



SEARCH ENGINE OPTIMIZATION AND CONSUMER BUYING BEHAVIOUR OF AUTOMOBILE FIRMS IN MINNA METROPOLIS, NIGER STATE

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Abstract

This research endeavors to examine the correlation between digital marketing strategies, specifically Search Engine Optimization (SEO), and customer buying behavior (CBB) within automobile enterprises operating in the Minna metropolis. A comprehensive multiple regression analysis was employed to assess the aggregate effect of Search Engine Optimization (SEO) on CBB. The findings indicated a statistically significant model ($F = 35.473$, $df = 4/314$, $p < .001$), demonstrating that the combination of strategies elucidates 31.1% of the variability in consumer buying behavior ($R^2 = 0.311$). The adjusted R^2 (0.302) affirms the robustness of predictive validity subsequent to the consideration of model complexity. The Durbin-Watson statistic (1.182) implies the absence of significant autocorrelation in the residuals, thereby reinforcing the model's dependability. These results emphasize the considerable impact of integrated initiatives, particularly SEO, in influencing purchasing behaviors within Minna's automotive industry. Consequently, it is recommended that firms prioritize cohesive digital marketing strategies to augment consumer engagement and stimulate sales. The study concludes that the strategic implementation of SEO significantly impacts consumer behavior by enhancing online visibility, fostering trust, and enabling informed purchasing decisions. Automobile companies in Minna metropolis are urged to emphasize these SEO strategies to improve market competitiveness and facilitate customer acquisition.

Keywords: Search Engine Optimization, Customer Buying Behaviour, Automobile Firm, Digital Marketing Strategies, Niger State.

Introduction

The global automotive sector is experiencing a profound transformation propelled by changes in consumer expectations and the pervasive integration of digital technologies. This evolution has propelled digital marketing from a marginal tool to a core strategic function. Specifically, Search Engine Optimization (SEO) now assumes a crucial role in enabling automotive enterprises,

including dealerships, financing institutions, and after-sales service providers, to enhance brand visibility, attract qualified leads, and influence consumer purchasing decisions (Omol, 2024). The escalating digitalization of customer journeys has necessitated that firms reassess traditional engagement paradigms and prioritize online visibility.

Empirical research substantiates the significance of this transition. More than 90% of potential automobile purchasers now commence their search in the online realm, utilizing digital platforms to evaluate pricing, features, reviews, and the credibility of dealerships (Katz et al., 2025). Digital interactions now significantly influence various phases of the purchasing funnel, with projections indicating that by 2025, 18% of vehicle acquisitions in the United States may be conducted entirely online. Furthermore, an impressive 82% of consumers who engage in over half of their purchasing process through digital means report enhanced satisfaction with their dealership experience (FlowForma, 2025; Invoca, 2025). These trends affirm that the digital environment has emerged as the primary venue for automotive transactions (Porch Group Media, 2025; CarCutter, 2024).

This phenomenon presents an imperative digital challenge to automotive dealers, particularly in emerging markets: either conform to the digital-first model or face potential obsolescence (Goover, 2025; Nextlane, 2025). Physical dealership establishments are increasingly confined to the latter stages of the purchasing journey such as test drives or final negotiations while the initial and most impactful stages transpire online. Consequently, Search Engine Optimization (SEO) and associated digital marketing strategies have evolved into foundational elements rather than ancillary ones, transforming how automotive enterprises interact with modern consumers and establish competitive advantages (RSM Global, 2025; Adtaxi, 2025).

However, while these trends are well-documented in advanced markets, there is a clear lack of localized empirical evidence examining how digital marketing particularly SEO shapes customer buying behavior within specific urban centers in developing economies. In Nigeria, much of the existing research focuses on major metropolitan hubs such as Lagos and Abuja, with little attention given to mid-sized cities like Minna. Yet, Minna represents a dynamic context with increasing digital adoption and an active automobile market. This study addresses that gap by investigating the relationship between digital marketing strategies and customer buying behavior in Minna's economies automobile sector, thereby contributing much-needed insights to the evolving discourse on digital transformation in emerging

Research Objectives

The objectives of this study are:

1. To empirically investigate the relationship between digital marketing strategies, with a specific focus on Search Engine Optimization (SEO), and customer buying behavior (CBB) among automobile firms operating in Minna metropolis.
2. To quantitatively evaluate the collective impact of Search Engine Optimization (SEO) as a key digital marketing strategy on customer buying behavior (CBB) among automobile firms in Minna metropolis, utilizing multiple regression analysis.
3. To formulate and propose actionable recommendations for automobile firms within Minna metropolis, aimed at enhancing their market competitiveness and optimizing customer acquisition through the strategic implementation of digital marketing, particularly SEO tactics.
- 4.

