A Novel Framework for Evaluation of Social Media Marketing Effectiveness

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Abstract— **Despite the increasing growth in social media marketing usage, the identification of the criteria for the evaluation of the effectiveness of this new approach has gone unnoticed. The purpose of this study is to identify and prioritize the criteria for the evaluation of social media marketing effectiveness. This research has adopted the mixed-method approach. To identify the criteria, the expert opinion was sought through a focus group. Then, to validate the extracted factors and to prioritize them, expert opinion polling was done through a questionnaire. The research population was comprised of the specialists and experts of the social media marketing who were selected through purposive sampling. T-test was used to assess the data obtained from the survey, while the weighted mean coefficient was applied to prioritize the criteria. The results showed that the criteria include customer perception results, customer behavior results, customer knowledge management results, and financial results.**

Keywords— **Social media, Social media marketing, Marketing effectiveness.**

I. INTRODUCTION

The use of new tools in firms to create better opportunities compared to those of their rivals is significantly essential for organizations [1]. One of the new and growing tools in this regard is social media. Social media comprise one of the most important communication and marketing tools at the national and global levels, which have a significant, positive effect on attracting the audience [2]. Social media usage is one of the most popular online activities in 2018, an estimated 2.65 billion people were using social media worldwide, a number projected to increase to almost 3.1 billion in 2021 [3]. Therefore, businesses' ignorance of the value and potential capability of social media for the creation of commercial opportunities can be a dire mistake [4, 5]. Hence, businesses increasingly attempt to embrace social media as an inseparable part of their working life and use it to create a competitive advantage [6]. Nearly 97 percent of marketers in the world use social media marketing [2]. As managers become more comfortable with including blogs and social networks as part of their integrated marketing relationships, they have unsurprisingly turned their attention to questions regarding the return-of-investment of social media [5, 7]. Despite the increasing interest in social media, its effectiveness in brand sales is still unidentified and unpredictable [8]. On the other hand, many companies might not benefit from social media marketing due to various reasons [9]. Given the dynamics of the social media context, evaluating the effectiveness of social media marketing has considered a great and significant challenge for chief marketing officers (CMOs) [10]. Evaluating the effectiveness of social media marketing differs from traditional marketing channels because they focus on two-way dialogue or exchange [11]. Therefore, organizations need a tool for effectiveness assessment to justify financial, human, and other sources of investment [12]. Evaluation of social media marketing assists CMOs in exploiting marketing investment and resources and, consequently, leads to finding solutions to retain existing customers, gain new customers, build long-term relationships with customers, and enhance critical value-adding activities for customers [1]. So far, the evaluation of social media marketing effectiveness has not received appropriate attention due to some reasons such as the novelty of social media industry and related domains to it, the lack of enough information, the lack of effectiveness evaluation models and frameworks, the unfamiliarity of managers with the existing patterns and models of effectiveness evaluation, and the lack of practical examples [13]. Therefore, the evaluation of social media marketing effectiveness is one of the leading and highly needed issues in social media marketing [14]. Moreover, no specific classification system has been offered for it [15]. Consequently, the main question of the study at hand is the identification and prioritization of the criteria for social media marketing effectiveness.

II. THEORETICAL BACKGROUND

2.1. Social media

As a result of IT advancement, many Internet users started to express their dissatisfaction with passive, one-way Web surfing. They asked for two-way Internet surfing to be able to write and upload information on websites. Moreover, they wanted to express their viewpoints and preferences through picture sharing, weblogs, wallpapers, email, instant messages, crowdsourcing, etc. [16]. Social media bring about a product platform that shares consumer opinions and perceptions and impacts customers' decision making [17]. Social media are Web-based programs in a Web 2.0 environment that allow users to create and exchange content [18]. Social media have been classified into four groups based on their functions:

weblogs, communities, micro-blogs, and social networks [19]. The use of social media has increased among people and organizations. Businesses, too, have significantly boosted their use of social media. In fact, social media enable companies to improve various aspects of their marketing methods [20].

2.2. Social media marketing

The use of social media platforms as marketing channels has expanded in recent years, driven by the ability to reach millions of customers with brand-related content and to engage them in conversations [9]. On the other hand, the increasing popularity of social media among customers has made their use a high priority for the companies [21]. Social media marketing is defined as "a process that empowers individuals to promote their websites, products or services through online social channels and to communicate with and tap into a much larger community that may not have been available via traditional advertising channels" [14]. Rendering it is possible to makes the management system simple and effective [22], creating appropriate interactions with customers, helping organizations implement their marketing strategy [20], increasing brand awareness [23], and spreading specific marketing messages to a large group of people [4], which are the main reasons for the adoption of social media marketing in the organizations. Social media provide managers with the opportunity to attain their desired valuable information about customers [24]. Some of the advantages of using social media marketing include the small cost of advertisement, speeded operationalization of ideas, increased WOM advertisement, increased brand loyalty, increased return-of-investment, and easy access to the audience [27].

