A Survey for Investigating Key Performance Indicators in Digital Marketing

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ABSTRACT

In today’s competitive markets, marketing may be one of the most important factors in the sale of goods and products. In the present age, with the technological revolution, many human aspects have changed. One of these aspects is business and business interaction methods that have completely changed with the advent of e-commerce. Despite the growing investment in social media marketing and the many benefits it’s for all businesses left in the world today, identifying the challenges This ubiquitous marketing approach has been largely overlooked. To this end, the purpose of this study is to identify and rank the challenges of social media marketing. To this end, the purpose of this study is to identify and rank the challenges of social media marketing. First, by reviewing the literature and reviewing the opinions of experts, the most important challenges facing social media marketing were identified. Then, using Mikhailov hierarchical analysis technique, the most important challenges were prioritized. The results showed that security challenges are one of the most important social network-based marketing challenges.

Keywords:
Marketing, Social Media Marketing, Social Media Marketing Challenges, Hierarchical Analysis.
1. Introduction

The Internet, as one of the most important human innovations in the last century, with its numerous and extensive capabilities and functions, has affected various parts of human life, both positively and negatively (Nozari et al., 2021). That's why networks and social media are emerging as a key marketing platform. An increasing number of marketers are communicating directly with consumers by acquiring various skills and using social media as a channel (Dwivedi et al., 2021). This fledgling tool has incredible power and unrivaled effects on the field of marketing, so that today, with the development of these social networks, it can be claimed that marketing on social media has become one of the most important areas of e-marketing (Samadi-Parviznejad & Akhavan, 2021). Numerous studies in this field have made this important fact more and more obvious. Social media has not emerged for many years, but despite their short presence in daily life, they have been able to open their place among individuals in all walks of life, so that today few people are found (Nozari et al., 2016). They may not be connected to these networks in any way. Connections and instant communications in the virtual world have created an indelible ground for marketing departments to use the capacity of this department to integrate Internet and online audiences.

The role of social media is vital for researchers and managers in the field of marketing. Despite the proliferation and widespread use of social media in business, there is little research on social media strategies, and companies are developing and directing their social media marketing strategies through trial and error. Problems related to social media marketing have caused researchers to focus and expand the importance of such an issue. Therefore, the purpose of this study is to investigate the challenges related to social media marketing in order to eliminate and reduce the challenges and develop more effective marketing with higher value for the audience.

The structure of this paper is as follows. The second section reviews the literature. In the third part, the most important challenges of social media marketing are explored according to the literature and opinions of experts. In the third part, the research method is presented and in the fourth part, the findings are presented and finally in the fifth part, the conclusion is presented.

2. Literature Review

Social media is a type of media that has emerged after mass media and allows interaction between the message producer and the recipient. Social media provides a product platform that both shares consumer ideas and perceptions and influences customer decisions (Sukumar et al., 2021). People are increasingly seeing social media programs as an important part of their daily lives and are more likely to move their interactions to virtual programs. Social media is divided into the following six categories based on social media research and processes (self-expression): blogs, social networks, virtual social worlds, collaborative projects, content communities, and virtual game worlds (Hafez, 2021).

Social networks provide a great opportunity for online consumers to share their information with a network of friends about brands, products and services. Social media provides companies with an opportunity to reconnect with customers and eliminates negative publicity (Parviznejad & Bahrami, 2021). The general view among experts and managers was that social media would improve reconnection with customers and rebuild trust that had been lost (Arici & Arici, 2021). This view has a lasting and significant effect on the company's reputation. If social media is not well managed, without strategy and policy, it cannot have a dramatic effect on the brand image. Due to the advancement of technology and the need for speed in communication and transaction, the identification and classification of opportunities and challenges of social media marketing has been considered (Nahr et al., 2021).
Due to changes in technology, advertising methods, changes in ordering methods, etc., conducting thorough research in the field of social media marketing is felt as much as possible. Marketers can grow their business by launching online brand communities on social media. Online brand communities are groups of different sizes that pay attention by interacting online and sharing the personal opinions of their members, and admire the brand that the community has created (Olutade, 2021). Today, people seem to see social networking sites as a tool for learning about a company and its products, receiving up-to-date corporate information, and pursuing interaction with the company just like interacting with people (Chugh et al., 2021).

