

Title: Insights into Reshoring from Big Data Visualization of Social Media Posts

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Abstract: Data visualization is a powerful tool for conveying information in an easy to understand format. One potential application is in the topic of reshoring, which is the act of reintroducing domestic manufacturing. Reshoring, American manufacturing, and Made in the USA are hot topics in academia, industry, and popular press. These topics are relevant in 2018, as location manufacturing decisions affect the supply chain, total costs of production, and consumer perceptions. Big data are being produced on social media and can be analyzed using data visualization to lead a more thoughtful discussion about the reshoring phenomenon. The purpose of this study was to apply data visualization techniques to social media posts and responses on reshoring discussions. The context data are visualized using time, source type, and geographic analyses, and the content data are visualized by activity in social media, theme, sentiment, and author engagement analyses. Among key findings were discussions about U.S. reshoring activities are taking place in 140 countries and the term ‘reshoring’ is rarely used in social media posts. This study offers an example of the application of big data visualization.

Key Words: Data visualization, Social media, Big data, Reshoring, Made in the USA, American manufacturing

1. Reshoring Confusion

There is a potential renaissance for all sectors of U.S. manufacturing as firms are reconsidering their offshoring and outsourcing strategies (Hartman, Ogden, Wirthlin, and Hazen, 2017). In general, there has been a global decline in offshoring and outsourcing practices (Margulescu & Margulescu, 2014), and an increase in reshoring practices and reemergence of American manufacturing (Moradlou & Backhouse, 2017; Pearce, 2014); this has prompted numerous studies on reshoring (e.g., Hartman *et al.*, 2017; Moradlou & Backhouse, 2017).

One potential source of confusion when reading reshoring studies is the language used. Researchers of reshoring studies vary in their terms for and definitions of reshoring. For example, the terms reshoring (e.g., Ellram, Tate & Petersen, 2013; Gray, Skowronski, Esenduran, & Rungtusanatham., 2013; Tate, 2014), onshoring (Kazmer, 2014), backshoring (Arlbjorn & Mikkelsen, 2014), back-reshoring (Fratocchi *et al.*, 2016), nearshoring (Ellram, *et al.*, 2013), reverse offshoring (Edgell, Meister, & Stamp, 2008), and foreign direct investment (Reshoring Initiative, 2017) are a few of the terms being used for the phenomenon of reshoring. The definitions for reshoring are also different. Tate, Ellram, Schoenherr, and Petersen (2014) define reshoring as “the relocation of manufacturing facilities from traditional offshore locations to more attractive offshore locations, or even home to the United States” (p.381). In contrast, the Reshoring Initiative

(2017) defines reshoring as “the practice of bringing manufacturing and services back to the U.S. from overseas” (p. What is reshoring?). The potential confusion caused by the differences in terms and definitions is not isolated to discussions in academia.

Reshoring related conversations are also occurring in companies, the popular press, and across the political spectrum (Hartman *et al.*, 2017; Grappi, Romani, & Bagozzi, 2015). These conversations use terms such as reshoring, American manufacturing, and Made in the USA. These different terms create an impediment to our ability to study the attitudes and opinions about reshoring.

Analyzing social media posts is one way to study the attitudes and opinions of politicians, companies, and the general public. Interactions on social media have been analyzed in marketing and management studies (e.g., Mangold & Faulds, 2009; Malhotra, 2015), but far fewer analyses of social media interactions were found in the supply chain management literature. The current study aims to fill a gap in the literature on the analysis of social media to understand the reshoring discussions occurring between government officials, companies and the general public.

2. Importance of Social Media

The analysis of social media posts concerning reshoring requires a pluralistic approach, as the information is both qualitative and quantitative in nature. Qualitative information can be particularly beneficial for exploratory research such as is being conducted in the current study (Touzani, Fatma, & Mouna Meriem, 2015). One example of qualitative information is the choice of search terms based on the literature and popular press. Quantitative information consists of data such as demographic information about authors, lengths of exchanges, number of mentions of themes, and sentiment analysis which attempts to automatically determine the attitude present in the text of social media posts. Social media data is secondary data which is growing in relevance and application for research in purchasing and supply management (Ellram & Tate, 2016), however, such data needs context. Social media audience analysis, as used in the current study, is one way to provide context.

