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## **Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak**

**Abstract.** The COVID-19 pandemic (that started in early 2020) is causing several disruptions in the short- and mid-term, to which businesses have to adapt. Some retailers have reacted to the emergency immediately, displaying a plethora of different intervention types. The authors aim to synthesize the challenges that retailers are facing during the COVID-19 emergency. We do this from the perspective of both consumers and managers, with the goal of providing guidelines on and examples of how retailers can handle this unprecedented situation.

**Keywords:** retailing; consumer behavior; COVID-19; emergency; retail strategy; pandemic

### **1. Introduction**

This commentary aims to synthesize the challenges retailers are facing during the COVID-19 emergency from the perspective of both consumers and managers. The goal is to provide guidelines on and examples of how retailers can handle this unprecedented situation. At the time of writing, the UK and many EU countries have placed large parts of their economies in lockdown in the hope of reducing deaths by an order of magnitude but with substantial negative consequences in terms of damage to national economies, businesses and individual jobs (Parker et al., 2020). Estimates of the negative economic effects of the crisis are at an early stage for many countries but are known to be substantial, even devastating for some emerging economies (Evans, 2020). For China, which is a couple of months or so further down the road than other countries, the economy is estimated (as of March 2020) to have taken a 3.2 percent hit in 2020 (Fernandes, 2020). For the US, a recent (March 2020) forecast is that GDP growth will decline by 2.9 percent by the end of 2020 under a 1.5-month containment strategy (Fernandes, 2020), although variation across the country is high (Makridis and Hartley, 2020). Fernandes (2020) estimates that most countries' GDP growth is likely to decline by three to five percent in 2020 in an event of a mild (1.5 months) lockdown. Every extra month of shutdown accounts for a further two to 2.5 percent of global GDP growth. Service sectors such as retail (Fernandes, 2020), hospitality and tourism will be particularly hard hit (Dolnicar and Zare, 2020; Fernandes, 2020). More service-oriented economies will be particularly negatively affected, and have more jobs at risk (Fernandes, 2020). Countries like Greece, Portugal, and Spain that are more reliant on tourism (more than 15% of GDP) will be more affected by this crisis, perhaps even losing 10 percent of GDP growth (Fernandes, 2020). Five million people in China lost their jobs in the

first two months of 2020, likely to grow to more than nine million before the end of 2020, and retail sales fell by 20 percent over the same period (Fernandes, 2020). A global recession appears to be inevitable (Fernandes, 2020). Indications from China are that return to normality may be accompanied by a rebound (sharp rise) in consumption, as a result of consumers' needs to restore their normal levels of psychological arousal in retail settings although this rebound might be limited to a very short term effect (Deng et al., 2020).

Most large companies have a part to play in supporting national economies and consumer wellbeing (Fadel et al., 2020). All retailers strive to provide an excellent service to maintain existing and attract new consumers. However, being able to do so in a time of uncertainty and now imminent recession is harder and more complex than usual (Tarki et al., 2020). Sudden disruption of consumer demand (such as panic buying of staples such as toilet tissue and pasta, as seen in the UK) leads to negative impacts on supply chain performance (Ivanov, 2020). Extant literature has sparsely investigated the impact of emergency (e.g., a virus in some regions of Asia as the SARS SARS-CoV spread started in 2003 (Zhang et al., 2005), crisis situations (Gummesson, 2009; Schenker-Wicki et al., 2010), and natural disasters like earthquakes and hurricanes (Rittichainuwata and Chakraborty, 2012)). Prior research has provided indications that are either hypothetical (e.g., Public Emergency Preparedness) (Meyer-Emerick, 2015) or limited to confined geographical areas.

Yet, the COVID-19 pandemic is global, and since WWII the world has not experienced such severe restrictions on the freedom of individuals as those imposed by several governments of democratic countries. Some countries (e.g., Italy) adopted total lockdown strategies while others reduced the numbers and operations of businesses and services (e.g., the UK), and several other countries enacted containment measures that severely limit the possibilities for people to leave home.