Improper management of social networks has a negative impact on the consumer. Once the benefits of social media are identified, the organizational challenges of social media can be clarified. One of the main challenges is that the implementation of social media, which is a tool for communication and retrieval, is not seen in isolation. Instead, a process should be considered that represents the final step in a coherent approach to improving the strategic endeavor of the product/service, organization, and website (Wijaya et al., 2021). Other important challenges for implementing social media marketing in an organization as a strategic communication and marketing tool are limitations to accept it (users who do not know how to use social media or encounter problems in accepting technology), hesitation (users who have a negative view) Social media potentials (as a means of communication) or the limitation of adaptation conditions is seen in the organizational structure; These constraints can continue depending on the social, economic, and cultural context in which the organization operates.

3. Challenges of Social Media Marketing

Because digital marketing is a new and specialized method of marketing, some of its areas may be unknown to business owners. This makes digital marketing challenging for managers, so managers are skeptical about using digital marketing strategies to grow their business. If we want to stay ahead of competitors who are very active in the Internet and digital space, we must have a good plan for an active presence in the digital space and be well aware of the challenges we may face in the course of digital marketing strategies or plans. Find appropriate solutions to these problems. Table 1 shows the most important social media marketing challenges. Initially, the most important challenges were extracted by reviewing the literature and searching scientific databases such as Scopus and Google Scholar. Then, using the opinions of 15 academic experts, the most important ones are selected and shown in Table 1.

Table 1. The most important challenges of social media marketing

<table>
<thead>
<tr>
<th>Code</th>
<th>Challenges of social media marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1</td>
<td>Lack of knowledge, skills and culture in using social media</td>
</tr>
<tr>
<td>W2</td>
<td>Security challenges in social media due to presence in cyberspace</td>
</tr>
<tr>
<td>W3</td>
<td>Challenges of technology and infrastructure in the use of social media</td>
</tr>
<tr>
<td>W4</td>
<td>Number and variety of social media</td>
</tr>
<tr>
<td>W5</td>
<td>The cost of producing content on social media</td>
</tr>
</tbody>
</table>

- **Lack of knowledge, skills and culture in using social media**

Low experience of specialists in the field of social media, lack of knowledge of social media presence rules, entry of non-specialists, lack of special academic knowledge in the field of social media, low knowledge of specialists in the field of social media are the main challenges in social media marketing (Rahyadi, 2021).
• **Security challenges in social media due to presence in cyberspace**

Social networks have their own dangers that can be troublesome for the user by not following the security tips, or hackers can access personal information through social media or enter the viruses they want into people’s systems and harass them. Give. These events may even go so far as to target and destroy people’s reputation, job status, and ultimately their lives. So people need to stay safe on social media (Fallah & Nozari, 2020).

• **Challenges of technology and infrastructure in the use of social media**

Weak internet platform in some countries and regions, slow internet speed, social media filtering in some countries, poor technical infrastructure is among these challenges (Orzan et al., 2021).

• **Number and variety of social media**

The challenge of multiple social media and choosing the right media from among the various social media in today’s world and with the growing growth of these media is one of the most important challenges for choosing a marketing space (Tyaqi, 2021).

• **The cost of producing content on social media**

The need for innovation in content production, the high cost of professional decorating and photography, and the high cost of the content production team are among the most important challenges in social media marketing (Ayeni, 2021).

4. **Research Methods**

Due to the complexity and uncertainty of real decision making, it often makes accurate, unrealistic or even impossible judgments. Therefore, it is much more realistic and practical if it is possible to give the decision maker the opportunity to use inaccurate judgments using fuzzy logic instead of accurate judgments. In 2004, Mikhailov proposed a new approach to calculating weights in the fuzzy AHP method, which he called fuzzy prioritization (Nozari et al., 2019, Szmelter-Jarosz et al., 2021). One of the most important features of this method is the calculation of adaptation rate in fuzzy mode. In this method, fuzzy even comparisons are assumed to be triangular fuzzy numbers. The definite weight vector (priority) $w = (w_1; w_2; ...; w_n)$ is extracted in such a way that the priority rate is approximately within the range of the initial fuzzy judgments.

