Association for Information Systems

AIS Electronic Library (AISeL)

ICIS 2021 TREOs

TREO Papers

12-12-2021

Data Mining Application for Crisis Management during Major disruptions

Hossein Mohit University of North Texas, hossein.mohit@unt.edu

J.Kiarash Sadeghi University of North Texas, javad.sadeghi@unt.edu

Follow this and additional works at: https://aisel.aisnet.org/treos_icis2021

Recommended Citation

Mohit, Hossein and Sadeghi, J.Kiarash, "Data Mining Application for Crisis Management during Major disruptions" (2021). *ICIS 2021 TREOs*. 74. https://aisel.aisnet.org/treos_icis2021/74

This material is brought to you by the TREO Papers at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 2021 TREOs by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Data Mining Application for Crisis Management during Major disruptions

Hossein Mohit, G. Brint Ryan College of Business, University of North Texas, Hossein.Mohit@unt.edu J. Kiarash Sadeghi, G. Brint Ryan College of Business, University of North Texas, Kiarash.Sadeghi@unt.edu

The COVID pandemic has negatively influenced all businesses across the world in 2020, particularly supply chains. Inappropriate reactions to the recent pandemic showed that companies have insufficient learning from prior pandemics such as SARS, resulting in a considerable reduction in the global gross domestic product (GDP) in 2020. Supply chains are the center of focus of attention and interest within researchers and practitioners communities to mitigate the negative impacts of the current crisis (Govindan et al., 2020). From a supply chain perspective, lack of inventories, labor shortage, and resource shortage are the main consequences of the current crisis. With the advent of computers, big data analytics techniques, e.g., text analysis, have become a reliable tool to provide a holistic view toward a problem such as the current crisis (Ragini et al., 2018). Text analysis of a big dataset can explore all possible solutions in crisis management. This paper contributes to the prior studies by providing a decision-making platform based on big data analytics in text analysis to help decision makers address a crisis. Below figures are descriptive analyses of tweets. We collected qualitative data including 120,000 tweets to address the research question: According to big data analytics, what are the main areas in crisis management to focus during COVID-19? The preliminary results reveal that the global supply chain is the main barrier to addressing the consequences of the pandemic. Moreover, findings showed that organizations showed poor learning from prior disruptions due to crises.



Figure 2: Tweets trend

References

- Govindan, K., Mina, H., & Alavi, B. (2020). A decision support system for demand management in healthcare supply chains considering the epidemic outbreaks: A case study of coronavirus disease 2019 (COVID-19). Transportation Research Part E: Logistics and Transportation Review, *138*, 101967.
- Ragini, J. R., Anand, P. M. R., & Bhaskar, V. (2018). Big data analytics for disaster response and recovery through sentiment analysis. International Journal of Information Management, 42, 13–24.

Presentation at TREO Talks in conjunction with the 42nd International Conference on Information Systems, ICIS 2021 TREO Talks are not peer-reviewed and not a formal part of the ICIS 2021 Proceedings All TREO Talks are available in the TREO Talks section of the AIS e-Library