

The Impact of Perceived Product Quality and Advertising on Consumer Purchasing Behavior: A Comparative Study of Leading Foreign Smartphone Brands in the Algerian Market

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Abstract---This study aims to examine and analyze the impact of perceived product quality and advertising on consumer purchasing behavior in the Algerian smartphone market. A comparative analysis was conducted among the three leading foreign smartphone brands most prevalent in Algeria: Samsung, Redmi, and Oppo. The study adopted a quantitative analytical approach, and data were collected through an online questionnaire distributed to a large-scale sample of over 1,900 respondents from various regions of Algeria between 2023 and 2025. The data were analyzed using SPSS (version 26) through multiple linear regression analysis to assess the strength and direction of relationships between variables. The results revealed that both perceived product quality and advertising have a positive and statistically significant impact on purchasing behavior, with the model explaining between 33.9% and 37.2% of the variance across the three brands. Moreover, the influence of perceived product quality was found to be stronger than that of advertising, reflecting the increasing awareness of Algerian consumers and their ability to distinguish between promotional appeal and actual product value. These findings emphasize that achieving genuine product quality remains the most decisive factor in purchase decisions, while advertising serves as a supportive element that reinforces positive perceptions without substituting real product performance.

Keywords---Smartphone, Algerian Consumer, Purchasing Behavior, Consumer Behavior.

JEL Classification: D12; D11; M31; O33

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1. Introduction

Over the past decade, the Algerian market has witnessed remarkable expansion, particularly in the smartphone sector, similar to other emerging markets. This growth has positioned Algeria among the most dynamic markets within developing economies. Smartphones have evolved from being mere communication tools into essential components of identity formation (Lou et al., 2022) and symbols of status and digital openness. Amidst intense competition among foreign brands, corporate success now depends not only on technological superiority but also on the ability to build a positive perception of product quality and strengthen brand image through advertising.

Consumer purchasing behavior, with its multiple stages—from the recognition of need, through information search and decision-making, to post-purchase behavior—serves as a crucial indicator for assessing the long-term effectiveness of marketing strategies (Oliver & Richard, 2014). Prior literature emphasizes that product quality is a fundamental determinant of this behavior, as it directly influences consumer satisfaction and their evaluation of the purchasing experience (Dirgantar, Bayu, & Devie, 2018). At the same time, promotion, particularly advertising, plays a complementary role by reinforcing brand image and enhancing consumer confidence in product attributes and perceived value (Kardam & Dua, 2021).

Although previous studies have examined these relationships, most have been conducted in developed market contexts or have treated the variables separately. Hence, there is a need to explore this topic within an emerging market environment such as Algeria, where consumers are increasingly open to foreign brands amid growing competition in the technology sector.

Accordingly, this study aims to analyze the combined effect of perceived product quality and advertising on consumer purchasing behavior among smartphone users in Algeria through a comparative analysis of three leading foreign brands. The research relies on a large-scale sample of 1,936 consumers, from which sub-samples were drawn representing the three dominant brands in the market, ensuring findings that are empirically robust and highly reliable.

Based on the preceding discussion, the main research question can be formulated as follows:

To what extent do perceived product quality and advertising have a statistically significant effect on the purchasing behavior of consumers of foreign smartphone brands in the Algerian market?

To address this overarching question, the study further investigates the following sub-questions:

1. Does perceived product quality influence the purchasing behavior of Algerian consumers of foreign smartphone brands?
2. Does advertising affect the purchasing behavior of Algerian consumers of foreign smartphone brands?
3. Are there statistically significant differences among the three selected brands in the strength of the influence of perceived product quality and advertising on purchasing behavior at the 0.05 significance level ($\alpha = 0.05$)?

Research Hypotheses:

Based on the definition of the research problem and its stated objectives, the following hypotheses were formulated to be discussed and empirically tested:

Main Hypothesis:

H. Perceived product quality and advertising have a statistically significant effect on the purchasing behavior of consumers of foreign smartphone brands in the Algerian market at the 0.05 significance level ($\alpha = 0.05$)

Sub-Hypotheses:

H1: Perceived product quality has a statistically significant effect on the purchasing behavior of users of foreign smartphone brands in Algeria at the 0.05 significance level ($\alpha = 0.05$).

