

# Exploring the supply chain resilience agenda within the UK SMEs prior to Covid-19

**Keywords:** Supply Chain Resilience, UK, SMEs

**Topic(s):** 40. Operations resilience practices of SMEs and lower tier suppliers in global supply chain networks

**Word count:** 1028

## The SME Supply Chain Resilience

With the increased disruptions faced by businesses resilience against disruptions is becoming a key priority (Eshetu- Birkie, 2015; Chopra and Sodhi, 2014; Wieland, 2013). Jaharuddin et al. (2016) notes that complex and changing global environment poses a threat to SMEs who are more fragile and facing a rather high level of competition, than large corporations from transfer pricing to (Kumar and Sosnoski, 2011) to integrated information sharing (Hoffman, 2011). The academic literature also highlights the SMEs resilience by highlighting SME characteristics affecting the resilience. In this context SMEs resilience are defined as; (a) a characteristic, where “[r]esilience [was seen as] an important characteristic of SMEs competing in today’s business environment” (Kumar and Sosnoski, 2011:5432); (b) a capability, whereby the “SME resilience [is defined] as the capability to self-renew over time, to maintain status-quo or move to a new desirable state after (or before) being disturbed” Li et al, (2011:7)

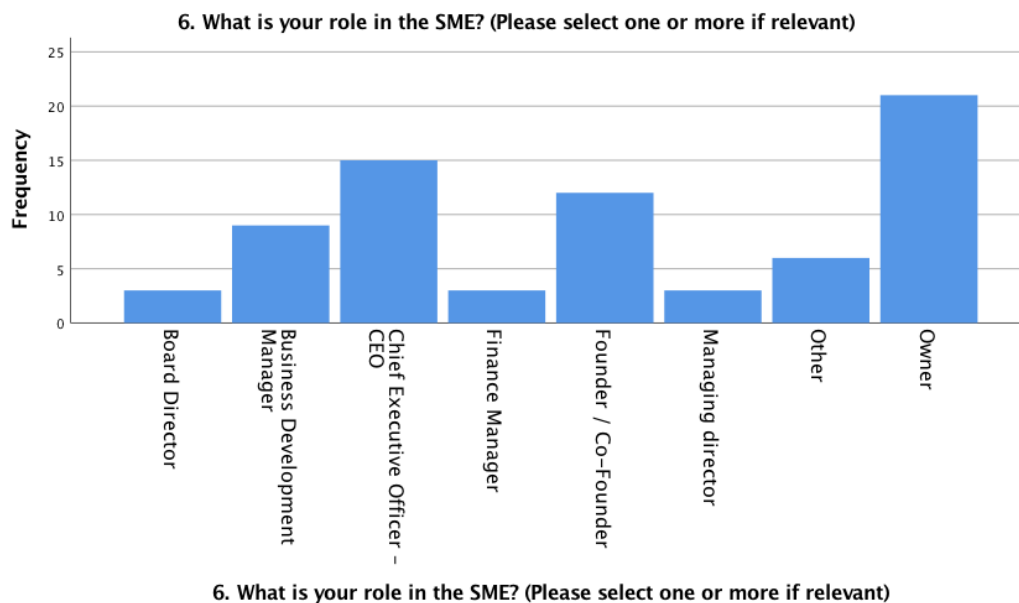
The resilience of SMEs can be enabled by the capability of generating capital, location, adoption of technology and marketing (Alonso and Bressan, 2014). For example SMEs in comparison to large and multinational corporations have been noted to present different response to resilience (Bak, 2018; Thun et al, 2011). However, also we have to note that multinational corporations are highly dependent upon SME suppliers, hence are faced with increasing risk if SMEs cannot adapt to the changing market conditions (Jorgensen and Knudsen, 2006; Hermann and Guenther, 2017). Similarly, Hoffman (2011:129) notes “fluctuating prices or exchange rates harm the SME to an extent that its existence becomes endangered, significant consequences for the entire supply chain (network) can occur.” Hence SME resilience is also closely of interest to the wellbeing of multinational corporations (Norman and Jansson, 2004; Hoffman, 2011; Hermann and Guenther, 2017). The SME level of contextual complexity makes it rather difficult to understand the resilience agenda and its implications. Considering that SMEs employ 50-200 people which globally account for 70% world’s production, its impact into resilience is noteworthy (Ates and Bititci, 2011; Kamalahmadi and Parast, 2016; Kumar and Sosnoski, 2011).

