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Editorial: Fake News, Misinformation, and Supply Chain Disruptions: The Role of Emerging Technologies

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Over the last few years, countries around the world and the World Health Organisation (WHO) have strived to minimise the impact of the COVID-19 pandemic on communities, production/manufacturing lines supply chains (SCs), and business activities (Kovacs & Sigala, 2020; Parnell et al., 2020; WHO 2020). Recent studies on COVID-19 have highlighted the adverse effects of fake news proliferation on the continued crisis and pandemic, leaving people sceptical of the information they obtain through social media (Li et al., 2020). For instance, fake news about a cure published on Facebook has led to people dying (Legon & Alsalman, 2020). In the past, literature (Sommariva et al., 2018) highlighted the impact of health-related messages on the Zika virus. In contrast, a recent study by Shrivastava et al. (2020) has proposed and tested a model that extrapolates how misinformation is disseminated "amongst groups with the influence of different misinformation-refuting measures" (p. 1159). Other scholars have argued that fake news has a "wildfire" synonym to the extent of its spread compared to other types of news, such as genuine news (Dwivedi et al., 2018; Vishwanath, 2015).

Fake news and misinformation during disruptions may lead to the preventable loss of lives and misguiding information on tourism, business activities, and innovation (Di Domenico et al., 2021). From an SC perspective, misinformation can lead to a halt in production lines, imports and exports, and changes in buying behaviour (e.g., panic buying), leading to uncertainty and demand fluctuation and hence further disruption in the supply chain (Ivanov, 2020; Kovacs & Sigala, 2021; Papadopoulos et al., 2017; Petit et al., 2019; Sodhi & Tang, 2020). Within humanitarian SCs, fake news may lead to corruption, unethical behaviour, or even aid not reaching beneficiaries on time. Therefore, fact-checking of information within SC disruptions is required to put measures in place to build confidence in people, businesses, and supply chains (United Nations, 2020).

The role of emerging technologies (such as big data analytics, blockchain, artificial intelligence, social media, Internet of Things) has never been more relevant now than ever before in dealing with fake news during SC disruptions. Fact-checking fake news, and false information is required to "know why," “know how,” “know what,” and “know when” of the content shared (Gachter et al., 2010; Jayawickrama et al., 2016; Oyemomi et al., 2016). Emerging technologies play an influential role in managing the dissemination of

information by accurately mitigating false information and making correct decisions when tackling complex issues (Endsley, 2018; Jayawickrama et al., 2019; Roozenbeek & van der Linden, 2019).

There is limited theoretical and practical research underpinning emerging technologies in tackling fake news (Kim & Dennis, 2019) during SC disruptions. This special issue addresses this gap by establishing a new understanding through conceptualisation, theorisation, modelling, and empirical findings on the role of emerging technologies in combating fake news and false information (Venkatraman et al., 2018; Tandoc et al., 2018) in SC disruptions.

In our special issue of *Annals of Operations Research* on *Fake News, Misinformation, and Supply Chain Disruptions: The Role of Emerging Technologies*, we invited scholars to explore this area and provide some ongoing discussions and insights as an agenda for future research towards this direction. Previous research, as it is explained in the research of *Zamani, Smyth, Gupta and Dennehy*, shows the potential of Artificial Intelligence (AI) and Big Data Analytics (BDA) to significantly improve resilience of supply chains and to facilitate more effective management of supply chain resources. To explore more about the conversations and investigation of the area, our special issue presents studies such as that by *Akhtar, Ghouri, Khan, ul Haq, Awan, Zahoor, Khan,* and *Ashraf* whose paper combines Artificial Intelligence (AI) and Machine Learning (ML) to develop a Fake news and Disinformation model aimed at preventing supply chain disruptions. On the other hand, *Chatterjee, Chaudhuri,* and *Vrontis* in their paper investigates the role of fake news and misinformation in supply chain disruption and the consequences to a firm's operational performance, as moderated by technology competency. In the paper by *Hossain, Chowdhury, Pappas, Metri, Hughes*, and *Dwivedi* the authors explore the extent to which social media fake news contributes to supply chain disruption through the affordances lens. Also, in the paper by *Kar, Tripathi, Malik, Gupta,* and *Sivarajah* the authors analysed an interest in cognitive aspects with a focus on the role of fake news in creating psychological distress among the general public/consumers, which further creates panic among them while starting the stockpiling of products for future consumption.

From an application-oriented perspective, *Petratos* and *Faccia* in their paper propose blockchain technology and strategies to mitigate and manage information risks (such as fake news, misinformation, and disinformation) within supply chain disruptions, whereas the paper by *Zissis* discusses through modelling how emerging technologies can facilitate information sharing and reduce misinformation in decentralised settings. Interesting analyses are also those of *Konstantakis, Cheilas, Melissaropoulos, Xidonas*, and *Michaelides* in their paper that proposes a novel input–output neural network approach focusing on the US food sector to understand whether fake news is extracted on Google and explain production and supply processes. Also, studies in developing countries could provide the background for understanding better how emerging digital communication technologies help small- and medium-sized enterprises adapt their operations and build resilience during the COVID-19 pandemic that is discussed in the paper by *Ashiru, Nakpodia*, and *You*. Finally, *Cui, Wu, Wu, Kumar*, and *Tan* in their paper investigates another aspect that is studied in the context of developing countries, which is the resilience during COVID-19 through the lens of information processing theory.

We believe that our special issue will provide food for thought to those academics and practitioners who would like to conduct more research and obtain practical insights into emerging technologies' role in Fake News, Misinformation, and Supply Chain Disruptions.

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