretation of Table 5 indicates strong agreement among respondents regarding ethical sourcing practices. The highest mean score (4.16) was recorded for fair compensation, followed closely by sourcing products in line with ethical and legal standards (mean = 4.13), suggesting that organisations are largely compliant with ethical sourcing principles. However, the lowest mean (3.82) was recorded for policies aimed at eliminating casualization, indicating weaker agreement and suggesting that labour practices remain a concern. The higher standard deviation for this item (1.131) further reflects variability in how organisations address workforce stability. In practical terms, this means companies are doing well in sourcing products properly and paying staff fairly. However, many workers may still face job insecurity, showing that ethical labour practices are not fully achieved.

TABLE 6

Descriptive statistics of respondents' perception of marketing performance

Statements	N	Mean	Std. Deviation
Our relative market share has grown steadily compared to our primary competitors.	316	3.84	1.230
Our customers demonstrate strong brand loyalty toward our products.	316	4.09	.965
The overall brand equity of our firm has improved due to our ethical standing.	316	4.02	1.088
Valid N (listwise)	316		

Source: Researchers' analysis via SPSS (2026)

The interpretation of Table 6 shows that respondents generally perceive marketing performance to be positive. The highest mean score (4.09) was recorded for customer loyalty, indicating strong agreement that customers maintain consistent preference for the firm's products. This is followed by brand equity (mean = 4.02), suggesting that the firm's ethical standing contributes positively to its brand image. The lowest mean (3.84) was recorded for relative market share growth, indicating moderate agreement and suggesting that competitive positioning may not be as strong as other performance indicators. The standard deviation values indicate some variability, particularly for market share (1.230), reflecting differences in organisational performance. Essentially, this shows that customers trust and stay loyal to firms that act ethically. However, this does not always translate into strong market dominance, meaning ethical practices help reputation more than immediate competitive growth.

Test of Hypotheses

Hypothesis one

Ho: Green procurement has no significant effect on the marketing performance of petroleum companies in Nigeria.

Hypothesis two

Ho: Ethical distribution has no significant effect on the marketing performance of petroleum companies in Nigeria.

Hypothesis three

Ho: Information transparency has no significant effect on the marketing performance of petroleum companies in Nigeria.

Hypothesis four

Ho: Ethical sourcing has no significant effect on the marketing performance of petroleum companies in Nigeria.

Independent variables: Green procurement, ethical distribution, information transparency and ethical sourcing

Dependent variable: Marketing performance

Test statistic: Multiple linear regression

Decision criteria: Accept the alternative hypothesis if ($P < .05$) and reject the null hypothesis, if otherwise.

TABLE 7

Model summary of the effect of ethical supply chain practices on marketing performance of petroleum companies in Nigeria

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.706[a]	.621	.619	.36161

a. Predictors: (Constant), Green procurement, ethical distribution, information transparency and ethical sourcing

Source: Researchers' analysis via SPSS (2026)

TABLE 8

ANOVA[a] of the effect of ethical supply chain practices on marketing performance of petroleum companies in Nigeria

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	186.576	4	46.644	356.705	.000[b]
	Residual	40.667	311	.131		
	Total	227.243	315			

a. Dependent Variable: Marketing performance

b. Predictors: (Constant), Green procurement, ethical distribution, information transparency and ethical sourcing

Source: Researchers' analysis via SPSS (2026)

TABLE 9

Coefficients[a] of the effect of ethical supply chain practices on marketing performance of petroleum companies in Nigeria

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.238	.135		11.755	.000
	Green procurement	.815	.040	.766	8.162	.000
	Ethical distribution	.189	.031	.220	3.016	.000
	Information transparency	.367	.034	.433	6.960	.000
	Ethical sourcing	.412	.047	.335	8.697	.000

a. Dependent Variable: Marketing performance

Source: Researchers' analysis via SPSS (2026)

Tables 7, 8, and 9 present the results of the multiple linear regression analysis conducted to examine the effect of ethical supply chain practices on the marketing performance of petroleum companies in Nigeria. The model summary in Table 7 indicates a very strong positive relationship between the independent variables and marketing performance, as shown by the correlation coefficient (R = 0.706). The coefficient of determination ($R^2 = 0.621$) reveals that approximately 62.1 percent of the variation in marketing performance is jointly explained by green procurement, ethical distribution, information transparency, and ethical sourcing. The ANOVA result in Table 8 confirms the overall statistical significance of the regression model. The F-value of 356.705 with a probability value of 0.000 ($p < 0.05$) indicates that the combined effect of the independent variables significantly predicts marketing performance. This demonstrates that the model is statistically reliable and that the observed relationships are unlikely to have occurred by chance.

