

The Impact of Social Media on the Elements of the Marketing Mix: A Case Study of Large and Medium-Sized Industrial Enterprises in Western Algeria

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Received: 08/02/2026; Accepted: 26/03/2026; Publishing: 01/06/2026

Summary: This study aims to highlight the impact of social media (ease of use, information accuracy, and information efficiency) on marketing functions, specifically the elements of the marketing mix (product, price, promotion, and distribution) in medium and large-sized Algerian industrial enterprises. A questionnaire was utilized as the primary data collection tool, targeting marketing managers and officials in a convenience sample consisting of 53 medium and large-sized industrial enterprises. A total of 70 questionnaires were distributed, of which 60 were retrieved, yielding a response rate of approximately 85.7%. The data were statistically analyzed using SPSS software (version 22).

The findings reveal a significant impact of social networking sites—represented by ease of use, information accuracy, and information efficiency—on the elements of the marketing mix in medium and large Algerian industrial enterprises. Furthermore, the results indicate that social networking sites influence all components of the marketing mix. The study recommends that Algerian industrial enterprises incorporate social networking sites as a fundamental part of their marketing strategies to enhance their overall effectiveness and competitiveness.

Keywords: Social Networking, 4PS, Medium and Large Industrial Enterprises.

Jel Classification Codes: M31; D85.

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I– Introduction:

In recent decades, the economic environment of enterprises has undergone rapid and complex transformations. Globalization, technological progress, and increasing economic openness have intensified competition among organizations across various sectors. In such a dynamic environment, companies are no longer competing solely through traditional resources, but increasingly through their ability to efficiently manage information, adopt advanced technologies, and respond quickly to market changes. Consequently, operational efficiency and the effective use of information technologies have become not only essential capabilities but also key sources of competitive advantage and organizational survival.

Alongside these developments, the widespread diffusion of the internet and digital technologies has significantly transformed the way organizations interact with their markets. In particular, the emergence and rapid growth of social media platforms have reshaped communication patterns between businesses and consumers. Social media has evolved from a simple communication tool into a strategic marketing instrument that enables companies to reach large audiences, build brand awareness, and engage directly with customers.

Today, social media platforms are among the most widely used services on the internet. Platforms such as Facebook, Twitter, and LinkedIn attract hundreds of millions of users worldwide. Their extensive user base offers organizations unprecedented opportunities to promote their products and services, enhance brand visibility, and manage corporate reputation. As a result, many companies—both large enterprises and small- and medium-sized businesses—have integrated social media into their marketing strategies to strengthen communication with customers and improve market positioning.

The growing reliance on social media has led to a fundamental transformation in marketing practices. These platforms enable organizations to interact with customers in real time, gather valuable insights into consumer preferences, and develop stronger and more personalized relationships with their target audiences. Moreover, social media allows companies to collect and analyze large volumes of data, which can support better decision-making in marketing activities.

In this context, social media has become one of the most influential digital marketing tools. Its effectiveness largely depends on several key characteristics, such as ease of use, the accuracy of information, and the efficiency of communication. These characteristics can significantly influence the strategic decisions companies make regarding the elements of the marketing mix.

Specifically, social media can contribute to improving the four traditional components of the marketing mix:

- **Product:** by enabling companies to gather customer feedback and opinions, which can support product improvement and innovation.
- **Price:** by helping organizations monitor market trends and competitors, allowing them to set more competitive pricing strategies.
- **Promotion:** by facilitating targeted advertising, interactive communication, and personalized promotional campaigns.
- **Distribution:** by supporting digital channels and technology-based solutions that improve product availability and delivery.

Through these capabilities, social media platforms play a crucial role in enhancing marketing effectiveness and strengthening the relationship between companies and consumers. Consequently, organizations must increasingly invest in social media marketing strategies in order to maintain continuous engagement with their customers and remain competitive in the digital marketplace.

1. Research Problem

The rapid evolution and widespread adoption of social media platforms have made them essential tools in modern marketing strategies. Businesses increasingly rely on these platforms to communicate with customers, promote products, and gather market information. However, despite their growing importance, the extent to which social media attributes influence the effectiveness of marketing mix strategies remains insufficiently understood.

