Open Access Indonesia Journal of Social Sciences

Journal Homepage: https://journalsocialsciences.com/index.php/OAIJSS

Analysis of Gojek's Brand Perception Utilizing Twitter Hashtag: Sentiment Analysis Using Ekman's Classification

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ARTICLE INFO

Keywords:
Brand perception
Ekman's classification
Product engagement
Sentiment analysis

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All authors have reviewed and approved the final version of the manuscript.

https://doi.org/10.37275/oaijss.v6i2.153

ABSTRACT

Advertisers constantly try to use different communication channels to approach consumers more effectively and promptly and increase their products' visibility and attractiveness. Gojek, an Indonesian ride-hailing and delivery company, uses hashtags as part of its marketing strategy on social media platforms such as Twitter and Instagram. This research aimed to analyze Gojek's brand perception using the Twitter hashtag. This research uses descriptive analysis and sentiment analysis using Ekman's classification of emotional expression algorithm. This research analyzed 813 tweets containing hashtags related to Gojek, an Indonesian ride-hailing and delivery company, including #AmanBersamaGojek, #Cerdikiawan, #JalanTerus, #PastiAdaJalan, and #SebelumGojek, to understand the sentiment and emotional tone of the tweets. Using Ekman's classification method for identifying and categorizing emotional expressions, the analysis found that the tweets were predominantly positive in sentiment, with surprise and joy being the most frequently expressed emotions. However, the research also identified a range of other emotions expressed in the tweets, including fear, sadness, disgust, and anger, indicating that Twitter users may have more complex and nuanced attitudes toward Gojek and its hashtags. In conclusion, Gojek may consider conducting additional research and implementing strategies to address negative emotions and better engage with its audience on social media to improve its brand perception on Twitter.

1. Introduction

The recent growth of mobile devices and the arrival of Web 3.0 have enabled users to effortlessly generate and distribute content via social network services, one of the most successful communication methods. Specifically, the widespread use of smartphones has enabled consumers to use social networks frequently and quickly.

Advertisers constantly try to use different communication channels to approach consumers more effectively and promptly and increase their products' visibility and attractiveness. Especially with groundbreaking technological advances, such as social media, have revolutionized how consumers and companies communicate and interact (Christodoulides, 2009). Consequently, the hashtag # symbol has emerged as a marketing tool allowing consumers to easily express their values (Oh, 2015), most frequently through social network platforms. Hashtag symbols precede keywords, which can be searched for a collective display of related information (Chae et al., 2015).

Gojek, an Indonesian ride-hailing and delivery company, uses hashtags as part of its marketing strategy on social media platforms such as Twitter and Instagram. Gojek uses hashtags to promote its

services, events, and campaigns and to engage with its customers and followers. Some examples of hashtags that Gojek has used in the past include #AmanBersamaGojek, #Cerdikiawan, #JalanTerus, #PastiAdaJalan, and #SebelumGojek. This research aimed to analyze Gojek's brand perception using the Twitter hashtag.

2. Literature Review

Hashtags could be a powerful branding and marketing strategy since they enable businesses to develop and engage in social media campaigns and conversations connected to their brand or sector (Omena et al., 2020). By utilizing pertinent hashtags, businesses may boost the exposure and reach of their content and engage a vast audience on social media platforms (Sukma et al., 2023). Hashtags also increase brand recognition and customer loyalty, enabling people to quickly locate and follow a company's social media activity (Luarn et al., 2015). Additionally, hashtags may be used to track marketing efforts' efficacy and get customer feedback and insights (Gow et al., 2022). Hashtags can be used in various ways in marketing, such as to promote events, products, or services, to create buzz around a brand, to engage with customers and build a community, or to gather user-generated content (Izatt et al., 2015). Companies can also use hashtags to track their brand's sentiment and engagement and identify influencers and key opinion leaders in their industry.

