

Current Trends & Future Prospects of Social Media Analytics in Business Intelligence Practices

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ABSTRACT

Social media analytics is an emerging discipline that involves collecting data and information from social media sites and formulate measurement techniques for deriving insights for successful implementation of business strategies. Despite the availability of a wide range of programs and technologies, businesses are still struggling with formulating and implementing the methodologies for a successful social media analytics program. Against this backdrop, this study aims at analyzing a business intelligence perspective of social media analytics in order to provide guidelines to the businesses in realizing their strategic objectives. The study is based on quantitative as well as qualitative analysis based on data collected from the surveys and reports published by various research organisations. The paper outlines conceptual fundamentals of business intelligence and social media analytics, and aims to analyse the current processes, practices and technologies used by the businesses. The study also intended to offer a pragmatic approach to align social media analytics with strategic business objectives as a business intelligence practices. The outcome of the research will be helpful for the businesses to better understand current as well as prospective customers and help them in improving their performance management.

Keywords: Social Media Analytics, Customer's perspective; Business Intelligence, Performance Management; Metrics; Strategic objectives.

Introduction

For years organizations have made business strategies based on information collected through focus groups and customer surveys. Most of these decisions backfired as these approaches lacked genuine market insight. Today with the help of social media companies can get a better understanding about product issues, market shifts, competitor trends and consumer purchase patterns to improve or redirect their marketing efforts.

Social media has transformed from a fun place to real-time intelligence tool to get business insights out of social conversations. Social media is considered a 'snapshot of the real world' as it captures customer's feedback through on-line forums and groups. It is considered a powerful Business Intelligence tool as it can be used by organizations to create personas, identify consumer trends and build product and service strategy. Businesses are using "graphical dashboards", "influencer maps", "social authority", "word clouds" and "geolocation maps" to build brands, drive

innovation, generate sales and respond to a potential market crisis. Social media has become a virtual broadcaster for everyone including customers, shareholders, competitors, unions, journalists, employees, suppliers, politicians and protestors. According to the Global Digital Market Report 2019, there are 3.484 billion social media users worldwide. Northern, Sothern and Western Europe and North America have the largest penetration of internet with 88% - 95% of the population using internet for some or other purposes. Marketers use data analytics to monitor and analyze this vast amount of unstructured social data to draw strategic insights for Business Intelligence.

Business intelligence is used by organizations to interpret the activity feeds from various social media platforms and analyze conversions, likes, shares, clicks, tags and the demographics of the participants. This will help the companies to understand the profile of potential audience, popularity of a product and campaign, and consumer buying behavior trends. Companies track social mentions of their brands and products to study consumer

preferences and biases that will affect their purchase decisions. Consequently businesses can design marketing and advertising activities to influence the influencers and draw customer’s attention towards the brand.

Research Questions

This study attempts to find answers for the following questions:

1. How social media can be effectively used for small businesses for the growth of the business?
2. What are the different ways social media can influence the decision making by business?
3. How social media can be positively used for improving the overall performance of the business through improvement in marketing strategies, brand image and better customer relationship?

Research Objectives

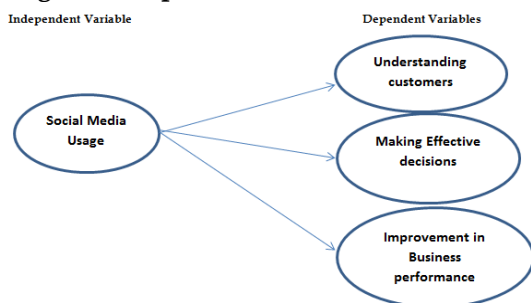
The research is intended to address and accomplish the following core objective:

1. To examine the key factors associated with the development of the business through social media analytics
2. To explore the impact of social media on business decision making
3. To evaluate the impact of social media in overall business performance.

Conceptual Framework

This research proposes the following theoretical framework to evaluate the impact social media usage understanding customers, making useful and effective business decision and overall performance of the business.

Fig 1: Conceptual Framework of Research



Source: Compiled by authors on the basis of Literature Review

Social media usage helps in qualifying leads in the early stages in the sales cycle by researching the profile of the prospective

customers (Shih 2009). Various social media platforms including Facebook and LinkedIn provide detailed information as well as customer insight about the product or service. These tools help the sales professionals to increase their social capital and build deeper relationships in order to improve the performance of the business.