These measures have severely affected the everyday life of consumers and businesses, decreased tourism (World Tourism Organization, 2020) led to emergency purchasing situations (EPS) (Samson and Voyer, 2014) and presented retail managements with unprecedented challenges. As a consequence of the extraordinary containment measures, consumers are, of course, shopping differently. The "scarcity effect" (Hamilton et al., 2019) has dramatically impacted price elasticities and stockpiling habits, while traditional deterrents such as waiting times and perceived crowding are now tolerated, as witnessed by long queues to enter stores. Several grocery retailers are diffusing messages about the availability of food and limiting the number of items to buy per consumer, implementing new types of online services, and home delivery, though often with unsatisfactory results for consumers' sense of wellbeing. Similarly, also many online grocery stores introduced the virtual queue to limit the number of customers to be handled simultaneously (as in the case of Ocado

in UK) and provide priority delivery slots for vulnerable or elderly customers (e.g. Waitrose in the UK).

The profound changes that are being experienced at a global level are challenging consumers' perceptions and behaviors in retailing to the extent that they might leave a mark even when the emergency is over. First, consumers might switch from the retailers they usually patronize to other competitors, because of spatial proximity reasons or because of assortment (un)availability during the emergency made them reconsider their established habits. Second, it might happen that consumers could keep patronizing after the emergency those retailers that helped them during the emergency and could develop attachment toward those stores (and reduce attachment towards others perceived not to have helped, for example those unable or unwilling to provide delivery slots for previously-loyal customers). Third, as consumers review their shopping habits, they discover benefits from services they had never used before. For instance, elderly consumers are switching to online purchases, that they never considered before, discovering the safety and benefits of home-deliveries, store pick-up, and cashless payment. Indeed, in this emergency scenario, online shopping and home deliveries have been classified as "essential services" by several governments.

In the following paragraphs, we review the current situation from the consumer side, explore which strategies are retailers implementing to reply to the emergency, and identify critical retail areas to better handle the unprecedented consumer demand and pressure.

## **2. Consumers' buying behavior in a time of emergency**

Recent literature has shown that the perceived scarcity of products can significantly affect consumer choices (Hamilton et al. 2019). Albeit agreeing that scarcity enhances the relevance of the unavailable good (Verhallen and Robben 1994), literature has pointed out that the scarcity of products, as opposed to resources, leads -respectively- to an increase in the perceived value of the scarce products (Cialdini 1993) or to a decrease of the relevance of the context of purchase (Shah et al., 2015).

Since the beginning of the COVID-19 outbreak (early 2020), consumers displayed stockpiling behaviors that significantly deviate from their usual shopping behavior. For instance, retail stores and drugstores in Italy ran out of hand sanitizers and surgical masks in a few days, while toilet tissue was rapidly out-of-stock in the UK. Then, the stock disruption spread to other products that appear to be less related to a medical emergency, such as yeast, pasta, and detergents. Stock-outs in groceries are rare in non-emergency times: as a consequence of being frequently exposed to such stock-outs during the emergency, consumers might react in unanticipated ways, and those reactions might potentially persist even after the emergency time. The extant literature has shown that consumers typically cope

with one-time stock-outs by switching either brand or store (Pizzi and Scarpi, 2013). Yet, the repeated unavailability of brands (due to stock-outs) and stores (due to lockdown) could alter consumers' preferences in a deeper way, ultimately affecting the choice shares of the products even after the stores will be back to normality.

