An Adoption of Social Media Monitoring Tools for Business and Market Research

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Abstract- **Market research is an important process for business to know the customer needs. In Thailand, people usually apply social media as a communication channel to review their interested products or services. They provide their opinions which are useful for market research and business development. This paper presents an adoption of social media monitoring tools for business and market research. Social media monitoring tools are explained in terms of features and functions to use for market research. Some monitoring tools are explained in various important functions. The experiments are performed based on the information from the users who have applied the social media monitoring tools for their works. We compared the usage of tools between two organizations. The result showed that there are some common features to support the business and market research. However, some different factors are also analyzed. Therefore, an adoption of social media monitoring tools is very important to support the market research in the current business.**

Keywords- **Technology Adoption, Social Media, Monitoring Tool, Business, Market Research**

I. INTRODUCTION

Currently, internet has an important role in daily life. There are many useful applications on internet. In addition, communication channels are increasing via internet. Business and industrial organizations are interested in the customers' opinions on internet especially social media. Thus, social media is a powerful tool for online communication channel.

In business, marketing is an important issue. Market research was introduced many years ago [1]. The role of marketing has changed is various aspects due to the rapid changes of technology including the internet. Marketing research is important in strategic decision making and acquiring the information about customers, products and marketplace. Moreover, the future of marketing was discussed in various aspects [2]. Social media is one of power tools for marketing. An adoption of cloud computing is explained as an empirical study of customer preferences [3]. We apply the multi-method approach to evaluate the social media monitoring tools. Social media marketing is discussed in four main themes of research studies including virtual brand communities, consumers, attitudes and motives [4]. Social media marketing is adopted as a new communication tools and offers unique opportunities for marketing research. The balanced picture of the current state of social media marketing is explained [5]. This is useful to analyze the related area of social media monitoring. There are many social media which is useful for market research such as facebook, line, google+, instagram, twitter and web forums.

Fig. 1 Social media analytics journey.

Market research tools are segmented in four stages including passing tools, timeless tools, transitional tools and emerging technologies. Social media is one of many aspects in the transitional tools which are important for research segmentation. Thus, we use social media as a tool for market research. Social media analytics journey consists of data recording, trend monitoring, sentiment analysis, cause analysis and customer relationship management as presented in Fig. 1. In this paper, we present an adoption of social media monitoring tools for research purposes especially in business and market research. Social media analytics will be explained in the next section. Research methodology and experimental results are explained in section 3 and 4. The final section is the conclusion.

II. SOCIAL MEDIA MONITORING

There are several monitoring tools which are useful in business and market research. However, we select some social media monitoring tools which are applied for market research in business and education as a case study. The examples of social media monitoring tools are presented in Fig. 2.

Fig. 2 The examples of social media monitoring tools.

Social media is a very powerful communication channel. The trust of your audience is important to recommend products or services to friends. Facebook, Twitter, and other platforms are necessary to create engagement. Social media monitoring tools can help for social media marketing efforts and identify the areas of improvement. Currently, there are many social media monitoring tools such as Social Mention, Mention, Talkwalker, Topsy, PinAlerts and S-Sense which are applied for business.

In this paper, some monitoring tools are explained to use for business and market research. The features and characteristics of these monitoring tools are demonstrated in this section.

A. Social Mention

There are many useful social media monitoring tools. One of the powerful monitoring tools is a social mention. Social mention is a monitoring tool for brand mentions and interactions in visual format. This can find your brand's strength, the passion of the posting, the sentiment and the reach. The top keywords, users, hash tags and sources are presented as well. Social mention is an excellent way to search for people who are talking about your brand. This is a free online service. Social mention can be used easily by typing in the name and click search to see the links to your mentions. The results are sorted by timeframe. We can search the keyword and examine the result as presented in Fig. 3.
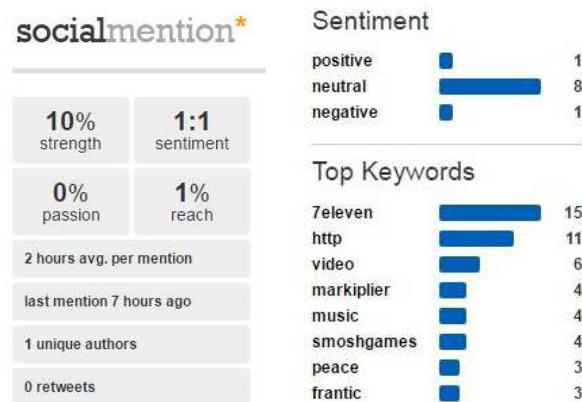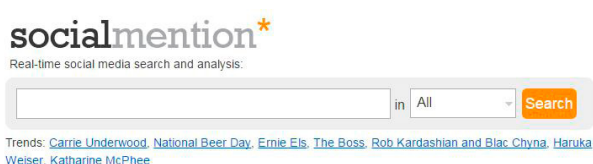

Fig. 3 Social mention monitoring tool.

