

COVID-19 CRISES MANAGEMENT: A CONTINGENCY PERSPECTIVE

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ABSTRACT

The spread of COVID-19 crisis resulting in large-scale travel restrictions continue to wreak havoc on the global businesses across different industries. In a bid to control the spread of the pandemic, countries of the world including Nigeria, have introduced lockdown which has significantly affected the almost all industries. The purpose of this study is to examine the aligning content of COVID-19 with the contingency management thought. The methodology adopted is literature review. This paper examined the adverse effect of Coronavirus (COVID-19) to the business across the globe. The findings based on the review of extant literature reveals that the coronavirus known as COVID19 has negatively affected a lot of businesses across the globe. The paper recommends that business organizations should focus on core competencies and capability development strategy for survival in the presence of such pandemic.

Keywords: *Crises Management, COVID-19, Proactive Strategies, Reactive Strategies*

INTRODUCTION

Organisations are operating in a rapid unpredictable economic environment. The changes in the environment have a significant impact on the survival and success of the organisations (Tomecko & Dondo, 2012). The issue of crisis management strategy has generated interest among most management experts. According to McConnel (2010) it is through crisis management strategy that a firm will be able to secure itself from threats brought about by the changes in the environment. Crises are developments or trends that emerge from an organization's internal or external environments and are perceived to have the potential to affect an organization's performance (Drennan, McConnell & Stark, 2015; King & McGrath, 2002). As environmental turbulence increases, crisis emerge more frequently that challenge the way an organization formulates and implements its strategy.

The COVID-19 was first reported in Wuhan, Hubei province, China, in the late 2019. As noted by the Johns Hopkins University on May 27, 2020, the number of confirmed cases reported around the world has been steadily growing, reaching 5.69 million with 355,575 deaths (Johns Hopkins University & Medicine 2020). In view of this exponential growth, the COVID-19 was declared a world pandemic by the World Health Organization—WHO (2020) on March 11.

The COVID-19 pandemic outbreak created a crisis that has forced many businesses to close, leading to an unprecedented disruption of commerce in most industry sectors. Retailers and brands face many short-term challenges, such as those related to health and safety, the supply chain, the workforce, cash flow, consumer demand, sales, and marketing. However, successfully navigating these challenges will not guarantee a promising future, or any future at all. This is because once we get through this pandemic, we will emerge in a very different world compared to the one before the outbreak. Many markets, especially in the fields of tourism and hospitality, no longer exist. All organizational functions are intended to prioritize and optimize spending or postpone tasks that will not bring value in the current environment. Companies, especially start-ups, have implemented an indefinite hiring freeze. At the same time, online communication, online entertainment, and online shopping are seeing unprecedented growth (Donthu & Gustafsson, 2020).

The COVID-19 outbreak is likely to cause bankruptcy for many well-known brands in many industries as consumers stay at home and economies are shut down (Tucker, 2020). In the US, famous companies such as Sears, JC Penney, Neiman Marcus, Hertz, and J. Crew are under enormous financial pressure. The travel industry is deeply affected; 80% of hotel rooms are empty (Asmelash & Cooper, 2020), airlines cut their workforce by 90%, and tourism destinations are likely to see no profits in 2020. Furthermore, expos, conferences, sporting events, and other large gatherings as well as cultural establishments such as galleries and museums have been abruptly called off. Consulting in general and personal services, like hairdressers, gyms, and taxis, have also come to a standstill due to lockdowns. Finally, important industries like the car, truck, and electronics industries have abruptly closed (although they started to open up two months after their closure). There are an endless number of questions we could ask ourselves in connection to this rather abrupt close-down. For instance, how do we take care of employees in such situations? Why are companies not better prepared to handle such situations (e.g., putting aside earnings or thinking of alternative sources of income)? How are the companies and even countries using the current situation to enhance their competitive situation? One of the countries that seem to be using the situation is China that is buying European based infrastructure and technology (Rapoza, 2020).

