
Article

Social Media Analytics: Application towards Social Media Marketing

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Abstract: The role of Social Media Marketing (SMM) in marketing strategies is rapidly growing. Because the use of social media is growing, the industry of SMM will grow bigger in the coming years; the pace of this growth is faster than ever. To survive in the modern competitive world, effective use of SMM for a firm is a must; for that, every SMM channel needs to be used to its full potential. For a marketing campaign to be effective, there is a need for some metrics to measure the success of the SMM campaign. These metrics measure if the campaign is successfully implemented or not. This would help firms understand the market, gain a competitive advantage, and ultimately get a positive impact on the overall business. This study categorizes SMM strategy into 4 dimensions and associates 10 broad categories of SMM metrics to these dimensions. The proposed model of this study suggests the application of Social Media Analytics (SMA) ineffective use of metrics to measure SMM campaigns. There are so many SMA Tools available for free and time-efficient data analysis that can lead to faster and better results than manual analysis. Following this model, the importance of SMA tools in devising an effective SMM strategy is highlighted. The implication of this research is towards a better understanding of the application of SMA for any firm to have a solid SMM Strategy, especially small and medium-sized enterprises that have limited resources.

Keywords: social media; social media metrics; digital marketing; social media marketing strategy; customer sentiment; customer engagement

1. Introduction

There has been a huge impact of social media on the way organizations communicate with their customers and deliver their brand message. Now, the consumers are not just passively receiving information related to their brand but it has become a two-way process. Social media is used by customers to communicate with organizations and thus, engagement with consumers increases

(Araujo, Neijens, & Vliegenthart, 2015) and a relationship of different nature takes place between consumers and organizations (Lipsman, Mudd, Rich, & Bruich, 2012). Organizations nowadays are focusing on using social media to build their business and communicate more with their customers in a much more inexpensive way (Felix, Rauschnabel, & Hinsch, 2017).

After the incorporation of social media into business processes, it is no longer possible for firms to use only traditional media because modern social media marketers rely on two-way communication enabled by social media (Tiago & Veríssimo, 2014). Now, firms need to do more than just passing-on brand-related information and exposure online. Brand managers need to not just create awareness online, but encourage the customers to engage with the brand through Social networking sites, this also enables firms to research their influence on the consumers and help them strategize.

Firms need to continuously monitor and keep themselves up-to-date regarding the activities of their customers, competitors, and their surrounding marketplace and respond

and communicate regularly with the market (Gallaughar & Ransbotham, 2010). Regular social media monitoring is important because it enables firms to work on the best possible strategies to enhance their social media marketing and other business development-related processes.

Having the right interpretation of what the data from social media monitoring means, and then how to respond to this data is crucial in developing an effective social media marketing strategy (Malthouse, Haenlein, Skiera, Wege, & Zhang, 2013). In the process of monitoring social media data, social media analytics (SMA) plays a significant role. Social media analytics is being used by professionals in the industry as well as academia. SMA is very fast, effective, and inexpensive compared to all traditional approaches to analyzing social media data, as traditional techniques require much more resources in terms of time and manpower.

This use of social media analytics became popular when major social media platforms around the world gave access to their data to firms for market research. The participants on social media platforms can be grouped into content creators and content consumers. For example, SNSs like Twitter where participants follow and like stories and the latest news of the profiles of their choice. Similarly, Yelp is used as a platform to post reviews for reading by the viewers (Mansfield, 2016).

Following the importance of SMA, this study attempts to incorporate the role of SMA in devising an effective social media marketing strategy (SMMS) by exploring different metrics to measure SMM and how SMA can facilitate effectively work with these metrics.

2. Literature Review:

2.1. Social Media Marketing

There are certain dimensions in the process of implementing a social media marketing campaign by marketing managers (Parsons & Lepkowska-white, 2018). When it comes to categorizing these dimensions, four categories represent the process of social media marketing (Parsons & Lepkowska-white, 2018). Following figure 1 represents these four categorized dimensions and their relationship with each other.