B. Mention

Mention is a tool which is similar to Google Alerts. This tool can send emails to notify when a keyword you specified was detected online. It is possible to monitor millions of sources in real time and support several languages. We can apply an online search or receive a daily email from the related mentioned messages. This is a useful tool which can export the data in the format of CSV to share with others. Mention monitoring tool is presented in Fig. 4.
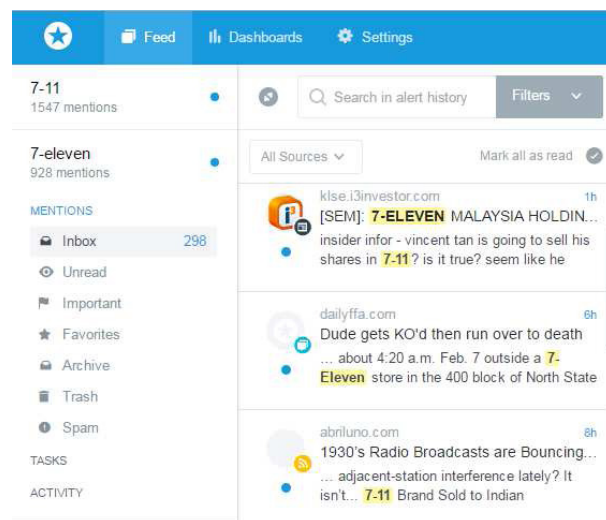

Fig. 4 Mention monitoring tool.

C. Talkwalker

Another monitoring tool is Talkwalker which an alert is set up from keyword. We can resize the returned data by result type, language, frequency and quantity. This tool can give the brand mentions and the sources where these mentions occur. There are some advantages of this tool including the performance of brand mention, the engagement levels, influencers talking about your brand both of website and social media, sentiment analysis, tag cloud and demographic data such as location. There is a world map tracking to know the location of conversations and present the pie charts on every location to indicate the

sentiment in each country. Talkwalker is another free service to alert the brand mentions as presented in Fig. 5.
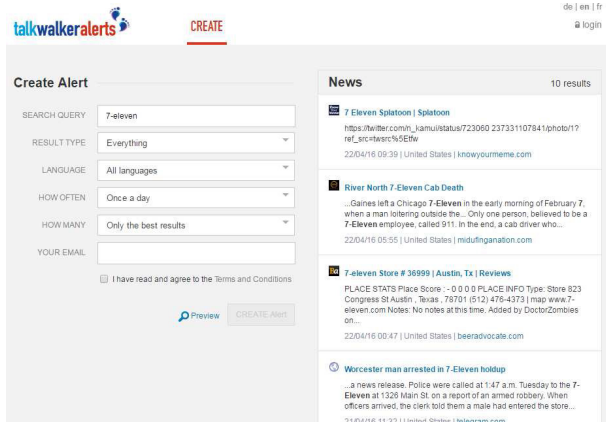

Fig. 5 Talkwalker monitoring tool.

D. Topsy

Topsy is a search engine to monitor brand mentions across the web. This tool measures sentiment and provides analytics which the database is in real time. The results can be sorted by links, tweets, photos, videos or influencers. This is useful for a large volume of content. Social search can be sorted by timeframe and sentiment score. It provides a comprehensive data which focus on influencers and top conversations.

E. PinAlerts

PinAlerts is an additional function from a traditional brand moinitoring platform in Pinterest alert system. It monitors links to pins from your website and notifies when someone pins from your site via email. This tool can jump into conversation with people on Pinterest who shared your pins and develop relationships with them. It is helpful to monitor your brand online. Thus, you can engage when appropriate and respond when necessary.

F. S-Sense

S-Sense is one of monitoring tool which provides the function of sentiment analysis which is useful to monitor the customers' opinion from social media [6]. S-Sense is implemented by NECTEC as demonstrated in Fig. 6. It consists of four analysis modules. Language usage analysis classifies each text based on two aspects, the use of obscene and informal languages. Detecting obscenity is useful since many texts with strongly negative sentiment could sometimes contain obscene language. Intention analysis classifies each text into four classes: announcement, request, question and sentiment.