While some businesses are struggling, some businesses are thriving. This is true for a number of Internet-based businesses, such as those related to online entertainment, food delivery, online shopping, online education, and solutions for remote work. People have also changed their consumption patterns, increasing the demand for takeout, snacks, and alcohol as well as cleaning products as we spend more time in our homes. Other industries that are doing well are those related to healthcare and medication as well as herbs and vitamins. Typically, when studying markets, it is assumed that they are static, a natural conclusion since they tend to change slowly. However, if there is one thing the COVID-19 outbreak has shown us, it is that markets are dynamic (Jaworski, Kohli, & Sahay, 2000) and can move rapidly. Furthermore, a market is not just a firm; it is a network of actors (i.e., firms, customers, public organizations) acting in accordance with a set of norms. These systems are sometimes referred to as dynamic ecosystems that exist to generate value (Vargo & Lusch, 2011).

In a context where severe disruptions (e.g., manufacturers closed or partially closed, airports operating with harsh restrictions, shortages of medical equipment and supplies) are recorded in

the global SCs (Ivanov 2020a; McKinsey & Company 2020; World Economic Forum—WEF 2020a), a good number of industries (automotive, electronics, medical equipment, consumer goods, etc.) also experience ripple effects (Dolgui, Ivanov & Sokolov, 2018; Ivanov 2020a, b). For example, as China is considered a world's factory, the pandemic's disruptions to SCs around the world started there before spreading elsewhere (Deloitte 2020). The severe ripple effects from this challenge require different crises management strategies and actions.

Crisis management is a strategic activity whose aim is to minimise risks thus making it possible for an organization to take greater control of its own destiny. It is a planning process for crisis management in order to mitigate against possible undesirable occurrences and devise favourable strategies for risk minimisation. A crisis is an event that occurs suddenly; demanding quick reaction, distorts organization strengths, creates uncertainty and puts an organization's reputation at risk. Depending on its intensity, it can permanently change an organization's character (Millar, 2008). According to Fearn – Banks (2006) crisis management is a process of planning for unpredictable eventualities. He also adds that crisis is an issue that is difficult to resolve because of pressure of time, high uncertainty as well as limited control. Crisis management is therefore of great importance to every organization (Burnett, 2008).

Crisis management is a new field of study and practice, which has attracted empirical studies on its management. Mostafa (2006) conducted a research on Egyptian hospitals on crisis management preparedness entitled Strategic Preparation for Crisis Management in Hospitals: Empirical Evidence from Egypt. The study focused on hospital managers' perceptions concerning the preparation for crisis management. The findings indicated that there was a positive relationship between external strategic orientation and readiness for crisis. He also found out that there was a positive relationship between long-term strategy and readiness for crisis. Firms should be proactive in the prevention of crises by ensuring that, skilled human resource is under protection at all times to avoid high staff turnover, requisitioning only the supplies needed at a particular time in order to avoid obsolete supplies and keeping abreast with the latest technology. Risk assessment is also important in order to anticipate and shield against any incidences in advance (Gartner, 2010).

The main aim of crisis management is to device strategies that make it possible for an organization to deal with a crisis successfully and in a timely way. A crisis management team should be in place to make critical decisions in case of a crisis. The team takes the responsibility to management crisis and to restore order. The purpose of this study is to examine the relationship between crises management and its alignment with the contingency management thought.

LITERATURE REVIEW

Crisis Management Strategies

Crisis management strategies are of special importance to the mobile telephone service providers because the firms will be in a position to respond quickly to risks. Teams should be put in place that would make decisions in extra ordinary situations (Rozek & Groth, 2008). Scholars have classified crisis into many categories for example Coombs (2002) has classified it into nine categories; natural disasters, malevolence, technical break downs, human break downs, challenges in supplies, technological changes, organizational misdeeds, workplace violence and

rumours. Coombs (2009), later grouped crisis into five clusters namely; rumours, natural, disasters, malevolent accidents and misdeeds for such as obsolete supplies.

Crisis management has undergone progressive evolution during the last 20 years (Jacques, 2007). Coombs (2007a) considers crisis management as a critical function in an organization because if it is not effectively managed, it can result to loss of specialised employees leading to disruption of key functions. The safety of human resources is of great importance. It would take a long time to recover from the loss of well-trained human resources in case of an incidence. It is unfortunate that some companies are not aware of the real costs of employee turnover. Employee turnover is expensive to an organization and affects business performance. It is difficult to manage employees' turnover. In research by Pearson & Clair (2008) stated that when turnover rate rises organizations should recognize that their workforce and financial performance are at risk. Therefore, organizations should lay strategies to mitigate and eliminate or lower the turnover.