In particular, many companies face challenges in utilizing social media efficiently to support their marketing activities and to translate online interactions into tangible marketing

outcomes. This issue is especially relevant for industrial companies operating in emerging markets, where the integration of digital marketing tools is still developing.

Accordingly, the central research question of this study is:

To what extent do social media platforms contribute to enhancing the effectiveness of the marketing mix in large and medium-sized Algerian industrial companies?

2. Research Hypotheses

Hypotheses are proposed answers to the research questions, subject to testing. Based on the main research problem and sub-questions, the study's hypotheses are formulated as follows :

- Main Hypothesis:

There is no impact of social media dimensions (ease of use, information accuracy, and information efficiency) on marketing mix elements (product, price, promotion, and distribution) in large and medium-sized Algerian industrial companies .

This leads to two main hypotheses :

Main Hypothesis 1 :

There is no impact of social media dimensions (ease of use, information accuracy, and information efficiency) on marketing mix elements in large and medium-sized Algerian industrial companies .

-Sub-hypothesis 1: Information efficiency has no impact on the marketing mix elements at a significance level of 5% .

-Sub-hypothesis 2: Information accuracy has no impact on the marketing mix elements at a significance level of 5% .

-Sub-hypothesis 3: Ease of use has no impact on the marketing mix elements at a significance level of 5% .

Main Hypothesis 2 :

There is no impact of social media on marketing mix elements (product, price, promotion, and distribution) in large and medium-sized Algerian industrial companies .

-Sub-hypothesis 1: Social media has no impact on product development at a significance level of 5% .

-Sub-hypothesis 2: Social media has no impact on pricing strategies at a significance level of 5%

-Sub-hypothesis 3: Social media has no impact on promotion strategies at a significance level of 5% .

-Sub-hypothesis 4: Social media has no impact on distribution strategies at a significance level of 5%.

3. Research Model

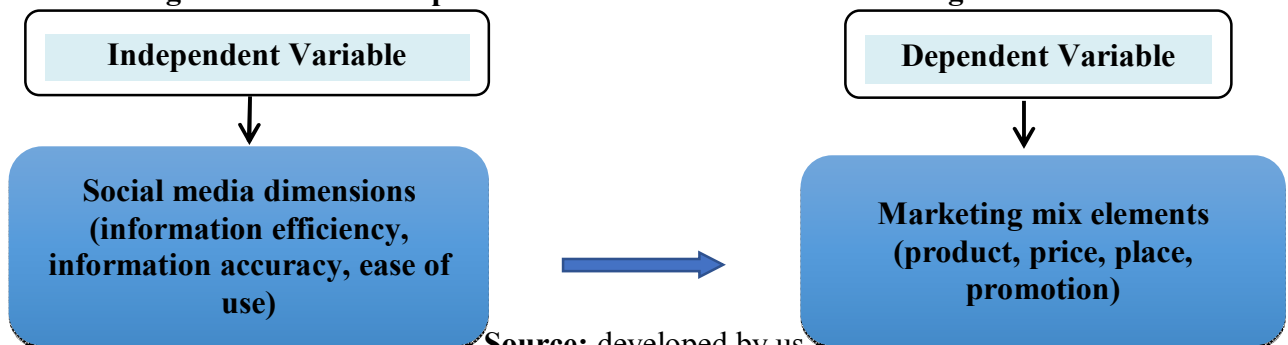
The study is designed to examine the effect of social media on marketing functions, focusing on Algerian industrial companies (medium and large enterprises). The research framework consists of :

-Independent Variable: Social media dimensions (information efficiency, information accuracy, ease of use)

-Dependent Variable: Marketing mix elements (product, price, place, promotion)

The following diagram illustrates the research model :

Fig.1: The relationship between Social media and Marketing mix elements



Source: developed by us

II– Literature Review:

Social media has become an essential tool for businesses, reshaping how companies interact with customers and adjust their marketing strategies. This section explores how social media influences the key elements of the marketing mix product, price, place, and promotion within large and medium-sized industrial enterprises in Western Algeria. Additionally, it reviews empirical studies examining how businesses adapt their marketing strategies to harness the power of social media effectively.