The panic stockpiling also impacted consumers' price sensitivity. Past literature has widely examined a plethora of determinants of consumers' price elasticity (e.g. Huang et al. 2017; Wakefield and Inman, 2003). Emergency situations are among those factors. Thus, it comes as no surprise that many consumers accepted price increases up to 300% for certain product categories during the emergency period. Simultaneously, Governments' regulations to limit gatherings of people (including inside stores) has immediately led to long queues outside stores, not unusually with hours-long waiting times. Although previous literature has found a negative relationship between customer satisfaction and waiting time (Anić, Radas, and Miller, 2011), in the emergency context the long waiting times are not expected to negatively affect customer satisfaction with the stores; an emergency could be a situational factor affecting the perceived length of waiting time (Mowen, Licata and McPhail, 1993). Yet, it is unknown whether the effects of situational factors persist when they are prolonged in time. For instance, customer satisfaction with waiting times stems from comparing the duration of the queue with one's shopping experience (Kumar, 2005). Thus, consumers might react differently to waiting times in retail even after the emergency period, because of their shopping experiences during the pandemic (Kumar, 2005).

A further consequence of the lower accessibility of store premises, combined with consumers' higher health concerns, has been an immediate increase in demand for alternative distribution channels. Unexpected regulations imposing social distance are further having a vast impact on consumers' favored channel for shopping. Specifically, while online grocery shopping has witnessed stable though limited growth in the last decade (Harris et al. 2017), online grocery has skyrocketed during the COVID-19 emergency. For instance, retailers such as Ocado (in the UK) and Carrefour (in France) had to create online queues or to take the online websites down to cope with excessive demand (Mintel 2020<sup>1</sup>). Also, older and less digitally-savvy consumers have started discovering and enjoying online shopping, welcoming the safety offered by technology. For instance, Miss Fresh, an online retailer in China, witnessed a 237% increase in users over 40 years old (Nielsen, 2020). Social distancing is a form of social exclusion, which impacts negatively on consumers' wellbeing (Dennis et al., 2015; Papagiannidis et al., 2017). There are concerns about the effects of COVID-19 social isolation on (for example) anxiety, depression and stress (Holmes et al., 2020), although negative

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<sup>1</sup> <https://www.mintel.com/blog/retail-market-news/covid-19s-impact-on-the-uk-grocery-market>  
Pantano E., Pizzi G., Scarpi D., Dennis C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, pp. 209-213.

effects of social exclusion may be at least partially offset by online shopping (Dennis et al., 2015; Papagiannidis et al., 2017).

Finally, the countermeasures adopted by both retailers and governments to comply with public regulation might potentially lead to higher acceptance of biometric surveillance measures (e.g., body scanning, face recognition, GPS tracking, etc.), which might further alter privacy perceptions over time. The use and disclosure of biometric data usually causes consumers to be concerned about their privacy (Miltgen et al. 2016), albeit with cultural differences (Carpenter et al. 2016). However, in a time of emergency, consumers might weigh more heavily the benefits of more invasive surveillance than they did before. Thus, they might be more willing to disclose personal information for the benefit of tracking the virus spread and supporting the containment measures. The question is left unanswered as to whether adaptation phenomena will take place and the decrease in consumers' privacy concerns will remain also after the emergency period.

### **3. Retail strategies in a time of emergency**

Retailers are aware that their responses to the emergency will dramatically impact their business, but are scrambling to adapt as they have very little time to take action. For some major retailers (possibly including, e.g., Debenhams, Topshop and Dorothy Perkins in the UK) that have already suffered growing competition from online stores, the crisis will be the last straw and they will either go out of business or permanently close a high proportion of physical stores, meaning that consumers will be unable to revert to former shopping habits<sup>2</sup>. Regardless of whether the COVID-19 emergency is harming or helping their profits, retailers seem to share a common fear of appearing to profit from the pandemic. On one hand, there is the risk that consumers who felt betrayed by the brands during the emergency will not go back to buying those brands once the crisis has passed. Indeed, some consumers could be outraged by some retailers' opportunism in raising the prices of critical goods such as sanitizers and surgical masks, possibly leading to grudging resentment even once normality is restored. On the other hand, consumers who have stopped purchasing the brands during the emergency might be even more willing to repurchase them once the crisis has passed, if they feel the brands or stores were empathic and did their part to help.