Traditional social media audience analysis provides data on consumers who are talking about or with a specific company about a topic (Henrich & Lang, 2017). By broadening the definition of audience, this analysis can include data on any person or organization discussing any topic. Social media analysis as a whole can be relevant for understanding the attitudes and opinions towards topics, and social media audience analysis can aid in offering context for these opinions (Henrich & Lang, 2017). Context can consist of segments of the authors of social media posts by location, demographics, account types and a few other variables (Henrich & Lang, 2017).

3. Research Questions

The current study addresses three questions:

Research question 1: What is the context surrounding social media posts on reshoring?

Research question 2: What is the quantitative and qualitative nature of the content in social media posts pertaining to reshoring?

Research question 3: How effective was this method for gathering and visualizing social media posts on reshoring using IBM Watson Analytics products?

4. Methodology

IBM Watson Analytics for Social Media™ (WASM) is a software tool used for collecting, analyzing, and visualizing social media data. WASM needs search parameters before data collection can begin. WASM Topics are the keywords and themes are subtopics and related words. WASM uses lists of inclusion terms, exclusion terms, and context terms to further refine the topics of interest. WASM permits retrieval and analysis of social media posts in seven languages. For this study, English was the only language used.

There are seven sources of data for IBM Watson Analytics for Social Media™: Twitter, Forums, Reviews, Facebook, Videos, Blogs, and News. All information retrieved from these sources are public posts on social media. WASM selects a random sample of 10% of the Tweets on Twitter that contain the topics of interest. Forums are public message boards and forums. Reviews are various review sites. The Facebook functionality is in beta form. WASM pulls data from Facebook pages of the top 10 industries and requested pages. Videos are comments posted to video sites. Blogs are web pages or sites regularly updated with informal posts and subsequent comments. News are major news sites and news wires. The current study used all of these sources.

For the purpose of this study, the Topics used for searching IBM Watson Analytics for Social Media™ were *Reshoring, Made in the USA, American manufacturing, Onshoring, Backshoring, and American made*. The context terms used were *manufacturing, manufacture, made, produce, production, source, and sourcing*. Due to a celebrity hashtag event, some terms were excluded as these were not relevant to the Topics. The Themes used for the research were the same as the Topics in order to ensure that the specific wording was maintained throughout the entire processes of data collection, analysis and visualization. In the current study, “reshoring” is the term used to encompass the results of the searches.

In addition to using IBM Watson Analytics for Social Media™ (WASM), the current study used IBM Watson Analytics™ software. IBM Watson Analytics™ is a data analysis and visualization tool that uses artificial intelligence for suggestions of additional lines of inquiry.

5. Results

5.1 Context

5.1.1 Time Analysis

Due to a potentially large amount of data, the dates for the current study were limited to January 1, 2017 to March 31, 2017. This time encompasses the first quarter of 2017. Figure 1 illustrates the mentions of reshoring related topics over time for the period January 1, 2017 to March 31, 2017. Mentions are references to Topics within posts. The number of mentions of reshoring are relatively stable over time, except for a salient spike on January 24, 2017. This was the first Tuesday after the Inauguration of President Donald Trump. On Monday, January 23, 2017, President Trump announced that the United States would leave the Trans-Pacific Partnership. A portion of the spike may be due to this event.

[Insert Figure 1 about here]

5.1.2 Source Type Analyses

The number of mentions varied across source types. Table 1 shows the number and percentage of mentions. Videos and Forums combined accounted for 49.54% of the total mentions across sources. Reviews at 4.60% and Facebook at 0.84% had the fewest mentions.