Dimensions of Crisis Management

Proactive Strategy

An organisation that is proactive is a conformist one. It would rather eyeball a crisis than allow it to fester. Robin et al (2011) described proactiveness as a personality attribute that describes people prone to take action to avert an unpleasant situation; same applies to organisations. Rotter (1996) opined that proactive organisations tend to have an internal locus of control where they believe they have the capacity and the responsibility to control their own fate. Frankl (2013) is of the opinion that being proactive helps organisations to successfully preserve their strength and confidence in the midst of obstacles.

Reactive Strategy

Being reactive is falling to do what should have been done initially. According to Bailey (2016), being reactive is associated with having the ability to confront pressure that comes your way in real time. In relation to crisis management, it is a situation in which planning decisions take place during and after the crisis situation (Karam, 2018). A reactive manager is one who will usually wait for crisis to occur or emerge before taking necessary steps to manage and eradicate it in order to achieve continuity in business operations. This strategy is characterized by quick thoughts processes which are logical and planned to turn things around (Bailey, 2016).

COVID-19 Crises Management

A crisis is a business or organizational problem that is exposed to public attention, and that threatens a company's reputation and its ability to conduct business (Weiner, 2006). Coombs (2007) agree that a crisis is a sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and a reputational threat. Crises can harm stakeholders physically, emotionally and/ or financially. A wide array of stakeholders is adversely affected by a crisis including community members, employees, customers, suppliers and stockholders. During crises effective crisis management has a significant importance endeavouring to avoid damage for corporate reputation. Weiner (2006) notes that a crisis can take on many forms, including natural or man-made disasters, environmental spills, product tampering or recalls, labour disruptions or criminal acts to name a few. Payne (2006) believe that the interaction of reputation and response may be such that traditional strategies do not apply in

all cases For this reason, Grundy, Moxon (2013) suggest when considering an appropriate crisis response, organisations must assess the type and scale of crisis they are facing.

Literature suggests three important aspects of crisis management endeavouring to avoid damage for corporate reputation: the role of CEO, organizational activities and communication strategy. According to Turk, Jin, Stewart, Kim, Hipple (2012), positive relationships between a company and its stakeholders plus a CEO who plays a visible leadership role during a crisis may allow for a more aggressive, yet defensive communications strategy during a crisis. There is the interconnectedness of reputation, leadership and communication. So there is a need for a CEO to play a visible leadership role during a crisis, a long-held tenet of crisis management. The world as it is today is being overwhelmed by the outbreak of the novel severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2) virus that is responsible for the COVID-19 disease (Shereen, Khan, Kazmi, Bashir & Siddique,2020). The World Health Organization (WHO) declared the new wave of infection with predominantly respiratory system symptoms a pandemic on March 11th, 2020 with most countries reporting increasing numbers of morbidity and mortality rates (Cucinotta & Vanelli, 2020). The major drivers of the outbreak appear to be both symptomatic and asymptomatic persons infected with SARS-COV-2 from whom the virus can spread via droplets or direct contact with contaminated surfaces (World Health Organization,2020). This forcefully and rapidly led to a systematic lockdown of most countries of the world (Whitworth,2020). Since the WHO had recommended a multi-prong preventive approach that includes physical distancing, hand washing with soap and water for at least 20 seconds and respiratory etiquette as mitigating measures, the lockdown eventually became a key method of restricting on-going community spread of the virus (Shereen, Khan, Kazmi, Bashir & Siddique,2020). The resultant effects of these stringent public health actions have led to enormous economic losses, disruption of the 'usual' physical and social contacts, massive loss of jobs and means of livelihood and increase in mental health issues (Fernandes,2020; Torales, O'Higgins, Castaldelli-Maia & Ventriglio,2020).

