



**Sustainability of Supply Chains in the Wake of the
Coronavirus (COVID-19/SARS-CoV-2) pandemic: lessons
and trends**

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Abstract

Purpose - This article addresses the prioritisation and focus of supply chain managers subsequent to COVID-19/SARS-CoV-2 and the great lockdown of 2020.

Design/methodology/approach – In this article, concepts and trends on resilient and sustainable supply chains are systematized. Main trends in sustainability of supply chains in the wake of COVID-19 are presented.

Findings - Guidelines on building smarter and more resilient supply chains are provided and future tendencies, which includes the increase of a sustainable consumption perspective, are highlighted.

Originality – This is a conceptual article blended with a practical approach aiming to propose guidelines for managers and scholars on how to address supply chain management challenges after the coronavirus pandemic.

Keywords: Coronavirus; COVID-19; resilience; supply chain management, sustainable consumption.

1. Introduction

COVID-19 has brought to light the fact that supply chains function as the veins of our economy and society (Ivanov, 2020). Societies and businesses across the world have faced unprecedented challenges due to the disruptions that the coronavirus outbreak, and the consequent great lockdown, have caused. Individuals, for instance, have dealt with a range of changes in their lives, from self-isolation to difficulties stocking up on essentials. Some businesses, mainly from the hospitality sector, have failed to survive because of the slowdown in trade, while other

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37 **2.1 Principles for Building Resilience in Supply Chains**

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41 and Peck, 2004; Kamalahmadi and Parast, 2016) called ECAC: Engineering, Collaboration,
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25 Velocity concerns reducing the 'end-to-end' time taken for producing and delivering
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43 Digital technologies, such as cyber-physical systems, sensors, barcodes, internet of
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30 (Wilding, 2003).
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36 **4. Guidelines for Managers and Scholars on How to Address Supply Chain Management** 37 38 **Challenges after the Coronavirus Pandemic**

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40 Taking into account the above factors, supply chain and logistics managers, as well as
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42 policymakers and businesses in general, should pay attention to the following tendencies in the
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44 aftermath of COVID-19.
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48 Some supply chains should be given the spotlight as they are critical for society and
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50 require specific attention from government, for example, pharmaceutical supply chains, in
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52 particular those dependent on biodiversity, grocery retailers, logistics and transportation, and
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54 the healthcare and safety sectors.
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57 Society may reassess its decision-making processes regarding consumption patterns due
58
59 to isolation and changes in habits (resulting from the increased use of social media and chat
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4 apps used to share items). According to EY Future Consumer Index, consumers behaviours
5
6 tend to change after COVID-19 crisis. A survey conducted by Ernest Young shows that 34%
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8 of respondents would be willing for paying more for local products, 25% for trusted brands and
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10 23% for ethical products (Ernest Young, 2020). Thus, a more sustainable consumption model
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12 may arise (Sarkis et al., 2020), moving towards a sharing economy logic, with implications for
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14 supply chains which deal with consumer goods. The use of services provided by apps would be
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16 reinforced.
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20 The notion of crowdsourcing has been highlighted; therefore, last mile logistics should
21
22 be developed further to meet the potential rise in demand.
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25 The discussion of offshore production should be on the agenda of supply chain managers
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27 with regard to the length and location of supply chains. Re-shoring is likely to be a hot topic
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29 for Governments, policy makers, and supply chains managers around the world.
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32 Logistics decisions involving modes of transport, warehousing, handling of materials
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34 and packaging should be reassessed in order to seek even more efficient and agile solutions
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36 (Choi, 2020). Digital (e.g. use of sensors, cyber-physical systems) and virtual (e.g. virtual
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38 reality glasses) technologies would be vital to meeting the new requirements.
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41 Procurement activity and in particular the importance of ensuring *Right Quality* should
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43 not be lost in the race to provide goods and services in the *Right Time* at the *Right Place* (Lysons
44
45 and Farrington). Technical specifications and due diligence measures still remain vital elements
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47 in the procurement process, ensuring that potential suppliers have the necessary qualities to
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49 become a partner of government in its role as buyer.
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52 Each sector faces a particular challenge. For example, the hospitality sector should
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54 invest more in delivering life experiences, online services, and connectivity to customers after
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56 the isolation that people have faced, in order to provide high-value services. The hospitality
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58 sector may shift the provision of services towards the virtualization business model.
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4 E-commerce may grow even further due to an increase in the number of users; thus,
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6 investing in efficient logistics, order fulfilment management and customer service management
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8 may be a trend.
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11 More information systems and technologies, as well as automation systems, may be
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13 required by the manufacturing and service sectors, thus, there may be an increase in demand
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15 for such systems, as suggested by Govindan et al. (2020).
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20 21 **5. Conclusion**