[Insert Table 1 about here]

5.1.3 Geography Analyses

Using the search parameters specified for WASM, there were 78,815 total documents with 85,347 total mentions for the reshoring related topics for the period of January 1, 2017 to March 31, 2017. Documents are posts. Mentions are references to the topics within posts. Most of these mentions of reshoring related topics came from the United States, totaling 12,360 mentions. Additionally, there were high numbers of mentions from Canada, Brazil, Russia, and China. In total, roughly 140 countries had reshoring related posts. The map in Figure 2 depicts reshoring related social media authorship from countries around the world. The darker shading indicates a higher geographic concentration of authors. There were some countries where there were no authors of reshoring related content on social media. The use of Topics such as Made in the USA probably contributed to the high number of authors in the United States. Of the roughly 140 countries with unique authors, only 34 had 10 or more unique authors.

[Insert Figure 2 about here]

These results suggest that the reshoring phenomena is discussed globally. This agrees with studies conducted on reshoring in the United States (Ellram *et al.*, 2013), the United Kingdom (Bailey & De Propriis, 2014), Spain (Martinez-Mora & Merino, 2014), Germany (Kinkel, 2012), and Northern Europe (Gylling, Heikkila, Jussial, & Saarinen, 2015).

Figure 3 shows the analysis of conversation size by author country. Conversation size is the overall total posts within a conversation thread. The bar chart in Figure 3 shows that reshoring related posts in Bangladesh create very large sized conversations on social media. Reshoring related posts in Columbia, China, Netherlands, Argentina, and the United States have the next largest conversation sizes.

[Insert Figure 3 about here]

5.2 Content

5.2.1 Activity in social media

The qualitative content of social media posts indicates whether a post was from a company or an individual. Table 2 includes examples of qualitative content from public social media posts. An analysis of author influence scores showed that companies or causes were the most influential. WASM calculates the author influence score from the number of posts and the number of people responding to those posts.

[Insert Table 2 about here]

The most influential authors for the video source were users named Donald J. Trump for President, SwimOutletGear, and Trailers 123.com. The topic of reshoring was used for both political cause, such as the election, and for company advertisements. Donald J. Trump for President posted the most influential video. This video source had one video posted with 393 engagements during the time period of January 1, 2017 to March 31, 2017. Engagements are a count of the author's post, the responses, and author's response to the responses. Many social media users were companies posting about Made in the USA as a product attribute. For example, the SwimOutletGear posted 385 videos during

the searched time period. Of these 385 videos, zero had active engagements. Regarding the popular press, 19 news organizations had 50 to 170 posts about reshoring related topics. Examples of news organizations included Mil Tech, The Outdoor Wire, Yahoo! Finance, The Washington Post, Business Insider, and Business Wire. News organizations posted multiple times, such as the 112 postings from Yahoo!Finance pertaining to reshoring.

In addition to political, company and news posts, there were social media posts from individuals promoting Made in the USA products. For example, the Twitter account USA Love List was the second most influential twitter author. This account had over 14,800 followers. During the time period of January 1, 2017 to May 31, 2017, this user posted 102 tweets with 63 engagements.

5.2.2 Theme Analyses

The terminology used for Topics is the same as used for themes when searching WASM. Table 3 shows the total mentions by topic/theme. Almost half (45.74%) of the Topics and Themes mentioned were *Made in the USA*. *American Made* was 30.34% of the mentions. *Reshoring* was only 1.52%, and *Onshoring* was only 0.23% of the total reshoring related mentions on social media between January 1, 2017 and March 31, 2017. There seems to be a preference among social media users for the terms *Made in the USA* and *American Made*. Among the terms found in the academic literature, *Reshoring* was the favorite on social media. [Insert Table 3 about here]

In Table 3, the Other category was 3.73%. When mentions contain Themes or Topics but not context terms, the mention is classified as Other. In this case, *Backshoring* is not listed on the WASM theme output. *Backshoring* may or may not be a part of the 3.73% of unaccounted for mentions.