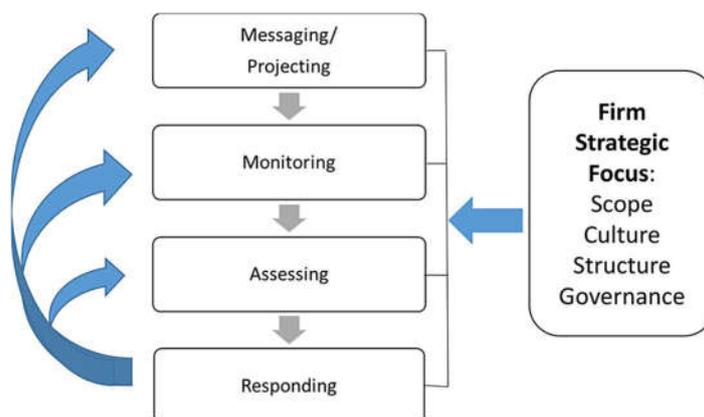


Figure 1. Social media marketing management (Parsons & Lepkowska-white, 2018).

2.1.1. Dimensions of SMM

2.1.1.1. Dimension one: Messaging/projecting

Online identity and awareness are essential for firms to develop business (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). One of the many popular reasons for firms to use social media marketing is to communicate their message to the audience and respond to customer engagement (Christodoulides, Michaelidou, & Argyriou, 2012). Previous research address social media as a medium to communicate the message to the masses (Gallaughar & Ransbotham, 2010), which might help firms to acquire more customers (Malthouse et al., 2013).

The main goal of social media marketing revolves around the concept of two-way communication, and what kind of message is communicated to the customers online depends upon the way firms engage with customers online. Right awareness and online identity can be done only through the right content. Understanding the goal of a campaign is important to identify the right content; customers may stop the following business if they see over-promoted content that does not fit their needs or wants. So, the right content is essential for a successful SMM campaign (Fox & Longart, 2016).

2.1.1.2. Dimension two: Monitoring

Messaging is just the first step towards involving customers online; after it, managers need to monitor customer response towards that online content posted on SNSs. So, after content is posted, there is a need to continuously monitor the way customers respond and interact with this content, this is important because the marketing world is evolving and with it needs to change the firm's marketing strategies (Fox & Longart, 2016). Monitoring is essential to acquire new knowledge (Malthouse et al., 2013).

Data gathered from monitoring SM is valuable for market research. Understanding this data may lead to a better understanding of a firm's customers, market, and competition; this may strengthen a firm's competitive position in the marketplace (Kietzmann et al., 2011; Kwok & Yu., 2013). Monitoring provides the basic information about the current competition, what strategies they apply to engage with the customers, how they respond to the customers, and how they persuade customers to become a part of their online community. A major advantage of monitoring is that it allows firms to forecast and change their marketing practices and timely adapts to the change.

2.1.1.3. Dimension three: Assessing

After monitoring customer response online, it is equally important to be able to interpret this data into useful information for further strategizing. Firms must have the ability to further process this information and understand how it can be used to strategize better customer engagement. One of the most important abilities to be held by successful firms is to be able to effectively manage data gathered from monitoring. The way data is gathered from social media platforms will determine how accurately it reflects the facts in the market. So, not all data need to be acted upon (Gallaughier & Ransbotham, 2010; Kwok & Yu., 2013; Schweidel D. A., 2014).

The dimension of accessing also plays an important role to access the sentiment of customers towards a brand, which depends upon the platform being used. Micro-blog platforms with word limits may lead to incomplete opinion, while other platforms with no word limit give a more in-depth customer opinion (Schweidel D. A., 2014). So, the source of data for accessing plays a vital role in correct interpretation. If the information is not accessed correctly, the firm may respond in an undesired way and damage its online identity.

2.1.1.4. Dimension four: Responding

After gathering data and analyzing it, the response is made to the customers based on the interpretation of the data. The right response shows that the firm cares for the customer and values their opinion (Pantelidis, 2010). The response by a firm may address customers, competition, or the market. These responses are of two types: first is External, which is to respond to the customer privately or publicly, and the second is Internal, which is changing or implementing new policies within the business. The internal response is preferred when one-on-one communication is required and an external response is used when broadcasting as a message is a purpose (Felix et al., 2017; Gallaughier & Ransbotham, 2010). To understand how successfully a firm has implemented these four dimensions, there are social media marketing metrics that determine the performance of a firm's social media marketing campaign.

