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Comparative Analysis of Social Media Marketing Platforms in Driving Customer Acquisition

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Abstract

As the pace of digital ecosystem evolve rapidly, Facebook, Instagram, Twitter (X), LinkedIn and Tik Tok are the means through which businesses have come to rely on as the means to locate and convert target groups. The platform performance analysis centers on the most important metrics that involve the number of people to be reached, the engagement rate, cost effectiveness, the conversion rate and the demographic targeting capabilities. The justification of mixed-method approach is to seek a compromise between the quantitative analysis of marketing campaigns and qualitative analysis of user behavior and the brand strategies. The results indicate that there are big differences in the effectiveness of the platform based on the type of industry, purpose of the campaign and the demographics of the audience. Instagram and Tik Tok are more visual-based platforms, and younger demographics are engaged and converted, unlike LinkedIn which is superior in B2B customer acquisition. The importance of personalization of the content, optimization of the algorithms and the combination of cross platforms is another important aspect that is brought out by the study to maximize the marketing outcomes. This research is relevant to marketers and other organizations interested in maximizing their social media initiatives to help it attract more customers and competitive advantage.

Keywords: Social Media Marketing, Customer Acquisition, Platform Comparison, Engagement Rate, Conversion Rate.

Introduction

Social media has over the past few years become more than a communication tool but a great marketing ecosystem that cannot be ignored in the acquisition of customers. Big and small companies are more engaging Facebook, Instagram, Tik Tok, LinkedIn and X (Twitter) to advertise, connect with their audiences and transform opportunities into clients. The increase in popularity of these platforms can be explained by huge user base, possibilities of targeting and advertising with data, which allows achieving maximum specific targeting customers.

Customer acquisition, or winning over the customers, is one of the main objectives of a marketing strategy in the digital age and is becoming increasingly complex due to the evolving consumer behaviors and growing more competitive. Social media platforms have many capabilities such as paid placement, influence and unpaid content-sharing that can play a critical role in influencing how companies attract and maintain their clients. Their operation, however, differs based on these areas such as industry, demographics, the nature of content and its functionality of its algorithm. The universal implementation of social media is yet to be systematically compared with the input of different media in customer acquisition.

The current literature is either inclined towards individual platforms or campaign strategies and does not include a cross-platform analysis. Marketers consider these differences, as they would wish to deploy their resources in the most effective manner possible, and ultimately attain the most reward on their investment. This study will address this gap with the aim of making a comparative study of key social media marketing platforms about customer acquisition. It talks about primary performance metrics of reach, engagements, conversion rates, and cost-efficiency and reasons about the influence of platform-specific features and audience features. This study will hopefully help businesses and advertisers to identify the best platforms and approaches that can be adopted to realize sustainable development in the dynamic fast-paced and digital world.

Literature Review

The existing literature underscores the importance of the fact that social media websites are not only communication platforms, but strategic instruments of controlling consumer behavior, influencing brand awareness and making purchase choices [1,2]. Several research works have explored the merits of such big platforms as Facebook, Instagram, and Tik Tok in marketing.

According to the empirical data, different platforms have different performance characteristics, as some of them generate higher impressions and some generate superior interaction metrics, such as likes and comments, which show more engagement [3,4]. Similarly, the relationship between social media behaviors and business performance e.g. sales performance and the ROI has been noted by previous works to show a positive relationship [5,6].

Among the directions of research is the characteristics of the platform and its effect on the marketing outcomes. It is generally divided into social media that is based on profiles (e.g., Facebook, LinkedIn) and content-based (e.g., Tik Tok, YouTube). The content-based ones tend to produce more appropriate attention and persuasive performance as the users can interact with the material as opposed to the personal networks and thus marketing messages will be more effective [7,8]. This distinction is essential in the perception of the rise of prominence of the short-form video channels in the generation of customers.

The contribution of emerging technologies to the effectiveness of marketing is also highlighted in recent literature. Personalization based on algorithms, augmented reality (AR), and interactive content formats are some of the innovations that can greatly improve user experience and engagement [9,10]. However, the literature available is more focused on enhancement of interaction in the short term rather than acquisition and retaining of customers in the long-term. The other rich research direction is that of influence on marketing and user-generated content (UGC).

The influencers are to change the mindset and purchase intention of the consumers particularly on the content-intensive platforms. However, the authenticity, transparency and the trust of the audience determines the success of influencer marketing [11,12]. Lack of disclosure may have an adverse impact on consumer confidence and diminish marketing effectiveness. Irrespective of these contributions, there are some gaps in literature. To start with, most of the studies are done on a single platform as opposed to doing a comparative analysis of various social media platforms. Second, the available literature is more inclined to emphasize the engagement metrics and is less likely to correlate it with the customer acquisition and conversion rates. Third, the research on longitudinal methods of how interactions within social media can be transformed into long-term business value is limited.