Sentiment analysis from S-Sense is developed which focuses on intention and sentiment analysis. Four different intentions (announcement, request, question and sentiment) were analyzed and two sentiments (positive and negative) were classified [7]. This social media information is obtained from Twitter and a famous webboard in Thailand.

Fig. 6 S-Sense monitoring for sentiment analysis.

These tools can save the time and make monitoring easy. Some tools are notification systems that allow you to act when you see alerts. Some tools have a real-time search component. A combination of these tools will support you stay on top of the conversations and become part of your social community.

III. RESEARCH METHODOLOGY AND EXPERIMENTS

The objective of this work is to explore the functions where the use of social media monitoring tools is necessary and understand whether the tools available in the market could satisfy requirements and expectation of business and education users. We ran a case study research to achieve the goal following an exploratory approach. The work is meant to be exploratory as factors influencing and conditioning the usage of the tools are not clearly recognized. Primary sources of data were collected through in-depth interviews with managers of a marketing department working in retail industry and education. The cases, interview procedures, and analysis method are explained in this section.

We compare case studies including users from business and education who is in the marketing field. Conditions and outcomes of adopting social media monitoring tools at two organizations were investigated. Both organizations locate in Thailand, and prefer to remain anonymous. The first company operate in retail industry and the second is an educational institute.

The information is collected from business and education managers in the company. We conducted an interview from both organizations. The information was summarized for several hours. Social media monitoring tool is implemented for business and market research. The visualization is customized for practical usage. We can summarize the experiments from the interview about the functions that is necessary for the business as follows.

The information from social media is analysed to see the online participation in market share of retail business as shown in Fig. 7. This figure can present the customers' opinions in the viewpoint of comments on social media. If we know that there are many comments about the products or services so we can concentrate to develop the business.
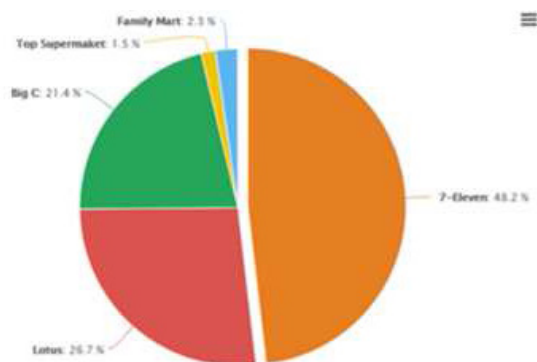
Fig. 7 Social monitoring for online market share
in retail business.

The visualization of tags cloud is demonstrated in Fig. 8. The frequency of words which is occurred from the comments in social media is shown as tags cloud. The bigger word has more important. Online mentions are presented   during different timeframe from several retail companies. We can see the movement of each business during different timeframe. Moreover, the sentiment of each comment is classified into four groups including gain, neutral, need and pain following business need. The experiments were conducted using the keywords in retail business and the visualization is presented in fields of business trend, sentiment and tags cloud.

Fig. 8 The visualization of tags cloud in retail business.

The monitoring tool features are used by users in business and education field. There are some similar features including the statistics, market share comparison and sentiment analysis. However, there are some different factors between business and education such as budget investment and technology impact because the business part can use the budget for technology testing. If it is benefit for the business then we can apply this tool for social media monitoring and delivery the results to other departments such as public relation and organization communication in the company. Therefore, the suitable tools should be adopted for different applications.

Finally, the comparison of monitoring tool usage is presented in Table 1. We compared the factors including need, budget, benefit, technology and feature between the users in business and education. The need from business side to use monitoring tool is higher than education because they use the tools to run the business and react the result immediately. Business section can invest the budget on the tool more than the education. The education usually uses

the trial version for testing. The business has the benefit directly for investment on the monitoring tool. Moreover, the business needs the customized tools and more features than the education.

TABLE I
THE COMPARISON OF MONITORING TOOL USAGE

Factors	Business	Education
Need	High	Low
Budget	Invest	Trial
Benefit	Full	Some
Technology	Customize	Enough
Feature	More	Less

IV. CONCLUSIONS

In this paper, an adoption of social media monitoring tools for business and marketing research is presented. Social media monitoring tools are explained in terms of their features and useful functions. The experiment is collected from users in two groups including business and education field. Social monitoring tool is evaluated based on user experience including functionality, reliability, usability, efficiency, maintainability and portability. The results are demonstrated in terms of dashboard visualization. The experiment demonstrated that the requirements of each user have the common features such as web statistics, sentiment analysis and topic classification in order to support the business and marketing research. This recommendation is benefit for users in different organizations.

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