2.3. Social media marketing evaluation

Social media marketing evaluation is a strategic management process that commence with the identification of social media marketing objectives, proceeds to the selection of appropriate KPIs and metrics, involves the collection of quantitative and qualitative data, to populate metrics and generate insights, which are distilled into report format and concludes with management decision making that influences future campaign objectives and strategies [6]. As organizations increasingly develop their social media presence, it is vital for them to be able to evaluate the impact of this investment, including its contribution to achieving marketing objectives, as well as more generally understanding any return-on-investment [8]. There has appeared a growing interest in the evaluation of social media marketing effectiveness, especially in those studies that report the return-of-investment [5]. The evaluation of social media marketing effectiveness intends to know how much of our objectives have been attained through the program for which scores of our funds have been used [14]. The main body of work relevant to SMM evaluation relates to KPI's and metrics [6]. Despite the various efforts from the companies and the general popularity of the medium, measuring the effectiveness is elusive [25].

III. METHODOLOGY

3.1. Research procedure

This study is an applied one and has adopted the mixed-method approach. The purpose of the study has been attained in the course of the following three stages.

Stage 1: first, the criteria for the evaluation of social media marketing effectiveness were extracted through a comprehensive review of the literature. Then, a focus group was used to enrich the opinions and to classify them. The focus group is a technique used to answer questions of in-depth interviews in social contexts. This technique helps understand the participants' experiences, realize their intended meanings, and find out the reasons for their attitudes towards the question under study. One of the objectives of the focus group is to understand the attitudes and opinions of the participants about the question under study [26]. It seems that there exists an agreement that the number of members of each group should not exceed 10 or 12 [27].

On the other hand, the ideal size of the group is from five to seven [28]. The focus group in the study at hand was comprised of five experts in the social media marketing domain. After the identification of participants, they were formally invited to take part in the discussions of the group. In this invitation, general points were described for them, which include: what is the purpose of focus group discussions, where and with whom these discussions are made, who are the researchers, and what they want to attain?

The discussions were recorded and documented to reach outcomes agreed by everyone. In order to ascertain the accuracy of the analyses, the findings were presented to the participating group.

Stage 2: In this stage, the survey method was used to poll the opinions of the experts about the criteria for the evaluation of social media marketing effectiveness. The questionnaire was developed based on the findings of the first stage of the study. The experts were asked to express their opinion about each of the factors and indices presented in the questionnaire.

Stage 3: In the last stage, the questionnaire was used to weigh each of the effective factors.

3.2. Data collection

The research population of the first stage of the study involved the experts and specialists of the social media domain. In the end, five participants were selected as members of the focus group of the study, who willingly accepted to take part in the study. In the second and third stages of the study, the research population included faculty members in the related domains, individuals with related university degrees, digital marketing managers, and individuals who had authored thesis or articles in the social media marketing domain. The participants were then selected through purposive sampling.

3.3. Reliability and validity

In order to determine the validity of the questionnaire, the content analysis method was used. To determine the reliability of the questionnaire, the initial design of the questionnaire was prepared through the exploration of the related literature. This was examined by four specialists who suggested several problems to be corrected. After the implementation of the suggested corrections, the final questionnaire was developed. Cronbach's alpha was used to determine the reliability of the questionnaire. To this end, first, an initial sample, including 20 questionnaires were pre-tested, and then, SPSS software was used to calculate the reliability coefficient. The obtained value of the Cronbach's alpha for customer perception results with six questions was 0.861, customer behavior results with 19 questions were 0.772, customer knowledge management

results with eight questions were 0.85, and financial results with seven questions were 0.763. The alpha coefficient calculated for the study variables is more than the standard 0.7 level. Therefore, it can be claimed that the questionnaire used in the study was reliable. T-test was used to validate the indices, and the weighted mean coefficient was used to prioritize the factors and indices.

IV. FINDINGS

The purpose of this study was to design a framework of the criteria for the evaluation of social media marketing effectiveness. The results obtained from each stage of the study are given in the following lines.