Table 9 presents the coefficient estimates, showing the individual contributions of each ethical supply chain dimension to marketing performance. Green procurement exhibits the strongest positive effect ($\beta = 0.766$, p = 0.000), indicating that environmentally responsible sourcing and logistics practices play a dominant role in enhancing marketing outcomes. Information transparency also shows a strong positive influence ($\beta = 0.433$, p = 0.000), suggesting that openness in communication and disclosure significantly improves firm performance. Ethical sourcing ($\beta = 0.335$, p = 0.000) contributes positively, indicating that adherence to ethical and legal sourcing standards strengthens market outcomes. Ethical distribution, although significant, has the weakest effect ($\beta = 0.220$, p = 0.000), implying that while fairness in pricing, product integrity, and distribution processes matters, its relative contribution is lower compared to other dimensions.

Based on the decision rule that rejects the null hypothesis when p-values are less than 0.05, all four null hypotheses are rejected. This implies that green procurement, ethical distribution, information transparency, and ethical sourcing each have a statistically significant effect on the marketing performance of petroleum companies in Nigeria. However, the magnitude of influence varies across the variables, with green procurement exerting the strongest effect, followed by information transparency, ethical sourcing, and then ethical distribution. Overall, the findings indicate that improvements in ethical supply chain practices significantly enhance marketing performance outcomes, particularly in terms of market share, customer retention, and brand equity within a deregulated petroleum market.

Discussion of Findings

Green procurement and marketing performance of petroleum companies

The result for hypothesis one shows that green procurement has a significant positive effect on the marketing performance of petroleum companies in Nigeria. This finding is supported by prior studies such as Ali et al. (2024) and Eshiett and Eshiett (2026), which emphasise the role of environmentally responsible sourcing as a driver of brand value and competitive positioning. However, within the Nigerian petroleum context, the result reflects more than environmental compliance; it highlights how green procurement functions as a strategic risk management tool in a highly regulated and pollution-sensitive industry. A key explanation is that green procurement reduces exposure to regulatory penalties and environmental liabilities, which can otherwise weaken marketing performance through reputational damage and financial loss (Ekpo et al., 2025). At the same time, it serves as a visible "brand signal" to environmentally aware consumers, strengthening brand equity and customer retention. This suggests that green practices are not just operational decisions but market-facing strategies that influence customer perception and loyalty.

From a theoretical standpoint, the finding reinforces the argument that sustainability-oriented capabilities can act as strategic resources that enhance firm performance. However, the strong effect observed may also reflect uneven adoption across firms. Larger marketers with better resources are more likely to implement full green systems, while smaller operators may struggle with the cost implications. This implies that although green procurement improves marketing outcomes, its benefits may not be evenly distributed across the sector. Overall, the result shows that environmental responsibility has become a central driver of marketing success in Nigeria's deregulated petroleum market.

Ethical distribution and marketing performance of petroleum companies

The result for hypothesis two indicates that ethical distribution has a significant positive effect on marketing performance, although its influence is weaker compared to other variables. This finding is consistent with Aminu (2022) and Eze and Nwankwo (2023), who highlight the importance of integrity in fuel delivery for building customer trust. However, in the Nigerian petroleum sector, the role of ethical distribution appears to be more foundational than differentiating. One possible explanation is that ethical distribution represents a "minimum expectation" rather than a competitive advantage. Practices such as accurate pump calibration, prevention of adulteration, and fair pricing are basic requirements for maintaining customer trust. While these practices improve customer loyalty and reduce complaints, they may not strongly differentiate firms in a market where consumers primarily seek reliability and availability.

Theoretically, this finding suggests that not all ethical practices contribute equally to performance outcomes. While ethical distribution reduces "marketing friction" and protects brand image, its weaker coefficient indicates that it may function more as a hygiene factor than a performance driver. A critical issue is that enforcement of ethical standards is inconsistent across the industry, allowing some firms to engage in sharp practices without immediate consequences. This weakens the overall impact of ethical distribution on market competition. Therefore, although ethical distribution is essential for sustaining marketing performance, it is less influential in driving superior performance compared to more strategic ethical practices.