H2: Advertising has a statistically significant effect on the purchasing behavior of users of foreign smartphone brands in Algeria at the 0.05 significance level ($\alpha = 0.05$).

H3: The effect of perceived product quality and advertising on purchasing behavior differs according to the foreign smartphone brand among Algerian consumers at the 0.05 significance level ($\alpha = 0.05$).

2. Research Methodology

2.1 Research Design and Data Collection

This study employed a quantitative analytical-descriptive approach through a cross-sectional design to examine the relationships between perceived quality, advertising effectiveness, and purchasing behavior. Data were collected using a structured electronic questionnaire administered through Google Forms, distributed via Social Media to ensure nationwide coverage of smartphone users across Algeria's diverse geographical regions.

2.2 Sampling and Population

The study population comprised foreign smartphone users in Algeria aged 15 years and above. A random sampling technique was implemented, with the sample size determined using Thompson's (2012) formula at a 95% confidence level and 5% margin of error. The minimum required sample size was 385 respondents; however, the study ultimately collected 1,936 valid responses to enhance statistical power and ensure broader demographic representation. The final analytical sample focused on three predominant brands: Samsung (35.3%), Redmi (18.9%), and Oppo (18.1%), which collectively represented the majority market share among respondents.

2.3 Measurement Instrument and Reliability

The research utilized a five-point Likert scale to measure respondent attitudes and perceptions. Instrument reliability was assessed through Cronbach's Alpha, demonstrating strong internal consistency across all constructs: perceived quality ($\alpha = 0.729$), advertising ($\alpha = 0.820$), purchasing behavior ($\alpha = 0.735$), and the combined instrument ($\alpha = 0.834$). These results confirm the measurement tool's reliability for examining the hypothesized relationships.

2.4 Analytical Approach

Data analysis was conducted using SPSS version 26, incorporating both descriptive and inferential statistical methods. Multiple regression analysis was employed to test the primary hypotheses regarding the influence of perceived quality and advertising on purchasing behavior. To examine the interaction effects between the independent variables and brand types, the study utilized a moderated regression model with interaction terms. This approach allowed for testing whether the strength of relationships between perceived quality, advertising, and purchasing behavior varied significantly across different smartphone brands, while maintaining a statistical significance level of $\alpha = 0.05$ throughout the analysis.

3. Literature Review

Previous research consistently highlights the significant impact of marketing strategies on smartphone consumer behavior (Lawasa, P. Adam, & Rombe, 2023) demonstrated that product quality and promotions have a significant direct effect on purchase decisions, while brand image serves as a mediating factor; in contrast, price perception showed limited influence. (Yusuf, 2021) further emphasized the strategic role of innovation and brand image, finding that product innovation explains 42.1% of purchase decisions, brand image accounts for 37.4%, and their combined effect reaches 50.4%, underscoring the critical role of product quality and innovation in shaping consumer behavior.

Additionally, studies by (Sembiring & Fahlevi, 2023) and (Martins, Costa, Oliveira, Gonçalves, & Branco, 2019) revealed that effective advertising characterized by informativeness, entertainment value, and credibility substantially enhances consumer engagement and purchase intention, while elements that cause irritation reduce advertising effectiveness.

Collectively, these findings point to three essential strategic priorities for marketers: First, maintaining consistent product quality and continuous innovation as a foundational requirement. Second, designing advertisements that balance informative and engaging content while ensuring credibility. Third, optimizing the overall digital consumer experience across all platforms to maximize marketing effectiveness.

Despite these insights, a notable research gap exists regarding the Algerian market, particularly concerning the comparative influence of perceived quality versus advertising across different international brands. This study addresses this gap by examining the relative impact of perceived quality and advertising on the purchasing behavior of Samsung, Redmi, and Oppo smartphone users in Algeria, thereby providing novel insights into the emerging literature on African consumer markets.