II .1.Theoretical Foundations of Social Media Marketing

The marketing mix, first introduced by McCarthy (1960), comprises four fundamental elements: product, price, place, and promotion. (Kotler and Keller, 2016) emphasized the need for businesses to evolve with digital transformations, including social media integration. With the rise of digital platforms, companies have redefined their marketing strategies to enhance customer engagement and competitiveness (Chaffey, D., & Smith, P. R., 2017).

II .2.Impact of Social Media on the Marketing Mix

1. Product Development and Branding

Social media provides businesses with immediate consumer insights, enabling them to align products with market demands (Kaplan, A. M., & Haenlein, M, 2010). A study by (Alalwan, 2017) found that companies using social media for customer feedback were better able to develop products that met consumer preferences. In Algeria, research by (Djamane-Segueni, 2021) revealed that industrial enterprises use social media platforms to enhance brand perception and product appeal.

2. Pricing Strategies

Social media significantly impacts pricing transparency and competitiveness (Faulds, Mangold , 2009) Consumers frequently compare prices and share opinions on digital platforms, prompting businesses to adopt dynamic pricing strategies (Stephen, A. T, 2016) .In Western Algeria, enterprises increasingly use social media analytics to adjust pricing models based on consumer sentiment (Fersaoui, 2018).

3. Distribution Channels (Place)

Social media optimizes distribution channels by facilitating direct-to-consumer (DTC) models, reducing dependence on traditional supply chains (Kietzmann, 2011). Algerian industrial firms have leveraged social media to streamline distribution, enhancing efficiency and accessibility (Boulahbel & Ghrieb, 2023).

4. Promotional Strategies

Promotion is the most visibly impacted element of the marketing mix due to social media. Research by (Felix, 2017) indicated that businesses using interactive social media campaigns experienced higher consumer engagement. (Boulahbel & Ghrieb, 2023)) found that Algerian firms adopting social media marketing saw enhanced brand recognition and customer loyalty.

5. Challenges and Considerations

Despite its advantages, social media marketing presents challenges such as managing negative feedback, maintaining consumer trust, and addressing cybersecurity risks (Hichour & Kourtel, 2020). Businesses must implement well-structured digital marketing strategies to mitigate these risks while maximizing social media's benefits.

Integrating social media into the marketing mix has significantly transformed marketing strategies in large and medium-sized industrial enterprises in Western Algeria. By leveraging social media, these companies enhance product innovation, adjust pricing models, optimize distribution channels, and strengthen promotional efforts. However, businesses must address challenges such as information security and content management to sustain long-term success in the digital landscape.

III-Methods:

Population Sample Size and Data Collection

This study explores the impact of social media on the marketing mix elements—product, price, promotion, and distribution—in large and medium-sized industrial companies in Algeria. Social media serves as the key factor influencing these marketing elements.

The study focuses on marketing executives and managers working in Algerian industrial companies. A purposive sampling method was used to ensure the selection of relevant participants from medium and large enterprises. A total of 70 questionnaires were distributed, each representing a single company. Of these, 60 were returned, but 7 were found to be invalid. This resulted in 53 valid responses for analysis.

To collect data, a structured survey was developed to assess the role of social media in shaping marketing strategies. The survey was distributed directly to marketing professionals, ensuring diverse representation across different industries and sectors.

Data and Analysis Methods

The study used a questionnaire distributed in paper format to the selected participants. Responses were measured using a five-point Likert scale to capture insights into how social media influences marketing practices.

The collected data were analyzed using SPSS version 20. The analysis included Cronbach's alpha to assess the reliability of the questionnaire and multiple regression analysis to examine the relationship between social media and marketing mix elements. These methods provided valuable insights into the role of social media in shaping marketing strategies within Algerian industrial companies.

