Social Media Listening in the COVID-19 Environment by Song He and Emre Erturk

Emre Erturk[1]

[1]Affiliation not available

May 28, 2020

Abstract

Companies are constantly engaged in the arena of social media, whereby any posts, comments, sentiments, and even clicks can make an impact on the market and their brands. Being able to quickly sense the social media sentiment and give prompt responses is a crucial task. This paper originally conducted a case study to explore social listening, which is a useful social media strategy. The aim was to demonstrate feasible social listening strategies and practices. In the first part of the paper, the idea of social listening and the ways of measurement are described. Here the paper used a case study approach. By leveraging a social listening tool called SentiOne, a New Zealand Brand (Pak'nSave was studied under different business scenarios. The involved looking at the brand image, competition, and crisis detection. Furthermore, several social listening techniques, including measuring mentions, influencers, sentiment, brand health index, channels, and Keyword cloud, were applied. The brand has been revisited in 2020 to understand the suddenly changing shopping circumstances under the COVID-19 global pandemic. The contribution of this work-in-progress paper is to showcase how social listening is currently useful for companies and market analysts.

1. Introduction

In recent years, businesses are facing fast-paced developments which impact the effectiveness and efficiency of their engagement with customers (ICMI Research, 2013). Meanwhile, creating and sharing blogs, tweets, Facebook content, videos, and pictures have become an important part of marketing and public relations (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Therefore, to enhance a brand's influence and visibility, companies are trying to apply different social media strategies to understand and engage customers through multiple channels. An increasing number of influential companies along with government agencies and political campaigns are trying to measure public opinions, which have led to the development of social media listening tools and software (Schweidel & Moe, 2014).

In the context of social media, to achieve the goal of effective listening, various social listening tools and data are available to serve the needs of professionals. Based on the total relevant mentions observed in social networks, social listening platforms allow companies to understand the momentum of how customers think about their brand or service (Patino, Pitta, & Quinones, 2012). In other words, social listening is a way of understanding the public image of a company and the changing nature of the market.

As a crucial part of customer relationship management, social listening and social monitoring support the engagement between companies and customers in social media (Woodcock, Green, Starkey, & FrameworkTM, 2011). By continuously scanning social content relevant to their brands and products through appropriate audiences and channels, companies can achieve positive outcomes such as better customer engagement and market analysis (Woodcock et al., 2011).

To explore a detailed social listening strategy for enterprises, this research aims to identify viable social listening and monitoring strategies for enterprises. The research questions are:

"How to achieve a better social media listening and monitoring outcome for companies by using a social listening tool?"

"According to sample online social data, how has the COVID-19 crisis affected online shopping in New Zealand?"

"According to sample online social data, what are some ways that the COVID-19 crisis may affect a particular brand?"

Especially in view of the last two questions, as of March 2020, the keywords 'panic buying' and 'panic shopping' and their derivatives become significant search terms and hashtags on Twitter (Chen, 2020). After analysing social listening data for a case study, aspects such as the possible causes, reactions, advantages, and drawbacks can be discussed to better understand the business context. This research also proposes strategies for different business scenarios over time to take advantage of the social listening applications and data for companies.

1. **Literature Review and Theoretical Perspectives: Social Listening Concepts**

A definition of social listening is given in Anderson et al (2017), whereby it is described as a process to identify and analyse big picture information about a company, product, brand, or individual from online social media. By contrast, social monitoring is an endeavour that focuses on the daily interaction and the details (Cuttica, 2016). Crawford (2009) gave a broader description by categorising social listening to three types, which are background listening, reciprocal listening, and delegated listening. These can involve different listeners such as individuals, politicians, and corporations. Background listening is a method that generally scans the social media, where content continuously flows in the background, without an intention to interfere (Crawford, 2009). Reciprocal listening is a method that uses a broadcast approach to respond to the comments and direct messages in social media, which is commonly used in politics. The delegated listening conducted by corporations, enables others listeners to take part and observes the participants and data in a controllable manner. Likewise, Paine (2011) emphasises that companies should focus on their content and the publicly available data about the customers rather than exhaust their own resources trying to monitor everything.