2.2.1. Metrics to manage SMM

This study investigates 10 types of metrics that measure the effective implementation of a social media marketing campaign (WARD, 2019). All these social media metrics belong to any one of 4 social media marketing dimensions. These metrics can be used to determine the performance of a certain SMM campaign in each of 4 domains. The following figure mentions the names of all 10 categories of SMM metrics.

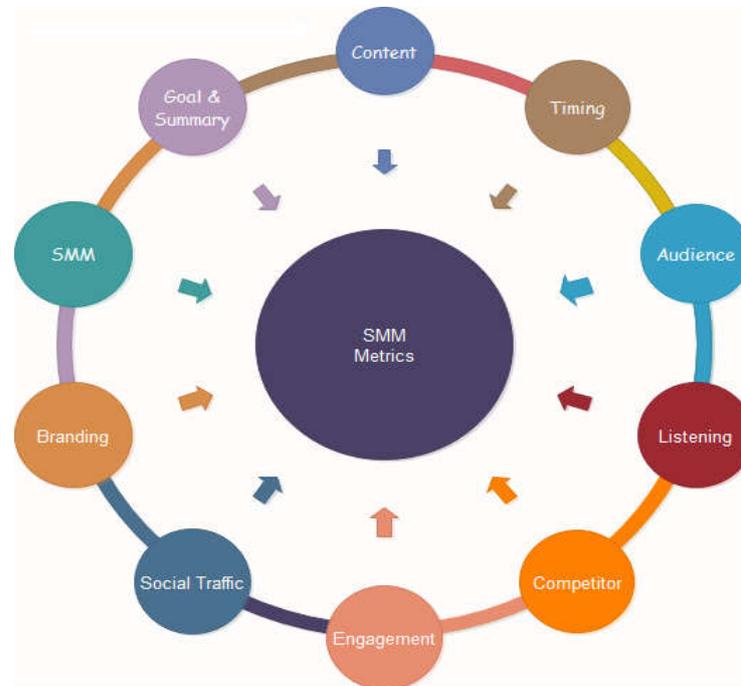


Figure 2. Social Media Marketing Metrics (WARD, 2019).

Each of these metrics can be calculated more efficiently using Social Media Analytics (SMA). So, this study further explores the ways through which SMA can help in devising the right SMM Strategy.

2.2. SMA

Social media analytics is a process of data collection from social media platforms for better decision-making. This data is primarily based on customer engagement with social media platforms and hence it allows marketers to understand the type of content that would cultivate a better relationship with customers. Around the world, organizations are using SMA to develop their competitive advantage (Golden & Caruso-Cabrera, 2016).

There are many enterprise-level SMA tools available online nowadays. Marketing managers are using these platforms to collect and analyze social media to understand customer engagement and manage customer relationships. In the current business world, continuous study of SMA is a must for firms to keep up with the competition. Based on the business intelligence it can provide, SMA can have a significant impact that may lead to effective social media marketing strategies (SMMS). It will influence all 4 dimensions of SMM (Lee, 2017).

3. Proposed Framework:

The proposed framework discusses the impact of SMA on devising an efficient SMM Campaign. Starting with how different SMM metrics work as a performance indicator for each of the 4 dimensions and then how each metric can be calculated more efficiently using SMA tools.