Literature Review

Kaplan and Haenlein (2010, p. 61) in their article Users of the world Unite has defined social media as “a group of Internet based applications that build on the ideological and technological foundations of Web 2.0, and allow the creation and exchange of User Generated Content.” As per Yanga & Kentb (2014) a business can improve his public presence through increasing it’s visibility on social media which can influence on the organizational perceptions on trust, buying preferences of the consumers and in times of crisis.

Organizations need appropriate data to make quick decisions to gain competitive advantage (Farjami, 2015). This can be done with the help of Business Intelligence (BI). During 1950s decision support technology was used by companies to take strategic decisions. Nowadays BI is used by almost all the organizations around the world, due to increased data collection and better data storage capacity with innovations in technology. BI is a framework that is used to gather, analyze and present data collected from various sources such as mobile devices, internet records and social media activities to find patterns and trends to enhance companies basic decision-making process (Raisinghani, 2004; Den Hamer, 2004). Carlo (2009) has explained business intelligence system with the help of a pyramid. The main components of this pyramid are:

Data Sources: It consists of both primary and secondary sources of data such as operational data, documents, emails and data from external providers.

Data warehouse/Data mart: Data warehouses consolidate different kinds of data at one location with the help of an ETL process (extract, transform and load). Data marts are small warehouses that collect information related to a single department rather than

collecting information for the whole organization.

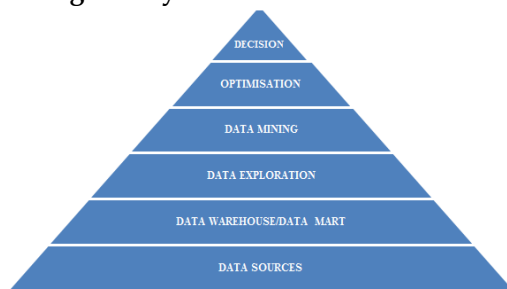
Data exploration: Passive analysis with the help of Statistical analysis and visualization of data.

Data mining: Active BI analysis to extract information and knowledge from data.

Optimization: Selection of optimal solution from large number of alternatives.

Decisions: Selection of a specific decision to end the decision-making process.

Fig 2: Hierarchical Model of Business Intelligence System



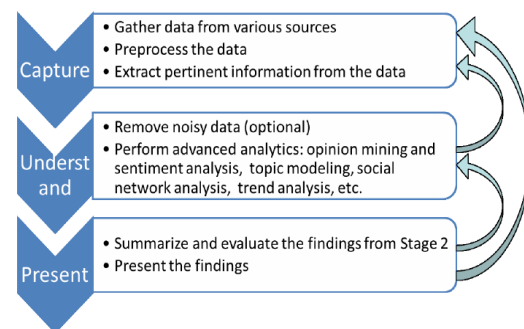
Source: Compiled by authors

According to Leong & Gligorijevic (2011, p.2) “The social media platform has given credence for consumers to share their experiences in their social networks and also to review the recommendations given by others on products and services”. Businesses use social media data to detect new trends in communication (Bi, Zheng, & Liu, 2014), for decision-making purposes (Tsou et al., 2015), as a channel to communicate with the customers (Griffiths & McLean, 2015; Pletikosa Cvijikj et al., 2013) and for product placement (Liu, Chou, & Liao, 2015).

There are more than 150 social networking sites which are in use, out of these Facebook, Twitter, LinkedIn, Snap chat and Google+ are most popular. Facebook provides a platform to its users to share anything with other users around the world. It helps the businesses to use the platform to advertise and promote their products and services (Barashi, 2012). Twitter a micro-blogging platform is used by businesses to connect with the users in real time (Bennett, 2012). LinkedIn is a professional network which is used by Organisations to advertise vacancies, head hunt prospective candidates and advertise the profile of company owners. The “Hangout” tool offered by Google+ allows businesses to share and discuss any documents (Barashi, 2012).