Social Listening Factors and Benefits

Social listening can bring multiple advantages to companies. According to Crawford, companies can have three benefits from social listening: hearing opinions, leveraging customer support, and increasing the brand's influence (2009). According to Patrick (2017), Clutch surveyed 300 social listening software users who worked at companies with more than 100 employees. This survey indicated that improving products and services, attracting new customers, and improving customer service are considered the most beneficial aspects to companies (respectively 25%, 24%, and 21% of responses). Also, the survey indicated other benefits of social listening, such as monitoring content performance, recruiting and hiring new employees, and learning about the competition. In practice, 42% of the participating companies used these tools to improve the relationship with their customers by adopting various social listening strategies. The data from Clutch's 2017 social listening survey also showed that 86% of the participants monitor customer requests, questions, and concerns, while 77% monitor their competition.

In the contexts of the company brand, a company's interests are likely to be greatly impacted by any snowball effects that may begin with a single post. Identifying and coping with a crisis is vital for companies (Paine, 2011); Magdalena Urbaniak, the brand manager of "Brand24" company, said "With a social media monitoring tool, we are able to respond first and nip a potential social media crisis in the bud before it can escalate."

In regards to social listening for market competition, brands and products need to be positioned flexibly and be able to respond and thrive in the market (Paine, 2011). There are so-called hot buttons or factors and different dimensions such as price, value, delivery, and variability. The positioning is to find what strategic approach a company might take, e.g. being a leader, follower, or laggard. For example, a company can listen

to the comment of their rivals' customers for what drives their consumption decisions and then make their own marketing strategies (Paine, 2011).

Social Listening Measurement

Measurement is a critical part of social listening. From the perspective of business functions, social listening can be applied to public relations, marketing, and advertising fields (Paine, 2011). The data for measurement can be based on public data, such as the number of mentions and followers, or a group of intelligence systems (Kietzmann et al., 2011). Optional metrics for measuring social listening mentions are strength, sentiment, passion, and reach (Kietzmann et al., 2011). The strength metric is the number of times a company or product are mentioned in the selected channel. The sentiment metric is the proportion of mentions i.e. positive versus negative. The passion metric is the frequency in which certain users mention a company or a product. The reach metric is the distinct users in mentions divided by the strength metrics (Kietzmann et al., 2011).

As a particular metric, sentiment measurement is a media-content-analysis-based method to understand how the image of a company projects in the outside environment (Paine, 2011). Through media content analysis, companies can try to measure the positivity of their image in the media and better understand their audience. Paine (2011) points out that there are several key aspects of sentiment measurement. One is the main subject for the sentiment. The second is the type of the measured item, such as opinion, feature story, Q&A, and customer feedback. The third is the visibility of companies in the measured item, which means whether the images of companies can be identified within public content. The fourth is the people who make the posts. The fifth is the tonality, which means whether a reader seems to have a conflict with the company. The sixth is the type of media in which the item appeared. The seventh is the key message in the item. The eighth is how customer satisfaction and responsiveness to customers appear in the content.

Social media software and data are quite accessible online to users around the world; therefore, technology transfer and exchange of new ideas can take place (Erturk, 2009). For social media sentiment listening, manual analysis may be impractical due to the enormous amount of data (Schweidel & Moe, 2014). By contrast, software-automated sentiment analysis is a viable way, both faster and easier (Paine, 2011). Also, Hopkins and King (2010) suggest a hybrid sentiment analysis by combing manual analysis and software. For example, in many cases, a human can detect the sentiments toward the price of a product which automated analysis cannot detect. Furthermore, most systems cannot identify the irony and sarcasm in a common conversation, which causes the vast majority of automatic sentiment analysis systems to only detect correctly at a rate of 50% or less (Paine, 2011).

Methodology

This research adopts a case study methodology. Since this research focuses on the strategies of social listening and monitoring practices, looking at multiple snapshots in time has its advantage of conducting in-depth research by seeing variations under different scenarios.

In terms of the data sources, this research aims to find data from Facebook, Twitter, and YouTube, which are mainstream social media. However, for those users who comment a company or product using multiple accounts across different channels, the results of calculating mentions may seem duplicated, i.e. they may overstate certain outcomes such as consumer sentiments. However, this research advocates a multi-channel approach review the influences of brands and trends. For 2020, during the period influenced by COVID, the paper uses data and keywords mainly from Google Trends as well as Wordtracker.com.