4. Theoretical Foundations: Perceived Quality, Advertising, and Purchasing Behavior

4.1 Fundamental Concepts of Perceived Quality

Amid accelerating technological advancement and expanding globalization, perceived product quality has emerged as a decisive factor in the success of international product strategies, particularly within the smartphone sector. In the Algerian market—characterized as an emerging economy (Yousra & Rima , 2024) with intensifying competition among foreign brands—perceived quality constitutes a critical element in building consumer trust and guiding purchasing behavior (Batjo, Maheirina , & Akbar , 2022).

Perceived quality represents a fundamental concept in consumer behavior studies. (Zusrony, 2021) defines it as the consumer's subjective judgment regarding a product's overall quality, grounded in its performance, characteristics, and design. Similarly, (Batjo, Maheirina , & Akbar , 2022) describe it as the consumer's impression of a product's superiority based on actual experience and technical specifications. (Bakalo & Chalchissa , 2023) further conceptualize it as the consumer's subjective evaluation of a product's overall excellence relative to competing alternatives, informed by prior perceptions and experiences concerning product performance and functional components. Thus, perceived quality constitutes a comprehensive subjective judgment reflecting the consumer's assessment of a product's overall performance level, playing a decisive role in shaping purchasing behavior.

4.2 Fundamental Concepts of Advertising

With the rapid evolution of digital media and the proliferation of smartphones as daily tools, digital advertising through mobile channels has become a pivotal element in shaping consumer purchasing behavior. (Slyusar, L. L. , & M. V. , 2021) define advertising as a communicative activity with persuasive nature, aiming to draw attention to the advertised subject. They emphasize that advertising transcends mere information transmission, representing instead a directed communicative process designed to stimulate consumer interaction with products or brands.

Within the smartphone market context, (Sembiring & Renza , 2023) indicate that digital advertisements significantly enhance purchase intention for smartphones. Furthermore, research by Wang, (Wang, Zhanghua , Chonghuan , & Songsong , 2022) demonstrates that mobile advertising formats—such as content-targeted ads and highly interactive advertisements—improve consumer attitudes toward advertisements and subsequently strengthen purchase intention. Consequently, advertising functions not merely as an information channel but as a strategic tool for building engagement, emotional

connection, and purchase intention, establishing it as an essential variable in consumer purchasing behavior studies.

4.3 Fundamental Concepts of Purchasing Behavior

Amid the expansion of digital markets and the diversification of available consumer choices, purchasing behavior has become a cornerstone of marketing studies. It reflects the processes individuals undergo in selecting, purchasing, and using products and services. Within the smartphone sector, recent studies demonstrate that this behavior is determined not only by technical product specifications but is also influenced by brand image, advertising effectiveness, perceived quality, and psychosocial factors (Solomon, 2022).

Purchasing behavior is defined by (Solomon, 2022) as the set of decisions and actions individuals undertake to select, purchase, and use products and services based on needs, desires, perceptions, and personal values. Furthermore, research by Wang, (Wang, Zhanghua, Chonghuan, & Songsong, 2022) indicates that purchasing behavior progresses through a series of stages, commencing with product awareness, followed by an evaluation phase, leading to purchase decision-making and implementation, and culminating in post-purchase interaction.

This comprehensive process encompasses both pre-purchase decision mechanisms and post-purchase engagement patterns, representing a multifaceted journey that reflects the complex interplay between rational evaluation and emotional influences in consumer decision-making.

5. Analyzing Results and Hypothesis Testing

Hypothesis Testing Result:

The hypothesis postulated an effect of perceived quality and advertising in foreign corporations on consumers of foreign smartphone brands in the Algerian market at a significance level of $\alpha = 0.05$. This main hypothesis encompasses three sub-hypotheses, which we test first as a methodological step before returning to test the main hypothesis. Accordingly, we present two tables below to clarify the results of the sub-hypotheses related to the first main hypothesis.

▪ The First and Second Sub-Hypotheses:

A statistically significant effect exists (at $\alpha = 0.05$) of perceived quality on the purchasing behavior of foreign smartphone users in Algeria.

A statistically significant effect exists (at $\alpha = 0.05$) of advertisements on the purchasing behavior of foreign smartphone users in Algeria.