These social media platforms are very cost efficient for small businesses as they can use these sites to share information, communicate and take real time feedback directly from their customers about their products and services. Small businesses can advertise their products and services, update customers on the offers and discounts available, launch new products, improve their offerings based on customer’s feedback, collaborate with customers, suppliers and other businesses to improve and develop their operations (Barashi, 2012). However some companies still find it challenging to choose the right platform as they lack the knowledge to differentiate between different platforms and also lack familiarity with recent technologies (Michaelidou, Siamagka, & Christodoulides, 2011). Moreover negative customer feedback for their products and services can hamper their business growth. (Fischer & Reuber, 2011).Hence it becomes all the more important for small businesses to develop an understanding of the different social media platforms and tools that are available to successfully engage with the customers and tap the right business opportunities. The data collected from social media can be divided into structured data and unstructured data (Baars and Kemper, 2008). This data is combined and analyzed by Social Media Analytics (Zeng, Chen, Lusch, & Li, 2010).Social Media Analytics (SMA) make use of algorithms based on data mining techniques, natural language processing and social network analysis to offer a range of metrics to derive business insights for effective decision making (Melville et al., 2009; Luckham, 2011). As shown in the Fig. 3, Social Media Analytics involves a three-stage process namely Capture, Understand, and Present.

Fig 3: Social Media Analytics



Source: Compiled by Authors

The 'Capture' stage includes obtaining relevant social media information and data through various social media sources followed by the second stage 'Understand' which is the core of the entire SMA process. The success of this stage will greatly influence the metrics and information displayed in the last stage 'Present'.

Other drivers for Social Media Analytics are: identifying influencers; measuring effectiveness of marketing campaigns; determining brand reputation; understanding sentiments and identifying target audience (Lovett, 2011; Petrocelli, 2013; Stodder, 2012). Yang and Shih (2012) offered a rule-based sentiment analysis technique to analyze customer reviews about business offerings.

Liu and Yang (2012) proposed a buyer behavior prediction tool by analyzing social networks and behavior patterns on e-commerce purchases and marketing applications on net.

Nithya and Maheshwari (2016) introduced a scoring system technique that consisted of two rating attributes, 'sentiment score' and the 'feature score'. This technique was used to identify the most promising features of a product, insights regarding brand promotion, product penetration and future demand for the product.

Liu et al. (2014; 2015) proposed a framework named 'HYDRA', to identify user linkages across different social networks and establish a correlation between various user profiles. They successfully tested 'HYDRA' in a database of ten million users and also identified user linkages across seven dominant social network platforms, outperforming existing algorithms in different user settings.

In the extant literature, there are limited studies done on the use of social media in small businesses (Kapoor et al., 2018), and these studies have not focused on the decision-making by businesses using the social media tools. This research aims to fill the gap by exploring the impact of social media on decision making and overall performance of the business.

Research Methodology

The study attempts to achieve the research objectives with the help of quantitative as well as qualitative method of data collection. For collection of primary data a survey was conducted with the help of 151 small business owners through questionnaires.

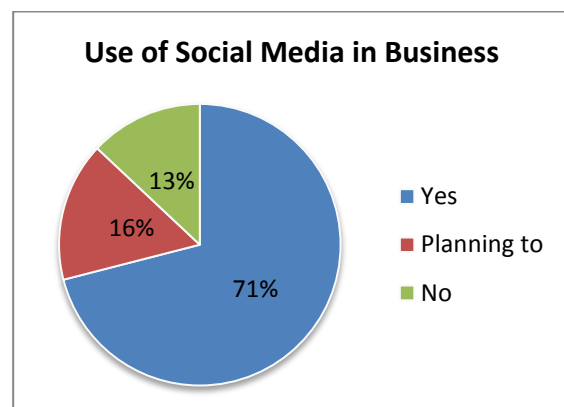
For qualitative analysis various surveys and semi-structured interviews from small business owners are used as secondary data. These data are collected from Global Digital Market Report 2019, Clutch Survey on Social Media and a survey report by Sprout Social.

Data Analysis

The business can collect massive amounts of relevant data by using various social media sources like news feeds, APIs, or by crawling. As per the survey it was revealed that businesses generally use popular platforms such as You tube, Facebook, LinkedIn, Twitter, Pinterest, Google +, as well as some more specialized sources such as blogs and micro blogs, Internet forums, news sites, Wikis, podcasts, and social bookmarking sites.