Previous studies reported that consumer interaction and brand-related user-generated content could lead to favorable brand-related outcomes (Algesheimer et al., 2005; Christodoulides et al., 2012). Another study discovered that social media sharing experience (e.g., being active on Twitter, Facebook, and Instagram) might increase online content-sharing intentions (Lee et al., 2012). Similarly, customers willing to be more actively connected with a company through hashtags will also be more likely to share the business's adverts on other social media platforms. Adding hashtags in commercials might be interpreted as an implied invitation for customers to share the advertisement on social media.

Hashtags were created in 2007 by Chris Messina, a social technology expert, aimed at online interactions and discussions regarding Barcamp on Twitter, a technology conference that spans worldwide (Park et al., 2020). In 2010, Twitter launched its "Promoted Trends" advertising product, allowing brands to increase their reach and engagement around focal branded hashtags campaigns. Hashtags quickly gained popularity on Twitter and spread to other social media sites, such as Instagram and Facebook. Today, hashtags are widely used to organize and discover information on social media and are frequently employed in marketing and branding campaigns to promote events, products, and campaigns (Shin et al., 2018). Hashtags are also used to monitor marketing efforts' effectiveness and reach and collect customer feedback and insights.

Gojek has utilized numerous hashtags on Twitter to promote its brand and interact with its audience. Gojek has used the hashtags #AmanBersamaGojek, #Cerdikiawan, #JalanTerus, #PastiAdaJalan, and #SebelumGojek in the past. These hashtags are frequently used in tweets about Gojek's services, promotions, and other updates, and they are intended to assist users in discovering relevant information and engaging with the brand. Gojek's use of hashtags on Twitter is an integral aspect of its marketing strategy and increases the target audience's knowledge of the firm and its offers. By utilizing a variety of hashtags, Gojek can engage with a more significant number of users in a more personalized and focused manner.

Ekman's classification model is a technique for classifying and distinguishing various emotional expressions (Barrett et al., 2019). This approach was developed on the premise that there are universal facial expressions that correlate to specific emotions. According to Ekman's classification, there are six generally recognized fundamental emotions; anger,

disgust, fear, joy, sadness, and surprise. It is believed that certain emotions are naturally and culturally universal, meaning they are recognized and expressed by humans everywhere. Ekman's classification method employs techniques to recognize and classify emotional emotions. It can be accomplished using specialist software or manually by qualified researchers. The approach is a reliable means of recognizing and classifying emotional expressions in the context of emotion research.

3. Methods

This research uses descriptive analysis and sentiment analysis using Ekman's classification of emotional expression algorithm. This research was conducted in three steps. It collects data from Twitter using Octoparse, preprocessing text, and modelling using orange data mining. Twitter has implemented precautions to prevent the scraping of its data, but Octoparse can be used to crawl and extract data from Twitter. Using Octoparse's visual point-and-click interface may develop custom scrapers to extract data from Twitter. Octoparse will crawl the chosen Twitter profile or hashtag and extract the data based on the user's criteria. The collected data can then be exported in various forms, including Excel, CSV, or JSON, and imported into other tools or software for additional analysis. The research could collect data from Twitter by using Octoparse to search for and gather the hashtag from Twitter that contain keywords related to Gojek's hashtags, including #AmanBersamaGojek, #Cerdikiawan, #JalanTerus, #PastiAdaJalan, and #SebelumGojek.

Based on data obtained from Octoparse, there are six main variables used, including; author_name (the screen name of the user), tweet times (time and date that the tweet was posted on Twitter), tweet_content true (the actual text of the tweet, which can include up to 280 characters), the keyword (a word or phrase that is used to represent the main subject or theme of a piece of content), tweet_number_of_like (a metric that reflects the number of likes that a tweet has received on Twitter), tweet_number_of_retweet (a metric that reflects the number of times a tweet has been retweeted on Twitter).

The collected data was analyzed using quantitative and qualitative methods. For the quantitative analysis, statistical software could identify trends and patterns in the data, such as the frequency of specific keywords or the sentiment expressed in tweets. For the qualitative analysis, the tweets could be coded and analyzed manually using Ekman's classification method to identify and categorize the emotional expressions they contain.