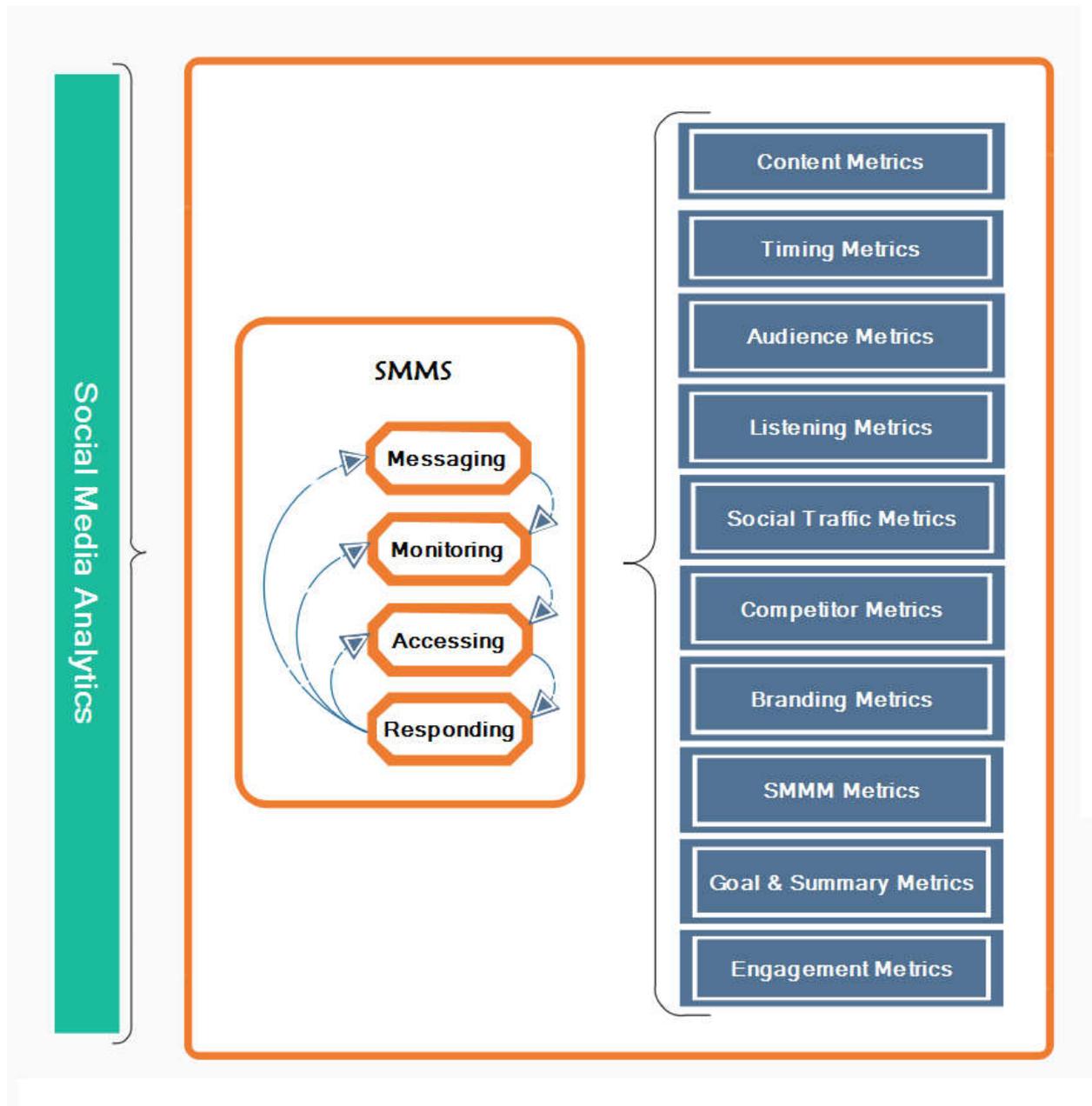


Figure 2. Proposed Framework.

3.1. Content Metrics

Content metrics are used to analyze the type of content shared and compare the performance of different types of content used in postings. For example, it would determine what percentage of video content and image content would be most effective for a social media campaign (Lua, 2019; WARD, 2019).

- **Unique Visits per Post Category (link, video, image, or text-based post):** This metric measures the number of unique user visits per post. This gives us an insight into with category of content that is more likely to get more audience (link, video, image, or text-based post). There are SMA tools that can give detailed insight into this metric across multiple SM platforms (" BuzzSumo Process," 2017); Some are listed below.
 - BuzzSumo
 - Agorapulse
- **Content Marketing ROI (CM ROI):** It is the percentage of what was spent on a post and how much revenue was generated by it (Santora, 2019).

Below is the list of SMA tools that calculate CM ROI (Brandon, 2017):

- Built-in social media analytic tools
- [Hootsuite](#)
- [HubSpot](#)
- Buzzsumo
- Google Analytics

3.2. Timing Metrics

Timing metrics identify the best time for content postings concerning the targeted audience. This may require insights about what times the audience is engaging with the content the most and with what consistency a firm post's content (Lua, 2019).

To measure these metrics, there are some important attributes to be measured, such as

- No. of Posts Per Week
- Most Common Posting Time
- Most Common Posting Day
- Most Engaged Audience Time
- Most Engaged Audience Day

Observing these attributes, it can be calculated at what time is best for customer engagement. Following the SMA tool can calculate these timing metrics.