As to the social listening tool, this paper adopts SentiOne as the social listening tool. SentiOne is a professional social listening tool which can be used for monitoring and analysing various social media in 26 languages and can detect trends (Kucharska, Brunetti, Confente, & Mladenović, 2018). In this research,

SentiOne is leveraged to perform the data gathering and present results in a dashboard. In addition, this research has used other tools such as Microsoft Power BI to visualise some of the findings.

Pak'nSave is a well-known discount food warehouse chain in New Zealand. This paper studies social listening or monitoring, including brand image reviewing and crisis detecting. Pak'nSave is a good example of a company influenced by social media trends.

The first step of conducting a social listening is keyword selection. For a company or a product, there may be probably multiple names or spellings. For example, the company registered name is the Pak'nSave, while on the Internet, users are likely to type it in other ways, as a result of typos, or easier ways of typing, or naturally-pronunciations, such as "Pak n save"," pack and save", or "Pak and save". To find appropriate search keywords, this paper leverages Google AdWords, which provides keyword suggestions based on the target market. Table 1 is the search criteria of the subjects. The table lists major related names for the brands or products in this research. The AdWords tools calculated 12 months' search results and provided the times of search for relevant keywords which are organised and listed for a "keyword ideas". This research manually filtered out irrelevant keywords and focused on the most relevant brands and product synonyms and selected the most-searched keywords in the keyword ideas list.

Table 1: Keyword searches for three scenarios

Subjects	Com
Brand image reviewing	Pak'
Note: The keywords are fetched from Google AdWords by inputting company name in the "keyword ideas" search box.	*Note*

The second step is to define the search criteria. Table 2 shows the search criteria for the first part of this paper. The research applies five options, including period, channels, sentiment, language and excluded factors, for a business scenario. The period is the time frame for capturing the mentions from social media. For the original brand image, the research set four weeks as the period for analysis. For the social media channels, all three scenarios take Facebook, Twitter, and YouTube as the data sources. For the sentiment and analysis, the brand image and competition use the positive, negative and neutral sentiment to get the whole picture of a brand in social media, while the crisis detection may look at the negative mentions which could be a contributing factor, or at comparisons. Also, the criteria have an excluded factors option, which can filter out unnecessary content. This research mainly filters out the feeds or comments generated by the companies themselves. For the analysis of the trends in 2020, country level data was obtained through Google Trends (https://trends.google.com/trends/?geo=NZ), which may have limitations. The Google Trends data comes in a daily aggregated form.

Table 2: Search criteria

| Options	Brand Image
Period	02.07.2018 00:00 – 02.09.2018 23:59
Channels	Facebook, Twitter, YouTube
Sentiment	Positive, negative, neutral
Language	English
Excluded factors	Paknsave as the author

1.

Findings and Discussion

Brand Image Review for Pak'nSave (2018)

Background and Mentions

Pak'nSave is a discount food warehouse chain and one of largest supermarkets with widespread distribution in New Zealand. The appeal of Pak'nSave is providing food and groceries at low costs.