Nonetheless, these shared beliefs, and the common goal of being perceived as putting people before profit, translate into heterogeneous retailing actions. For instance, some retailers temporarily hired employees from other businesses to help meet unexpected peaks in demand for online services in industries (like groceries) and countries (like Italy and UK) where e-commerce for food was either

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<sup>2</sup> Sunday Times (UK) Business & Money, 5 April 2020.

Pantano E., Pizzi G., Scarpi D., Dennis C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, pp. 209-213.

virtually non-existent or at a low level before the crisis (Nielsen, 2020)<sup>3</sup>. Other retailers such as Apple leverage on technology to transition workers from the store into remote support staff (Nasdaq, 2020)<sup>4</sup>. Similarly, while most retailers are re-thinking their supply chain anticipating disruptions, some do so by cutting advertising expenditures and increasing prices, as in the example of Coolblue (one of the largest web stores in the Netherlands and Belgium). Others have switched to a local-only supply chain. Yet others cut the online service for standard consumers in order to prioritize vulnerable people and employees of the national health services (i.e., doctors, nurses, etc.), as, for example, the main grocery retailers in UK (e.g., Sainsbury and Ocado). Traditional spirits and alcohol producers also reconfigured the production to hand sanitizers to be freely distributed among hospital workers (e.g., BrewDog). Food delivery retailers have also introduced contactless payments, while home delivery requiring a signature before the virus outbreak now consists on leaving the packages in front of the door without further contacts with consumers, or sometimes the delivery driver must stand back and take a photo of the customer picking up the parcel with the door open. Local small businesses that are allowed to stay open have extended their product lines sell other primary goods, for example, some bakeries have started selling also milk, pasta, eggs and flour to support local communities. Other retailers such as Ted Baker (UK) have further provided messages of comfort, either mailing consumers reassuring messages and codes for home delivery, or temporary closing all the stores (limiting sales to the online channel only), while wishing consumers to stay safe and healthy, as, for example, Louis Vuitton, Paul Smith, and Mulberry. Luxury retailers are among those hit hardest by the changes in consumption habits brought about by the emergency. Yet, probably to avoid being perceived as aloof or distant from reality (Tsai, 2006), many have initiated new practices aiming to be particularly active socially in this emergency and have started stating explicitly that they care for society (as anticipated by Janssen et al. (2017)). For example, Gucci has provided surgical masks and medical overalls to civil protection workers, Ralph Lauren has donated \$10 million to the World Health Organization, and other luxury retailers such as Armani and Ferragamo donated to Italian hospitals and charities. Burberry and Prada, among others, have even reconfigured their factories to produce medical garments, Bulgari switched production to hand sanitizers, while Ferrari and Dyson produced ventilators and other instruments for hospital patients. While previous research emphasized how to get value from the introduction of new in-store technologies to enhance consumers' experiences (Pizzi et al., 2019; Vannucci and Pantano, 2019), retailers' efforts are moving towards the improvement of online service and home delivery, begging new research questions on how traditional stores will (and should) look and behave like when the pandemic is over.

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<sup>3</sup> <https://www.nielsen.com/us/en/insights/article/2020/covid-19-the-unexpected-catalyst-for-tech-adoption/>

<sup>4</sup> <https://www.nasdaq.com/articles/apple-asks-retail-workers-to-provide-tech-support-during-covid-19-2020-04-01>

Pantano E., Pizzi G., Scarpi D., Dennis C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, pp. 209-213.

#### **4. Critical retail areas to reply to the emergency**

We suggest that retailers should focus on the following main areas to handle the unprecedented demand and pressure brought about by the COVID-19 emergency:

##### *1. Rethinking agile retailing*

New dynamic capabilities (Schriber and Lowstedt, 2019) need to be developed to deal with consumers' new demands and governments' pressures on how businesses are to be run. A new agile approach (Sjodin et al., 2020; Gordon et al., 2020) would shorten the lead time between changes in consumer demand and retailers' responses. In this way, retailers need to understand how their stakeholders (i.e., consumers, suppliers, employees, etc.) interact. This would help to reduce response times and simplify processes. More collaboration with stakeholders is therefore needed (e.g., by soliciting feedback during the operations), to make them feel part of the process rather than just suppliers or end users. In other words, retailers need to move away from their traditional plans in order to capture organizational changes made necessary by the pandemic (e.g., by reallocating employees' roles). The new agile approach needs to be implemented quickly so that retailers are ready to deal with the rapid rebound in consumption after the end of the pandemic whilst adapting in preparation for the normalization of consumption after the rebound weakens.