The sentiment analysis stage preprocessing phase consists of process steps that must be completed prior to evaluating the topic being examined further (Nandwani et al., 2021). Thus, the already-collected data will be processed to reduce unnecessary noise. The preprocessing approach eliminates stopwords, lexicon, numerals, and regular expressions. During the transformation process, eliminate the accent side, HTML content, and URLs. The data preparation procedure likewise employs an n-gram range of two to three words and adds the Porter-Stemmer model to the normalization procedure.

4. Results and Discussion

As shown in Figure 1, 813 tweets were collected and analyzed to assess the brand perception of Gojek using Twitter hashtag data in this research. The tweets were collected between August 2018 and January 2023 and consisted of 414 tweets from the hashtag #JalanTerus, 307 tweets from the hashtag #PastiAdaJalan, 40 tweets from the hashtag #AmanBersamaGojek, 29 tweets from the hashtag #SebelumGojek, and 22 tweets from the hashtag #Cerdikiawan.

The #JalanTerus hashtag was the most commonly used, with 414 tweets representing 51% of the total dataset. This hashtag was likely used in marketing campaigns or events related to Gojek and may have

been used to promote the brand and engage with customers. The #PastiAdaJalan hashtag was the second most commonly used, with 307 tweets representing 38% of the total dataset. This hashtag may have been used similarly to #JalanTerus and may have been used to promote the brand and engage with customers.

The #AmanBersamaGojek hashtag was used in 40 tweets, representing 5% of the total dataset. This hashtag may have been used to promote the safety and reliability of Gojek's services and may have been targeted toward a specific audience or market segment. The #SebelumGojek hashtag was used in 29 tweets, representing 4% of the total dataset. This hashtag may have been used to highlight the benefits of using Gojek's services and may have been used to compare Gojek to other transportation options. The #Cerdikiawan hashtag was used in 22 tweets, representing 3% of the total dataset. This hashtag may have been used to promote Gojek's brand values or to engage with a specific audience.

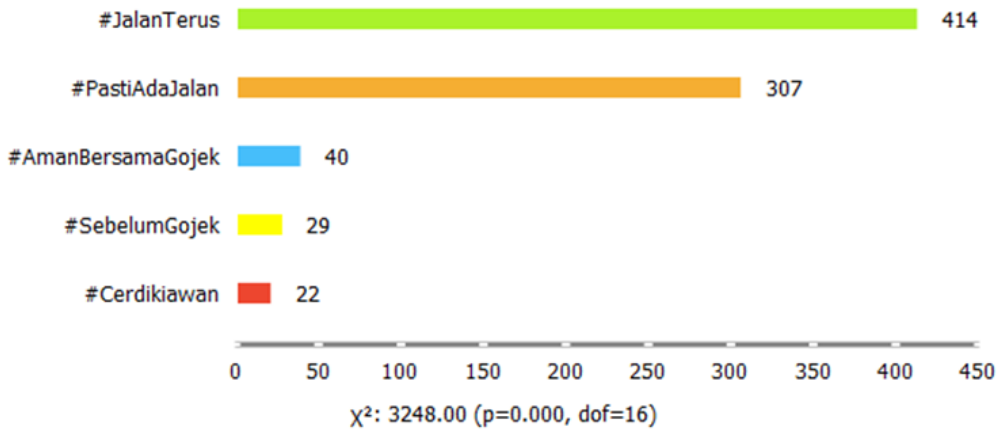

Figure 1. Distribution of data.

