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

Spanaki, K.^a, Papadopoulos, T.^b, Jayawickrama, U.^c, Olan, F.^d, Liu, S.^e

^a*Audencia Business School, France*

^b*University of Kent, UK*

^c*Loughborough University, UK*

^d*Essex Business School, UK*

^e*University of Plymouth, UK*

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 misleading 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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Dr. Konstantina Spanaki (kspanaki@audencia.com) is an Associate Professor of IS and Supply Chain Management at Audencia Business School. Prior to this role Konstantina worked at Loughborough University and Imperial College London in areas around Technology Management. Konstantina's main research areas lie within the intersection of Information Systems (IS) and Operations Management (OM). Recently, she is actively involved in projects related to Digital Supply Chain, Data and Technology Management, Data Sharing and Disruptive Technologies. Konstantina's research has been published in Information Technology and People, Information Systems Frontiers, Computers in Industry, the International Journal of Production Research, Production Planning and Control and other IS/OM outlets. She has served as Guest Editor for Special Issues in Production Planning and Control (PPC) journal, the International Journal of Production Research (IJPR) and International Journal of Information Management (IJIM). Konstantina is a member of the International Editorial Review Board of International Journal of Information Management (IJIM), co-ordinating editor for Information Systems Frontiers. Konstantina also is an AIS and EurOMA member and has served the AIS community as track chair, AE and a reviewer multiple times in the past.

Prof. Thanos Papadopoulos (a.papadopoulos@kent.ac.uk) is a Professor of Management and the Departmental Lead for Research & Innovation of the Department of Analytics, Operations, and Systems at Kent Business School, University of Kent, UK. He has published over 150 articles in peer-reviewed journals and conferences, including, inter alia, the British Journal of Management, Decision Sciences, the European Journal of Operational Research, and the International Journal of Operations and Production Management. He is an Associate Editor for the British Journal of Management and the International Journal of Operations and Production Management. He also sits on the Editorial Board of Production Planning and Control and Technological Forecasting and Social Change and is a Distinguished Editorial Board member of the International Journal of Information Management and International Journal of Information Management Data Insights.

Dr. Uchitha Jayawickrama (U.Jayawickrama@lboro.ac.uk) is a Senior Lecturer (Associate Professor) in Information Systems at the Centre for Information Management, Loughborough Business School, Loughborough University, UK. He was the Conference Local Chair (General Chair) of the ICDSST 2021 which was held in Loughborough University, UK. He is a Senior Fellow of Higher Education Academy (SFHEA), UK. He has research, teaching, and industry experience in the field of information systems, particularly in the areas of enterprise systems, cloud ERP, business process automation, knowledge management, knowledge management systems, blockchain ethics, AI adoption, decision support systems, digital transformation, big data applications, business process re-engineering and business intelligence. He has published research in various renowned conferences, books, and journals. He is involved in several research projects internally and externally. Moreover, he is a reviewer for several journals and international conferences. He has editorial experience in various journals. He is a member of several scientific/technical/program committees. He has guest-edited Special Issues in Annals of Operations Research and International Journal of Decision Support System Technology. He has also been the lead editor for the Springer book on Lecture Notes in Business Information Processing – titled "Decision Support Systems XI: Decision Support Systems, Analytics and Technologies in Response to Global Crisis Management " (2021).

Dr. Femi Olan (fo22531@essex.ac.uk) is a Senior Lecturer ® (Associate Professor) in Business Information Management at Essex Business School, UK. He obtained his PhD degree from Plymouth University, UK. He has research, teaching and industry experience in the field of information systems, particularly in the areas of information systems, business process automation, knowledge management, KM systems, digitisation (digital innovation & productivity), business intelligence, data analytics and business process re-engineering. He has published research in various renowned conferences, books and journals. He has involved in several research projects internally and externally. He is a reviewer for

several journals and international conferences. He has editorial experience in various journals. He is a member of several scientific/technical/programme committees.

Prof. Shaofeng Liu (shaofeng.liu@plymouth.ac.uk) is Professor of Operations Management and Decision-making and currently Associate Head of School for Research and Innovation at Plymouth Business School. She obtained her PhD degree from Loughborough University, UK. Her main research interests and expertise are in knowledge-based techniques to support business decision-making, particularly in the areas of knowledge management, integrated decision support, digital business, and quantitative decision methods. She is a senior member on the Management Board for Euro Working Group of Decision Support Systems. She has undertaken several influential research projects funded by UK research councils and the European Commission with a total value of over €40 million. She is currently the PI and Co-I for four EU projects under the Horizon 2020 program. She has published two books and over 180 peer-reviewed research papers. She has been the Associate Editor for International Journal of Decision Support System Technology since 2014 and has guest-edited Special Issues with a number of international journals, including Journal of Decision Systems, and Industrial Management and Data Systems.