Figure 1 is the brand mentions from weekly and daily perspective. Chart A is the weekly brand mentions, which were between 25 to 50 per week, except the highest week from July 24th. Chart B is the daily brand mentions, in which the peak value was also the July 24th. To find the causes of this exception, this research drilled down the data and navigated to the detailed mentions on that date. Surprisingly, most of the mentions of July 24th pointed to a piece of news, published by New Zealand major media such as Stuff.co.nz, reported that a major competitor, "Countdown", had been cutting down the cost of more than a dozen of their women's sanitary products (Macandrew, 2018). Although the Pak'nSave was not directly mentioned, the social media obviously drew this low-price-asserted brand into the spotlight and give an extra exposure.
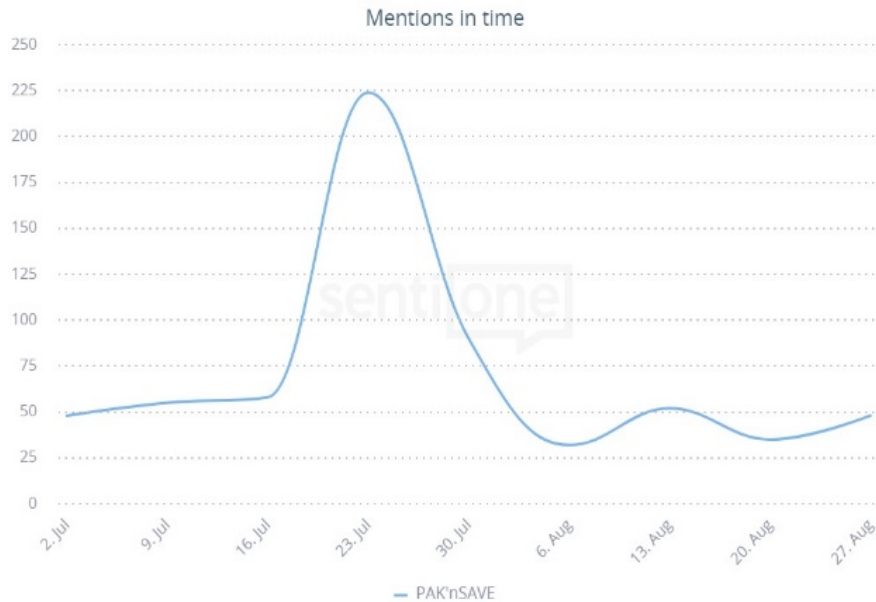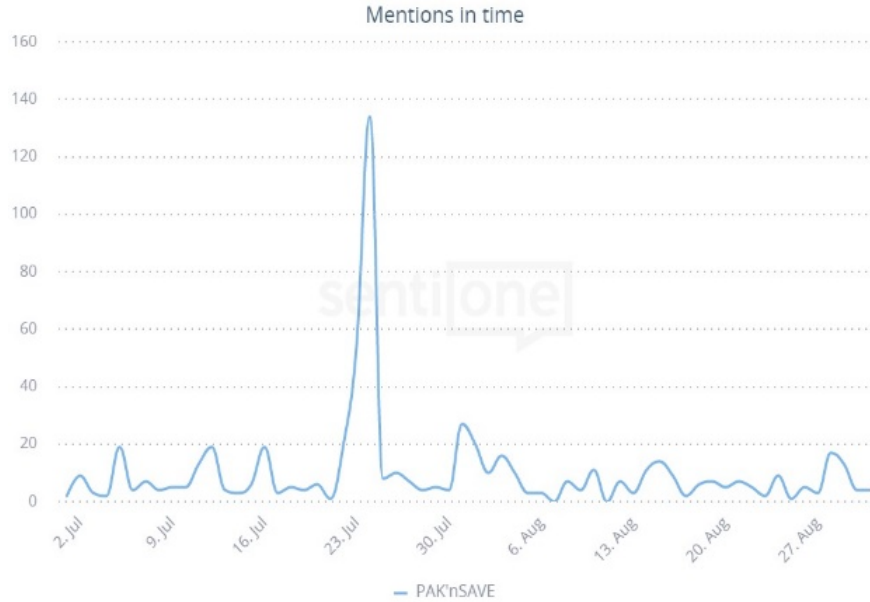
Mentions in time

Weekly brand mentions B. Daily brand mentions

Figure 1: Line chart for social media mentions.

Influencers

Influencers (e.g. having 10,000 followers on Twitter) can have a great impact on the brand of a company (Paine, 2011). Table 3 shows two influencers for Pak'nSave in social media. An influencer that impacted Pak 'N Save had 208,403 followers on Facebook. This account made three posts related to Pak'nSave during the period. The posts were about a "shouting out" of its own products which involved Pak'nSave as one of five retailers. Another influencer, a world rally championship driver, had 40,353 followers on Twitter. This account mentioned the Pak'nSave in one post, which was a casual life sharing tweet with 320 likes and 101 retweets. This post "@" Pak'nSave after the content along with other sponsors. It is important to interact with these kinds of influencers and provide sponsorship.

