

Leveraging on collective prosperity for supply chain disruption during Covid-19 Lockdown: Experience from Nigeria

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Abstract

This research contributes to supply chain risk management literature by investigating how leveraging the need for collective prosperity between supply chain partners can enable partners to work together to mitigate supply chain disruption during the Covid-19 pandemic. Drawing from social capital theory, we argue that collective prosperity is a relational behaviour that can be leveraged to reduce opportunistic behaviours, thereby promoting genuine concern for the survival and performance of supply chain partners. Using a qualitative strategy, the study collects data from 20 supply chain managers through semi-structured interviews. The study findings reveal that collective prosperity was an important factor which supply chain partners used - as a basis to go an extra mile in ensuring that their partner's supply chain was not disrupted. Supply chain partners deployed practical tactics to ensure that their partner's firms did not suffer major disruption. The findings underscore the critical role of relational capital in supply chain relationships, specifically leveraging collective prosperity to mitigate supply chain disruptions.

Keywords: Collective Prosperity, Social Capital, Supply Chain Risk, Covid-19

1. Introduction

This study investigates how firms establish and promote the understanding of collective prosperity (also called shared goals) with their supply chain partners - in fear of Covid-19 lockdown - to avoid disruption and make their supply chains more resilient. The study was necessitated by the large-scale supply chain disruption caused by Covid-19. At the peak of the pandemic, most countries shut down their economy, leaving only essential services to operate. Before shutdown and after, suppliers were faced with the difficult choice of; who to sell to and not sell to, at what price, at what quantity and on what terms? In contrast, customers (business-to-business relationships) had to lobby for

scarce supplies. Although price, government influence and proximity were part of the factor used in making supply chain decisions in such critical times, it is unclear whether and how supply chain managers leverage their interpersonal relationship to secure supplies by explaining to their partners that “we are in it together”.

The research question is built on the argument from the relational dimension of the social capital theory, that relationships are assets (Nahapiet and Ghoshal, 1998), which promotes interpersonal relationships, collective prosperity and togetherness (Reddish, Fischer and Bulbulia, 2013). Hence, partners are likely to suppress their personal interests for the collective benefit. Research by Chow and Chan (2008) reveals that social connection between individuals or partners encourages collective action. Furthermore, Durach and Machuca (2018) stressed that investments in interpersonal relationships are significant antecedents that are re-deployable in managing supply chain disruption. However, no empirical evidence has indicated how a shared understanding of collective prosperity between supply chain partners can be leveraged to prevent disruption, particularly during the Covid-19 pandemic.

With the need to enhance performance and competition, businesses have adopted several business and operations management models such as Total Quality Management, Just-in-Time, outsourcing, and lean philosophy. However, supply chains are constantly under pressure from upstream and downstream to keep up with innovations while delivering value. Thus, managing supply chain risk is of high interest in maintaining the expectation of all supply chain stakeholders. However, supply chain risk is an inevitable reality that faces all businesses. Thun and Hoenig (2011) defined risk management as the identification and analysis of risks and their control.

This paper is organised as follows: Section 2 presents the literature review where the theoretical background of our study is revealed. Section 3 develops the hypotheses and conceptual. Section 3 presents the research methodology. Section 4 presents the findings, and Section 5 conclude by presenting the study contributions and limitations and proposing directions for

2. Literature Review

Theoretical Background – Social Capital

Social relationships both at the firm and individual level reinforce formal relationships that provide supply chains with positive outcomes (Sukoco, Hardi and Qomariyah, 2018; Azar *et al.*, 2018). The social capital theory is one of the popular theories that have been used in psychology – later extended to other fields, including supply chain and disaster risk management, to explain the network of relationships and their advantages to individuals, communities and firms (Nahapiet and Ghoshal, 1998).

The theory of social capital, according to Lin (2003), focuses on the resources embedded in one’s social network and how access to and use of such resources

benefit the individual actions”. Hence, actions taken to maintain and gain valued resources are the main focus of the theory (Lin, 2001). The social capital theory focuses not only on individuals but also on relationships and their outcomes (Andriani and Christoforou, 2016). As a result, social capital does not belong to individuals but to a social structure, an organisation, community, or other social groupings.