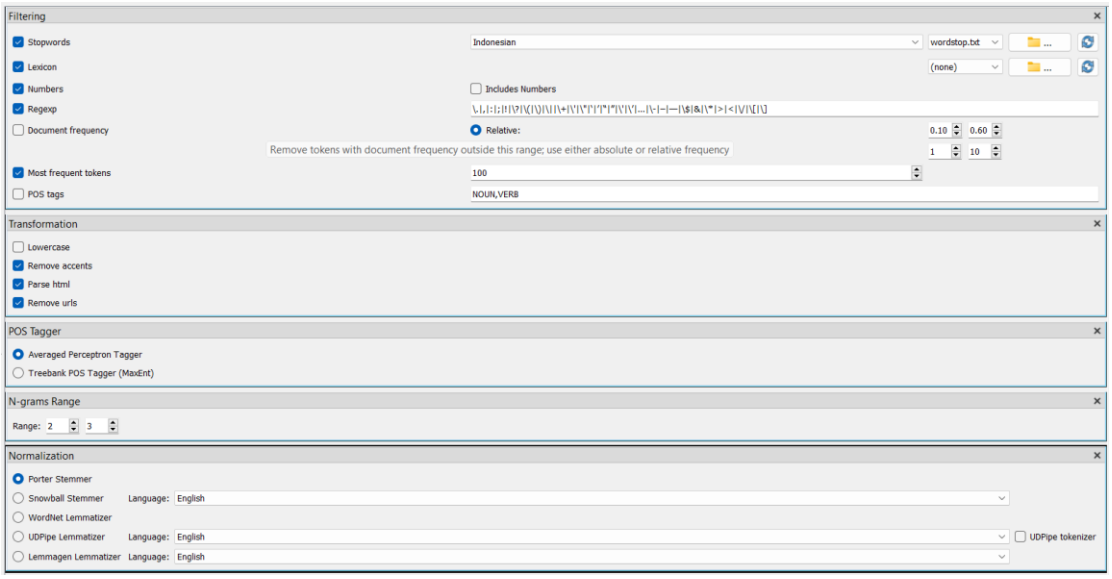

Figure 2. Preprocessing data using orange data mining.

The sentiment analysis phase of a research project involves assessing the sentiment or emotion expressed in a text, such as a tweet or social media post. It is often required to preprocess the data to eliminate noise and prepare it for future analysis to determine the text's sentiment accurately. The preprocessing phase of sentiment analysis consists of cleaning and organizing the data in preparation for analysis (Figure 2). One of the initial tasks in the preprocessing phase is to remove stopwords, common words such as "dan" or "atau" that do not carry much meaning and can impede the analysis. Other procedures in the preparation phase involve removing lexicon, domain- or industry-specific words that a broader audience may not comprehend, and numerals and regular expressions, which may not be necessary to the research. In addition to these procedures, the pretreatment phase may involve altering the data to remove any accent marks, HTML content, or URLs that may be present. The data may also be standardized using n-gram analysis, which divides the text into word sequences, and the Porter-Stemmer model, which simplifies the analysis by reducing words to their root form.

Figure 3. Word cloud as the result of preprocessing data.

The word cloud demonstrates that the Twitter data used in this research has undergone a preprocessing step to remove irrelevant or extraneous information, enabling more accurate sentiment analysis. The word cloud shows that the Twitter data used in this analysis has been carefully cleaned and filtered to eliminate noise and improve the accuracy of the sentiment analysis. The word cloud reveals that the Twitter data used in this research has been purified of various types of noise, resulting in more precise sentiment analysis.

This research examines tweets' emotional expressions, including hashtags relevant to the Indonesian ride-hailing and delivery service Gojek using Ekman's classification approach. #AmanBersamaGojek, #Cerdikiawan, #JalanTerus, #PastiAdaJalan, and #SebelumGojek were among the hashtags studied.

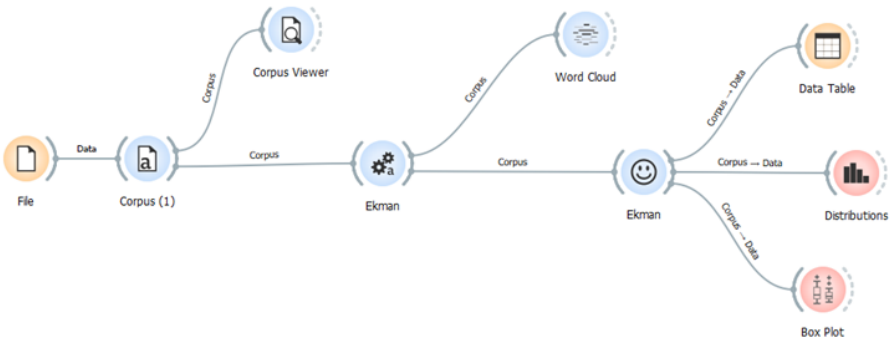

Figure 4. The step using Ekman's classification in orange data mining.