IV-Results:

Analysis of the Study Sample

To better understand the impact of social media on the marketing mix elements product, price, promotion, and distribution this study examined a diverse group of marketing professionals from medium and large industrial companies in Algeria. The sample consisted of 53 participants, representing different genders, age groups, educational backgrounds, and managerial levels.

1. Gender Distribution

The participants included both male and female marketing professionals.

- Female 41.5 percent
- Male 58.5 percent

This distribution ensures a balanced perspective on how social media influences marketing strategies across genders.

2. Age Groups

Participants were divided into three age categories.

- Young professionals 18 to 30 years 26.4 percent
- Mid-career professionals 31 to 45 years 47.2 percent
- Senior professionals 46 years and above 26.4 percent

With nearly half of the participants in the mid-career stage, the study benefits from insights drawn from professionals who are actively involved in shaping marketing strategies and decision-making.

3. Educational Background

The study sample included professionals with different levels of education.

- Secondary education 47.2 percent
- University degree 43.4 percent
- Postgraduate qualifications 9.4 percent

A highly educated workforce indicates that marketing professionals have a strong theoretical foundation, which likely influences their approach to using social media in marketing mix decisions.

4. Managerial Roles

Participants held different levels of responsibility within their organizations.

- Higher management 37.7 percent
- Middle management 43.4 percent
- Low management 18.9 percent

With a substantial representation from middle and senior management, the study provides insights into strategic marketing decisions and the role of social media in optimizing the marketing mix.

The study sample reflects a dynamic and experienced workforce that plays a crucial role in shaping marketing mix strategies within Algerian industrial companies. By analyzing these demographic patterns, this research offers valuable insights into how social media influences product development, pricing strategies, promotional efforts, and distribution channels.

Table 1.1: socio demographic variables

variables	values	N	%
gender	Female	22	41.5
	Male	31	58.5
Age	From 18 to 30	14	26.4
	From 31 to 45	25	47.2
	46 and more	14	26.4
	Secondary	25	47.2
Educational level	Collegiate	23	43.4
	postgraduate	5	9.4
Administrative level	Higher management	20	37.7
	Middle management	23	43.4
	Low management	10	18.9

Source: developed by us

Validity test

The validity of the measurement tool has been tested by presenting it to some of the experienced and specialized arbitrators.

To verify the stability of the measurement tool, the Cronbach's alpha stability coefficient was employed, and Table 1.2 displays the instrument's reliability.

Table 1.2: scale reliability analysis

Variable	Number of items	Cronbach's alpha
social media dimensions		
Information Efficiency	5	.930
Information Accuracy	5	.879
Ease of Use	5	.893
Marketing Mix Elements		
Product	4	.954
Price	4	.877
Promotion	4	.859
Distribution	4	.915
Total	31	.914

Source: developed by us

The Cronbach's alpha values for all variables ranged from **0.859 to 0.954**, which are well above the acceptable threshold of 0.70, indicating a high level of internal consistency. The overall reliability of the instrument was **0.914**, reflecting excellent consistency across the entire scale. These results confirm that the questionnaire is a reliable tool for measuring the impact of social media dimensions on marketing mix elements.

Hypotheses Results

This section presents the results related to the two main hypotheses of the study, which examine the influence of social media and its dimensions on the elements of the marketing mix in large and medium-sized Algerian industrial companies.

• Results of Main Hypothesis 1

Table 1.3 presents the results of the regression analysis examining the influence of social media dimensions—information efficiency, information accuracy, and ease of use—on marketing mix elements (product, price, promotion, and distribution). The results show that all three dimensions have a statistically significant effect, as all p-values are below the threshold of 0.05.

- **Information Efficiency (H1.1) → Marketing Mix:** The regression coefficient ($B = 0.506$, $t = 4.084$, $p = 0.000$) indicates that information efficiency has a strong and statistically significant positive influence on the marketing mix elements.
- **Information Accuracy (H1.2) → Marketing Mix:** This variable also has a significant effect on the marketing mix ($B = 0.325$, $t = 2.757$, $p = 0.000$), suggesting that the accuracy of information shared via social media platforms contributes to more effective marketing strategies.
- **Ease of Use (H1.3) → Marketing Mix:** Ease of use demonstrates a significant impact as well ($B = 0.208$, $t = 3.736$, $p = 0.006$), confirming that user-friendly social media platforms can enhance the effectiveness of marketing mix practices.