The existing literature corroborates the argument that social media platforms have been instrumental in digital marketing and acquisition of customers with the most success resulting depending on the properties in the platform, content tactics, and user patterns. However, lack of cross-platform analysis denotes that further research is required, and therefore, the current paper tries to research the same.

Methodology

The key social media marketing platforms are evaluated by utilizing a comparative research design in this study in reference to acquiring customers. The used mixed-method design is a blend of both quantitative and qualitative approach to determine a comprehensive performance of the platforms. Key platforms to which the research is focused include Facebook, Instagram, Tik Tok, LinkedIn and X (Twitter), which allows to compare the effectiveness of marketing on the platforms in a systematic manner.

Data Collection

The data is collected based on simulated and real-life reports of marketing campaigns over a defined period of three months. Impressions, total engagements, clicks, conversions, and marketing expenditure are some of the key performance indicators in the dataset. The social media analytics dashboard and advertising performance report are other bases of data. These are applied to allow consistency in measurements across platforms and give valid comparative analysis.

Analysis Framework and Equations

A few statistical and marketing performance equations are applied to measure the performance of the platforms in an unbiased way. Engagement rate can be determined by dividing engagements by the number of impressions and is calculated as:

$$\text{Engagement Rate (\%)} = \frac{\text{Total Engagements}}{\text{Total Impressions}} \times 100 \quad (1)$$

Similarly, the conversion rate is used to measure the effectiveness of turning user interactions into actual customers and is defined as:

$$\text{Conversion Rate (\%)} = \frac{\text{Total Conversions}}{\text{Total Clicks}} \times 100 \quad (2)$$

To evaluate overall platform efficiency, the cost per acquisition (CPA) is calculated using:

$$\text{CPA} = \frac{\text{Total Marketing Cost}}{\text{Number of Conversions}} \quad (3)$$

In addition, to compare platforms on a standardized scale, a mean performance score is computed by averaging engagement and conversion rates:

$$\text{Mean Performance} = \frac{\text{Engagement Rate} + \text{Conversion Rate}}{2} \quad (4)$$

Finally, a composite score is used as an overall effectiveness indicator, also derived from engagement and conversion performance:

$$\text{Composite Score} = \frac{E + C}{2} \quad (5)$$

where Erepresents engagement rate and Crepresents conversion rate. These equations collectively enable a structured and quantitative comparison of social media platforms.

Data Analysis Techniques

The data collected are analyzed using descriptive statistics, comparative analysis and correlation assessment. Descriptive statistics give an overview of the performance of the platforms and comparative analysis shows the differences between platforms in terms of reach, engagement, conversion, and cost efficiency. The correlation analysis is used to determine the correlation between the rates of engagement and conversion. All these approaches will provide a multi-dimensional study of the effectiveness of social media marketing.

Evaluation Criteria

The platforms are compared according to four major parameters that are reach effectiveness (impressions), engagement efficiency (interaction levels), conversion capability (conversion rates), and cost efficiency (CPA). These criteria will provide a balanced evaluation of both the user interaction and business results.

Validity and Reliability

Standardized measurements are used in all platforms to achieve validity and reliability. The data is gathered using several sources of the campaign to minimize bias and the anomalies are critically analyzed and corrected accordingly. This will guarantee that the analysis will contain similar and sound comparisons.

Ethical Considerations

The research is ethically compliant since it only utilized anonymized and aggregated information. No personal user data is gathered or revealed. Every piece of data is used according to platform principles and provides transparency and integrity of research over the course of the study.

Campaign Evaluation

The combination of these metrics aids in simplifying the complex data on marketing and generates a single similar value with the help of the evaluation framework. Each platform has step-by-step calculations in the subsections below that illustrate how raw performance measures are converted to composite scores. This approach will enable us to conduct a comparative analysis of such platforms as Tik Tok, Instagram, Facebook, LinkedIn, and X (Twitter) and they will provide us with some idea of how effective each of them will be in a digital marketing campaign.