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COVID-19 has caused a severe industrial collapse as manufacturing companies are now facing a crisis. Production plans are postponed which definitely has spillover effects. Car manufacturers like, Ferrari and Volkswagen, are suspending production in Europe. They are closing operations due to industrial shutdown as well as for lack of parts. The effect is also noticeable in luxurious goods, like Swiss watches. The manufacturers are facing problems due to lack of parts and components. The supply chain disruption will surely have a major impact on the business cost for the manufacturing companies in foreseeable future. Hasbro, a toy manufacturing company is also suffering as 70% of the source of its goods is from China. Due to the shutdown of different factories in China and the disruption of the transportation route, it has been extremely difficult for manufacturing companies like Hasbro to market its products (Fernandes,2020).

In a mission to control the spread of the virus, social distancing is to be maintained; which has caused the shutdown of various local businesses, supermarkets, financial markets, corporate offices along with coast -to-coast businesses. As a result, many economists are anticipating high levels of inflation, because both supply and demand have been affected by the pandemic. Travel agency services, hotels, restaurants, home electronics\furnishings, sport events are sectors that have been more vulnerable to the current pandemic (Mahar, Mahar & Early ,2020).

The COVID-19 pandemic in Nigeria and around the globe has resulted in business leaders and owners having to swiftly mobilize and make short term decision. A decision such as the reduction in production output and or even shutting down operation temporarily could have long term implications that may not be foresighted. This, thus, would have an impact on private business financial performance, as a result of the lockdown policy or order by the President of the Federal Republic of Nigeria. Empirical studies have also suggested that both pandemics and epidemics harm the financial performance of firms. Kim, Kim, Lee and Tang (2020) investigate the influence of macroscopic and infectious epidemic disease outbreaks on the financial performance of the restaurant industry. Nine events on four epidemic disease outbreaks during 2004–2016 were analyzed. Event study method and Mann-Whitney U test were used as the research method and inferential statistic respectively. They found out that confirmed the negative influence of epidemic disease outbreaks on the restaurant industry, and identified all the three firm characteristics serve as risk-mitigating factors.

Covid-19 Crises Management: A Contingency Perspective

The COVID-19 emergency responses of many states have revealed important inconsistencies. In many European countries, the authorities have adopted a one-size fits-all policy and imposed the same measures everywhere. More worryingly, some governments—notably in Africa— have not performed their own adapted risk assessment before copy-pasting strategies from abroad (Broadbent & Smart, 2020). This is problematic, since it makes little sense to use a predictive model developed from a country where the median age is (Pawson & Tilley, 1997) and translate it to a country with a median age of (World Health Organization, 2005), without adjusting the parameters. In addition, current policies fail to account for regional or trans-border contextual parameters, where either more stringent or relaxed measures could be more suitable depending on geographical determinants. The universal lockdown of a whole country may not be necessary when there are only one or two epidemic outbreaks separated by hundreds of miles, especially if containment is quick and determined. What we suggest, in order to be effective, is that policies

should fit each context and be adaptive at the territorial or ecosystem level, versus being unreflectively and uniformly bounded by national jurisdictions. Hence, this calls for a contingency approach to the containment of the pandemic. This is the best way to not impose measures that are too coercive, which may face legal constraints and may be counterproductive, eroding public trust and cooperation. (Parmet WE, Sinha,2020; Gostin & Hodge,2020). In the post-COVID-19 recovery phase, we hope the lessons learnt from local, national and global responses to this pandemic will foster support, by policymakers and by the public, for tailored policy responses that support stronger and more integrated local health systems.

Coronavirus (COVID-19) is a great wake up call. It has clearly demonstrated how fragile business is. It has created disruption in the supply chain both domestically and globally, especially with respect to food and energy. It has compelled business adapt contingency approaches powered by technological innovations in the face of survival threats. It is hard to imagine how business could run today without smart phones, the internet, eCommerce, and Zoom meetings. The economic crisis generated by the lockdown and social distancing mandates to combat the coronavirus has been a good wake up call for businesses in general and industrial businesses in particular. The best way to survive is adopting a contingency management perspective.