5.2.3 Sentiment Analyses

WASM uses textual emotion detection and artificial intelligence to determine the sentiment of the social media posts (Gundecha, 2016). WASM leverages training, featuring selection, diverse classifiers, lexicon/word detection, emoticons, emoji, and slang to attempt to determine the sentiment (Gundecha, 2016). Table 4 displays the results of the Sentiment analysis for the current study. Mentions are positive, ambivalent, neutral, and negative. Almost half (49.11%) of the total mentions of reshoring related terms were positive. Only 6.90% of the total mentions were ambivalent. For the dates, January 1, 2017 to March 31, 2017, 33.90% of the Social Media posts were neutral. Only 10.08% of the total social media mentions of reshoring related terms were negative. [Insert Table 4 about here]

There has been little research into the sentiments associated with reshoring. According to a 2015 study by Grappi *et al.*, the sentiments of gratitude, righteous anger, and ethnocentrism impacted consumers' willingness to pay for reshored products. In their study, as companies reshored, consumers were positive about the reshoring decision, wanted to reward reshoring companies, and perceived reshoring actions from those companies as benevolently motivated (Grappi *et al.*, 2015).

5.2.4 Author Engagement Analyses

Figure 4 is an image from IBM Watson Analytics™ of conversation size compared to type. The types are posts, replies and shares. Unique posts occurred the least, while shares and replies occurred more frequently. The conversation size by type is 31.65 for

shares, 12.24 for replies, and 0.99 for posts. For every single post of reshoring related material, there is an average of 31 shares and an average of 12 replies. This implies that social media users are more apt to share reshoring related materials, rather than post or reply to reshoring related material.

[Insert Figure 4 about here]

Figure 5 is an image of the classification of Author Engagement by Sentiment from IBM Watson Analytics™. Author engagement is calculated by counting the number of times people post or respond to an author and the number of times the authors responds to them. Based on Figure 5, posts with a neutral sentiment with regards to reshoring had the highest average for author engagement. Posts with negative and positive sentiment had the next highest averages, with negative being slightly higher. Those with ambivalent sentiment had the lowest average level of author engagement. One inference could be made that there were many mentions with a positive sentiment by users who were not as actively engaged. There were fewer neutral and negative sentiment mentions, however, these users had a higher average engagement.

[Insert Figure 5 about here]

Table 5 shows the relationship between author engagement and themes. Based on this analysis, those authors who used the term *American made* had the highest level of engagement followed by those who used the term *Made in the USA*. Those authors who used the term *Reshoring* were the least engaged, excluding Onshoring.

[Insert Table 5 about here]

6. Conclusions, Limitations and Future Research

The conceptual framework for academic research in reshoring is still in development (Tate, 2014; Fratocchi *et al.*, 2016; Tate & Bals, 2017; Wiesmann *et al.*, 2017). This study leveraged IBM Watson Analytics for Social Media™ and IBM Watson Analytics™ to conduct an exploratory study of secondary data for reshoring and related terms: *reshoring*, *Made in the USA*, *American manufacturing*, *American made*, *onshoring*, and *backshoring*. The results were presented based on context and content. The context was illustrated using time, source type, and geography analyses, and the content was presented by activity in social media, theme, sentiment, and author engagement analyses.

Regarding context, the dates for this search were limited to January 1, 2017 to March 31, 2017, encompassing the first quarter of 2017. It should be noted that in American politics, this time period contained the transition between President Barack Obama and President Donald Trump. During this time period, there was a difference in the number of mentions of reshoring related terms based on social media source with Videos and Forums accounting for approximately half of the total mentions. There were posts from roughly 140 countries that contained reshoring related terms. However, only 34 of these countries had 10 or more unique authors. Bangladesh, Columbia, China, Netherlands, Argentina, and the United States tended to have larger conversation sizes compared to the other 140 countries. Thus, this research presents information from regions of the world that are currently under-represented in reshoring related academic literature.

Analysis of the content of posts revealed that political social media users, companies, news organizations, individuals, and users devoted to promoting Made in the USA products, were all discussing reshoring related topics. Of the keywords or Topics used, *Made in the USA* constituted half and *American manufacturing* was 30% of the total

mentions of reshoring related topics. The term ‘reshoring’ is rarely used in social media posts. Regarding sentiment, almost half of the reshoring related posts were positive and 10% were negative. Many mentions with a positive sentiment were by users who were possibly not actively engaged. There were fewer neutral and negative sentiment mentions, however, those users had a higher average engagement. Social media users were more apt to share reshoring related materials than post or reply to reshoring related material. Those who use the term *American made* had the highest level of engagement followed by those who use the term *Made in the USA*. To the best of the researchers’ knowledge, this is the first study of reshoring involving author engagement.