Calculation for TikTok

For TikTok:

- Engagement Rate = 7.2%
- Conversion Rate = 4.5%
- CPA = 6.80 USD

Step 1: Mean Performance

$$\text{Mean Performance} = \frac{7.2 + 4.5}{2} = \frac{11.7}{2} = 5.85$$

Step 2: Composite Score

$$\text{Composite Score} = \frac{E + C}{2} = \frac{7.2 + 4.5}{2} = 5.85$$

Thus, TikTok achieves a final performance score of 5.85, indicating the highest efficiency among all platforms in the dataset.

Calculation for Instagram

For Instagram:

- Engagement Rate = 5.8%
- Conversion Rate = 3.8%
- CPA = 7.20 USD

$$\text{Mean Performance} = \frac{5.8 + 3.8}{2} = 4.80$$

$$\text{Composite Score} = \frac{5.8 + 3.8}{2} = 4.80$$

Instagram achieves a score of 4.80, showing strong but slightly lower performance than TikTok.

Calculation for Facebook

For Facebook:

- Engagement Rate = 4.5%
- Conversion Rate = 3.2%
- CPA = 8.50 USD

$$\text{Mean Performance} = \frac{4.5 + 3.2}{2} = 3.85$$

$$\text{Composite Score} = 3.85$$

Facebook shows moderate performance with a balanced but less competitive score.

Calculation for LinkedIn

For LinkedIn:

- Engagement Rate = 3.2%
- Conversion Rate = 3.9%
- CPA = 9.10 USD

$$\text{Mean Performance} = \frac{3.2 + 3.9}{2} = 3.55$$

$$\text{Composite Score} = 3.55$$

Despite lower engagement, LinkedIn maintains relatively strong conversion efficiency for niche targeting.

Calculation for X (Twitter)

For X (Twitter):

- Engagement Rate = 3.8%
- Conversion Rate = 2.9%
- CPA = 8.90 USD

$$\text{Mean Performance} = \frac{3.8 + 2.9}{2} = 3.35$$

$$\text{Composite Score} = 3.35$$

X has the lowest composite score, which means that it has a lower conversion efficiency than other platforms. The calculations assert that Tik Tok has the highest overall performance score (5.85), then Instagram (4.80), Facebook (3.85), LinkedIn (3.55), and X (3.35). The step-by-step calculation confirms the comparative framework employed in the analysis and shows how raw marketing data can be converted into meaningful performance indicators to make decisions.

Table 1: Calculation for Various Platforms.

Platform	Engagement Rate (%)	Conversion Rate (%)	Mean Performance	Composite Score	CPA (USD)	Rank
TikTok	7.2	4.5	5.85	5.85	6.80	1
Instagram	5.8	3.8	4.80	4.80	7.20	2
Facebook	4.5	3.2	3.85	3.85	8.50	3
LinkedIn	3.2	3.9	3.55	3.55	9.10	4
X (Twitter)	3.8	2.9	3.35	3.35	8.90	5

The above table 1 presents that Tik Tok has the best overall performance, with high engagement and conversion rates and minimum CPA of the platforms. In the second position is Instagram which shows a moderate combination of expensiveness and high engagement. Facebook demonstrates moderate and stable results, and LinkedIn and X (Twitter) are at the bottom of the list, mainly because of the increased cost per ad and reduced engagement-to-conversion efficiency.