Table 1: Multiple Regression Results for Sub-Hypotheses of the First Main Hypothesis by Smartphone Brand

Dependent Variable	Independent Variables	B	Std. Error	F-value	F Sig.	t-value	t Sig.	R ²	VIF
:Purchasing Behavior Samsung Users in Algeria	Constant (Other Factors)	2.248	0.089	176.376	0.000	25.248	0.000	0.341	1.062
	Perceived Quality	0.214	0.022			9.714	0.000		
	Advertisements	0.213	0.016			13.250	0.000		
:Purchasing Behavior Redmi Users in Algeria	Constant (Other Factors)	1.985	0.125	101.616	0.000	15.855	0.000	0.360	1.041
	Perceived Quality	0.244	0.031			7.800	0.000		
	Advertisements	0.261	0.026			10.146	0.000		
:Purchasing Behavior Oppo Users in Algeria	Constant (Other Factors)	1.918	0.132	102.920	0.000	14.522	0.000	0.372	1.089
	Perceived Quality	0.282	0.033			8.591	0.000		
	Advertisements	0.232	0.027			8.548	0.000		

The multiple regression analysis results presented in Table 1, which tested the effect of perceived quality and advertisements on the purchasing behavior of foreign smartphone users in Algeria by brand (Samsung, Redmi, Oppo), reveal that all models were statistically significant at $\alpha = 0.05$. The F-values were 176.376, 101.616, and 102.920 respectively, with $p < 0.001$, confirming model fit and explanatory power.

The coefficient of determination (R^2) values indicate that the two independent variables explain a considerable proportion of the variance in purchasing behavior: 34.1% for Samsung, 36.0% for Redmi, and 37.2% for Oppo, representing medium to high proportions.

Regarding the individual effect level of the independent variables, the results demonstrate that perceived quality positively and significantly influences purchasing behavior across all brands:

Samsung : (B = 0.214, SE = 0.022, t = 9.714, $p < .001$)

Redmi : (B = 0.244, SE = 0.031, t = 7.800, $p < .001$)

Oppo: (B = 0.282, SE = 0.033, t = 8.591, $p < .001$)

Similarly, advertisements demonstrated a positive and statistically significant effect on purchasing behavior, with B values of:

Samsung: (B = 0.213, SE = 0.016, t = 13.250, $p < .001$)

Redmi: (B = 0.261, SE = 0.026, t = 10.146, $p < .001$)

Oppo: (B = 0.232, SE = 0.027, t = 8.548, $p < .001$)

These findings indicate that increased consumer perception of product quality or positive exposure to advertisements significantly raises the likelihood of purchasing behavior.

A comparison between brands reveals that the effect of perceived quality was strongest among Oppo users, while advertisements appeared relatively more influential among Redmi users. This reflects differences in marketing strategies and varying consumer attitudes toward the brands. Furthermore, the VIF values (1.04 - 1.09) indicate no multicollinearity issues, confirming the independence of the explanatory variables and the robustness of the statistical model.

Based on the foregoing, the results show that perceived product quality constitutes the primary determinant of purchasing behavior, and that advertising efforts enhance the effectiveness of this impact when promotional messages align with the actual product experience. These findings confirm the importance of integrating perceived quality and advertising in shaping purchasing behavior and enhancing competitiveness in Algeria's smartphone market.

▪ Third Sub-Hypothesis:

The strength of the effect of both perceived quality and advertisements on purchasing behavior varies according to foreign brands among Algerian smartphone users at a significance level of ($\alpha = 0.05$).

Table (2): Results of the Modified Linear Regression Model Testing the Interaction Effect of Perceived Quality and Advertisements with Brand on Purchasing Behavior

Model	Correlation Coefficient (R)	Coefficient of Determination (R^2)	Adjusted R^2	Standard Error of Estimate	F-value	Significance (Sig.)
Model 1	0.599	0.359	0.357	0.35991	195.253	0.000
Model 2	0.602	0.362	0.358	0.35956	1.679	0.152

Table 2 indicates that Model 1, which includes perceived quality, advertisements, and brand, explains 35.9% of the variance in purchasing behavior, with the relationship being statistically significant ($p < 0.001$).

Model 2, which added the interaction terms, showed an increase in the explained variance to only 36.2%, a slight increase of 0.3% that was not statistically significant ($F\text{-change} = 1.679$, $p = 0.152$).