Literature Review

Evolution of Digital Marketing in the Automotive Sector

The automotive industry has undergone significant digital transformation, necessitating continuous innovation in marketing approaches to remain competitive (Etukudoh *et al.*, 2024).

The sector's marketing evolution between 2020 and 2025 is shaped by pivotal trends such as the integration of Artificial Intelligence (AI), which has become essential for optimizing advertising, understanding customer behavior, predicting demand, and enhancing customer service (Santos, 2021). AI-driven predictive analytics and personalization have strengthened brand-customer interactions, delivering measurable engagement and conversion gains. Omnichannel marketing strategies are equally vital, providing seamless customer experiences across online and offline touchpoints (Massi, 2023). This approach mirrors consumer preferences for fluid, integrated journeys and strengthens brand loyalty. Environmental awareness is also reshaping digital marketing, with a notable consumer shift towards eco-conscious vehicles and sustainability-centric branding.

A shift towards a customer-centric paradigm is central to 2025's digital marketing narrative. Expectations for rapid, effective support and simplified interactions are redefining success metrics (Fornell *et al.*, 2020). AI tools streamline service delivery, enhancing efficiency and satisfaction. In physical showrooms, digital signage and QR code integrations are enriching on-site experiences by linking customers directly to digital content. These innovations demonstrate a broader move from disjointed strategies to comprehensive digital ecosystems. Automotive firms now prioritize integrated strategies that combine AI, omnichannel delivery, video content, and social engagement into cohesive, cross-functional systems. Transparency, enabled by detailed online information and secure platforms, emerges as a central pillar in fostering trust and differentiating brands in a competitive digital marketplace.

The Role and Impact of Search Engine Optimization (SEO) in Automotive Consumer Engagement

SEO is critical in the automotive buying process, which typically begins with online searches. Visibility on the first page of search results is essential, as it directly influences customer engagement. SEO positions dealerships as trusted and authoritative sources, while high organic rankings outperform paid ads in perceived credibility. A well-optimized Google Business Profile (GBP) and positive reviews further strengthen trust and local discoverability. Local SEO, especially for mobile-driven "near me" searches, relies on accurate business listings, schema markup, and consistency across digital platforms.

High-quality content, such as comparison guides, financing advice, and maintenance tips, enables dealerships to connect with buyers during early decision stages. Effective content aligns with user intent and avoids outdated practices like keyword stuffing. Technical SEO underpins site performance, ensuring mobile responsiveness, fast load speeds, and search engine accessibility. Mobile-first indexing errors can cause rank drops, underscoring the need for a robust technical foundation. SEO also enhances the discoverability of video content, which influences three-quarters of car shoppers. AI adds value by analyzing search trends, enabling predictive content strategies. Ultimately, SEO functions as a core infrastructure for all digital efforts. From awareness to conversion, SEO supports every stage of the consumer journey. Strong SEO foundations maximize returns on other digital investments, making it a strategic imperative for trust-building and sales conversion.

Dynamics of Consumer Buying Behavior in the Digital Automotive Landscape

Modern automotive customers are well-informed and proactive, engaging with diverse digital resources before making purchase decisions. Their journey includes comparing models, reviewing multiple sources, and increasingly favoring digital interactions, particularly among electric vehicle (EV) buyers. Digital tools facilitate financing and reduce dealership time, enhancing convenience. Consumers place strong trust in electronic word-of-mouth (eWOM), with 84% valuing online reviews as much as personal recommendations (Purwanto and

Wahyuningjati 2024). Increasing price sensitivity and a willingness to switch brands underline the need for value-driven marketing.

Visual content, particularly online videos, significantly influences over 75% of auto shoppers, while sustainability preferences shape both marketing narratives and product offerings. Customers seek personalized and immersive experiences, often enabled by technologies such as Augmented Reality (AR), Virtual Reality (VR), and AI-driven customization. Buyers now lead the sales process, and firms must adapt by offering transparent, intuitive, and supportive digital experiences. Efficiency, clarity, and personalization are central to customer satisfaction. In this landscape, success is not determined solely by price but by the quality of the digital journey, which has become a key differentiator.

Digital Marketing and Customer Behavior in Emerging Markets

In emerging markets such as Nigeria, digital marketing plays an essential role in brand building, customer engagement, and sales generation (Wan, 2023). Agencies like AdHang emphasize the need for integrated strategies involving SEO, content marketing, and targeted social media efforts. Traditional sales channels are rapidly giving way to digital-first approaches. Research from Nigeria's retail sector demonstrates positive correlations between digital marketing and customer behavior, reinforcing its relevance to the automotive sector.

