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Contents lists available at ScienceDirect

Journal of Business Research

journal homepage: www.elsevier.com/locate/jbusres

Effects of COVID-19 on business and research



A B S T R A C T

The COVID-19 outbreak is a sharp reminder that pandemics, like other rarely occurring catastrophes, have happened in the past and will continue to happen in the future. Even if we cannot prevent dangerous viruses from emerging, we should prepare to dampen their effects on society. The current outbreak has had severe economic consequences across the globe, and it does not look like any country will be unaffected. This not only has consequences for the economy; all of society is affected, which has led to dramatic changes in how businesses act and consumers behave. This special issue is a global effort to address some of the pandemic-related issues affecting society. In total, there are 13 papers that cover different industry sectors (e.g., tourism, retail, higher education), changes in consumer behavior and businesses, ethical issues, and aspects related to employees and leadership.

1. Introduction

There has been a long history of fear of pandemic outbreaks. The discussion has not focused on whether there will be an outbreak, but when new outbreaks will happen (Stöhr & Esveld, 2004). The events leading to influenza pandemics are recurring biological phenomena and cannot realistically be prevented. Pandemics seem to occur at 10–50-year intervals as a result of the emergence of new virus subtypes from virus re-assortment (Potter, 2001). As the global population increases and we need to live closer to animals, it is likely that the transfer of new viruses to the human population will occur even more frequently. All our society can do is take preventive measures so that we are able to act quickly once we suspect an outbreak. We should also make an effort to learn from the consequences of pandemic outbreaks to prepare our societies for if—and, more likely, when—this happens again.

As we are in the middle of a pandemic outbreak, it is very difficult to estimate its long-term effects. Although society has been hit by several pandemics in the past, it is difficult to estimate the long-term economic, behavioral, or societal consequences as these aspects have not been studied to a great extent in the past. The limited studies that do exist indicate that the major historical pandemics of the last millennium have typically been associated with subsequent low returns on assets (Jorda, Singh, & Taylor, 2020). For a period after a pandemic, we tend to become less interested in investing and more interested in saving our capital, resulting in reduced economic growth. Given the current situation, in which saving capital means negative returns, it is not at all certain that we will be as conservative as we have been in the past. Behavioral changes related to pandemic outbreaks seem to be connected with personal protection (Funk, Gilad, Watkins, & Jansen, 2009), such as the use of face masks, rather than general behavior changes. Our lives, as humans in a modern society, seem to be more centered around convenience than around worrying about what might happen in the future.

On a societal level, we seem to be completely unprepared for large-scale of outbreaks. Our societies are more open than ever; we rely on the importing of important products, such as food, energy, and medical equipment, rather than sourcing them from close to where they are

needed; and there are limited efforts to prepare for pandemic outbreaks. The guiding principle of our society seems to be efficiency and economic gain rather than safety. This may change after the current outbreak. It is also important to point out that the principles (e.g. openness and global trade) on which society is based have lifted a large number of countries around the globe out of poverty and produced well-developed economies. It is not unlikely that our societies will back-off some of them leading to more poverty in the world.

The COVID-19 pandemic outbreak 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.

2. Interesting research themes

As research indicates that pandemics are reoccurring events, it is very likely that we will see another outbreak in our lifetime. It is apparent to anyone that the current pandemic has had enormous—but hopefully short-term—effects on all our lives. Countries have closed their borders, limited the movement of their citizens, and even confined citizens in quarantine within their homes for weeks. This is a rather unique occurrence, as we are used to freedom of movement, but in the midst of the pandemic outbreak, people have been fined just for being outside. Although our societies seem to be very accepting of these limitations and condemn people that do not follow the rules, but we need to ask ourselves how this will affect the views of our society (e.g.,

<https://doi.org/10.1016/j.jbusres.2020.06.008>

Available online 09 June 2020

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views regarding freedom, healthcare, government intervention). We should also be aware that infrastructure and routines to monitor citizens in order to limit the spread of the virus have been rolled out, and so we should ask ourselves how accepting we will be of monitoring in the future. We must realize that once these systems are in place, it is highly unlikely that they will be rolled back. Furthermore, in some countries, the ruling politicians have taken advantage of this situation and increased their control over the state, suppressing opposing opinions and thus jeopardizing democratic systems. Some of the worst examples are Turkmenistan, which has banned the use of the word “corona,” and Hungary, which is letting Viktor Orbán rule by decree indefinitely.