Table 3: Top three influencers for Pak'nSave in social media

name	Influencer 2	Influencer 3
Leader Type	Facebook	twitter
statements	3	1
positive	1	0
negative	0	0
likes	767	320
dislikes	0	0
shares	193	0
comments	99	0
retweets	0	101
followers	208,403	40,353

Sentiment

Figure 2 is the summary of the content related to Pak'nSave in social media. According to this summary, the total mentions of the brand are 642 with a 52% year-on-year decrease. While the positive mentions are 110 which increased 139% compared to the same period of last year, and the negative mentions are 117 which declined 18% year-on-year. These statistics tell a mixed story that compares to last year, when the brand mentions in social media decrease greatly, the brand credibility has become better.
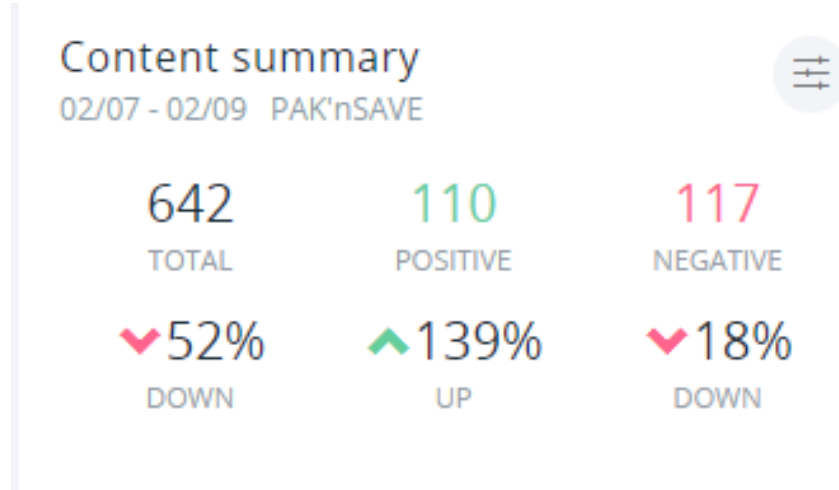

Figure 2: Contents sentiment summary for Pak'nSave

From the viewpoint of sentiment distribution which shows in Figure 3, 64.65% social media mentions of Pak'nSave is neutral, while the number of positive and negative are quite similar.
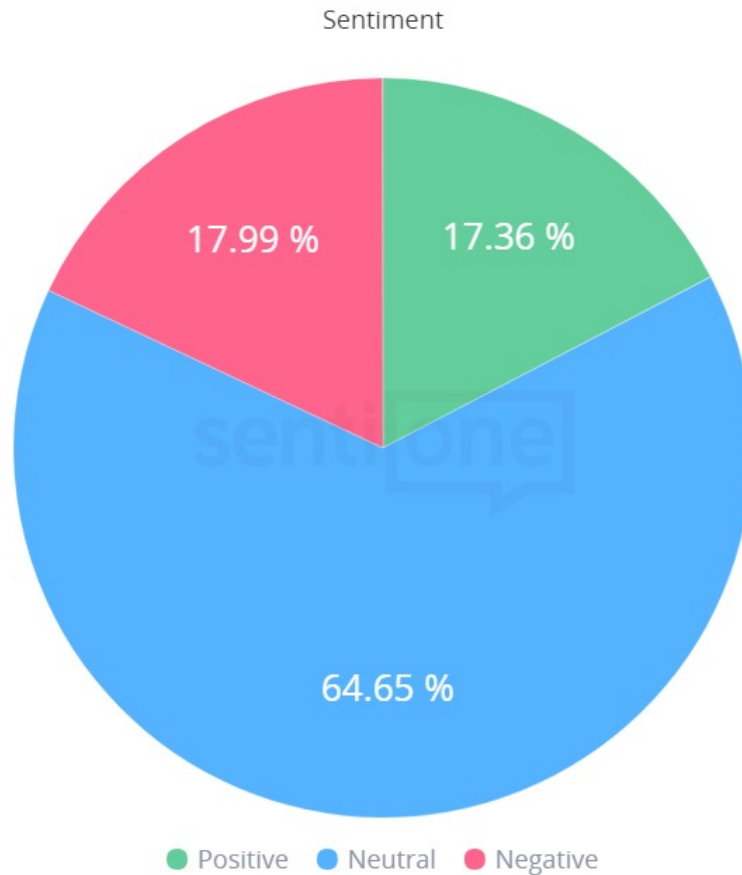
Sentiment