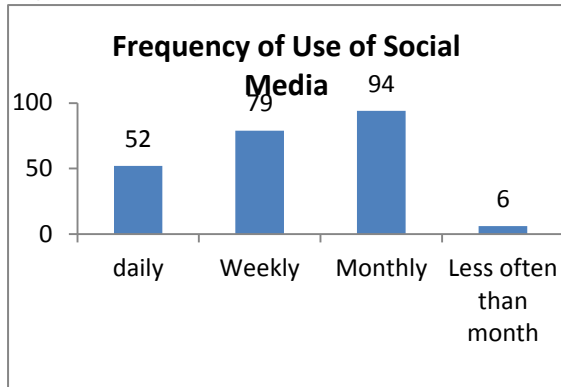
From the survey conducted from 151 small businesses it was revealed that almost 71% of businesses use social media for the development and marketing of their products. Moreover, 16% of them are planning to use it in future. Among the respondents, about 79% of millennial business owners prefer to use social media, while in case of Generation X and baby boomer only 65% business owners combined use it. The results also had shown that that more than half of the respondents (52%) use it daily.

Fig 4: Use of Social Media in Business



Source : Compiled by authors from survey results

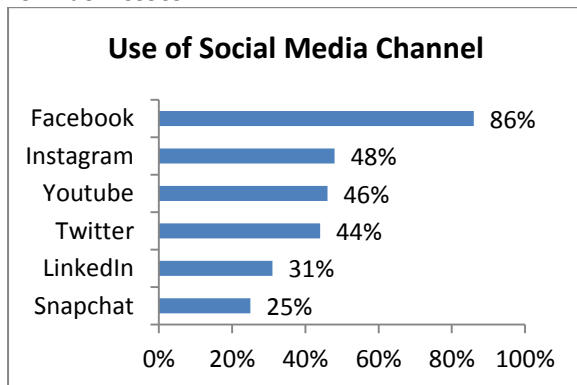
Fig 5: Frequency of use of Social Media



Source : Compiled by authors from survey results

Social network analysis is the one of the main technique used for finding the key factors which influences viral marketing campaigns on Twitter, Facebook or other social media platforms. This method is used to detect sub-communities which can be involved in a discussion forum for better precision in customizing the products as well as marketing materials. When the customers were asked their most used platform for social media, 86 % of them voted in favour of Facebook.

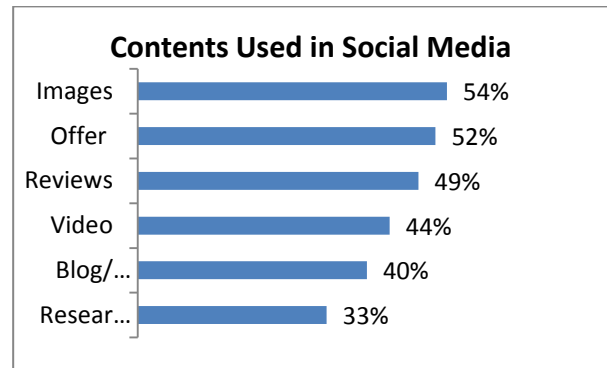
Fig 6: Most Popular Social Media Channel for Businesses



Source: Compiled by authors on the basis of survey results

Using social media for marketing of their products or services helps a business to create a brand image and getting invaluable feedback from their target audience. Small businesses use various blogs, images, graphics, reviews etc. to create awareness among their customers. A survey conducted by Clutch Co. on 351 small businesses in US revealed that although businesses use different form of contents to get connect with their prospective users, the majority (54%) of them post images and info graphics. (Fig. 7)

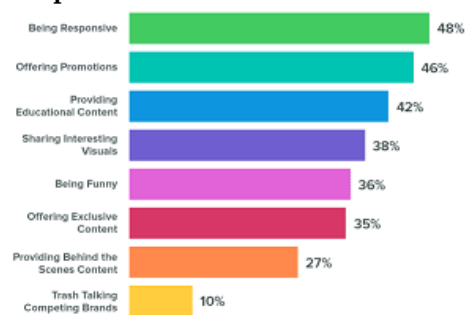
Fig 7: Contents Used by Businesses to Attract Customers



Source: Compiled by authors on the basis of survey results

As per Global Digital Report 2019, over the period social media is being used as a customer service platform where current and prospective customers want answers quickly and in real-time. The chart below shows that 48 % of users expect the companies to be responsive to their customer’s queries and problems. Only 27%of of respondents have shown interest in purchase products after going through the contents shared on brand social pages.