##### *2. A new role for retailers in society*

More than ever, (grocery) retailers will be recognized as playing a fundamental role in society, and their personnel will be classified as essential workers. Some retailers have moved their own brand production to medical support equipment and hand sanitizers, or made donations to hospitals, national health systems, charities, etc. Such practices enhance consumers' attachments to the retail brand, by perhaps adding a new sense of proximity to the retailer, and possibly helping to improve the retailer's image even once normality is restored.

##### *3. Putting consumers at the core*

Retailers have to be aware of consumers' vulnerability, special needs, acceptable times for responses, and possible health hazards during (offline) shopping expeditions, and should not underestimate the effect of retail service on consumers' sense of wellbeing. Retailers must successfully transfer this awareness into communicating to their consumers how much they value their satisfaction and wellbeing. Retailers should make it clear that their priority is



ensuring consumers' safety and health, not profit, while providing the products they need in a reasonable amount of time. To this end, more personal and sensitive information about customers might be needed, but consumers might show an unprecedented willingness to disclose such information in exchange for these benefits. Similarly, consumers are more willing to wait longer if they are aware that such waiting is related to the enactment of measures to ensure their safety.

#### 4. *Digital communication*

Messages that retailers spread online during the emergency need to include information on (i) the availability of products, specifying any restrictions on the amount allowed to be bought (to limit both speculation and panic-buying), (ii) their measures to protect consumers and employees, (iii) their overall contribution to public health, and (iv) the use of surveillance measures to limit the spread of the virus. To these ends, retailers need to improve customer relationship management systems, and enhance safe interactions with customers (e.g., through online chats with employees) to provide real time customer assistance.

Enacting the suggestions provided in these four points should generate in consumers a new sense of trust toward the retailers that might well last also once the emergency is over.

### **5. Concluding remarks**

This commentary offers a synthesis of what is going on right now in retailing during the COVID-19 pandemic. It provides indications for practitioners about how to manage the situation until normality is restored (and possibly even later). The considerations developed in this commentary open up several avenues for future research. Among these, scholars could investigate the following:

- (i) How out-of-stock products and long waiting queues (both online and offline) reflect on consumers' choices, sense of wellbeing, and affect toward the retailer.
- (ii) How local/small businesses (i.e., local restaurants, small retailers, and so on) could be involved in supporting the economy and helping cope with the emergency-induced changes in demand.
- (iii) How the emergency could push consumers towards more sustainable buying behaviors, and favorable buying conditions that would be safe also for vulnerable people and essential workers (i.e., doctors and nurses).
- (iv) How retailers could reshape consumers' satisfaction and wellbeing in times of emergency.

(v) How retailers could use the emergency to differentiate even further from competitors, for instance, by being perceived closer to consumers, more socially-responsible or by adding new technologies, or enacting unique ways of shopping.

In sum, the current situation presents huge, unprecedented challenges both to retail managers and scholars. The retail landscape and retail research agendas will emerge from the crisis much changed. We recommend urgent rethinking of strategies and tactics for both retailers and academics.

## References

Anić, I. D., Radas, S., & Miller, J. C. (2011). Antecedents of consumers' time perceptions in a hypermarket retailer. *The Service Industries Journal*, 31(5), 809-828.

Carpenter, D., Maasberg, M., Hicks, C., & Chen, X. (2016). A multicultural study of biometric privacy concerns in a fire ground accountability crisis response system. *International Journal of Information Management*, 36(5), 735-747.