Due to the highly contagious nature of the SARS-CoV-2 virus, ensuring a safe social distance between people has proven to be an effective way to reduce viral infections in communities (Fong, Gao, Wong, Xiao, Shiu, Ryu & Cowling, 2020). Initially implemented with the onset of COVID-19 (believed to have originated in Wuhan, China), social distancing measures include the closing public areas (such as parks and plazas) and the maintenance of physical distances between people in areas that cannot be closed (such as markets and health care facilities). These social distancing practices have had a major impact on industries that rely on high levels of human interaction, such as hospitality and tourism, which are suffering greatly during this period (Hoque, Shikha, Hasanat, Arif & Hamid 2020). Strategic response initiatives and creative innovations to navigate the COVID-19 crises can only be driven by adopting a contingency approach and in this way, a new paradigm can emerge in which technologically driven capabilities' can facilitate a better business survival than we knew prior to the COVID-19 pandemic.

Managing uncertainty especially during the COVID-19 pandemic involves strategies that help firms either reduce (risk management) or cope with (strategic management) un-certainty; reducing uncertainty is a natural motivator that guides firms' behavior, whereas coping with it allows firms to adapt their strategy to deal with the type of uncertainty faced by them (Sniazhko,2019).Uncertainty reduction involves information gathering, proactive collaboration or cooperation, and networking; whereas, uncertainty coping consists of flexibility (diversification and operational adaptation), imitation (copy competitors and early movers), reactive collaboration and/or cooperation, control and avoidance (Simangunsong, Hendry & Stevenson, 2012). Contingency management is needed to achieve the foregoing.

During times like these, reactive collaboration and/or cooperation (e.g., shifting the risk and uncertainty to the firms' partners) is the most common strategy used by firms to handle environmental or industry uncertainty. Firms may also try to avoid uncertainty when the level of

environmental and industry uncertainties is much greater than their worst expectations. Overall, managing uncertainty involves reducing the probability of undesirable outcomes and their impact on the businesses at various stages of the value chain (Figueira-de-Lemos & Hadjikhani, 2014). For instance, Aldens is family owned butcher SME, based in Oxford and established in 1783, supplies universities, restaurants, pubs, etc., and they faced an 85% reduction in orders overnight (Midcounties, 2020). Aldens partnered with regional Mid counties Co-op retailer to supply fresh meat and substitute those product lines that were in jeopardy because of increased consumer demand and disrupted supply chains. Similarly, many SMEs in fashion industry have started making face masks and lab coats, to meet the insatiable demand for these personal protective equipment (PPE). Similarly, many alcohol factories are now producing hand sanitisers, while a small firm (Isinnova) was able to create a system to use the Decathlon diving Mask as a pulmonary ventilator (Murdock, 2020). It is important to state that only firms that adopt a proactive COVID-19 management using contingency models will survive.

In this context, it may also be useful to see the experience of Samsung, a South Korean giant in consumer electronics and home appliances, during the ongoing Covid-19 crisis. Being fully aware of the risks of single sourcing, Samsung has established a vast manufacturing network over the years with factories in Brazil, India, Indonesia, South Korea, and Vietnam, to fulfill its huge production demand and to reduce its dependence on China. Unsurprisingly, this has helped Samsung shift its production from one location to another during the ongoing Covid-19 crisis, thereby facing just a slow-down, and not a complete shutdown in production. Similarly, to compensate for the closure of retail stores, Samsung has leveraged its contracts with mobile phone retailers and Benow (a payment and EMI technology firm) to create an e-commerce platform so that its retail business can continue to sell and deliver the products to its customers (Mukherjee, 2020). Samsung has also launched additional services to maintain its customer relationships, such as “Free Repairs for the Frontline” program to offer free smart phone repair services to healthcare workers and special discounts for first responders and healthcare professionals (Mihai, 2020)

CONCLUSION

COVID -19 is the deadly virus that has nearly locked down the entire universe. It has claimed several millions of lives worldwide. Presently, there is no known cure for the virus. The pandemic have influences on education, economy, religious, sporting, social, banking activities, and others. Global economic and social life has been severely challenged since the World Health Organization (WHO) declared the COVID-19 disease a pandemic. Travel, tourism and hospitality, in particular, have been massively impacted by the lockdowns used to maintain social distance to manage the disease.

RECOMMENDATIONS

- i. Organizations should pursue the proactive crises strategies rather than the reactive in crisis management strategies in order to respond well and have a positive corporate identity management.
- ii. The paper recommends that business organizations should focus on core competencies and capability development strategy for survival in the presence of such pandemic.