Fig 8: Brand Actions on Social Media That Prompt Consumers to Purchase



Source: Compiled by authors on the basis of survey results

To assess the effectiveness of social media various metrics have been used. For instance, Micro blogging platforms including Twitter use the simple metrics like number of tweets and followers or the number of retweets. Real time analysis and topic modeling help a business to know customer’s insight about its products and services and alter them accordingly in order to improve sales performance and capture the market. Depending on the objectives, the business can use various marketing funnel (as shown in Fig.9) for achieving their goals through social media.

Fig 9: Brand Actions on Social Media That Prompt Consumers to Purchase

Social Metrics Map					
BUYER'S JOURNEY	OBJECTIVE	SOCIAL MEDIA STRATEGY	SOCIAL ACTIVITY	SOCIAL KPI'S	BUSINESS IMPACT
AWARENESS	Create awareness	Expose target audience to brand content	Posts, promotions (Boosted)	Impressions, reach	SOM: Top of Mind Awareness
CONSIDERATION	Generate demand	Generate engagement of target audience with brand content	Posts, responses	# of engagements, types of engagements	Visitors/traffic (online or offline)
DECISION	Drive conversion	Drive target audience to brand offers	Posts, promotions	Link clicks	Conversions (purchases, lead submissions, app downloads)
ADOPTION	Delight customers	Drive engagement with brand products/services	Responses (i.e. social customer care)	Optimized earned mentions, customer care metrics (response times & etc)	Sentiment and satisfaction
ADVOCACY	Inspire evangelism	Activate customer influencers	Posts, outreach to influencers, networks	Earned impressions, earned reach, social UGC	Referrals, influencer activity, positive word of mouth, NPS

Source: A Survey from Sprout Social

To improve the **advocacy** the business can encourage the reviews from the customers through social media or Google reviews. In order to convert offer into **purchases** and **evaluation** of variations in consumer messages a business can use *Google Remarketing for Search* or *Google Marketing Display*. Besides this, *Google AdWords* can be used to display brand to the consumer during **consideration** period and consumer **awareness** can be enhanced through *Youtube* or *Google Display*.

Social media can also be helpful to promote product innovation by capturing and understanding conversations among different group of customers. For instance, most regular customers of a business can reveal important insights, on the other hand, conversations with other customers can lead to improvement of product & services. For instance, Dell had used its website Idea Storm to explore users' ideas about improving its product. Dell took these suggestions seriously and customized product as per their desire and expectations.

Conclusion

As described by Owyang, (2009) "Social media measurement is like driving a modern car. You may have a dashboard with all the lights, toggles, gauges, and metrics, but remember, the most important piece of data to have in front of you is the GPS screen. The GPS screen indicates where you want to go (your objective), where are you now, and how to get there."

The empirical results regarding usage of social media in business strongly suggest that there is a positive relationship between organizations' ability to both create opportunities and understanding and manage relationships with customers. Some of the tools including 'like', 'tweet' or 'retweet' helps the businesses in real-time sentiment analysis

of customers and to respond instantly to their choice or comments before customer complaints become a negative torrent and damage its reputation.

Another important finding of this research is that the businesses with a strong presence in social media prevails in the minds of customers, suppliers and other stake holders which can result in improving organizational visibility, product loyalty, brand presence and organizational trust and all these factors together can eventually lead to increase in overall performance of the businesses. Especially for the small businesses, which can't spend much on their marketing, use of social media has become indispensable. In terms of performance, the results of the study revealed that social media usage impact on the overall performance of the organization.

Companies can develop deeper relationship with their current and prospective customers by making social media an integrated part of their marketing strategy. Through social media they can improve their collaboration with customers via two way conversation and get customer insights which can be used to create customized products and services to achieve higher sales performance.

Limitations and Further Research

Although this study has some limitations, it is expected that this research will positively contribute to the limited research on impact of social media on small businesses. To address the limitation of the smaller sample size used for the qualitative study and time limitations were the major constraints. However, the future researches on this study can focus on larger qualitative data and selection of a particular sector like hospitality, tourism etc. which can instill more confidence in the findings.

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