As previously mentioned, people have been confined to their homes. There has also been a constant stream of news on this invisible external threat from which we cannot protect ourselves. We have been occupied trying to figure out how best to protect ourselves and our loved ones. On top of that, many feel pressure due to losing their jobs or due to working in close proximity to potentially infected people, as society depends on them fulfilling their duty. The consequences of the pandemic outbreak have hit various sectors of society in different ways. People that are working in sectors connected to healthcare must endure endless tasks and very long working days. Additionally, people are losing their jobs at rates we have not seen since the Great Depression of the 1930s. The sectors that have seen the largest increases in unemployment are those that are hedonic in nature and require the physical presence of the customer (e.g., hospitality, tourism, and entertainment), as demand for these services has ceased to exist. The employees in these sectors tend to be younger and female. Past experience also indicates that once someone is outside the job market, it is very difficult to get back in as they will face more competition that may be more competent.

All countries that can are trying to stimulate their economies to keep as much as possible of their necessary infrastructure intact and to keep citizens productive or ready to become productive once the pandemic has been overcome. In order to keep society from deteriorating, people not only need jobs or a way to support themselves but also need access to what they view as necessary products and services. If this infrastructure does not exist, people start to behave in what is considered uncivil behavior (e.g., hoarding or looting). Countries around the globe have adopted very different approaches to handle the current stress on the job markets and infrastructure. Some countries have chosen to support businesses in order to help them keep the workforce intact, but others with less financial strength cannot do the same. Countries also have directly supported their citizens in various ways. There is an enormous body of rich information that researchers can collect to determine the best approaches for when and if a major disaster happens in the future.

3. Consumer behavior during COVID-19

Around the globe, societies are in lockdown, and citizens are asked to respect social distance and stay at home. As we are social beings, isolation may be harmful for us (Cacioppo & Hawkley, 2009). Feelings of loneliness have, among other things, been connected to poorer cognitive performance, negativity, depression, and sensitivity to social threats. There are indications that this is happening during the current pandemic, as there has been an increase in domestic violence, quarrels among neighbors, and an increase in the sales of firearms (Campbell, 2020). However, we have also seen an increase in other, more positive types of behavior caused by social distancing that have not been researched. People have started to nest, develop new skills, and take better care of where they live. For instance, they may learn how to bake, try to get fit, do a puzzle, or read more. There has also been an increase in purchases of cleaning products, and more trash is being recycled. At the same time, we are eating more junk food and cleaning ourselves less. People are also stockpiling essentials, panic buying, and

escaping to rural areas. This is an indication that what is happening to us and our behaviors is complex, and it would be interesting to study this phenomenon further.

Another consequence of the lockdowns is the extreme increase in the usage of Internet and social media. Previous research has indicated that humans who feel lonely tend to use social media more and, in some cases, even prefer social media over physical interaction (Nowland, Necka, & Cacioppo, 2018). Social media also may bring out the worst in us through trolling or sharing of fake news. This is, to some degree, not as damaging as the “real life” is lived in the physical world and the Internet is an “add on” with, in most cases, limited impact on the physical world. By this, we are able to compartmentalize and distinguish what matters and what does not matter. However, the current situation has made social media the main mode of contacting or socializing with others. In many cases, the Internet is at present also the main way to get essential supplies and receive essential services, like seeing a doctor. The question, then, is what happens to us when the “real life” is lived online and becomes a way to escape the physical world?