Small and medium sized enterprises (SMEs) are often considered as a strength, and in some cases, the driving force of an economy. The societal and economic importance of the SMEs in the UK is noteworthy as they employ more than 87 million people with 80 new companies being born an hour in the UK alone (Gray and Jones 2016). Thus, it can be argued that such organisations make an important contribution to the local, regional and national economic output. However, despite the importance of SMEs, Kamalahmadi & Parast (2016:128) noted that there is “a very limited scholarly work on resilience practices in SMEs” and a limited understanding of “on how organisations, particularly SMEs, can achieve degrees of resilience”

(Bhamra et al. 2011:5388). Similarly, Kalamahaddin and Parasat (2016:131) echoes this stance having looked into supply chain resilience on SMEs noted that in the literature “questions remain on how SMEs can enhance resilience, and whether resilience principles associated with large enterprises are also applicable to SMEs”. Hence, in this study the research question is: [1] How do the UK SMEs define supply chain resilience and its characteristics? [2] What are the major challenges defined for setting up a supply chain resilience agenda.

### The research design

To undertake the research a questionnaire based on the previous work and distributed to the UK based SMEs acquired through 1000 companies listed on the LSEG (London Stock Exchange Group). The survey resulted with 72 SME respondents. To undertake the research a pilot interview with two UK SMEs has been conducted and a quantitative scale has been developed distributed to the UK based SMEs acquired through 1000 companies listed on the LSEG (London Stock Exchange Group). The respondent’s role where.



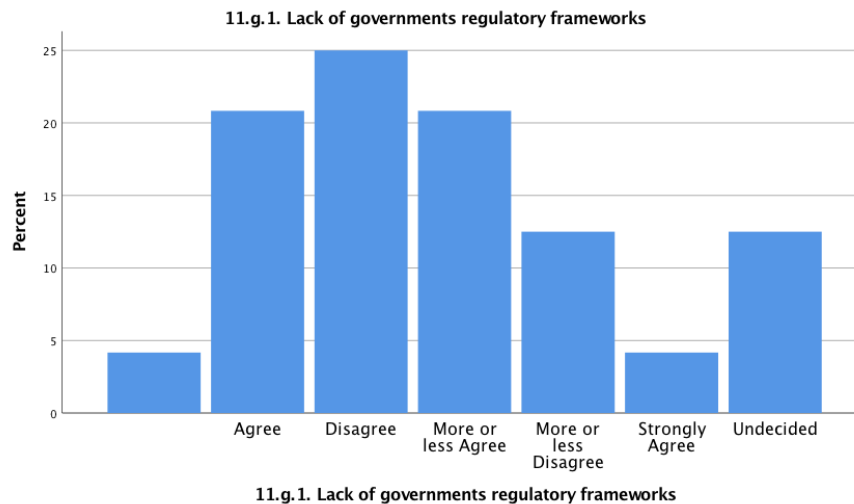
Most of the participants SMEs were operational more than 10 years, this may be also related to and an outcome of the sampling strategy. The participants are operational mostly in the area of (1) manufacturing; (2) other and © (3) construction 62% of the SMEs were selling services and products to more than 5 EU countries, whereas 81% did not sell to non-EU countries.

### Findings and Conclusion

Based on the findings the SME supply chain resilience in the UK has highlighted 9 areas; Resilience measures, resources, capabilities, information systems, collaboration, governance, Finance, External environment, innovation. Prior to Covid 96 % of the SMEs stated that they are resilient. Interestingly 21% of the respondents said that the SME was very resilient, however 100% of finance and management directors noted as good only. It is interesting also that most of the UK SMEs reject this finding with 60%, an interesting finding as SMEs have been described as being “ill-prepared for any disruption, due to absence of SME resilience measures”. Some general areas concepts based on open coding were (Figure 2);



The 56% of the respondents agree that there is a lack of government initiated forms of regulatory framework and support.