The current study could potentially serve as one baseline for future social media analyses of reshoring. This study provides evidence for many of the claims in the reshoring related literature regarding the lack of consistency of reshoring terminology and concepts. This study offers application of the concepts being discussed in the academic literature of reshoring to the consumer and social media conversations. For example, the current study provides evidence of the extent of the global nature of reshoring based on number of mentions analysis and unique authorship analysis. This offers real-world insights into the societal conversations, pertaining to reshoring practices occurring in the general population, that may be of interest to supply management professionals. In brief, this exploratory study reinforces that reshoring related topics are varied, and precision is necessary in this field of study.

Advantages of the proposed method include easily obtaining large sample sizes, easily modifying search parameters despite loosely defined reshoring boundaries, incorporating and comparing reshoring terminology across stakeholders into singular analyses, and generating easily understood pictorial and graphical representations of the data. Disadvantages of this method include the need for consistent reshoring terminology, limitations in inference capabilities, and the introduction of noisy data. Businesses may want to cautiously consider implementing the proposed method when evaluating reshoring sourcing strategies to gain insights into support or opposition for reshoring.

In 2018, the ubiquitous discussion about reshoring related topics makes it approachable to most audiences. Big data are being produced on social media and can be analyzed using data visualization in order to lead the way in a more thoughtful discussion about the reshoring phenomenon. This study offers an example of the application of big data visualization to answer questions that are being considered in industry and academia.

The results of this study may have been different depending on the terms included as Topics. The limitations of the current study include a focus on public social media posts in the English language for the first quarter of 2017. The time period of this study was limited to January 1, 2017 to March 31, 2017 (the first quarter of 2017). The transition between President Barack Obama and President Donald Trump in American politics may have had an impact on the volume and variety of the data accessed by WASM. The terms *American made*, *American manufacturing*, and *Made in the USA* along with the limitation of the English language, created a bias towards social media posts from the United States.

Given the discrepancy between the frequency of the terms used in the popular press and terms used in the academic literature for reshoring related topics, there is an opportunity to investigate further separation based on these two types of terms. Further research into differences between source types may be insightful as well.