Additionally, the overall model shows strong explanatory power. The **correlation coefficient (R)** is 0.870, indicating a strong relationship between social media dimensions and marketing mix effectiveness. The **coefficient of determination (R^2)** is 0.758, meaning that 75.8% of the variance in the marketing mix is explained by the model. The **F-statistic** of 51.048 confirms that the model is statistically significant.

These results reject the null hypothesis and support the idea that social media dimensions significantly affect marketing strategy in large and medium-sized Algerian industrial companies.

Table 1.3: Results of Main Hypothesis1

hypotheses	Regression weights	B	t	p-value	results
H ₁₁	IF MM	0.506	4.084	.000	supported
H ₁₂	IA → MM	0.325	2.757	.000	supported
H ₁₃	EU → MM	0.208	3.736	.006	supported
R	0.870				
R ²	0.758				
F	51.048				

Note. * $p < 0.05$. IF: information efficiency, IA: Information Accuracy, EU: Ease of Use, MM: The marketing mix includes product, price, promotion, and distribution

• Results of Main Hypothesis2

Table 1.4 presents the results of the regression analysis examining the influence of social media on each of the four elements of the marketing mix: product, price, promotion, and distribution. The results show that social media has a statistically significant effect on all four components, as all p-values are below the threshold of 0.05.

Social Media (H2.1) → Product: The regression coefficient ($B = 0.647$, $t = 6.262$, $p = 0.000$) indicates that social media has a strong and statistically significant positive influence on product development.

Social Media (H2.2) → Price: This variable also shows a significant effect on pricing strategies ($B = 0.722$, $t = 6.057$, $p = 0.000$), suggesting that social media helps companies make more informed pricing decisions.

Social Media (H2.3) → Promotion: A very strong relationship is observed in this case ($B = 0.867$, $t = 12.220$, $p = 0.000$), confirming that social media is a powerful tool in shaping effective promotional strategies.

Social Media (H2.4) → Distribution: The highest impact among the four elements is found here ($B = 1.024$, $t = 15.541$, $p = 0.000$), indicating that social media plays a major role in enhancing distribution processes through digital channels.

Additionally, the overall model demonstrates excellent explanatory power. The correlation coefficient (R) is 0.909, showing a very strong relationship between social media and the marketing mix components. The coefficient of determination (R^2) is 0.826, which means that 82.6% of the variance in the marketing mix can be explained by the influence of social media. The F-statistic of 241.529 confirms that the regression model is statistically significant.

These results lead to the rejection of the null hypothesis and confirm that social media significantly affects all four elements of the marketing mix in large and medium-sized Algerian industrial companies.

Table 1.4: Results of Main Hypothesis2

hypotheses	Regression weights	B	t	p-value	results
H ₂₁	SM → Product	0.647	6.262	.000	supported

H ₂₂	SM → price	0.722	6.057	.000	supported
H ₂₃	SM → promotion	0.867	12.220	.000	supported
H ₂₄	SM → distribute	1.024	15.541	.000	supported
R	0.909				
R ²	0.826				
F	241.529				

Note. * $p < 0.05$, SM: social media includes information efficiency, Information Accuracy, Ease of Use

• Overall Conclusion of Hypotheses Testing

The results of the regression analyses for both main hypotheses clearly indicate that social media and its key dimensions have a statistically significant impact on the elements of the marketing mix in large and medium-sized Algerian industrial companies.

The first main hypothesis confirmed that the individual dimensions of social media—namely information efficiency, information accuracy, and ease of use—positively and significantly influence the effectiveness of the overall marketing mix. This highlights the importance of optimizing the design, accuracy, and accessibility of social media platforms used by companies.