Stage 1: Findings obtained from the analysis of focus group discussions and the review of the literature that was done in the first stage of the study are illustrated in Table 1.

Table 1. Social media marketing performance evaluation criteria extracted from the literature and focus group

Dimensions	Measures	References	Results of focus group
Customer perception	Increase customer trust	[21, 29, 30]	*
	Increase customer satisfaction in online surveys	[12, 31, 32]	*
	Increase customer intimacy	[33, 34]	*
	Increase brand awareness	[12, 29, 35]	*
	Increase purchase intention	[25, 36, 37]	*
	Enhance quality perception	[31, 37]	
Customer behavior results	Increase the number of fans pages	[36, 38]	*
	Increase the number of comments	[15, 39]	*
	Improve site ranking in search engines		*
	Increase positive word of mouth	[5, 25, 34]	*
	Reduce the number of customer complaints	[32, 40]	*
	Increase the number of followers	[5, 22, 36]	*
	Increase shares	[12, 25, 41]	
	Increase customer engagement	[12, 22]	*
	Reduce customer churn rate	[42]	*
	Increase repurchases	[29, 37]	*
	Increase click rates	[6, 38]	*
	Increase the number of mentions	[32, 38]	*
	Increase traffic site	[22, 36]	*
	Increase the number of likes (number and fan details)	[36, 43]	*
	Increase the number of subscriptions	[5, 39]	*
	Increase the number of page visits	[30, 39]	*
	Increase download video number	[36, 38]	*
	Increase the number of tags	[5, 44]	*
	Increase time spent on social media	[15, 30, 38]	*
C	The improvement of customer notification	[37, 45]	*
	Identification of sales clues and opportunities		*
	Quick attainment of customer feedback on product and services	[32, 44]	*
	Improve company knowledge of competitors' tastes	[37, 39]	*
	Achieve innovative customer ideas	[37]	*
	Facilitate access to customer information	[22, 37]	*
	Facilitation of personalization process	[28, 32]	*
	Facilitate sharing of customer experiences	[46]	*
Financial results	Increase the customer lifetime value	[15, 30, 38]	
	Increase the return of investment	[15, 25, 36]	*
	Reduce market research costs	[5, 30, 36]	*
	Increase the average volume of customers' purchases	[47]	*
	Increase sale	[5, 12, 25]	*
	Reduce marketing costs	[39, 44]	*
	Reduce support costs	[5, 19, 30]	*

Stage 2: To assess the indices and factors related to the criteria for the evaluation of social media marketing effectiveness, experts' opinion was polled. The data obtained from the collected questionnaires in this stage was analyzed using the Sign test. The main question in this stage was that if the factors and indices mentioned in the questionnaire were verified by the experts or not. Due to space considerations, only the results of the Sign test for the customer perception dimension is given in Table 2.

Table 2. T-test results for customer perception dimension

Measures	Mean Difference	95% Confidence Interval of the Difference		t	Sig	Conclusion
		Upper	Lower			
Increase customer trust	3.477	3.862	3.92	18.21	0.000	Supported
Increase customer satisfaction in online surveys	4.318	4.561	4.074	11.78	0.000	Supported
Increase customer intimacy	3.250	3.645	2.845	16.18	0.000	Supported
Increase brand awareness	4.000	4.353	3.646	22.84	0.010	Supported
Increase purchase intention	4.022	4.296	3.748	29.58	0.000	Supported

Enhance quality perception	3.727	4.133	3.321	18.50	0.000	Supported

Table 2 is given as a sample of the customer perception dimension indices. T-test was run for all research indices, and all suggested framework indices were verified.

Stage 3: In this stage, the questionnaire was given to the experts to weigh each of the factors and indices. In order to calculate the weight of each factor and index, the weighted mean coefficient was used. The results of this test are presented in Table 3.

Table 3. The result of the weighted mean coefficient for research factors and indices