Relational Capital

Most scholars have agreed that there is three dimensions of social capital: structural, cognitive and the relational dimensions of social capital (Nahapiet and Ghoshal, 1998). The relational dimension has been used interchangeably with social capital (Cousins et al., 2006). This dimension of social capital has also received attention from scholars, who have described it as “the relational view”. The relational dimension focuses on the personal relationships and direct ties between actors that have developed with each other through a history of interactions, as opposed to structural outcomes of interactions (Nahapiet and Ghoshal, 1998). The relational dimension focuses on the particular relations people build in the course of their interaction, such as respect and friendship, trust, norms, and identification (Nahapiet and Ghoshal, 1998).

Scholars argue that relational capital translates to assets (relational assets) which can be leveraged as a source of value (Nahapiet and Ghoshal, 1998). According to (Cousins et al., 2006), when actors interact in a social context, trust, motivation, and opportunity may raise the level of social exchanges between the groups. It is also important to note that the quality of the interaction strengthens the relationship and in extension, the relational capital (Lefebvre et al. 2016). Where interaction is weak or doubtful, there is little possibility of the relationship translating to value beneficial to the parties.

Organisational social capital

According to Leana and Van Buren (1999), Organisational social capital is a resource reflecting the character of social relations within the firm’. Arregle, Hitt, Sirmon and Very (2007) referred to organisational social capital as a critical resource for organisations. Putnam (1995) first expanded the concept of individual-level social capital to the ‘stock’ of social capital owned by communities, organisations, or even nations. Although Putnam has been criticised for the ‘circular reasoning’ of social capital that enhances networks, norms, and trust (Edwards and Foley, 1997; Portes, 2000), his work has gained prominence in development agencies such as The World Bank applied some of his recommendations in their interventions (Feldman & Assaf, 1999). Organisational social capital can facilitate the direction of activities and projects across departments and units, enabling the smooth running of activities (Hitt et al., 2002). Organisational social capital can also enhance competitive advantage as it can improve effective decision-making processes and the execution of the resulting decisions, which can have a positive effect on the internal and external activities of the firm (Hitt et al., 2002).

Further, Hitt, Lee and Yucel (2002) reported that organisational social capital benefits a firm as it will provide access to external resources and facilitate internal coordination (Sirmon et al., 2007). Hitt, Lee and Yucel (2002) argued that since no firm controls all of the resources it needs to compete effectively or dominate the market, it must obtain or gain access to the resources it needs from external sources.

Also, organisational social capital is vital to a firm with regards to its role in increasing the availability and access to resources such as information, technology, knowledge, distribution networks, and key contacts, which Hitt, Lee and Yucel (2002) referred to as “relationships with critical constituencies”. An example of such in this study is a key relationship that an organisation maintains to participate in risk information sharing. Although organisations consist of individuals who, at an individual level, maintain a social relationship, the organisation needs to formalise their social relationships, especially those critical for risk information sharing.

Consistent with the argument by Hitt, Lee and Yucel (2002), even though an organisation may start by “borrowing” another actor’s social capital to satisfy its social capital needs, it must, however, develop its independent organisational level social capital to prevent the danger of losing the actors’ (that is their employee) support or the spill-over effect of an actor’s mistakes that may jeopardise the relationship. While an organisation may borrow or leverage on its employees’ individual level social capital, it may not necessarily yield the same level of openness or trust, which may enhance risk information sharing.

Supply chain relationships

Supply chain management has been described by Harland (1996) as an intermediate type of relationship within various business stages. Harland (1996) observes that business trends such as Just-in-time, supplier base reduction, and outsourcing provide the context and reasons for an increased interest in the management of supply chain relationships. This will likely increase as new business trends and models emerge. Besides, these business trends have their own risk that makes supply chains more vulnerable and thus, requires a relationship beyond the typical business exchange relationship.

Scholars have provided two extremes of business/supply chain relationship; (1) arms-length and (2) integration/ partnership type III /collaboration (Lambert and Knemeyer, 2004). In an arms-length relationship, “the organisations recognise each other as partners and coordinate activities and planning on a limited basis” (Lambert and Knemeyer, 2004). However, in the integration/ partnership type III /collaboration relationship, there is a significant level of integration between firms, “with each viewing the other as an extension of itself” (Lambert and Knemeyer, 2004). Further, some arms-length relationships in a buyer-supplier relationship may be competitive, leading to partners guarding important information (Wu and Choi, 2005). Yet, a collaborative relationship is more cooperative, emphasising more openness (Wu and Choi, 2005).