- iii. In the wake of the pandemic, managers should think more of innovate means of continued production by looking increasingly to the adoption of e-commerce platforms.

REFERENCES

- Asmelash, L., & Cooper, A. (2020). Nearly 80% of hotel rooms in the US are empty, according to new data. Retrieved from: CNN <https://edition.cnn.com/2020/04/08/us/hotel-rooms-industry-coronavirus-trnd/index.htm>. Accessed: 7/07/2020
- Broadbent, A, Smart, B.T.H. (2020). Why a one-size-fits-all approach to COVID-19 could have lethal consequences [Internet]. The Conversation, 2020. Available: <https://theconversation.com/why-a-one-size-fits-all-approach-to-covid-19-could-have-lethalconsequences>. Accessed: 7/07/2020
- Burns, T., & Stalker, G. M. (1961). *The management of innovation*. London: Tavistock.
- Cucinotta, D., & Vanelli M. (2020). WHO Declares COVID-19 a Pandemic. *Acta Biomed*, 91(1),157-160.
- Deloitte. (2020). COVID-19: Managing supply chain risk and disruption. Retrieved March 30, 2020, from <https://www2.deloitte.com/global/en/pages/risk/articles/covid-19-managing-supply-chain-risk-anddisruption.html>. Accessed: 7/07/2020
- Dolgui, A., Ivanov, D., & Sokolov, B. (2018). Ripple effect in the supply chain: An analysis and recent literature. *International Journal of Production Research*, 56(1–2), 414–430. <https://doi.org/10.1080/00207543.2017.1387680>.
- Donthu, N., Kumar, S., & Pattnaik, D. (2020). Forty-five years of Journal of Business Research: A bibliometric analysis. *Journal of Business Research*, 109,1–14.
- Fernandes N. Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy. SSRN Electron J. 2020.
- Figueira-de-Lemos, F., & Hadjikhani, A. (2014). Journal of World Business*, 49 (3), 332-349,
- Fong, M. W., Gao, H., Wong, J. Y., Xiao, J., Shiu, E., Ryu, S., & Cowling, B. J. (2020). Non-pharmaceutical measures for pandemic influenza in non-healthcare settings—Social distancing measures. *Emerging Infectious Diseases*, 26(5), 976–984.
- Fong, M. W., Gao, H., Wong, J. Y., Xiao, J., Shiu, E., Ryu, S., & Cowling, B. J. (2020). Non-pharmaceutical measures for pandemic influenza in non-healthcare settings—Social distancing measures. *Emerging Infectious Diseases*, 26(5), 976–984.

- Gostin, L.O., Hodge, J.G. (2020). US emergency legal responses to novel coronavirus: balancing public health and civil liberties [Internet]. JAMA 2020 <https://doi.org/>. Accessed: 7/07/2020
- Hoque, A., Shikha, F. A., Hasanat, M. W., Arif, I., & Hamid, A. B. A. (2020). The effect of Coronavirus (COVID-19) in the tourism industry in China. *Asian Journal of Multidisciplinary Studies*, 3(1), 52–58.
- Ivanov, D. (2020a). Predicting the impacts of epidemic outbreaks on global supply chains: A simulation based analysis on the coronavirus outbreak. *Transportation Research Part E*, 136 Available at: <https://doi.org/10.1016/j.tre.2020.101922>. Accessed: 7/07/2020
- Ivanov, D. (2020b). Viable supply chain model: Integrating agility, resilience and sustainability perspectives. Lessons from and thinking beyond the COVID-19 pandemic. *Annals of Operations Research*. Available at: <https://doi.org/10.1007/s10479-020-03640-6>. Accessed: 7/07/2020
- Jaworski, B., Kohli, A. K., & Sahay, A. (2000). Market-driven versus driving markets. *Journal of the Academy of Marketing Science*, 28(1), 45–54.
- Whitworth, J. (2020). COVID-19: a fast evolving pandemic. *Trans R Soc Trop Med Hyg*. 114(4), 241-248.
- Kim, J., Kim, J., Lee, S.K., & Tang, L. (2020). Effects of epidemic disease outbreaks on financial performance of restaurants: Event study method *approach*. *Journal of Hospitality and Tourism Management*, 43, 32-41.
- Mahar I, Mahar I, Early C. Impact of Covid-19 on Global Economy Structure [Internet]. *Modern Diplomacy*. 2020 [cited 10 May 2020]. Available from: <https://moderndiplomacy.eu/2020/04/22/impactof-covid-19-on-global-economy-structure/>. Accessed: 7/07/2020
- Midcounties (2020). Co-op Midcounties supports family butcher hit by coronavirus outbreak. 30th March, 2020. <https://www.talkingretail.com/news/industry-news/coop-midcounties-supports-family-butcher-hit-coronavirus-outbreak-31-03-2020/>. Accessed: 7/07/2020
- Mihai, M. (2020). Samsung USA offers free device repairs to COVID-19 first responders, *Sammoblie.com*, 22nd April, 2020. Available at: <https://www.sammobile.com/news/samsungusa-free-device-repairs-covid-19-first-responders/>. Accessed: 7/07/2020
- Mukherjee, W. (2020). Covid-19 fear: Electronics brands Samsung, Apple let offline stores sell online. *The Economic Times, India*, 18th April, 2020. <https://economictimes.indiatimes.com/industry/services/retail/covid-19-fear-electronics-brands-samsungapple-let-offline-stores-sell-online/>. Accessed: 7/07/2020