- Built-in social media analytic tools (Facebook, Twitter & YouTube analytics, etc.)
- Sprout Social Study (For healthcare Industry)

3.3. Audience

Audience metrics ensure that the audience is engaging with the content posted. If your customers are primarily 50- to 70-year-old women who live in Newyork, but your Twitter following is 90 percent men ages 15–45, that is an indication of in-alignment in the audience and the wrong audience is being targeted by your social media. Audience metrics also make sure that you are engaging with a real audience that is interested in your buying your product (Shleyner, 2019; WARD, 2019).

- Total Account Followers
- Male/Female Ratio
- Audience Age Group
- Audience Geographic Location

Below are some SMA tools that can analyze audience metrics:

- Followerwonk
- Social media insights (gender and location data)
- Google Analytics Report - Gender and Location
- Friends+Me (Facebook, LinkedIn, Twitter, Pinterest)
- Tailwind (Instagram and Pinterest)

3.4. Listening

Listening metrics don't just track mentions but also the sentiment attached to them. **These metrics dig deeper into what the customer comments are saying and what sentiments they hold about the brand.** By analyzing their sentiments, brands can respond to customers more effectively.

- Number of Brand Mentions
- Number of Positive Sentiments
- Number of Negative Sentiments
- Number of Neutral Sentiments

- Primary Mentioner

Below are SMA tools that are best to track Listening metrics:

- Mention
- TweetDeck
- SEMrush

3.5. Social Traffic

Social traffic metrics are used to analyze the way customers respond to your website once they enter it through a link on social media. For example, if a customer clicks a link to your website and doesn't engage with it and leaves, this is an indication that your message on the link was not well communicated. These metrics primarily deal with the post-click scenario where the customer engages with the website (Chen, 2019; Durcevic, 2019).

- Total Sessions (Website Visits)
- Total Page Views
- Bounce Rate
- Pages/Session
- Avg. Session Duration
- Mobile vs. Desktop Traffic
- Most Common Links Shared on Social Media

Below are SMA tools that are best to track Social traffic metrics:

- Google Analytics
- Ahrefs
- SEMrush

3.6. Competitor

Knowing how the competitors are engaging with the customers, may lead to a better understanding of how to respond to the customer, competitor metrics measure these approaches. The purpose is not to blindly follow what works for the competitor but to investigate and generate new ideas, and tactics through competitive analysis (Lua, 2019; Shleyner, 2019).

- Competitor Strength Analysis
- Competitor Weakness Analysis
- New Opportunities
- Percentage of Engagement Difference (against competitors)

You can follow and analyze competitors' platforms to get an idea of their engagement strategies. Again, the idea is not to follow but to get awareness for idea generation. The following tools can be very helpful for 360-degree competitor analysis.

- Likealyzer
- Phalanx
- SEMrush
- BuzzSumo

3.7. Engagement

Engagement metrics are usually the first metrics firms look into to judge the success of their marketing campaign. This approach is only effective if the end goal of the campaign is to increase customer engagement. In case of increasing reach, this approach would add limited value. These metrics determine if the content is following what the customer wants, and in the way, they want it (Chen, 2019).

- Total Customer Engagements

- Number of Individual Engagements by Type grouped in types (retweets, likes, comments, link clicks, shares, etc.)
- Percentage Increase or Decrease in Engagement
- Mentions Received
- Direct Messages Received

All engagement metrics can be monitored on control panels of social media sites, but it is not recommended. It is much easier to observe engagement through some SM scheduling tools such as the following:

- Hootsuite
- Sprout Social
- Agorapulse

3.8. Branding

Whatever your brand message is, if it's not aligned with your social media campaign, the campaign could not reach the right audience. Branding metrics ensure that your social media postings are consistent with your brand identity (Chen, 2019; WARD, 2019).

- Terminology of preference
- Company Name
- Mission statement
- Visual Marketing guidelines
- PR policies

Tracking audience metrics will ensure that your audience is following the same brand story as they were before. So, to ensure strong brand standards, these periodic analyses are necessary. SMA tools for such analysis are the same as those for audience metrics.

3.9. Social Media Marketing Metrics

Social media management metrics are all about your SMM team. It takes into consideration the number of team members, team lead, reports on findings, frequency of reporting, the correlation between the size of the team and goals achieved, average response time, PR Issues, etc. These metrics find patterns in your SMM team and determine the right mix for goal completion (WARD, 2019). Some important questions that are answered by these metrics are as follows:

- Who manages your SM?
- What is the number of people in your SM team?
- What is the frequency of reporting?
- Who reports findings?
- Does team size impact your goal achievement ratio?
- What is your team's avg? response time for engagement or direct message?
- How are your PR issues handled?