References

- Arlbjorn, J. & Mikkelsen, O. (2014), Backshoring manufacturing: Notes on an important but under-researched theme., *Journal of Purchasing & Supply Chain Management*, 20, 60-62.
- Bailey, D., & De Propriis, L. (2014). Manufacturing reshoring and its limits: The UK automotive case. *Cambridge Journal of Regions, Economy and Society*, 7(3), 379-395.
- Edgell, J., Meister, G., & Stamp, N. (2008). Global sourcing trends in 2008. *Strategic Outsourcing: An International Journal*, 1(2), 173-180.
- Ellram, L., Tate, W. & Petersen, K. (2013), Offshoring and reshoring: An update on the manufacturing location decision, *Journal of Supply Chain Management*, 49(2), 14-22.
- Ellram, L. M., & Tate, W. L. (2016). The use of secondary data in purchasing and supply management (P/SM) research. *Journal of Purchasing and Supply Management*, 22(4), 250-254.
- Fratocchi, L., Ancarani, A., Barbieri, P., Di Mauro, C., Nassimbeni, G., Sartor, M. & Zanoni, A. (2016). Motivations of manufacturing reshoring: an interpretative framework. *International Journal of Physical Distribution & Logistics Management*, 46 (2),98-127.
- Grappi, S., Romani, S., & Bagozzi, R. P. (2015). Consumer stakeholder responses to reshoring strategies. *Journal of the Academy of Marketing Science*, 43(4), 453-471.
- Gray, J., Skowronski, K., Esenduran, G. & Rungtusanatham, M. (2013), The reshoring phenomenon: What supply chain academics ought to know and should do, *Journal of Supply Chain Management*, 49(2), 27-33.
- Gundecha, P. (2016). IBM Watson just got more accurate at detecting emotions. Retrieved April 27, 2017, from <https://www.ibm.com/blogs/bluemix/2016/10/watson-has-more-accurate-emotion-detection/>
- Gylling, M., Heikkila, J., Jussial, K. & Saarinen, M. (2015), Making decisions on offshore outsourcing and backshoring: A case study in the bicycle industry, *International Journal of Production Economics*, 162, 92-100.
- Hartman, P. L., Ogden, J. A., Wirthlin, J. R., & Hazen, B. T. (2017). Nearshoring, reshoring, and insourcing: Moving beyond the total cost of ownership conversation. *Business Horizons*, 60(3), 363-373.
- Henrich, V., & Lang, A. (2017). Audience Segmentation in Social Media. *EACL 2017*, 53.
- Kazmer, D. O. (2014). Manufacturing outsourcing, onshoring, and global equilibrium. *Business Horizons*, 57(4), 463-472.
- Kinkel, S. (2012). Trends in production relocation and backshoring activities: Changing patterns in the course of the global economic crisis. *International Journal of Operations & Production Management*, 32(6), 696-720.
- Malhotra, N. (2015). *Essentials of marketing research: A hands-on orientation*. Boston, MA: Pearson Education.
- Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business horizons*, 52(4), 357-365.
- Margulescu, S., & Margulescu, E. (2014). Reshoring in manufacturing and services. *Global Economic Observer*, 2(1), 90-95.
- Martinez-Mora, C. & Merino, F. (2014). Offshoring in the Spanish footwear industry: A return journey? *Journal of Purchasing and Supply Management*, 20(4), 225-237.
- Moradlou, H., & Backhouse, C. J. (2016). A review of manufacturing re-shoring in the

- context of customer-focused postponement strategies. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, 230(9), 1561-1571.
- Pearce, J. A. (2014). Why domestic outsourcing is leading America's reemergence in global manufacturing. *Business Horizons*, 57(1), 27-36.
- Reshoring Initiative. (2017), available at: <http://www.reshorennow.org/> (accessed 24 April 2017).
- Tate, W. & Bals, L. (2017). Outsourcing/offshoring insights: Going beyond reshoring to rightshoring. *International Journal of Physical Distribution & Logistics Management*, 47(2/3), 106-113.
- Tate, W., Ellram, L., Schoenherr, T. & Petersen, K. (2014). Global competitive conditions driving the manufacturing location decision, *Business Horizons*, 57,381-390.
- Tate, W. L. (2014). Offshoring and reshoring: U.S. insights and research challenges. *Journal of Purchasing and Supply Management*, 20(1), 66-68.
- Touzani, M., Fatma, S., & Mouna Meriem, L. (2015). Country-of-origin and emerging countries: Revisiting a complex relationship. *Qualitative Market Research: An International Journal*, 18(1), 48-68.
- Wiesmann, B., Jochem, R. S., Hilletoth, P., & Eriksson, D. (2017). Drivers and barriers to reshoring: A literature review on offshoring in reverse. *European Business Review*, 29(1), 15-42.

Table 1. Number of Mentions and Percentage of Total Mentions based on Source

Source	Number of Mentions	Percentage of Total
Videos	23,528	27.57%
Forums	18,752	21.97%
News	16,787	19.67%
Twitter	11,497	13.47%
Blogs	10,141	11.88%
Reviews	3,924	4.60%
Facebook pages	718	0.84%
Total	85,347	100.00%

Table 2 - Context of direct quotes on Social Media pertaining to reshoring related topics.