The application of Ekman's classification method in this research enabled a systematic investigation of the emotional content of the studied tweets (Figure 4). By categorizing the tweets into one of the six fundamental emotions described by Ekman, it was better to grasp the mood and emotional tone of the tweets and find patterns and trends in the emotional expressions utilized.

	Author_Name	Tweet_Times	Tweet_Content True	keyword	Tweet_Number_of_Likes	Tweet_Number_of_Retweets	Tweet_Number_of_Reviews	Emotion
1	gojekindonesia	2022-10-3 11:15:1	Dari: MiminUntuk KamuJangan was-wa...	#AmanBersama...	50	9	17	Joy
2	wordfangs	2020-03-1 11:4:58	PS: gue bukan ahli tapi ya intinya logik...	#AmanBersama...	145	6	11	Joy
3	gojekindonesia	2022-08-2 11:30:2	Spill dong, gaes~handphone kamu pak...	#AmanBersama...	77	7	24	Surprise
4	mirgasoeprapto	2020-03-20 13:26:48	Kalian diem aja dirumah, kita yang kerj...	#AmanBersama...	46	24	3	Surprise
5	TeukuParvinanda	2020-03-19 6:56:20	#dirumahaja tapi kalaupun harus beper...	#AmanBersama...	7	8	4	Surprise
6	dwikimic	2021-11-30 11:20:59	Sering lupa pin dan password buat logi...	#AmanBersama...	29	2	3	Joy
7	duanotic	2020-03-6 12:46:6	As one of the writer, I am proud that m...	#AmanBersama...	5	1	0	Fear
8	gojekindonesia	2022-08-24 3:3:1	[GIVEAWAY] JANJI GAK KAGET?!A...	#AmanBersama...	688	573	907	Joy
9	infoPKU	2020-04-17 5:11:33	Gojek Pekanbaru dan Disperindag Kota...	#AmanBersama...	8	2	2	Joy
10	gojekindonesia	2022-05-27 11:21:58	Tenang dan aman karena Gojek menye...	#AmanBersama...	41	2	7	Fear

Figure 5. The samples of the result of Ekman's classification of emotional expressions.

This research analyzed 813 tweets that contained hashtags related to Gojek using Ekman's classification (Figure 5). The analysis showed that the tweets were predominantly positive in sentiment, with surprise being the most frequently expressed emotion, followed by joy. In total, 358 tweets expressed surprise, while 326 tweets expressed joy. These findings suggest that Twitter users had a generally positive perception of Gojek's hashtags and that the tweets were characterized by emotions such as surprise and joy. However, it is essential to note that the research also identified a range of other emotions expressed in the tweets, including fear, sadness, disgust, and anger. In total, 91 tweets expressed fear, 24 expressed sadness, nine expressed disgust, and four expressed anger (Figure 6).