- ● Positive
- ● Neutral
- ● Negative

Figure 3: Contents sentiment distribution for Pak'nSave

Sentiment data is vitally important to brand image analysis. Because it enables companies to get a substantial understanding of how people think about the brand of their brands. This case shows the sentiment mentions in variation and distribution manners, which allow Pak'nSave to comprehend how does its brand images going and what the current situations of the brand. Also, periodical sentiment listening could help companies spot significant potential aspects, from business opportunities to vital crisis.

Brand Health Index

According to SentiOne's business development manager Hurnik (personal communication, August 28, 2018), the brand health index (i.e. BHI) is calculated as: BHI = positive mentions / (positive mentions + negative mentions). BHI of Pak'nSave is found to be 0.48, which is considered only average during the examined period. The BHI is a simple index derived from sentiment metrics, which can provide a general idea to indicate the health of a brand. Companies can employ BHI together with sentiments analysis to get an overall perspective of brand image in social media.

Channels

This research chooses Facebook, Twitter, and YouTube as a channel source for social listening. From the perspective of the social media variety, this research aims to identify which channel a brand has more mentions than the others and how the audiences think about the brand in different social media platform. Facebook contributes nearly 80% of the total mentions, Twitter 14.95%, and Youtube 5.14%, which means the Facebook is the social media channel where Pak'nSave brand can have the most influence in.

Keyword Cloud

To visualize the most mentioned topics for a certain brand, Keyword cloud analysis is a good approach. By means of a content analysis engine, word occurrences in mentions can be extracted. These are counted and sorted in the report. What people talk about change over time. Figure 4 is the Keyword cloud analysis for Pak'nSave. Chart A is the keyword cloud between July 2nd and September 2nd, while chart B is the keyword cloud on July 24 with a peak value of mentions. The keywords are gathered like a cloud, in which the font size of a word represents the degree to which it has been mentioned. In chart A, heated words are not prominent, while chart B has more highlighted keywords: such as pads, cup, use, and tampons. Then these keywords were searched along with Pak'nSave in social media on July 24. This research found most of this surge to be due to news around the time about retailers cutting the price of sanitary products.

Keyword cloud (02/07 - 02/09) B. Keyword cloud (24/7)

Figure 4: Keyword cloud analysis for Pak'nSave

Trends, Crises, and Opportunities (2020)

The story of Walmart in the US in 2018 is a good basic example for a temporary social media crisis. On July 3, a Twitter influencer, Ryan Fournier, a Donald Trump supporter, denounced certain products in Walmart online. The baby and adult apparels were printed "Impeach 45" or "Impeach Trump." The post got many replies and retweets and snowballed to a brand crisis and spread globally (Ladd, 2018). Supporters of Trump used social media to express their frustrations and initiated a "boycott Walmart" movement online. Walmart quickly made a statement and removed the relevant products before the situation got worse. The mentions of Walmart soared from 8.6 k on July 2 to 40.6 k on July 4 before the topic quickly cooled down. The number of mentions had returned to 8.5k in three days. The date of the peak value of mentions was the second day after Walmart put the products on the shelf. Therefore, it is important to listen to the variation of mentions in social media to help companies identify a crisis and reach quickly. Understanding online consumer sentiments is an important element of detecting emergency trends.

In 2020, interest in online shopping rose in New Zealand during March. Certain milestones are important: 21 March (the introduction of the alert level system in New Zealand and the imminence of lockdown limitations) and 25 March (the coming of the nationwide lockdown and common perceptions around potential product shortages). According to Figure 5, interest in online shopping peaked on April 2, and then slowly dropped after then. Although the number of cases in New Zealand was still rising, the slowdown in panic buying

could be attributed to the public's increasing satisfaction with the government's response to the pandemic and a relative decrease in fears around food shortages.