The supply chain's collaboration is centrally aimed at integrating supply and demand (Barratt, 2004). Early forms of supply chain collaboration, as reported by Barratt (2004), are vendor managed inventory (VMI) and continuous replenishment programmes (CRP). According to Barratt and Oliveira (2001), information sharing is essential for successful collaboration among supply chain partners. This submission was further supported by Hudnurkar, Jakhar and Rathod (2014). They selected 69 randomly research papers published in the refereed journals in supply chain collaboration. They found that a total number of 28 factors that affects supply chain collaboration, and supply chain information sharing is a highly talked about factors for effective supply chain collaboration.

Covid-19 Pandemic and Supply Chain Disruption

The Covid-19 pandemic caused several disruptions to individuals, firms, and supply chains. According to Pato and Herczeg (2020), Covid-19 caused devastating social effects, and massively influencing the local and global economic status, including the short and global supply chains. There are also problems with movement restrictions of workers, changes in consumers' demand, closure of food production facilities, restricted food trade policies, and financial pressures in the the food supply chain in many countries (Aday and Aday, 2020). Silva et al. (2020) stated that coronavirus (Covid-19) had forced many companies to close doors because of the lack of capital to maintain operational performance; others reinvented and adapted themselves during this problem.

Chin (2020) explained that the occurrence of Covid-19 has disrupted the food supply chain with the lockdown restriction known as the Movement Control Order (MCO) put in place to break the transmission mode of Covid-19. According to Singh et al. (2020), an outbreak of deadly Covid-19 virus has taken the lives of people and severely crippled the economy, manufacturing and logistics activities have been suspended, and it has affected the demand and supply of various products. Queiroz et al. (2020) opined that a Covid-19 pandemic has seriously wreaked havoc on supply chains around the globe. Hoek (2020) stated that the Covid-19 pandemic is causing risks and disruptions in most supply chains. Golan et al. (2020) highlighted that the Covid-19 pandemic has clearly shown the lack of resilience and failure on a global network scale concerning individual supply chain connections nodes. In addition, Hoek (2020) suggested that the Covid-19 crisis has caused significant supply chain disruptions. Also, Hu et al. (2020) argued that the Covid-19 pandemic had caused considerable damage to various industries worldwide, and the global supply chain, which had shown a high level of robustness and resiliency against several disruptions in recent decades, is genuinely compromised.

There are also several reports about the disruptive effects of the Covid-19 pandemic on countries. In Nigeria, Babatunde (2020) reported that recent COVID 19 had plunged the world into a broken supply chain that Nigeria is not an exemption from. Similarly, in China, Sharma et al. (2020) stated that COVID-19 disruptions have caused a ripple effect on the global supply chains. In India, Rewari et al. (2020)

reported that India's nationwide lockdown due to the Covid-19 pandemic had prompted concerns about disruption to the antiretroviral drug essential supply. Bramantyo (2020) reported that the Government of Indonesia suspended various economic activities that significantly impact the availability of domestic supply chains. Similarly, Odunayo and Victor (2020) argued that Covid-19 crisis had created a new set of challenges to which supply chain managers must respond. Covid-19 and the imposition of the strict lockdowns have caused disruptions in China with a ripple effect on the global supply chains (Sharma et al. 2020).

3. Research methodology

A qualitative strategy is adopted to investigate how firms establish and promote the understanding of collective prosperity with their supply chain partners - in fear of Covid-19 lockdown – to prevent disruption and make their supply chains more resilient. The qualitative strategy is chosen because it allows for collecting in-depth data about a phenomenon in a real-life context, especially when the phenomenon and context are not clear (Yin, 2014; Creswell, 2009). As a result, the qualitative strategy is more appropriate for this phenomenon and research being investigated, given the lack of understanding of how firms establish and promote collective prosperity in crisis situations.

Rather, a qualitative exploratory interview fits the context and purpose of this research. In-depth semi-structured interviews are conducted with firms in Nigeria. The interviews targeted managers and decision-makers with experience in procurement, operations and distribution who have been with the organisation since the Covid-19 pandemic. A purposive sampling strategy is employed to locate and interview the right respondents for this research. Although the sampling choice creates a selection bias, Yin (2014) argues that purposive sampling is relevant, primarily when probability sampling can not be used to assess relevant data.

A total of twenty semi-structured open-ended interviews were conducted using face-to-face, telephone and internet-based videoconferencing. The interview was guided by an interview protocol built from literature in social capital theory and supply chain management (Lambert and Knemeyer, 2004; Durach and Machuca, 2018). Interviews are recorded, transcribed and analysed accordingly.