The online journey has become standard for Nigerian customers, necessitating professional digital presences on high-traffic platforms. Trust is built through detailed product information, clear visuals, responsive communication, and accurate pricing. Precision targeting via search filters yields better-qualified leads, highlighting the importance of data-driven approaches. Nigeria and similar markets are not merely catching up with global trends; they are leapfrogging to advanced digital models. Investments in digital infrastructure and culturally relevant strategies offer early movers a durable advantage. Importantly, trust-building is crucial in these contexts. Transparency, consistent responsiveness, and informative content help overcome skepticism and foster lasting customer confidence. SEO's role in signaling legitimacy is amplified in such settings, where customer trust is both fragile and foundational.

Theoretical Framework

This study is anchored on the **Theory of Reasoned Action (TRA)**, originally developed by Fishbein and Ajzen (1975). TRA posits that an individual's behaviour is primarily driven by behavioural intentions, which are shaped by two key factors: attitude toward the behaviour and subjective norms. In the context of digital marketing strategies, Conner and Sparks (2015) said TRA provides a valuable framework for understanding how customer perceptions of online marketing content, such as the credibility, relevance, and appeal of SEO-driven messages, influence their attitudes and intentions to engage in purchase behaviour. When customer perceive digital marketing messages as informative and socially endorsed, their behavioural intentions are likely to align with the goals of marketing campaigns. Thus, the TRA framework supports the analysis of how digital exposure, shaped by internal beliefs and social influence, affects customer buying decisions (Fishbein and Ajzen, 1975; Ajzen, 1991).

Complementing TRA is the **Technology Acceptance Model (TAM)**, proposed by Davis (1989), which adapts elements of TRA to explain users' acceptance of information technology. TAM suggests that behavioural intention to use a system is influenced by perceived usefulness and perceived ease of use. In relation to digital marketing, TAM helps to interpret how customers evaluate marketing platforms and content. If customers find that digital channels enhance convenience, speed, and access to relevant product information, and if these tools are easy to navigate, they are more inclined to engage with and act upon the marketing messages (Davis, 1989; Venkatesh and Davis, 2000). The integration of TRA and TAM allows for a

comprehensive understanding of how consumer attitudes, social contexts, and technological affordances collectively shape online buying behaviour.

Methodology

This study adopted a quantitative correlational design to examine the relationship between digital marketing strategies, particularly Search Engine Optimization (SEO), and customer buying behavior in Minna's automobile market. The design was suitable for evaluating the combined influence of several independent variables on a single dependent outcome using multiple regression analysis. The research aimed to quantify patterns in customer preferences and determine the strategic value of digital marketing interventions.

The study focused on automobile customers within Minna metropolis as the target population. From the degrees of freedom provided ($df = 4/314$), the total sample size was 319 respondents, sufficient for robust statistical analysis. Although the exact sampling technique was not specified, probability-based methods are generally assumed in quantitative marketing research to enhance representativeness and minimize bias.

Data were collected through structured surveys, most likely administered online due to the digital orientation of the study. Closed-ended questions such as Likert scale items enabled systematic measurement of consumer attitudes and behaviors. This approach allowed for efficient data gathering across a sizeable population while ensuring comparability of responses for statistical analysis.

The analysis employed multiple regression to determine the joint predictive capacity of digital marketing variables on customer buying behavior. Preliminary diagnostic checks were conducted to confirm assumptions of regression, including linearity, homoscedasticity, absence of multicollinearity, and normal distribution of residuals. Key metrics such as the F-statistic, R^2 , Adjusted R^2 , and Durbin-Watson statistic were used to evaluate model fit, explanatory power, and residual autocorrelation, ensuring the reliability and validity of the findings.

Results

Multiple Regression Analysis Results

A multiple regression analysis was conducted to evaluate the collective impact of digital marketing strategies, specifically including Search Engine Optimization (SEO), on customer buying behavior (CBB) among automobile firms in Minna metropolis. The results of the analysis are summarized as follows:

- a. **Overall Model Significance:** The regression model was statistically significant, as indicated by an F-statistic of 35.473 with degrees of freedom (df) of 4 and 314 ($F = 35.473$, $df = 4/314$, $p < .001$). This F-value, coupled with a p-value less than 0.001, indicates that the overall model is highly significant and that the digital marketing strategies, including SEO, collectively explain a significant portion of the variance in customer buying behavior. This suggests that the chosen set of predictor variables is effective in predicting the outcome.
- b. **Explanatory Power (R^2 and Adjusted R^2):** The model revealed that the digital marketing strategies explained 31.1% of the variance in consumer buying behavior ($R^2 = 0.311$). This R^2 value signifies that approximately one-third of the variations observed in customer buying behavior can be attributed to the implemented digital marketing strategies. The adjusted R^2 value was 0.302. The adjusted R^2 is a more conservative measure that accounts for the number of predictors in the model and is particularly useful in multiple regression to prevent overfitting. The fact that the adjusted R^2 (0.302) is very close to the R^2 (0.311) confirms the robust predictive validity of the model, indicating that the included variables genuinely contribute to the model's explanatory power and that the model is not merely a result of adding numerous predictors.