As humans, we rely to a large degree on our senses; we are built to use them in all situations of life. Thus, we rely on them heavily when making decisions. However, the current isolation is depriving us of our senses, as we are not exposed to as many stimuli as normal situation. Thus, we are, in a sense, being deprived of stimulation. We are also being told by authorities not to use our senses; we should not touch anything, wear a mask, or get close to other humans. Thus, what happens once our societies open up? How long will this fear of using our senses linger, and will we be over-cautious for a while or may we try to compensate as we have to some degree been deprived of using them? These are just some aspects of consumer behavior; many more are covered by this special issue.

4. Markets during COVID-19

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, JCPenney, 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). The COVID-19 outbreak poses a unique opportunity to study how markets are created and how they disappear within a very limited time span. It would also be interesting to explore whether the disappearance of one solution for a market may be replaced by another (e.g., combustion engines for electric or physical teaching for online teaching).

5. Predicted lasting effects

Based on past experiences, we have become more conservative and protective after a pandemic outbreak. We save resources in order to be prepared if the unthinkable happens again. Countries are starting to stockpile things like food, equipment, and medicine or prepare to produce them locally. It is also essential for larger global firms to have reliable supply chains that do not break. Consequently, it is very likely that this pandemic will make these firms rethink their supply chains and, probably, move supply chains closer to where they are needed in order to avoid stopping production in the future. Furthermore, authorities have implied that other humans from other countries are dangerous as they may carry the virus. A closed border implies that the threat is from the outside. In addition, international flights are not likely to be an option for many in the coming years. Together, these circumstances mean that countries may become more nationalistic and less globalized. This may be a dangerous development, as long-term protection from the consequences of a pandemic outbreak is likely to require global effort and sharing of resources. Such cooperation is also key to tackle other global challenges that we may face in the future.

6. This special issue

In this special issue, we have invited scholars from different areas of business and management to write brief papers on various aspects of the effects of the COVID-19 pandemic. In total, there are 12 articles in the special issue, which are summarized below.

The first contribution, by Jagdish Sheth, is titled “Impact of COVID-19 on Consumer Behavior: Will the Old Habits Return or Die?” It explores how the current pandemic has affected several aspects of consumers’ lives, ranging from personal mobility to retail shopping, attendance at major life events like marriage ceremonies, having children, and relocation. The author investigates four contexts of construed consumer behavior, namely social context, technology, working spaces, and natural disasters. Additionally, the author foresees eight immediate effects of the pandemic on consumer behavior and consumption. Hoarding—the mad scramble observed at the start of the COVID-19 outbreak—applies not only to consumers but also to unauthorized middlemen who buy products in excess to sell at increased prices.

Consumers learn to adapt quickly and take an improvised approach to overcome constraints that have been imposed by governments. Pent-up demand may lead to a significant rebound in sales of durable products, like automobiles, houses, and large appliances, and some of the realities of COVID-19 will put consumers in a buying mood soon.

Embracement of digital technology, either through online services or information-sharing platforms like Zoom, has kept people connected around the world. Digital savviness will become a necessity, rather than an alternative, for schools, businesses, and healthcare providers. With the onset of lockdowns in many countries, online shopping, including grocery shopping, has become more prevalent.

The desire to do everything in-home has impacted consumers’ impulse buying habits. Slowly but surely, work–life boundaries will be

blurred when both tasks are carried out from home. There should be efforts to compartmentalize the two tasks to make this a more efficient way of life.

Reunions with friends and family are now restricted to digital interactions, especially for people who work and live away from their families. We can expect a dramatic change in consumers’ behavior because of sophisticated technology. In addition, consumers may discover new talents as they spend less time on the road and more at home. They may experiment with cooking, learn new skills, and, soon, become producers with commercial possibilities. In the end, most consumer’s habits will return to normal, while some habits may die due to adaptation to the new norm.

The second contribution, “Interventions as Experiments: Connecting the Dots in Forecasting and Overcoming Pandemics, Global Warming, Corruption, Civil Rights Violations, Misogyny, Income Inequality, and Guns,” written by Arch G. Woodside, discusses whether there is an association between public health interventions, national and state/provincial governments interventions, and improved control of the COVID-19 outbreak in certain countries. The paper suggests “ultimate broadening of the concept of marketing” in order to design and implement interventions in public laws and policy, national and local regulations, and the everyday lives of individuals. It also lays out effective mitigating strategies by examining designs, implementations, and outcomes of COVID-19 interventions by examining deaths as a natural experiment.