4. Findings

The findings reveal how the supply chain managers interviewed have been able to mitigate the adverse effect of the Covid-19 lockdown by leveraging on the relationships they built with their supply chain partners in the past and subsequently using the relationship to secure critical supplies, get extra service and receive risk information in return for continuity of the relationship and future opportunities. Furthermore, given that the pandemic is adversely affecting most businesses in Nigeria and the world, the supply chain managers interviewed explained how they showed concern with some of their important firms that are struggling by providing financial and non-financial

support to prevent supply chain disruption as well as promote a shared understanding of the current situation in anticipation of a better future.

Regarding the financial support as a demonstration of collective prosperity as a strategy to mitigate supply chain disruption, the findings revealed that the focal companies assisted their supply chain partners in assessing loan facilities. This ensured that the suppliers stayed in business and continued delivering the required product and services to their supply chain partner.

The findings also revealed that suppliers went the extra mile to assist their supply chain partners. One company explained how a supplier provided them with a contact of another supplier for items they did have. This demonstrates a shared understanding that a disruption that affects a member's supply chain will directly or indirectly affect theirs in time. One of the interviewees argued that going the extra mile was possible because of the previous interpersonal relationship

5. Summary and Conclusion

This research contributes to the supply chain risk management and social capital literature by demonstrating how firms establish and promote the understanding of collective prosperity with their supply chain partners and how it makes their supply chains more resilient. The research also shows how firms can develop unique relational resources based on the current threat of Covid-19 to remain competitive and mitigate disruption. Furthermore, this research highlights the need for firms to build interpersonal relationships and strengthen the understanding of collective prosperity between supply chain partners as they can be leveraged during disruptions such as Covid-19.

References

- Aday, S., & Aday, M. S. (2020). Impact of COVID-19 on the food supply chain. *Journal of Food Quality and Safety*, 4(4). 167-180. doi:10.1093/fqsafe/fyaa024
- Arregle, J.L., Hitt, M.A., Sirmon, D.G. and Very, P. (2007) 'The development of organisational social capital: Attributes of family firms'. *Journal of management studies*, 44(1), pp.73-95.
- Babatunde, A. I. (2020). Impacts of covid 19 on supply chain operations in Nigeria. *International Journal of Business and Management Invention*, 9(4). 43-52. Retrieved from: 2319-8028, ISSN (Print):2319-801X www.ijbmi.org
- Barratt, M. (2004) 'Understanding the meaning of collaboration in the supply chain', *Supply Chain Management-An International Journal*, 9(1), pp. 30-42. doi: 10.1108/13598540410517566.
- Chin, C., F. (2020). The impact of food supply chain disruptions amidst covid-19 in Malaysia. *Journal of Agriculture, Food Systems, and Community Development*, 9(4). 161-163. Retrieved from: Q<https://doi.org/10.5304/jafscd.2020.094.031>

- Chow, W.S. and Chan, L.S. (2008) 'Social network, social trust and shared goals in organisational knowledge sharing', *information & management*, 45(7), pp.458-465.
- Cousins, P.D., Handfield, R.B., Lawson, B. and Petersen, K.J. (2006) 'Creating supply chain relational capital: the impact of formal and informal socialisation processes'. *Journal of operations management*, 24(6), pp.851-863.
- Creswell, J. W. (2009) *Research Design: Qualitative, Quantitative and Mixed Approaches* (3rd Edition). London: SAGE publications.
- Durach, C. F. and Machuca, J. A. D. (2018) 'A matter of perspective – the role of interpersonal relationships in supply chain risk management', *International Journal of Physical Distribution & Logistics Management*, 48(3).
- Edwards, B. and Foley, M.W. (1997) 'Social capital and the political economy of our discontent'. *American Behavioral Scientist*, 40(5), pp.669-678.
- Feldman, T.R. and Assaf, S. (1999) *Social capital: conceptual frameworks and empirical evidence: an annotated bibliography*. World Bank, Social Development Family, Environmentally and Socially Sustainable Network.
- Golan, M. S., Jernegan L. H., & Linkov I. (2020). Trends and applications of resilience analytics in supply chain modelling: systematic literature review in the context of the covid-19 pandemic. *Journal of Environment Systems and Decisions*, 40. 222–243. Retrieved from: <https://doi.org/10.1007/s10669-020-09777-w>
- Harland, C. M. (1996) 'Supply Chain Management: Relationships, Chains and Networks', *British Journal of Management*, 7(Special Issue), pp. 63–80.
- Hudnurkar, M., Jakhar, S. and Rathod, U. (2014) 'Factors affecting collaboration in supply chain: a literature review'. *Procedia-Social and Behavioral Sciences*, 133(1), pp.189-202.
- Hitt, M.A., Lee, H.U. and Yucel, E. (2002) 'The importance of social capital to the management of multinational enterprises: Relational networks among Asian and Western firms'. *Asia pacific journal of management*, 19(2-3), pp.353-372.
- Hoek, R. V. (2020). Responding to COVID-19 Supply chain risks—insights from supply chain change management, total cost of ownership and supplier segmentation theory. Retrieved from: doi:10.3390/logistics4040023 www.mdpi.com/journal/logistics
- Hu, L.-T., & Bentler, P. M. (2020). Evaluating model fit in supply chain. Structural equation modeling: Concepts, issues and applications. Newbury Park: Sage Publications.
- Lambert, D.M., Knemeyer, A.M. and Gardner, J.T. (2004) 'Supply chain partnerships: model validation and implementation', *Journal of Business Logistics*, 25(2), pp.21-42.
- Leana III, C.R. and Van Buren, H.J. (1999) 'Organisational social capital and employment practices'. *Academy of management review*, 24(3), pp.538-555.