The second main hypothesis demonstrated that social media as a whole significantly impacts each specific component of the marketing mix: product, price, promotion, and distribution. The strongest influence was observed in the areas of promotion and distribution, which confirms the strategic role of social media in enhancing communication with customers and improving delivery processes.

These findings support the rejection of both null hypotheses and affirm that social media is a powerful tool that directly shapes marketing strategies. Therefore, companies should continuously invest in their digital presence and develop tailored social media strategies to strengthen their market positioning and maintain competitiveness in a rapidly evolving digital environment.

V-Discussion:

This study investigated the effect of social media and its key dimensions—information efficiency, information accuracy, and ease of use—on the marketing mix within Algerian industrial firms. By analyzing both the overall impact of social media and the specific influence of each of its dimensions, the research aimed to clarify the role digital platforms play in shaping marketing practices.

Summary of Findings

The reliability tests confirmed that the measurement tool was consistent, with high Cronbach's alpha values supporting its validity. Regression analysis further supported the research assumptions, revealing that all three social media dimensions had a meaningful and statistically significant effect on marketing mix components.

- Information efficiency (H1.1) showed a strong positive relationship with the marketing mix, with a coefficient of 0.506 and a t-value of 4.084. This suggests that the ability to access and share information efficiently via social platforms contributes to improved marketing performance.
- Information accuracy (H1.2) also had a significant influence, with a coefficient of 0.325 and a t-value of 2.757. This confirms that accurate information on social media enhances marketing efforts.
- Ease of use (H1.3) demonstrated a clear positive effect as well, with a coefficient of 0.208 and a t-value of 3.736. This highlights the value of intuitive and user-friendly digital tools in implementing effective marketing strategies.

In testing Main Hypothesis 2, the direct impact of social media on individual marketing mix elements was also evident:

- Product (H2.1): 0.647 ($t = 6.262$)
- Price (H2.2): 0.722 ($t = 6.057$)
- Promotion (H2.3): 0.867 ($t = 12.220$)
- Distribution (H2.4): 1.024 ($t = 15.541$)

These results indicate that social media contributes to product development, pricing strategies, promotional campaigns, and distribution efficiency. The strength of the model was confirmed with a correlation coefficient of 0.909, R squared of 0.826, and an F-statistic of 241.529.

Theoretical and Practical Implications

This study adds to the body of knowledge in digital marketing by showing that social media functions as more than just a communication channel; it is a strategic resource that influences marketing performance. The findings align with theoretical perspectives that emphasize the role of digital tools in engaging customers, building brand visibility, and improving responsiveness.

From a practical standpoint, companies are encouraged to:

Focus on publishing accurate and reliable content.

Adopt platformsthat offer simple, easy-to-use interfaces.

Use insights from social media to refine product offerings, pricing models, promotion tactics, and distribution channels.

Limitations and Future Research

While the study provides valuable insights, its scope was limited to large and medium-sized industrial firms in Algeria. As such, the results may not be fully generalizable to other industries or countries. Future research could explore the influence of specific social media platforms or examine the role of factors such as company size, technological infrastructure, and market environment. Longitudinal studies are also recommended to track changes and long-term effects.

VI-Conclusion:

This research confirms that social media and its core dimensions—information efficiency, accuracy, and ease of use—have a substantial impact on the marketing mix in industrial firms. Both overall and specific effects on product, price, promotion, and distribution were found to be statistically significant. These findings underscore the importance of digital strategies that integrate social media as a central marketing tool. Algerian companies that embrace this approach are more likely to improve customer relationships, optimize performance, and maintain a competitive advantage in the digital marketplace.

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How to cite this article by the APA method:

Hatim Abdelhak DIDA & Imene BOUAZZA ABID (2026), The Impact of Social Media on the Elements of the Marketing Mix: A Case Study of Large and Medium-Sized Industrial Enterprises in Western Algeria, *Journal of Quantitative Economics Studies*, Volume 12 (Number 01), Algeria: Kasdi Marbah University Ouargla, PP. 93-102.



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