Although a specific tool is not needed for these metrics, SMA tools for audience and engagement metrics can help to estimate the performance of the SMM Team.

3.10. Goal and Summary Metrics

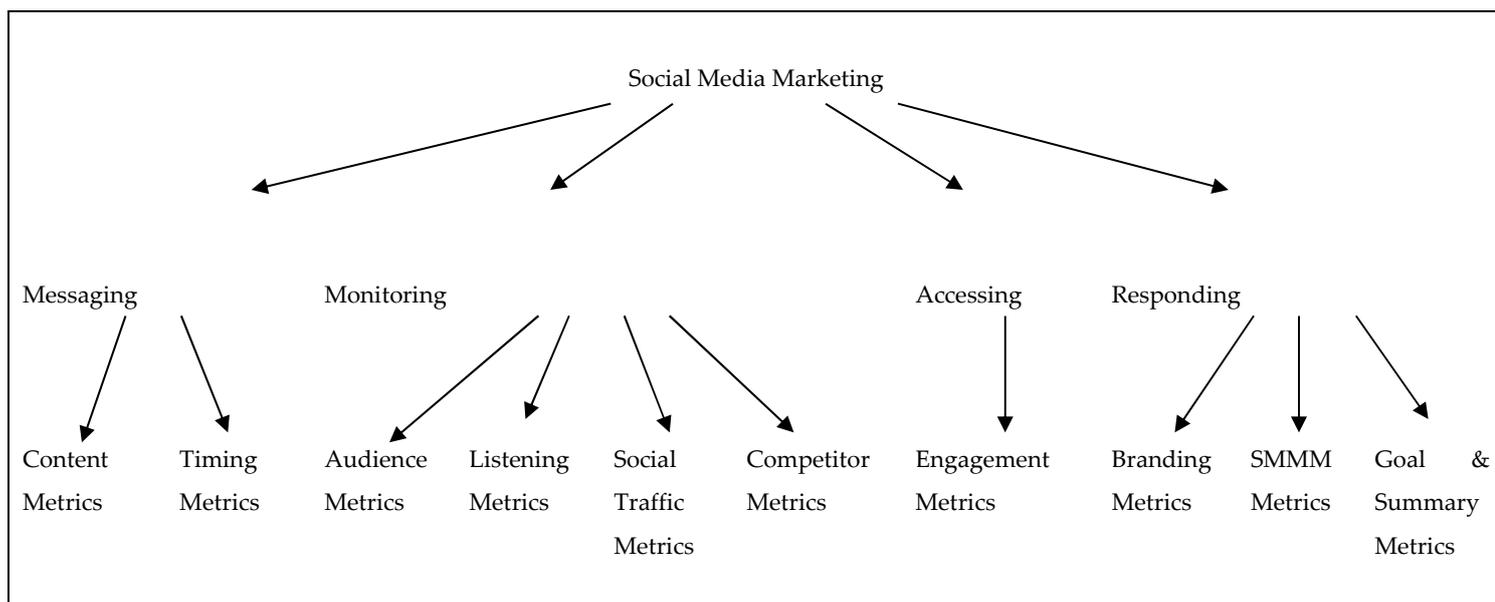
Goal and summary metrics ensure that the data gathered from social media aligns with your previously set goals. You need to make sure that the goal has a *what* and a *how*. For example, if your goal is to increase engagement on Facebook posts, the goal should be to get 200 engagements per post with 5 posts per day; this covers both what and how of what needs to be accomplished through a social media campaign (Durcevic, 2019; WARD, 2019).

Some metrics that may reflect your goal for an SMM Campaign are as follows:

- Conversion rate
- Number of conversions done
- Economic value (Gains / Losses)
- Overall Reach
- The overall number of Posts

All SMA tools discussed in this study may play a role in determining goal/summary metrics.

Table 1. SMM Detailed Metrics.