Lefebvre, V.M., Sorenson, D., Henschion, M. and Gellynck, X. (2016) 'Social capital and knowledge sharing performance of learning networks'. *International Journal of Information Management*, 36(4), pp.570-579.

Lin, N. (2001) *Social capital: A theory of social: Structure and action*. New York: Cambridge University Press.

Nahapiet, J. and Ghoshal, S. (1998) 'Social capital, intellectual capital, and the organisational advantage', *Academy of management review*, 23(2), pp.242-266.

Ogunayo, A. O., & Victor, A. C. (2020). COVID-19 and supply chain disruption: a conceptual review. *Asian Journal of Economics, Business and Accounting*, 19(2). 40-47.

Pato, B. S., & Herczeg, M. (2020). The effect of the covid-19 on the automotive supply chains. *Journal of Sciendo Studia Universitatis Babes-Bolyai Oeconomica*, 65(2). 1-11. Retrieved from: doi:10.2478/subboec-2020-0006

Portes, A. (2000) 'March. The two meanings of social capital'. In *Sociological forum* 21(5), pp. 589 –609.

Putnam, R.D. (1995) 'Tuning in, tuning out: The strange disappearance of social capital in America'. *PS: Political science & politics*, 28(4), pp.664-683.

Rewari, B. B., Mangadan-Konath, N., & Sharma, M. (2020). Impact of covid-19 on the global supply chain of antiretroviral drugs: A rapid survey of Indian manufacturers. *WHO South-East Asia Journal of Public Health*, 9(2). 126–133. Retrieved from: doi:10.4103/2224-3151.294306.

Reddish, P., Fischer, R. and Bulbulia, J. (2013) 'Let's dance together: synchrony, shared intentionality and cooperation'. *PloS one*, 8(8), p.e71182.

Silva, M. P., Veroneze, G. M., Oliveira, M. A., & Pereira, I. M. P. (2020). Impact on the supply chain in a hospital environment caused by the coronavirus inside the state of Amazonas. *European Journal of Business and Management Research*, 5(5). Retrieved from: DOI: <http://dx.doi.org/10.24018/ejbmr.2020.5.5.482>

Sharma, A., Gupta, P., & Jha, R. (2020). COVID-19: Impact on health supply chain and lessons to be learnt. *Journal of Health Management*, 22(2). 248–261. in.sagepub.com/journals-permissions-india Retrieved from: DOI:10.1177/0972063420935653 journals.sagepub.com/home/jhm

Singh, S., Kumar, R., Panchal, R., & Tiwari, M. K. (2020). Impact of covid-19 on logistics systems and disruptions in food supply chain. *International Journal of Production Research*. Retrieved from: <https://doi.org/10.1080/00207543.2020.1792000>

Queiroz, M. M., Ivanov, D., Dolgui, A., & Wamba, S. F. (2020). Impacts of epidemic outbreaks on supply chains: mapping a research agenda amid the covid-19 pandemic through a structured literature review. *Annals of Operations Research*. Retrieved from: <https://doi.org/10.1007/s10479-020-03685-7>

Wu, Z. and Choi, T. Y. (2005) 'Supplier-supplier relationships in the buyer-supplier triad: Building theories from eight case studies', *Journal of Operations Management*, 24(1), pp. 27–52. doi: 10.1016/j.jom.2005.02.001.

Yin, R.K. (2014) *Case study research: Design and methods (applied social research methods)*. Thousand Oaks, California: Sage publications.