User, Source, Date, and Time	Context/Direct Quote
Donald J Trump for President on YouTube. Posted March 8, 2017 at 13:22.	<p style="text-align: center;">Made In The USA GET YOUR OWN #MAGA HAT HERE: https://shop.donaldtrump.com/collections/headwear</p> <p>This is the inspiring story of the hundreds of American workers who manufactured the hats that became a symbol for our movement. We are proud to have a President whose job agenda is guided by the principles to buy American and hire American! #MadeInTheUSA</p>
SwimOutletGear on YouTube. Posted March 23, 2017 at 13:01.	<p style="text-align: center;">Spiritual Gangster Sky Above Me Workout Muscle Tee SwimOutlet.com</p> <p>-Proceeds of all sales also support the Children First Academy of Phoenix, Cambodian Children's Fund, Phoenix Children's Hospital, and the Make a Wish Foundation. - Made in the USA. Details</p> <p>- Fabrics: 50% Micro Modal, 50% Supima Cotton – Color: Black – Style Features: Muscle, Screenprint, Gold, Foil, Metallic, Mountains – Fit: Relaxed – Shelf Bra: No – Support: None – Adjustable straps: No – Length: 23'</p> <p>http://www.SwimOutlet.com is the web's most popular swim shop!</p>
Yahoo! Finance on News website. Posted March 30, 2017 at 14:24	<p style="text-align: center;">Mars to Invest \$70 Million in U.S. Manufacturing, Create 250 New Jobs</p> <p>Mars to Invest \$70 Million in U.S. Manufacturing, Create 250 New Jobs Latest announcement builds more than \$1 billion in American manufacturing investments from Mars, Incorporated over the past five years HACKETTSTOWN, N.J., March 30, 2017 /PRNewswire/ -- Mars Chocolate North America announced today a \$70 million reinvestment in its U.S. supply chain, continuing a long-standing commitment to American manufacturing and innovation. This latest investment will add approximately 250 new jobs to sites across the country, ensuring the more than 95 percent of Mars' chocolate products for the U.S. are made here.</p>
USA Love List on Twitter. Posted on March 29, 2017 at 10:37	<p style="text-align: center;">Six American Made Household Goods We Love – https://t.co/sope8kmWuc #home #gifts #MadeinUSA https://t.co/rqZsby8u6Z</p>

Table 3. Number of Mentions and Percentage of Total by Topic/Theme

Topic/Theme	Number of Mentions	Percentage of Total
Made in the USA	39,035	45.74%
American Made	25,897	30.34%
American Manufacturing	15,741	18.44%
Reshoring	1,295	1.52%
Onshoring	193	0.23%
Other (possibly Backshoring)	3,186	3.73%
Total	85,347	100.00%

Table 4. Number of Mentions and Percentage of Total based on Sentiment Type

Sentiment Type	Number of Mentions	Percentage of Total
Positive	41,915	49.11%
Ambivalent	5,893	6.91%
Neutral	28,934	33.90%
Negative	8,605	10.08%
Total	85,347	100.00%

Table 5. Table from IBM Watson AnalyticsTM of “What are the value of Author Engagement for Themes?”

Themes	Author Engagement
Made in the USA	13482
Onshoring	1
Reshoring	130
American Made	21138
American Manufacturing	2088
(blank)	3187

Share of voice trend (mentions per topic)

Dates and times are in UTC. A mention from noon your time appears as 4:00 PM in this timeline.



Figure 1. Mentions per topic over time from January 1, 2017 to March 31, 2017



Figure 2. Geographical map of the Social Media posters of reshoring related topics