- Murdock, J. (2020). 3D-printed valve turns snorkeling mask into ventilator for Coronavirus treatment, and the design is online for free. Newsweek, 25th March, 2020. <https://www.newsweek.com/coronavirus-covid19-hospital-ventilator-snorkeling-mask-italy-3d-printing-isinnova-1494150>. Accessed: 7/07/2020
- Parment, W.E., & Sinha, M.S. (2020). Covid-19 — the law and limits of quarantine. *N Engl J Med Overseas Ed* 2020;382:e28 <https://www.nejm.org/doi/full/>. Accessed: 7/07/2020
- Paul, E., Brown, G.W., & Ridde, V. (2020). COVID-19: time for paradigm shift in the nexus between local, national and global health. *BMJ Global Health* 2020;5:e002622. doi:10.1136/bmjgh-2020-002622. Accessed: 7/07/2020
- Pawson, R., & Tilley, N. (2020). *Realistic evaluation*. London: Sage, 1997
- Rapoza, K. (2020). Watch out for china buying spree, NATO warns. Forbes <https://www.forbes.com/sites/kenrapoza/2020/04/18/watch-out-for-china-buying-spreen-atowarns/#623eada31758>. Accessed: 7/07/2020
- Shereen, M.A., Khan, S., Kazmi, A., Bashir, N., Siddique, R. (2020). COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*, 24, 91-98.
- Simangunsong, E. S., Hendry, L., & Stevenson, M. (2012). Supply chain uncertainty: A review and theoretical foundation for future research. *International Journal of Production Research*, 50(16), 4493–4523
- Sniazhko, S. (2019). Uncertainty in decision-making: A review of the international business literature. *Cogent Business & Management*, 6 (1), 1-32.
- Torales, J., O'Higgins, M., Castaldelli-Maia, J.M., & Ventriglio, A. (2020). The outbreak of COVID-19 coronavirus and its impact on global mental health. *International Journal of Soc Psychiatry*, 66(4),317-320
- Tucker, H. (2020). Coronavirus bankruptcy tracker: These major companies are failing amid the shutdown. Forbes <https://www.forbes.com/sites/hanktucker/2020/05/03/coronavirus-bankruptcy-tracker-these-major-companies-are-failing-amid-the-shutdown/#5649f95d3425>. Accessed: 7/07/2020
- Vargo, S. L., & Lusch, R. F. (2011). It's all B2B... and beyond: Toward a systems perspective of the market. *Industrial Marketing Management*, 40(2), 181–187.
- World Health Organization. International Health Regulations (2005) Second edition [Internet], 2008. Available: https://apps.who.int/iris/bitstream/handle/10665/43883/9789241580410_eng.pdf?sequence=1 Accessed: 7/07/2020
- World Health Organization. (2020). Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations. Scientific brief. 2020. Accessed 22 April 2020.