The model is formulated and solved using the upper and lower limits of the resulting matrix elements. The nonlinear model used in this research is as follows.

$max \lambda$

Subject to:

$(m_{ij} - l_{ij})\lambda w_j - w_i + l_jw_j \leq 0; \quad \forall i = 1 ... n - 1; j = 2 ... n \; j > i$

$(u_{ij} - m_{ij})\lambda w_j - w_i - u_iw_j \leq 0; \quad \forall i = 1 ... n - 1; j = 2 ... n \; j > i$ (1)

$\sum_{k=1}^{n} w_k = 1$

$w_k > 0; \quad \forall k = 1 ... n$
In this research, in two main stages, the analysis of social network marketing challenges is done using the nonlinear hierarchical analysis method mentioned above: 1- Determining the matrix of pairwise comparisons based on the integration of experts 2- Application of mathematical modeling in ranking and obtaining the weights of the factors in the research model.

5. Research findings

Using the Mikhailov method presented in the previous section to obtain the weight of the factors introduced in the research model using the analysis of matrix judgments matrices. In this study, 45 experts active in this field were asked to complete the questionnaires. Of these, 35 completed questionnaires were received. The analytical results of these fuzzy questionnaires based on language criteria are shown in Table 2.

Table 2. Matrix of pairwise comparisons

<table>
<thead>
<tr>
<th></th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1</td>
<td></td>
<td>2.5</td>
<td>3.1</td>
<td>3.5</td>
<td>3.7</td>
</tr>
<tr>
<td>W2</td>
<td>2.5</td>
<td></td>
<td>3.25</td>
<td>2.45</td>
<td>2.98</td>
</tr>
<tr>
<td>W3</td>
<td>2.65</td>
<td>3.1</td>
<td></td>
<td>2.75</td>
<td>3.75</td>
</tr>
<tr>
<td>W4</td>
<td>1.56</td>
<td>2.3</td>
<td>2.1</td>
<td></td>
<td>3.25</td>
</tr>
<tr>
<td>W5</td>
<td>2.45</td>
<td>2.98</td>
<td>3.25</td>
<td>2.45</td>
<td></td>
</tr>
</tbody>
</table>

By placing the parameters from Table 2 in Equation 1 and solving the problem using GAMS software, the results of Table 3 are obtained.

Table 3. Weight and ranking of challenges

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Code</th>
<th>Weight</th>
<th>Rank</th>
<th>The objective function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of knowledge, skills and culture in using social media</td>
<td>W1</td>
<td>0.445214</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Security challenges in social media due to presence in cyberspace</td>
<td>W2</td>
<td>0.489542</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Challenges of technology and infrastructure in the use of social media</td>
<td>W3</td>
<td>0.450254</td>
<td>2</td>
<td>4935</td>
</tr>
<tr>
<td>Number and variety of social media</td>
<td>W4</td>
<td>0.421548</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>The cost of producing content on social media</td>
<td>W5</td>
<td>0.372158</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 3, a positive value for the compatibility index indicates an acceptable matrix compatibility.

6. Conclusion

Social media has become an integral part of people’s daily lives to communicate and share information with other media. Using social media is mostly simple and can provide a low-cost and fast tool for communicating with customers. But this fascinating phenomenon also poses challenges for those involved in this field. Therefore, in this study, an attempt was made to examine the most important challenges that can be faced in social media marketing. In this regard, first the importance of the challenges was examined using a review of scientific databases. Then, using nonlinear fuzzy hierarchical analysis, the priority of these challenges was identified. The results showed that security challenges are of the highest importance in social media marketing and therefore more attention should be paid to this issue by actors in this field.

Conflicts of Interest

No potential conflict of interest was reported by the authors.
References


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