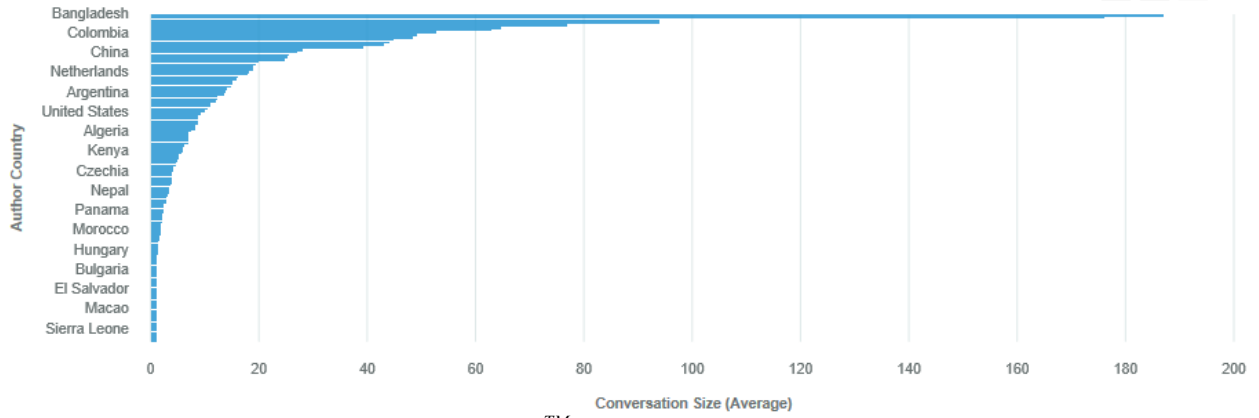


Figure 3. Image from IBM Watson Analytics™ of "How do the values of Conversation Size compare by Author Country?".

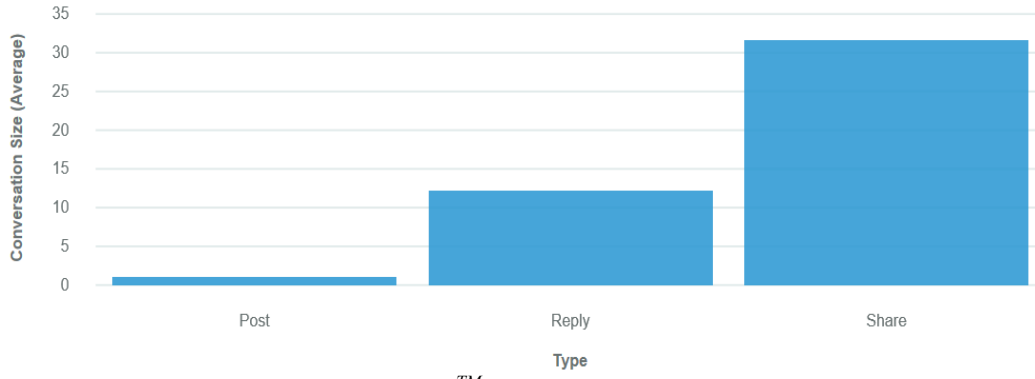


Figure 4. Image from IBM Watson Analytics™ of "How do the values of Conversation Size compare by Type".

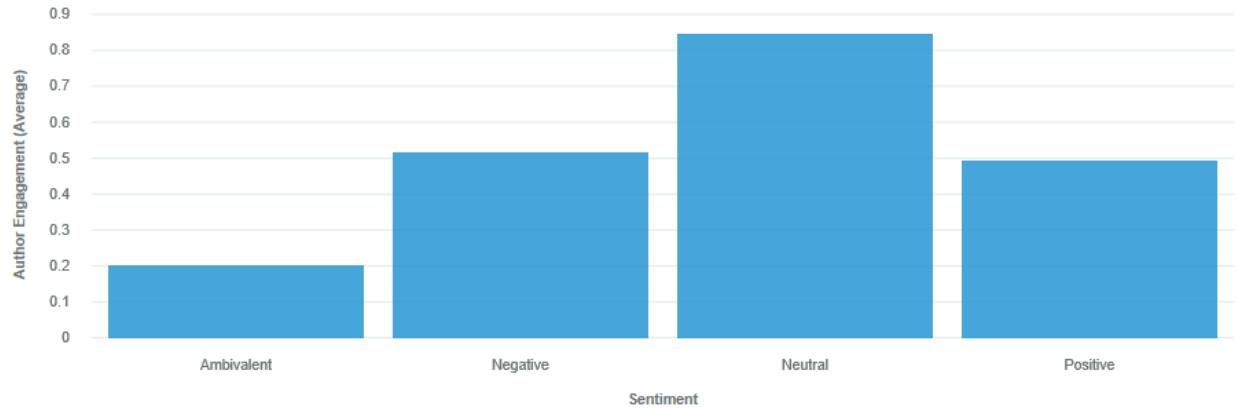


Figure 5. Image from IBM Watson AnalyticsTM of "How do the values of Author Engagement compare by Sentiment?"