Figure 5: Google Search Trends Online Shopping March 1 to April 23

Not every country has followed the same trends, in terms of online shopping, despite being somewhat close in size or population. One example is Sweden, where it took longer to put highly restrictive measures in place. Despite this, interest in online shopping peaked earlier in Sweden. Another example is Singapore, which faced the pandemic earlier. However, public interest in online shopping peaked later during 2020.
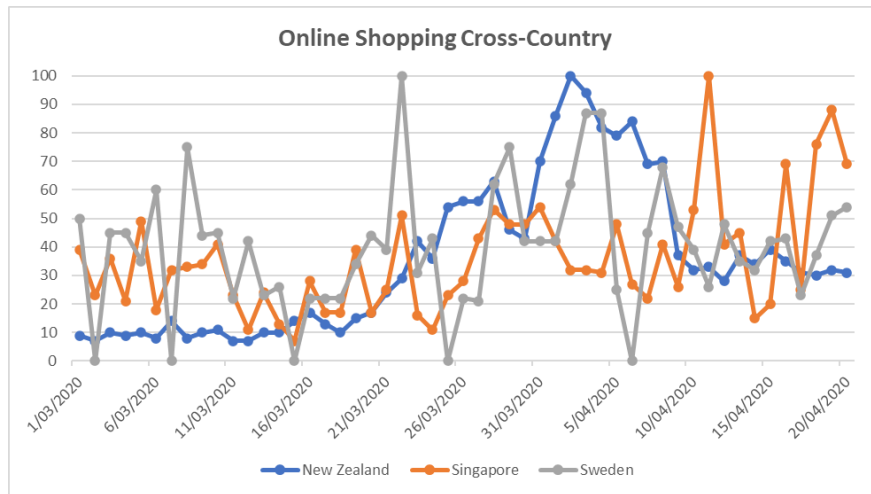

Figure 6: Online Shopping Trends in Three Countries

During the same period, interest in Pak'nSave also soared. The interest in the overall brand versus interest in its online shopping services have followed different trajectories.

[CHART]

Figure 7: Online Interest in Pak'nSave

Lessons Learnt

By studying different business cases, appropriate social listening strategies are suggested. Table 4 is a matrix of strategy portfolios. Firstly, to get a comprehensive view of a company's brand in the social media, the brand image can be reviewed from six factors: mentions, influencers, sentiment, brand health index, channels, and Keyword cloud. Secondly, to position a product or a brand in the market, as well as to understand the recurring qualities from social media, multiple products or brands can be compared with each other, including mentions, channels, and sentiments. Thirdly, to spot and address a crisis or trend in social media, the detection needs to be performed from four aspects, including mentions, sentiments, Keyword cloud, and brand health index.

Table 4: Matrix of the social listening strategy portfolios

business scenario	mention	influencer	sentiment	brand health index	channel	keyword cloud
brand image	[?]	[?]	[?]	[?]	[?]	[?]
competition	[?]		[?]		[?]	
crisis detecting	[?]		[?]	[?]		[?]

It is important to note here that Pak'nSave does not deliver directly to the customer (as for example Countdown does). Its online shopping is called Click and Collect, i.e. making the order online and then coming to a nearby store to pick up the goods (https://www.paknsave.co.nz/shop/online-shopping). Therefore, it does not make as much sense to compare it with another supermarket chain that has been involved in online shopping for a long time and offers home delivery. Pak'nSave also has a relatively smaller number of branches than its competitors. Pak'nSave is best known for offering more convenient prices to the consumer. Despite its limited online shopping services, Pak'nSave has experienced a surge in interest in the 2020 panic buying environment, as evidenced by the many different online entries that have been made into the web search engines. The top search terms between 1 March 2020 and 23 April 2020 were 'pak n save online shopping,' 'pak n save,' and 'paknsave online shopping.'

Conclusions

Regarding the original research question: "How to achieve a better social media listening and monitoring outcome for companies by using a social listening tool?", several lessons have become evident. When working with a long-term trend or crisis, social media data needs to be scanned especially after major public announcements. The analysis of the online trends during 2020 is still ongoing and there are still many avenues to be explored and questions to be discussed.