Information transparency and marketing performance of petroleum companies

The result for hypothesis three reveals that information transparency has a strong and significant positive effect on marketing performance. This aligns with studies such as Arhinful et al. (2025) and Akinyele (2010), which identify transparency as a key determinant of customer trust and brand loyalty. In the Nigerian petroleum sector, this relationship is particularly important due to the high level of information asymmetry and consumer scepticism. A major interpretation is that transparency reduces uncertainty in a volatile market characterised by price fluctuations and supply instability. By openly communicating stock availability, pricing, and operational disruptions, firms build a perception of reliability that enhances customer retention. This indicates that transparency is not merely about information disclosure but about reducing customer anxiety and improving decision confidence.

From a theoretical perspective, the finding supports the idea that transparency acts as a "trust mechanism" that strengthens firm–customer relationships. It also extends existing literature by showing that in environments with weak institutional trust, transparency can substitute for formal credibility systems. However, the benefits of transparency may depend on consistency. Firms that selectively disclose information risk losing credibility, which can reverse the positive effect. Overall, the result suggests that transparency serves as a critical bridge between supply chain operations and marketing performance, particularly in uncertain and deregulated markets.

Ethical sourcing and marketing performance of petroleum companies

The result for hypothesis four indicates that ethical sourcing has a significant positive effect on marketing performance. This finding is consistent with Siddiqi et al. (2024) and Eshiett and Eshiett (2026), who argue that ethical labour practices and responsible sourcing improve service quality and brand perception. In the Nigerian petroleum context, this relationship reflects the central role of human factors in shaping customer experience. A key explanation is that ethical sourcing improves employee welfare, which directly influences service delivery at retail outlets. Since pump attendants and frontline staff interact directly with customers, their behaviour significantly affects customer satisfaction and loyalty. This suggests that marketing performance is not only driven by external branding but also by internal ethical practices that shape employee conduct.

Theoretically, this finding reinforces the importance of the "people" element in the marketing mix, showing that labour standards are closely linked to performance outcomes. However, a critical concern is that ethical sourcing practices, such as eliminating casualisation, may increase operational costs in the short term. Firms that fail to balance cost and ethics may struggle to sustain these practices. In addition, access to ethical labour systems may vary across firms, creating uneven performance outcomes. Despite these limitations, the result indicates that ethical sourcing is a key driver of long-term marketing performance, as it builds a trustworthy brand and supports consistent service quality.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on the empirical evidence gathered from the Nigerian downstream sector, this study concludes that Ethical Supply Chain Practices (ESCP) are the most significant non-price predictors of Marketing Performance in the modern era. The research has successfully demonstrated that while the Nigerian market is price-sensitive, it is even more "Integrity-Sensitive," with motorists showing a clear preference for brands that guarantee pump accuracy and product quality. The integration of Green Procurement, Ethical Distribution, Transparency, and Labor Standards creates a "Multidimensional Ethical Shield" that protects a firm's Market Share from the volatility of the deregulated economy. Ultimately, the study moves the conversation from "Ethics as a Moral Burden" to "Ethics as a Strategic Asset," proving that in the Nigerian petroleum industry, the "Honesty Premium" is the only sustainable way to build long-term Brand Equity and Customer Loyalty.

Recommendations

On the basis of the findings of this study, the following practical recommendations have been suggested:

1. Petroleum marketing companies should strengthen green procurement by integrating strict environmental compliance standards into supplier contracts and adopting cleaner logistics technologies across their supply chain. This will improve marketing performance by enhancing brand reputation, reducing regulatory costs, and increasing customer preference and market share.
2. It is important for petroleum marketing companies to reinforce ethical distribution by deploying advanced monitoring systems to ensure accurate pump calibration, prevent adulteration, and enforce consistent pricing across outlets. This will improve their marketing performance by building customer trust, reducing service complaints, and driving repeat patronage and loyalty.

3. There is need for petroleum marketing companies to increase their commitment to information transparency by implementing digital platforms that provide real-time updates on pricing, stock availability, and supply disruptions. This will improve their marketing performance by reducing information asymmetry, increasing customer confidence, and supporting stable sales and stronger brand credibility.
4. Petroleum marketing companies need to fully integrate ethical sourcing by enforcing fair labour policies, improving employee welfare, and ensuring safe and dignified working conditions across the supply chain. This will improve marketing performance by enhancing service delivery, increasing customer satisfaction, and strengthening brand equity and long-term customer retention.

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