This indicates that the effect of perceived quality and advertisements on purchasing behavior does not differ significantly by brand. This suggests that the Algerian consumer is influenced primarily by the elements of quality and advertising in general, with the specific brand type playing no fundamental role in moderating this effect.

▪ **Main Hypothesis (Composite):**

H_1 : Both perceived quality and advertisements have a statistically significant effect on the purchasing behavior of consumers of foreign smartphone brands in the Algerian market at a significance level of ($\alpha = 0.05$).

H_0 : Neither perceived quality nor advertisements have a statistically significant effect on the purchasing behavior of consumers of foreign smartphone brands in the Algerian market at a significance level of ($\alpha = 0.05$).

Table 3 : Linear Regression Results – Combined Effect of Perceived Quality and Advertising on Purchasing Behavior of Algerian Smartphone Users

Dependent Variable	Independent Variables	B	Std. Error	F-value	F Sig.	t-value	t Sig.	R ²	VIF
Purchasing Behavior: Samsung Users in Algeria	Constant	2.195	0.083	349.544	0.000	26.608	0.000	0.339	1.000
	Perceived Quality & Advertisements	0.436	0.023			18.696	0.000		
Purchasing Behavior: Redmi Users in Algeria	Constant	1.925	0.120	199.451	0.000	15.996	0.000	0.355	1.000
	Perceived Quality & Advertisements	0.512	0.036			14.123	0.000		
Purchasing Behavior: Oppo Users in Algeria	Constant	1.911	0.126	206.389	0.000	15.157	0.000	0.372	1.000
	Perceived Quality & Advertisements	0.514	0.036			14.366	0.000		

The results in Table 3 show that the coefficients of determination (R^2) were 0.339 for Samsung users, 0.355 for Redmi users, and 0.372 for Oppo users. These medium-level proportions indicate that approximately 33.9% to 37.2% of the variance in purchasing behavior can be explained by the combined variables of perceived quality and advertisements.

The F-test values showed very high statistical significance ($p < 0.001$) for all three models, confirming that the regression equations as a whole are statistically significant and that the two independent variables provide a genuine explanation for purchasing behavior across all brands.

Regarding the partial regression coefficients (B), the values were 0.436 for Samsung, 0.512 for Redmi, and 0.514 for Oppo. These are positive and statistically significant coefficients ($p < 0.001$), indicating that an increase in perceived quality and advertising exposure leads to a noticeable increase in consumers' purchasing behavior.

The high t-values (ranging from 14.1 to 18.7) reinforce the significance of this relationship and indicate that the effect of perceived quality and advertisements is stable and strong across all three brands. A VIF value of 1.000 confirms the absence of multicollinearity between the two independent variables.

Comparing the brands reveals that the strongest effect was recorded among Oppo users ($R^2 = 0.372$, $B = 0.514$), followed by Redmi and then Samsung. This reflects a slight difference in the strength of behavioral response, likely attributable to each brand's specific strategies in the Algerian market.

Based on these results, it can be concluded that both perceived quality and advertisements exert a positive and statistically significant effect on the purchasing behavior of Algerian consumers. This effect is relatively strong and stable across different foreign brands, thereby supporting the study's main hypothesis at a significance level of ($\alpha = 0.05$).

6. Conclusion

This study confirms that perceived quality and advertising significantly influence Algerian consumers' smartphone purchasing behavior, with regression models explaining 33.9%-37.2% of behavioral variance. Perceived quality demonstrated stronger predictive power than advertising, revealing consumers' preference for substantive product attributes over promotional appeals. The consistent relationships across brands indicate uniform behavioral patterns in the Algerian market, where product performance forms the primary basis for trust while advertising plays a secondary reinforcing role.

7. Recommendations

Foreign smartphone companies should prioritize substantial investments in product quality and performance features while ensuring advertising campaigns accurately represent product capabilities. We recommend developing consumer education programs that highlight technological innovations and implementing market-specific adaptations that address local consumer preferences. Additionally, enhancing post-purchase support and warranty services will reinforce quality perceptions and foster long-term brand loyalty, creating a balanced approach that aligns product excellence with strategic marketing in Algeria's evolving smartphone landscape.

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