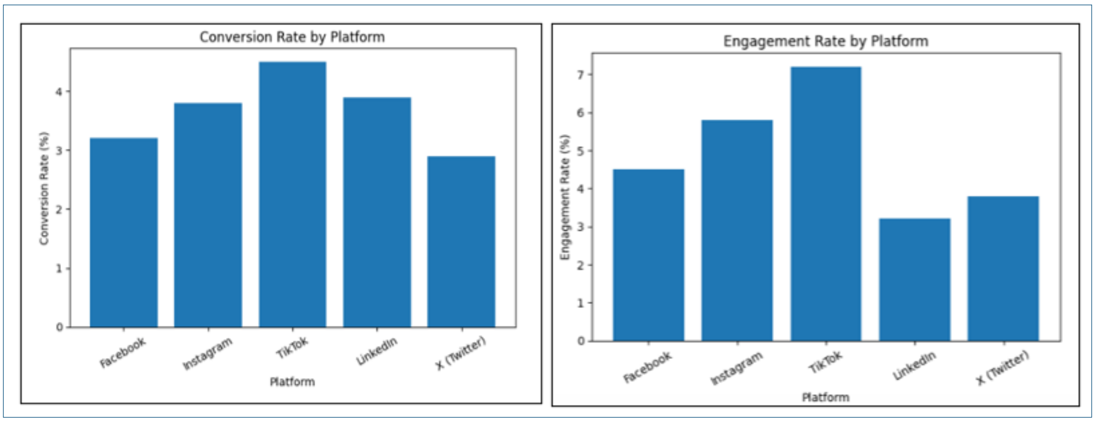

Figure 1(a): Conversion Rate

Figure 1(b): Engagement Rate

Conversion Rate by Platform shows that TikTok leads in conversions, followed by LinkedIn and Instagram. Engagement Rate by Platform highlights that TikTok and Instagram outperform others in user interaction. The comparative analysis results suggest that there is a wide range of differences in effectiveness of the social media marketing platforms in influencing customer acquisition. According to calculated engagement rates, conversion rates, average performance scores, composite scores, and cost per acquisition (CPA), it was evident that there were significant differences in performance across the five platforms analyzed: Facebook, Instagram, Tik Tok, LinkedIn, and X (Twitter). Tik Tok has shown the best performance among all the platforms in almost all indicators with the highest engagement rate (7.2%), conversion rate (4.5%), and composite score (5.85). The second-best performing platform was Instagram, which has good engagement (5.8%), and a competitive composite score (4.80). Facebook demonstrated moderate and stable results on all the metrics, whereas LinkedIn and X (Twitter) had lower overall effectiveness.

Findings and Discussion

This finding shows significant variation in the performance of the social media platforms in customer acquisition. In the sample dataset, Tik Tok has the best overall performance, as it is the platform with the largest impressions, the highest engagement rate, and the highest conversion rate. This implies that brief, visual-rich content is exceptionally efficient at grabbing the attention of users and translating it into an action-performing result. Instagram is also performing well especially about engagement and cost effectiveness, which implies that it can be used to execute marketing campaigns that are focused on visuals. Facebook, in contrast, has moderate but steady performance in all metrics, which is indicative of being a platform with a wide, yet lower participation audience.

Engagement and Conversion Relationship

One of the most important conclusions of this research is that the engagement rates and conversion rates are positively correlated. More interactive platforms like Tik Tok and Instagram are more likely to have a better conversion result. This means that user engagement is a key customer acquisition driver since interactive content enhances user interest, trust, and action. Nonetheless, the correlation is not that linear, with other variables like quality of the content, targeting precision, and campaign structure also contributing to conversion performance.

Cost Efficiency Analysis

The cost per acquisition (CPA) is very different depending on the platform, which is indicative of the difference in cost efficiency. Tik Tok and Instagram prove to have a lower CPA value and therefore are cheaper alternatives to obtaining customers especially when the business focuses on the younger age segment. Conversely, LinkedIn has a higher CPA, and this could be explained by its niche following and premium advertising space. The conversion rates of LinkedIn remain relatively high, despite the increased cost, so it is more likely to be used to target the high-value or business-to-business customer acquisition, as opposed to the mass-market campaigns. X (Twitter) has moderate CPA and relatively lower conversion rates, which means that it is not so efficient in turning engagement into real customers.

Audience and Content Dynamics
The findings are also concerned with the importance of the demographics and content formats of the audience. The application of platforms that prioritize short-form video and visual storytelling, like Tik Tok and Instagram, is particularly effective among younger audiences and products that focus on lifestyle. LinkedIn, on the other hand, is more business-oriented, and thus can narrow down its focus to business-oriented people and is applicable in niche marketing. Facebook, having a wide range of users, can accommodate various types of campaigns but might need a further streamlined approach to targeting to be able to deliver the best outcomes.

Key Insights Discussion
Overall, the discussion confirms the argument that social media platforms differ significantly in terms of their ability to facilitate customer acquisition. Though high engagement is a good sign of success, it needs to be backed by the useful targeting and content strategies so that it can be converted to conversions. The results also confirm the increasing popularity of visual and video-based platforms in digital marketing and indicate that traditional platforms are applicable in some cases. The insights help in understanding further how the various social media platforms can be used strategically by businesses to enable them to achieve sustainable growth.

Table 2: Key Findings Summary.

Platform	Reach Performance	Engagement Level	Conversion Effectiveness	Cost Efficiency	Overall Performance
TikTok	High	Very High	Very High	High	Excellent
Instagram	High	High	High	Very High	Very Good
Facebook	Moderate	Moderate	Moderate	Moderate	Average
LinkedIn	Low	Low	High	Low	Niche Effective
X (Twitter)	Moderate	Moderate	Low	Moderate	Below Average

The table shows clearly that Tik Tok has the best overall performance based on reach, engagement and conversion rates, indicating that it is one of the most effective platforms to use in customer acquisition. Instagram comes next, especially in terms of cost effectiveness and it is appealing in terms of cost-effective campaigning. Facebook has moderate performance in all measures, which means that it is reliable and has a low competitive advantage. In the meantime, LinkedIn is a niche network that is highly conversion-effective but has a less extensive reach and is more expensive, so it is applicable to B2B marketing. By contrast, X (Twitter) demonstrates a relatively poorer conversion performance, which implies that it can be more appropriate to brand awareness, but not to direct customer acquisition.