All Detailed Metrics

Messaging	Monitoring	Accessing	Responding
<ul style="list-style-type: none"> • Unique Visits per Post Category • Content marketing ROI 	<ul style="list-style-type: none"> • Total Account Followers • Male/Female Ratio • Audience Age Group • Audience Geographic Location 	<ul style="list-style-type: none"> • Total Customer Engagements • Number of Individual Engagements by Type • Percentage Increase or Decrease in Engagement • Mentions Received • Direct Messages Received 	<ul style="list-style-type: none"> • Terminology of preference • Company Name • Mission statement • Visual Marketing guidelines • PR policies
<ul style="list-style-type: none"> • No. of Posts Per Week • Most Common Posting Time • Most Common Posting Day • Most Engaged Audience Time • Most Engaged Audience Day 	<ul style="list-style-type: none"> • Number of Brand Mentions • Number of Positive Sentiments • Number of Negative Sentiments • Number of Neutral Sentiments • Primary Mentioner 		<ul style="list-style-type: none"> • Conversion rate • Number of conversions done • Economic value (Gains / Losses) • Overall Reach • The overall number of Posts
	<ul style="list-style-type: none"> • Total Sessions • Total Page Views • Bounce Rate • Pages/Session • Avg. Session Duration • Mobile vs. Desktop Traffic • Most Common Links Shared on Social Media 		

	<ul style="list-style-type: none"> • Competitor Strength Analysis • Competitor Weakness Analysis • New Opportunities • Percentage of Engagement Difference 		
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Table 2. SMA Tools.

SMA Tools			
Messaging	Monitoring	Accessing	Responding
<ul style="list-style-type: none"> • Built-in SM analytic tools • Hootsuite • HubSpot • Buzzsumo • Google Analytics • Sprout Social Study 	<ul style="list-style-type: none"> • Followerwonk • Social media insights • Google Analytics Report • Friends+Me • Tailwind • Mention • TweetDeck • Ahrefs • SEMrush • Likealyzer • Phalanx • BuzzSumo 	<ul style="list-style-type: none"> • Hootsuite • Sprout Social • Agorapulse 	<ul style="list-style-type: none"> • Followerwonk • Social media insights • Google Analytics Report • Friends+Me • Tailwind • Built-in SM analytic tools • Sprout Social Study

4. Discussion

4.1. Implications

In the modern marketing world, Social Media Marketing is one of the least expensive marketing mediums, and that is with maximum out-reach. Nowadays, SMM is very popular in all types of organizations, including SMEs. With all SMEs marketing themselves on SM, it's hard to stay relevant for an organization as there are so many others following the same marketing strategies. So, to effectively use SMM, it is essential to understand the crucial metrics that determine your SMM campaign; this would help organizations to develop social media marketing strategies that are measurable in terms of performance and output, and give you the needed competitive advantage.

There focus of this study is to highlight the importance of this approach and how to better deal with metrics using Social Media Analytics Tools. These SMA tools allow organizations to observe and experiment with their current and potential audience. This

leads to the foundation of a well-informed SMM Strategy. The proposed framework has categorized all metrics into 10 categories that all organizations should follow (utilizing SMA Tools) to build a strong competitive advantage in the SMM domain.

4.2. Limitations and future research

This study is limited to the defined 10 SMM metric categories. More such metrics can be explored in future research. Furthermore, this research explores many SMA Tools being used; a systematic literature review can be done on these tools and their application. Many of these tools perform the same tasks, so a cross-case analysis can be done to determine which tool is better for a certain metric calculation. To strengthen the findings of this research, a case-study approach can be used to explore the impact of the proposed framework on the SMM strategy of the selected firm for the case study. Else than the SMA tools discusses in this research, there are many more SMA tools that can prove to be applicable in SMM strategizing. So to summarize, more metrics and SMA tools can be explored that would add value to the proposed model, the usefulness of this model can be accessed through case-study analysis and finally, SLR and cross-case analysis can be done to choose the best SMA tools for a certain metric.

4.3. Conclusion

There are billions of social media engagements on daily basis all around the world. It would be impossible for any firm to manually analyze such massive data; and without it, any Social Media Marketing Strategy (SMMS) can't provide the needed competitive edge. So, the need for Social Media Analytics Tools is a must. SMA Tools not just analyze data, but also advise necessary actions based on the firm's past data. For any firm to use SMM effectively to its maximum potential, it is a must to incorporate SMM Metrics into its SMMS and use SMA to analyze these Metrics.

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