## References

- Ali, I., Nagalingam, S., & Gurd, B. (2017). Building resilience in SMEs of perishable product supply chains: enablers, barriers and risks. *Production Planning and Control*, 28(15), 1236-1250.
- Calabrese, G. G., & Vervaeke, M. (2017). Strategies for facing the crisis: The case of the car design/style supply chain in France and in Italy. *International Journal of Product Development*, 22(1), 21-37.
- Carla Roberta, P., Martin, C., & Andrea Lago Da, S. (2014). Achieving supply chain resilience: the role of procurement. *Supply Chain Management: An International Journal*, 19(5/6), 626-642.
- Demmer, W.A., Vickery, S.K. and Calantone, R. (2011), "Engendering resilience in small-and medium-sized enterprises (SMEs): a case study of Demmer corporation", *International Journal of Production Research*, Vol. 49 No. 18, pp. 5395-5413.
- Gunasekaran, A., Subramanian, N., & Rahman, S. (2015). Supply chain resilience: Role of complexities and strategies. *International Journal of Production Research*, 53(22), 6809-6819.
- Herbane, B. (2018). Rethinking organizational resilience and strategic renewal in SMEs. *Entrepreneurship & Regional Development*, 1-20.
- Jaharuddin, N. S., Mansor, Z. D., & Yaakob, S. (2016). Barriers of Supply Chain Intelligence Practices in SMEs: Case of Malaysia. *The Social Sciences*, 11(31), 7418-7422.
- Kamalahmadi, M., & Parast, M. M. (2016). A review of the literature on the principles of enterprise and supply chain resilience: Major findings and directions for future research. *International Journal of Production Economics*, 171, 116-133.
- Kumar, S., & Sosnoski, M. (2011). Decision framework for the analysis and selection of appropriate transfer pricing for a resilient global SME manufacturing operation—a business case. *International Journal of Production Research*, 49(18), 5431-5448.

- Marković, M. R., Farooq, M. S., & Marković, D. (2017). Strengthening the Resilience of Small and Medium-Sized Enterprises. *Management, Enterprise and Benchmarking in the 21st Century*, 345-356.
- Moore, S. B., & Manring, S. L. (2009). Strategy development in small and medium sized enterprises for sustainability and increased value creation. *Journal of Cleaner Production*, 17(2), 276-282.
- Monsson, C. K. (2017). Vulnerability and adaptability: post-crisis resilience of SMEs in Denmark. In *Creating Resilient Economies*. Edward Elgar Publishing.
- Müller, J. M., Buliga, O., & Voigt, K.-I. (2018). Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0. *Technological Forecasting and Social Change*.
- Pal, R., Torstensson, H., & Mattila, H. (2014). Antecedents of organizational resilience in economic crises—an empirical study of Swedish textile and clothing SMEs. *International Journal of Production Economics*, 147, 410-428.
- Polyviou, M., Croxton, K.L. and Knemeyer, A.M., (2019). Resilience of medium-sized firms to supply chain disruptions: the role of internal social capital. *International Journal of Operations & Production Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/IJOPM-09-2017-0530..>
- Ratick, S., Meacham, B., & Aoyama, Y. (2008). Locating backup facilities to enhance supply chain disaster resilience. *Growth and Change*, 39(4), 642-666.
- Rehm, S.-V., & Goel, L. (2017). Using information systems to achieve complementarity in SME innovation networks. *Information & Management*, 54(4), 438-451.
- Salles, M. (2006), Decision making in SMEs and information requirements for competitive intelligence, *Production Planning & Control*, 17(3), pp. 229-237.
- Stewart, G. T., Kolluru, R., & Smith, M. (2009). Leveraging public-private partnerships to improve community resilience in times of disaster. *International Journal of Physical Distribution & Logistics Management*, 39(5), 343-364.
- Strobel, N. and Kratzer, J. (2017), Obstacles to Innovation for SMEs: Evidence from Germany, *International Journal of Innovation Management*, 21(3), pp.1-28.
- Tokman, M., Richey, R. G., Jr., Morgan, T. R., Marino, L., & Dickson, P. H. (2013). SME supply chain portfolios: firm satisfaction and organization resources. *International Journal of*