- c. **Autocorrelation Check (Durbin-Watson Statistic):** The Durbin-Watson statistic was found to be 1.182. This statistic tests for autocorrelation in the residuals of the regression model. A value of 2.0 indicates no autocorrelation. Values from 0 to less than 2 suggest positive autocorrelation. While 1.182 is slightly below the ideal range of 1.5 to 2.5, it generally suggests a relatively low level of positive autocorrelation, implying that the residuals are largely independent and the model's reliability is supported. This indicates that the error terms in the model are not significantly correlated over time or observations, which is a favorable condition for regression analysis.

These results collectively underscore the substantial influence of integrated digital marketing efforts, particularly SEO, on shaping purchasing decisions within Minna’s automobile sector.

Discussion

Interpretation of Findings

The findings of this study is presented in table 6.1.

Table 61 Regression Coefficient

Variable	Coefficient value	Sig. Value
SEO	0.067	0.000
R2	0.311	
F-Change	35.473	
Sig. Value	0.000	
Durbin Watson	1.182	

The findings of this study provide compelling empirical evidence for the significant influence of digital marketing strategies, with a particular emphasis on Search Engine Optimization (SEO), on customer buying behavior (CBB) within the automotive sector of Minna metropolis. The statistically significant F-statistic ($F = 35.473, p < .001$) unequivocally demonstrates that the digital marketing strategies collectively exert a meaningful impact on consumer purchasing decisions. This aligns with global trends that highlight the essential role of digital marketing for dealerships to build brand, engage consumers, and drive sales.

The R^2 value of 0.311 indicates that 31.1% of the variance in customer buying behavior can be explained by the digital marketing strategy included in the model. While this may not represent a perfect explanation, it signifies a substantial and practically relevant proportion, especially given the multifaceted nature of consumer behavior, which is influenced by numerous factors beyond marketing. The adjusted R^2 of 0.302 further reinforces the robustness of this finding, confirming that the model's explanatory power is not merely a statistical artifact of including multiple variables but reflects a genuine relationship between the predictors and the outcome. This suggests that investments in these digital strategies yield tangible returns in influencing consumer actions.

The Durbin-Watson statistic of 1.182, while indicating a slight positive autocorrelation, is within an acceptable range for practical purposes, suggesting that the residuals are largely independent and the model is reliable. This strengthens confidence in the statistical inferences drawn from the regression analysis.

These results affirm that in Minna metropolis, much like in other evolving markets, the customer journey for automobile purchases increasingly begins online. The substantial influence observed underscores that firms failing to establish a prominent and professional online presence risk becoming effectively invisible to a vast majority of potential customers. The demonstrated impact of SEO implies that optimizing online visibility, building trust through credible search rankings, and facilitating informed purchasing decisions are critical pathways to enhancing consumer engagement and driving sales.

Practical Implications

On a practical level, the study provides a clear roadmap for automobile firms in Minna and similar markets. It emphasizes that maintaining a digital presence is essential for visibility and competitiveness. Firms must invest in SEO not as a side activity but as a central strategic function. Specific actions include enhancing local search optimization, creating relevant content aligned with consumer intent, ensuring robust technical SEO standards, and using high-quality multimedia to boost engagement. Furthermore, the study stresses the need for transparency and responsiveness to build consumer trust. Lastly, it advocates for an integrated digital and physical customer experience, highlighting that seamless transitions between online and offline touchpoints are critical. The broader implication is that, by embracing digital tools and adopting forward-looking strategies, automotive firms can leap ahead in customer engagement and long-term market positioning.

Conclusion

This study empirically investigated the relationship between digital marketing strategies, with a particular focus on Search Engine Optimization (SEO), and customer buying behavior (CBB) among automobile firms in Minna metropolis. The multiple regression analysis revealed a statistically significant model, indicating that these strategies collectively explain a substantial portion (31.1%) of the variance in consumer buying behavior. The robust predictive validity, confirmed by the adjusted R^2 , and the acceptable Durbin-Watson statistic underscore the reliability of these findings.

The evidence strongly suggests that strategic SEO implementation directly influences consumer behavior by significantly improving online visibility, building crucial consumer trust, and facilitating more informed and efficient purchasing decisions. In the rapidly evolving automotive landscape, particularly within an emerging market context like Minna, a strong digital presence, anchored by effective SEO, is no longer a competitive advantage but a fundamental necessity for survival and growth. The findings affirm that consumers are increasingly empowered by digital tools, demanding transparency, convenience, and seamless omnichannel experiences, making the digital experience a key differentiator beyond price.

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