Deng, S., Wang, W., & Chao, Y. (2020). Will consumption rebound after the COVID-19 pandemic? 1 A structural equation modeling research based on the psychological arousal theory, *PsyArXiv*, March, available from [www.psyarxiv.com](http://www.psyarxiv.com), accessed 5 April 2020.

Dennis, C., Alamanos, E., Papagiannidis, S., & Bourlakis, M. (2015). Does social exclusion influence multiple channel use? The interconnections with community, happiness and wellbeing. *Journal of Business Research*, 69(3), 1061-1070.

Dolnicar, S., & Zare, S. (2020). CORONAVIRUS AND AIRBNB – Disrupting the Disruptor. *SocArXiv*. March 18. doi:10.31235/osf.io/t9n6q.

Evans O. (2020). Socio-economic impacts of novel coronavirus: The policy solutions. *BizEcons Quarterly*, 7, 3–12.

Fadel, M., Salomon, J., & Descatha, A. (2020). Coronavirus outbreak: the role of companies in preparedness and responses. *The Lancet. Public Health*, 20, 30051-7. [https://doi.org/10.1016/S2468-2667\(20\)30051-7](https://doi.org/10.1016/S2468-2667(20)30051-7)

Fernandes, N. (2020). Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy (March 22, 2020). Available at SSRN: <https://ssrn.com/abstract=3557504> or <http://dx.doi.org/10.2139/ssrn.3557504> accessed 5 April 2020.

Gordon, A.V., Ramic, M., Rohrbeck, R., & Spaniol., M.J. (2020). 50 years of corporate and organizational foresight: looking back and going forward. *Technological Forecasting and Social Change*, 154, at. n. 119966.

Pantano E., Pizzi G., Scarpi D., Dennis C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, pp. 209-213.

- Gummesson, E. (2009). The global crisis and the marketing scholar. *Journal of Customer Behaviour*, 8(2), 119-135.
- Hamilton, R., Thompson, D., Bone, S., Chaplin, L. N., Griskevicius, V., Goldsmith, K., ... & Piff, P. (2019). The effects of scarcity on consumer decision journeys. *Journal of the Academy of Marketing Science*, 47(3), 532-550.
- Harris, P., Dall'Olmo Riley, F., Riley, D. & Hand, C. (2017), Online and store patronage: a typology of grocery shoppers, *International Journal of Retail & Distribution Management*, 45 (4), 419-445.
- Holmes EA, O'Connor RC, Perry VH, et al. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *Lancet Psychiatry*, published online April 15, 2020. [https://doi.org/10.1016/S2215-0366\(20\)30168-1](https://doi.org/10.1016/S2215-0366(20)30168-1), accessed 7 May 2020).
- Huang, A., Dawes, J., Lockshin, L., & Greenacre, L. (2017). Consumer response to price changes in higher-priced brands. *Journal of Retailing and Consumer Services*, 39, 1-10.
- Janssen, C., Vanhamme, J., & Leblanc, S. (2017). Should luxury brands say it out loud? Brand conspicuousness and consumer perceptions of responsible luxury. *Journal of Business Research*, 77, 167-174.
- Ivanov, D. (2020). Predicting the impacts of epidemic outbreaks on global supply chains: A simulation-based analysis on the coronavirus outbreak (COVID-19/SARS-CoV-2) case. *Transportation Research Part E: Logistics and Transportation Review*, 136.
- Kumar, P. (2005). The competitive impact of service process improvement: Examining customers' waiting experiences in retail markets. *Journal of Retailing*, 81(3), 171-180
- Makridis, C., & Hartley, J. (2020). An Economic Analysis of the COVID-19 Effects on County Real GDP (March 22, 2020). Available at SSRN: <https://ssrn.com/abstract=3559139> or <http://dx.doi.org/10.2139/ssrn.3559139> accessed 5 April 2020.
- Meyer-Emerick, N. (2015). *Using social marketing for public emergency preparedness: Social change for community resilience*. Routledge.
- Miltgen, C. L., Henseler, J., Gelhard, C., & Popovič, A. (2016). Introducing new products that affect consumer privacy: A mediation model. *Journal of Business Research*, 69(10), 4659-4666.
- Mowen, J. C., Licata, J. W., & McPhail, J. (1993). Waiting in the emergency room: how to improve patient satisfaction. *Marketing Health Services*, 13(2), 26.
- Papagiannidis, S., Boulakis, M., Alamanos, E., & Dennis, C. (2017). Preferences of smart shopping channels and their impact on perceived wellbeing and social inclusion. *Computers in Human Behavior*, 77, 396-405.
- Pantano E., Pizzi G., Scarpi D., Dennis C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, pp. 209-213.