Factors	Measures	Calculated value	Weight	Rank
Customer perception results (Weight:0.263)	Increase customer trust	4.181	0.164	4
	Increase customer satisfaction in online surveys	4.027	0.158	6
	Increase customer intimacy	4.204	0.165	3
	Increase brand awareness	4.59	0.180	1
	Increase purchase intention	4.272	0.168	2
	Enhance quality perception	4.113	0.162	5
Customer behavior results (Weight:0.248, rank:3)	Increase the number of fan pages	3.795	0.0540	10
	Increase the number of comments	3.909	0.056	6
	Improve site ranking in search engines	3.749	0.528	14
	Increase word of mouth	4.408	0.063	1
	Reduce the number of customer complaints	4.477	0.050	18
	Increase the number of followers	3.762	0.0531	12
	Increase shares	4.185	0.060	3
	Increase customer engagement	4.295	0.061	2
	Reduce customer churn rate	3.853	0.0546	8
	Increase repurchases	4.117	0.059	4
	Increase click rates	3.945	0.057	5
	Increase the number of mentions	3.686	0.0518	16
	Increase traffic site	3.86	0.055	7
	Increase the number of likes (number and fan details)	3.785	0.0530	13
	Increase the number of subscriptions	3.801	0.0541	9
	Increase the number of page visits	3.777	0.0532	11
	Increase download video number	3.704	0.521	15
	Increase the number of tags	3.568	0.0514	17
	Increase time spent in social media	3.385	0.048	19
Customer Knowle...	The improvement of customer notification	4.095	0.129	2
	Identification of sales clues and opportunities	3.911	0.123	5
	Quick attainment of customer feedback on product and services	4.181	0.132	1
	Improve company knowledge of competitors' tastes	3.951	0.125	4
	Achieve innovative customer ideas	4.004	0.126	3
	Facilitate access to customer information	3.885	0.122	6
	Facilitation of personalization process	3.704	0.117	8
	Facilitating the sharing of customer experiences	3.845	0.121	7
Financial results (Weight:0.233, rank:4)	Increase customer lifetime value	3.704	0.141	5
	Increase return-of-investment	3.886	0.148	3
	Reduce support costs	3.295	0.126	7
	Increase the average volume of customers' purchases	3.977	0.152	1
	Increase sale	3.913	0.149	2
	Reduce market research costs	3.613	0.138	6
	Reduce marketing costs	3.754	0.143	4

According to Table 3, among the four main dimensions, "Customer perception results" with a weight of 0.263 is recognized as the most important effectiveness dimension of social media marketing. Customer Knowledge Management Results (weight: 0.257), Customer behavior results (weight: 0.248), and financial results (weight: 0.23) are respectively important. In "Customer perception results" criterion, "Increase brand awareness" with a weight of 0.18 and "increase purchase intention" with that of 0.168 are orderly the two most important sub-criteria among the others. "Increase customer satisfaction in online surveys" is the least important sub-criterion in this dimension. Related to the "Customer Knowledge Management Results" dimension, "Quick attainment of customer feedback on product and services" (weight 0.132) and "the improvement of customer notification" (weight: 0.129) are the most and least important sub-criteria, respectively. Concerning "Customer behavior results," "Increase word of mouth" (weight: 0.063) is the most important sub-criterion, whereas, "Increase time spent in social media" (weight: 0.048) is deemed as the least important. In the "financial results" dimension, "Increase the average volume of customers' purchases" (weight: 0.152) is more important than the other sub-criteria, while "Reduce support costs" (weight: 0.126) is ranked as the least important sub-criterion.

V. DISCUSSION AND CONCLUSIONS

The primary purpose of the study at hand was to identify and prioritize the criteria for the evaluation of social media marketing effectiveness. After a comprehensive review of the literature, the framework for the evaluation of social media marketing effectiveness was extracted. Then, using a survey, expert opinion was obtained. Finally, the prioritization of dimensions and indices was done through the weighted mean coefficient. Based on the results obtained from this analysis, it was revealed that the criteria for the evaluation of social media marketing effectiveness include customer perception results, customer behavior results, customer knowledge management results, and financial results. The obtained results revealed that customer perception results, represented

in measures such as the increase in brand awareness, the enhancement of brand image, and the increase in customer loyalty, are is one of the criteria for the evaluation of social media marketing effectiveness, noted in studies such as [29] and [12]. The customer behavior results, represented in measures such as the increase in click rate, the increase in tag numbers, the increase in the number of followers, the increase in the number of page visits, and the increase in positive WOM advertisement, are among the criteria for the evaluation of social media marketing effectiveness, which is in line with the findings of [5], Tiago and [54], and [14]. The customer knowledge management results, represented in measures such as the improvement of customer notification, the facilitation of personalization process, and the facilitation of access to customer information, are among the criteria for the evaluation of social media marketing effectiveness. Some of the indices of this dimension have been noted in [54] and [14], but the customer knowledge management results dimension has not been referred to in any study as a separate category. The financial results, represented in measures such as the increase in return of investment, the reduction of market research costs, and the reduction of supporting costs, are among the criteria for the evaluation of social media marketing effectiveness, which has been noted in [29] and [28].

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