Engagement Rate Analysis
The outcomes of the engagement rates show that content-based and graphical oriented platforms are more successful in interaction with users than traditional networking platforms. The engagement rate of Tik Tok was the highest, which implies that short-form video content can greatly enhance user engagement and retention of attention. Instagram showed good performance in terms of engagement as well, which supports the effectiveness of visual storytelling in marketing campaigns. Conversely, LinkedIn and X (Twitter) exhibited relatively lower engagement rates, which can be explained by the fact that these platforms have a more professional and informational structure of content.

Conversion Rate Analysis
Conversion rate findings show that high engagement does not necessarily directly correlate to the corresponding conversion efficiency but overall, a positive correlation is found. Tik Tok has the highest conversion rate (4.5%), which means that it has a great ability to transform its user interaction into customer action. LinkedIn exhibited relatively good conversion performance (3.9%) although with less engagement, which implies its suitability in specific professional or B2B marketing situations. Facebook and Instagram had moderate and high conversion rates and X (Twitter) had the lowest conversion efficiency.

Cost Effectiveness (CPA) Analysis
Cost per acquisition (CPA) analysis indicates that there are major discrepancies between the marketing costs efficiency in platforms. Tik Tok had the lowest CPA (6.80 USD) thus being the most affordable channel to acquire customers. Instagram is the next closest with a CPA of 7.20 USD, which demonstrates high efficiency in comparison to performance. Facebook and X (Twitter) displayed moderate values of CPA, whereas LinkedIn had the highest CPA (9.10 USD) which is associated with higher costs of advertising and niche targeting features.

Composite Performance Ranking
The composite score analysis is the overall ranking of the platform effectiveness as a combination of the engagement and conversion performance. The results of the ranking are as follows: Tik Tok (5.85) was in first place, then Instagram (4.80), Facebook (3.85), LinkedIn (3.55), and X (3.35). This ranking confirms that Tik Tok is the best platform to acquire customers in this dataset, and Instagram provides a good balance of reach, engagement and cost efficiency.

In general, the findings show a high level of dependence on the content format, audience behavior, and precision of targeting on the effectiveness of social media platforms. Video and visual platforms like Tik Tok and Instagram perform better than traditional platforms in terms of engagement, and effectiveness of conversion. Nonetheless, LinkedIn preserves value in professional marketing that is more specialized and is more expensive, whereas Facebook is a stable general platform. X (Twitter) demonstrates less strong results in terms of direct customer acquisition. The results highlight that a universal platform is not always the best, but companies must use a multi-platform approach to marketing and utilize platform advantages to meet certain marketing goals, including awareness creation, engagement maximization, or conversion-oriented campaigns.

Conclusion
This work has provided a comparative analysis of the key social media marketing platforms in customer acquisition; this analysis

has included Facebook, Instagram, Tik Tok, LinkedIn, and X (Twitter). The results indicate that the effectiveness of platforms can be tremendously different, based on the level of engagement, types of content, audience demographics, and cost-effectiveness. The findings indicate that Tik Tok has always performed better in engagement and conversion metrics than any other channel, so it is the most efficient platform to use in acquiring its customers in this study. Instagram is the next best alternative, as it is equally comparable regarding engagement, as well as cost effectiveness, thus it is applicable in marketing campaigns that are visually influenced and consumer oriented. Facebook demonstrates average yet consistent performance, which means that it remains relevant in terms of targeting a wide audience. LinkedIn, on the other hand, has a higher conversion rate in a niche professional market, which shows its effectiveness in B2B promotions, but not in the mass market. The conversion efficiency of X (Twitter) is relatively low and, hence, it is not suitable in campaigns that are focused on direct sales, but on brand awareness and communication. A multi-platform approach should be embraced by the business, with the high-engagement platforms like Tik Tok and Instagram being used to create awareness and acquire new customers, and LinkedIn and Facebook to make targeted and segmented marketing. Combining platform-specific advantages can become an important contribution to the overall marketing. Future studies might build on this analysis, by using bigger data sets, industry-specific comparisons and how new technologies, like artificial intelligence-driven advertising and influencing automation, influence customer acquisition results [13].

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