Parker, G., Pickard, J., Cookson, C., & Pickford, J. (2020). UK to launch business rescue package to fight coronavirus fallout. *Financial Times Online*, Retrieved 4 April 2020 from <https://www.ft.com/content/30931d90-6821-11ea-800d-da70cff6e4d3>

Pizzi, G., & Scarpi, D. (2013). When out-of-stock products DO backfire: Managing disclosure time and justification wording. *Journal of Retailing*, 89(3), 352-359.

Pizzi, G., Scarpi, D., Pichierri, M., & Vannucci, V. (2019). Virtual reality, real reactions?: Comparing consumers' perceptions and shopping orientation across physical and virtual-reality retail stores. *Computers in Human Behavior*, 96, 1-12.

Rittichainuwata, B.N., & Chakraborty, G. (2012). Perceptions of importance and what safety is enough. *Journal of Business Research*, 65(1), 42-50.

Schenker-Wicki, A., Ianunen, M., & Olivares, M. (2010). Unmastered risks: from crisis to catastrophe: an economic and management insights. *Journal of Business Research*, 63 (4), 337-346.

Schriber, S., & Lowstedt, J. (2019). Reconsidering ordinary and dynamic capabilities in strategic change. *European Management Journal*, forthcoming, DOI: 10.1016/j.emj.2019.12.006.

Shah, A. K., Shafir, E., & Mullainathan, S. (2015). Scarcity frames value. *Psychological Science*, 26(4), 402-412.

Somason, A., & Voyer, B.G. (2014). Emergency purchasing situations: implications for consumer decision-making. *Journal of Economic Psychology*, 44, 21-33.

Sjodin, D., Parida, V. Kohtamaki, M. & Wincent, J. (2020). An agile co-creation process for digital servitization: a micro-service innovation approach. *Journal of Business Research*, 112, 478-491.

Tarki, A., Levy, P., & Weiss, J. (2020). The Coronavirus Crisis Doesn't Have to Lead to Layoffs. *Harvard Business Review Digital*. Retrieved 4 April 2020 from <https://hbr.org/2020/03/the-coronavirus-crisis-doesnt-have-to-lead-to-layoffs>

Tsai, S. P. (2006). Investigating archetype-icon transformation in brand marketing. *Marketing Intelligence & Planning*, 24(6), 648-663.

Vannucci, V., & Pantano, E. (2019). Digital or human touchpoints? Insights from consumer-facing in-store services. *Information Technology and People*, 33 (1), 296-310.

Verhallen, T. M., & Robben, H. S. (1994). Scarcity and preference: An experiment on unavailability and product evaluation. *Journal of economic psychology*, 15(2), 315-331.

Wakefield, K. L., & Inman, J. J. (2003). Situational price sensitivity: the role of consumption occasion, social context and income. *Journal of Retailing*, 79(4), 199-212.

Zhang, W., Gu, H., & Kavanaugh, R.R. (2005). The impacts of SARS on the consumer behavior of Chinese domestic tourists. *Current Issues in Tourism*, 8(1), 22-38

Pantano E., Pizzi G., Scarpi D., Dennis C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, 116, pp. 209-213.