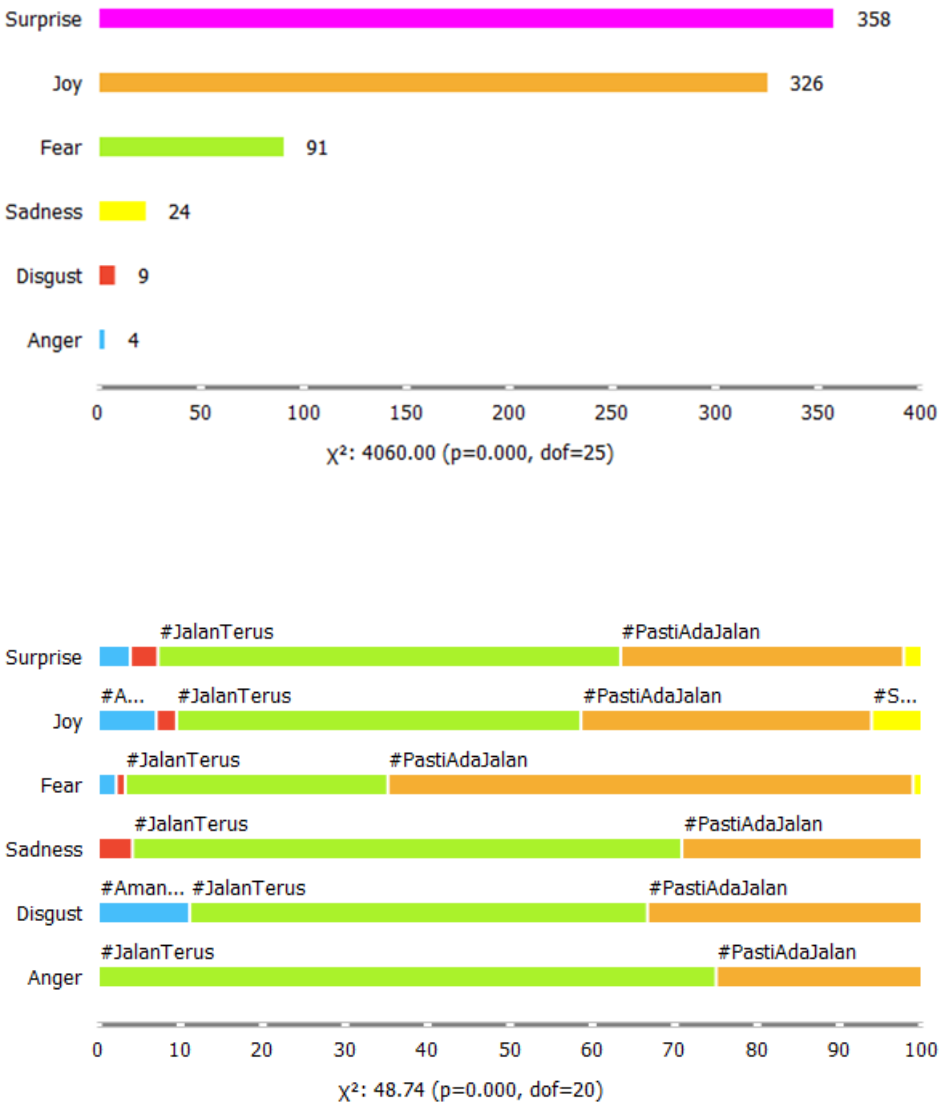

Figure 6. Distribution of Ekman's classification.

The findings of this research align with a previous study that found that tweets about Gojek on Twitter were predominantly positive in sentiment (Syahputra et al., 2020). Therefore, these findings give helpful insights into the perspective and emotional tone of the studied tweets and imply that Twitter users interpret Gojek's hashtags favorably. However, various additional emotions in the tweets suggest that Twitter users may have more complicated and nuanced perspectives regarding Gojek and its hashtags. This information may be used to enrich and improve Gojek's marketing strategies on social media and better understand the requirements and preferences of its consumers. By gaining knowledge of these aspects, Gojek can focus its marketing efforts more precisely and increase the overall effectiveness of its campaigns.

5. Conclusion

Based on the analysis of 813 tweets containing hashtags related to Gojek, an Indonesian ride-hailing and delivery company, it appears that Twitter users

generally have a positive perception of Gojek and its hashtags. The tweets were predominantly positive in sentiment, with surprise and joy being the most frequently expressed emotions. However, it is essential to note that the research also identified a range of other emotions expressed in the tweets, including fear, sadness, disgust, and anger. Twitter users may have more complex and nuanced attitudes toward Gojek and its hashtags.

In order to improve its marketing strategies using hashtags on Twitter, Gojek may want to consider conducting additional research to understand better the emotions and sentiments being expressed concerning its brand. It could involve collecting and analyzing a larger dataset of tweets or using additional methods for analyzing and interpreting the data. Gojek may also consider implementing strategies to address any negative emotions or sentiments being expressed or to better engage with their audience on social media. By gaining a deeper understanding of the emotions and sentiments of its audience, Gojek can more effectively tailor their marketing strategies and improve its brand perception on Twitter.

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