This case study has other limitations, e.g. data retrieved from Twitter and YouTube tends to lack geographical information. Future research needs to include the more specific regional analysis by finding or creating a social listening tool with functionalities that can verify the geographical aspects from the social media data.

In 2020, it is seen that panic shopping developed rather gradually. Pak'nSave has not necessarily responded by expanding its online shopping, but rather has reacted through price competition and price reductions (Dickinson, 2020). In the future, social media analysts should look closer, not only at already known concepts such as brand recognition, but also at how price competition plays out in social media posts and how effectively news such as promotions and sales may spread.

References

Anderson, L. S., Bell, H. G., Gilbert, M., Davidson, J. E., Winter, C., Barratt, M. J., ... Dasgupta, N. (2017). Using social listening data to monitor misuse and nonmedical use of bupropion: A content analysis.

JMIR Public Health and Surveillance, 3(1). https://doi.org/10.2196/publichealth.6174

BBC News. (2018). Walmart removes "Impeach Trump" apparel. BBC news. https://www.bbc.com/news/world-us-canada-44703873

Chen, E. (2020). COVID-19-TweetIDs. [Data Repository]. https://github.com/echen102/COVID-19-TweetIDs

Crawford, K. (2009). Following you: Disciplines of listening in social media. continuum, 23(4), 525–535. https://doi.org/10.1080/10304310903003270

Cuttica, P. (2016, March 17). Social media monitoring versus listening: Does It matter? https://www.cmo.com/opinion/articles/2016/2/26/social-media-monitoring-versus-listening-does-it-matter.html

Dickinson, P. (2020, May 6). Revealed: The supermarket with the highest number of price changes in April and May. https://www.newshub.co.nz/home/money/2020/05/revealed-the-supermarket-with-the-highest-number-of-price-changes-in-april-and-may.html

Erturk, E. (2009). International technology transfer: the case of free computer software. Proceedings of the International Academy of Business and Public Administration Disciplines (IABPAD) 2009 Winter Conference in Orlando, Florida.

Hopkins, Daniel J. and Gary King (2010), "A method of automated nonparametric content analysis for social science,"American Journal of Political Science, 54 (1), 229–47.

ICMI Research. (2013). Extreme engagement in the multichannel contact center. https://www.icmi.com/Resources/Research/2013-Extreme-Engagement-in-the-Multichannel-Contact-Center

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. Business Horizons, 54(3), 241–251. https://doi.org/10.1016/j.bushor.2011.01.005

Ladd, B. (2018). Trump supporters Vs. Walmart: Lessons learned from chain's "Impeach 45" PR crisis. https://www.forbes.com/sites/brittainladd/2018/07/05/donald-trump-supporters-vs-walmart-lessons-learned-from-walmarts-impeach-45-pr-crisis/#25d353f13791

Macandrew, R. (2018). Kiwi supermarket chain cuts cost of sanitary products in effort to tackle period poverty. http://www.stuff.co.nz/business/industries/105680280/kiwi-supermarket-chain-cuts-cost-of-sanitary-products-in-effort-to-tackle-period-poverty

Paine, K. D. (2011). Measure what matters: Online tools for understanding customers, social media, engagement, and key relationships. John Wiley & Sons

Patino, A., Pitta, D. A., & Quinones, R. (2012). Social media's emerging importance in market research. The Journal of Consumer Marketing; Santa Barbara, 29(3), 233–237. http://dx.doi.org.ezproxy.eit.ac.nz/10.1108/07363761211221800

Patrick, S. (2017). Why businesses should perform social listening: 2017 Survey | Clutch.co. https://clutch.co/agencies/social-media-marketing/resources/why-businesses-should-perform-social-listening-2017-survey

Schweidel, D. A., & Moe, W. W. (2014). Listening in on social media: A joint model of sentiment and venue format choice. Journal of Marketing Research, 51(4), 387–402. https://doi.org/10.1509/jmr.12.0424

Woodcock, N., Green, A., Starkey, M., & Framework™, T. C. (2011). Social CRM as a business strategy. *Journal of Database Marketing & Customer Strategy Management* , *18* (1), 50–64. https://doi.org/10.1057/dbm.2011.7