

**Sentiment and Opinion Leadership Analysis of Social Media Conversation Surrounding  
the China Trade Agreement**

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### **Introduction/Need for Research**

Social media platforms are an integral component of how the public consumes news due to the gatekeeping power of social media content creators (Presuel & Martinez, 2019). Research has found that one-third of adults prefer to get their news online, and that one-in-five access news specifically through social media platforms (Geiger, 2019). Farmers and ranchers are increasing their use of social media for news, with about half using platforms like Facebook, YouTube, and Twitter (American Business Media Agri Council, 2018). The trade war between the United States and China has been closely watched and the focus of online news discourse since 2017 (Wong & Koty, 2020). Because of retaliatory tariffs imposed by other countries, agricultural trade with China has been negatively impacted, and farm production costs have risen (Chinn & Plumley, 2020). There is a need to better understand what is being communicated about trade and who is curating content. This study ties into the research priority area one of the AAAE National Research Agenda, which is the public and policy-maker understanding agriculture and natural resources (Roberts et al., 2016).

### **Conceptual or Theoretical Framework**

The conceptual framework that guided this study was sentiment analysis and opinion leadership. Sentiment, the general and polarized opinion an individual has regarding a topic, is important because individuals care about their social network's opinion, especially regarding topics the individual is uncertain about. Sentiment analysis allows for the observation of how opinions are expressed online (Ceron et al., 2014). Opinion leaders have the ability to shape public opinion by selectively creating and sharing messages within their social networks (Bobkowski, 2015).

Opinion leaders, who are identified as having more knowledge on a topic than a non-opinion leader, may mediate information in the two-step flow of communication from the media to the public (Choi, 2015). Very few studies have focused on opinion leaders' discussion of trade policy or a specific trade agreement on Twitter; this study hoped to add to the body of literature.

### **Purpose and Objectives**

The purpose of this study was to describe Twitter conversations about trade in specific relation to the ongoing trade war with China. The following research objectives guided the study:

1. Describe the trending themes guiding Twitter conversation.
2. Determine the percentages of positive, negative, and neutral sentiments within messages about the China trade agreement on Twitter.
3. Determine the potential social reach and volume of China trade agreement content on Twitter.
4. Identify top accounts on Twitter disseminating content about the China trade agreement.

### **Methodology**

Meltwater, a social media monitoring tool, was used to conduct a descriptive, quantitative analysis for this study. Data collection dates of June 28, 2019, to January 18, 2020, were selected due to their relevance to the China trade agreement; on June 28, 2019, President Trump and President Xi Jinping met to discuss trade relations at the G20 Summit (Swanson & Bradsher, 2019), and on January 15, 2020, the United States and China signed phase one of the trade deal

(Wong & Koty, 2020). The keywords “trade,” “China,” and “ag” were entered into Meltwater. The monitoring tool accessed all relevant social media posts, and posts were analyzed in widgets provided by Meltwater. To ensure credibility, protocols from previous Meltwater studies were followed closely; to ensure trustworthiness, multiple validity procedures were implemented (Creswell & Creswell, 2017).

### Results

#### **RO1: Describe the trending themes guiding Twitter conversation.**

Top trending themes were words most commonly found when the keyword search was completed. Meltwater identified 10 top terms during the specified search dates. Listed in order from most common to least, themes identified were: trade, ag products, taxpayers, emergency ag payouts, spent \$39B, 29B from pre-tariff, napkin math, nice work, China, and ag sales.

#### **RO2: Determine the percentages of positive, negative, and neutral sentiments within message about the China trade agreement on Twitter.**

Meltwater used natural language processing (NLP) to label messages as positive, negative, or neutral; NLP involves using a text classification algorithm to determine a positive or negative score based on the words found in each tweet analyzed. Of the 21,352 tweets analyzed via the specific search parameters, 9.7% of posts were positive, 49.5% of posts were negative, and 40.8% of posts were neutral toward the trade agreement.

#### **RO3: Determine the potential social reach and volume of climate change content on Twitter.**

Potential social reach was a measure of potential viewers of the social media content, and social volume was the number of posts about the trade agreement. Both social volume and social reach remained under 3,000 and 23 million, respectively, except for two spikes in December 2019 and January 2020. Potential social reach and social volume followed each other when spikes were exhibited in each.

#### **RO4: Identify top accounts on Twitter disseminating content about climate change.**

Meltwater identifies top accounts to be the social media accounts that posted and had the greatest potential social reach. Ten accounts were identified based on the specified search dates; most were news organizations and political figures.

### Conclusions, Implications, and Recommendations

The top themes identified by Meltwater all revolved around agriculture, agricultural marketing, and taxes. Nearly half of social media posts coded for sentiment were neutral, which could be due to a large number of top accounts being news outlets that are attempting to remain objective. Social volume, the volume of posts relating to the trade agreement, spiked on December 13, 2019, and January 15, 2020; these spikes can be attributed to the “Phase one” agreement between the United States and China being announced and completed, respectively. Social reach, measure of potential viewers of Twitter content relating to the trade agreement, had a slight spike on December 13, 2019, and then a significant spike on January 15, 2020.

Within the specified search dates, Meltwater collected more than 21,000 social media posts and identified the top ten accounts posting about the trade agreement. The accounts identified were news organizations and political figures, indicating that conversation is not being driven by one individual as opinion leadership research indicates. For agricultural communicators, having a better understanding of the presence, or lack of, opinion leadership on social media platforms can aid in the development and implementation of strategic communications tactics on topics like trade relations and other agricultural issues. Future research should be conducted to analyze sentiment and top accounts as the U.S. and China continue to navigate trade relations; other opportunities for research include analyzing the sentiment and perceptions of legislation and trade policy related to agriculture.

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