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23 The world is likely to see a more imbricated relation between geopolitics and supply chain
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25 decision making processes. For example, governments are likely to invest and regulate ‘key
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27 supply chains’, such as pharmaceutical, personnel protective equipment, and agri-food chains
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29 in order to ensure national food security. This goes against long term trends of governments’
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31 policies of light touch, and simply putting their trust in key corporate supply chains to ‘do the
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33 right thing’; and therefore, relying on big retailers’ and suppliers’ strong customer orientation
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35 to keep supply chains moving. We may be entering a new age of localised/ regionalised supply
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37 chains and government intervention once again to determine.
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42 The role of intermediaries might also be reassessed as it is through them that the smallest
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44 producers (micro- and small farmers) may coordinate their actions to produce deeper impact in
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46 the provision, and end-consumers can shorten the supply chain by actively involved in
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48 production/distribution systems (online delivery and/or community-supported agriculture).
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51 Society, businesses and governments will all be transformed in the aftermath of the
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53 coronavirus outbreak, and we hope, towards a more sustainable society (Sarkis et al., 2020);
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55 thus, scholars and managers should attempt to consider this transformation through a positive
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57 lens in order to improve supply chains and logistics management in order to provide high value
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and even more outstanding services to society, since it has now been made abundantly clear that supply chains are the veins of an economy.

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59 to isolation and changes in habits (resulting from the increased use of social media and chat
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apps used to share items). According to EY Future Consumer Index, consumers behaviours tend to change after COVID-19 crisis. A survey conducted by Ernest Young shows that 34% of respondents would be willing for paying more for local products, 25% for trusted brands and 23% for ethical products (Ernest Young, 2020). Thus, a more sustainable consumption model may arise (Sarkis et al., 2020), moving towards a sharing economy logic, with implications for supply chains which deal with consumer goods. The use of services provided by apps would be reinforced.

The notion of crowdsourcing has been highlighted; therefore, last mile logistics should be developed further to meet the potential rise in demand.

The discussion of offshore production should be on the agenda of supply chain managers with regard to the length and location of supply chains. Re-shoring is likely to be a hot topic for Governments, policy makers, and supply chains managers around the world.

Logistics decisions involving modes of transport, warehousing, handling of materials and packaging should be reassessed in order to seek even more efficient and agile solutions (Choi, 2020). Digital (e.g. use of sensors, cyber-physical systems) and virtual (e.g. virtual reality glasses) technologies would be vital to meeting the new requirements.

Procurement activity and in particular the importance of ensuring *Right Quality* should not be lost in the race to provide goods and services in the *Right Time* at the *Right Place* (Lysons and Farrington). Technical specifications and due diligence measures still remain vital elements in the procurement process, ensuring that potential suppliers have the necessary qualities to become a partner of government in its role as buyer.

Each sector faces a particular challenge. For example, the hospitality sector should invest more in delivering life experiences, online services, and connectivity to customers after the isolation that people have faced, in order to provide high-value services. The hospitality sector may shift the provision of services towards the virtualization business model.

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4 E-commerce may grow even further due to an increase in the number of users; thus,
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6 investing in efficient logistics, order fulfilment management and customer service management
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8 may be a trend.
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11 More information systems and technologies, as well as automation systems, may be
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13 required by the manufacturing and service sectors, thus, there may be an increase in demand
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15 for such systems, as suggested by Govindan et al. (2020).
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20 21 **5. Conclusion**

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23 The world is likely to see a more imbricated relation between geopolitics and supply chain
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25 decision making processes. For example, governments are likely to invest and regulate 'key
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27 supply chains', such as pharmaceutical, personnel protective equipment, and agri-food chains
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29 in order to ensure national food security. This goes against long term trends of governments'
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31 policies of light touch, and simply putting their trust in key corporate supply chains to 'do the
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33 right thing'; and therefore, relying on big retailers' and suppliers' strong customer orientation
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35 to keep supply chains moving. We may be entering a new age of localised/ regionalised supply
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37 chains and government intervention once again to determine.
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41 The role of intermediaries might also be reassessed as it is through them that the smallest
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43 producers (micro- and small farmers) may coordinate their actions to produce deeper impact in
44
45 the provision, and end-consumers can shorten the supply chain by actively involved in
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47 production/distribution systems (online delivery and/or community-supported agriculture).
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51 Society, businesses and governments will all be transformed in the aftermath of the
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53 coronavirus outbreak, and we hope, towards a more sustainable society (Sarkis et al., 2020);
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55 thus, scholars and managers should attempt to consider this transformation through a positive
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57 lens in order to improve supply chains and logistics management in order to provide high value
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and even more outstanding services to society, since it has now been made abundantly clear that supply chains are the veins of an economy.

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