While COVID-19 eradication intervention tests are being run for promising vaccines, these are considered true experiments, and analyzing the data from these interventions may involve examination of the success of each vaccine for different demographic subgroups in treatment and placebo groups in randomized control trials. Comparing the designs and impact of the current COVID-19 mitigation interventions across nations and states within the U.S. provides useful information for improving these interventions, even though they are not “true experiments.”

The third contribution, “Employee Adjustment and Well-Being in the Era of COVID-19: Implications for Human Resource Management” is written by Joel B. Carnevale and Isabella Hatak. They claim that COVID-19 is becoming the accelerator for one of the most drastic workplace transformations in recent years. How we work, socialize, shop, learn, communicate, and, of course, where we work will be changed forever. Person–environment (P-E) fit theories highlight that employee–environment value congruence is important because values influence outcomes through motivation. However, given the current environment, in which the fulfillment of needs and desires like greater satisfaction, higher engagement, and overall well-being is drastically altered, there is an increased likelihood of misfits working in organizations.

In response to this, organizations need to use virtual forms of recruitment, training, and socialization in lieu of face-to-face interactions. Increasing job autonomy will alleviate the family-related challenges that may arise within remote work environments by providing employees with the right resources to manage conflicting work and family demands. Human resource leaders within the organization must enhance relationship-oriented human resources systems in order to combat the risk of unforeseen and prolonged isolation among single, independent employees and to better prepare them for situations like the current crisis. The field of entrepreneurship can offer insights that can be adapted by organizations coping with the pandemic. Entrepreneurs’ struggles are largely caused by the lack of work-related social support in comparison to salaried employees. Nevertheless, some entrepreneurs are known to overcome these limitations by leveraging alternative, domain-specific sources of social support, such as positive feedback from customers, which ultimately enhances their well-being. Recycling such approaches to identify overlooked or untapped sources of social support is likely to be beneficial for employees given the current work environment dynamic.

The fourth contribution, written by Hongwei He and Lloyd C. Harris, is titled “The Impact of Covid-19 Pandemic on Corporate Social Responsibility and Marketing Philosophy.” The worldwide demand for hand sanitizers, gloves, and other hygiene products has risen because of the COVID-19 pandemic. And, in some countries, there has been a surge in complaints about profiteering and opportunism. As doctors combat the virus, prosecutors are pursuing the opportunistic profiteers who prey on the fearful. Many large corporations have a social purpose and set of values that indicate how much they appreciate their customers, employees, and stakeholders. This is the time for these corporations to make good on that commitment. Some organizations strive to set great examples. For example, Jack Ma, the co-founder of Alibaba, donated coronavirus test kits and other medical supplies to many countries around the world through the Jack Ma Foundation and Alibaba Foundation. Large corporations have often written off the costs of product failures, restructuring, or acquisitions. When writing off losses due to the coronavirus pandemic, it is understandable to pursue the bond established between the brand and consumer. This gesture can turn out to be more meaningful and lasting than when implemented during “normal” times.

On the bright side, the COVID-19 pandemic offers great opportunities for companies to actively engage with their corporate social responsibility (CSR) strategies and agenda. The post-COVID-19 marketplace is going to be irrecoverably different. Organizations will need to re-evaluate their visions, missions, and objectives to account for changes to their customers and competitors, amongst other shifts. A key facet of this is the exponential increase in digital communications and change.

Professors T. Y. Leung, Piyush Sharma, Pattarin Adithipyangkul, and Peter Hosie wrote “Gender Diversity and Public Health Outcomes: The COVID-19 Experience.” Public health is an interdisciplinary subject that involves the social sciences, public policy, public education, economics, and management. Failure to implement a proper public health policy may not only lead to a huge loss of human lives but also shatter the economy; expose the incompetence of public bodies, including governments and political leaders; and weaken the confidence of the general public. We are used to hearing that women are more other-directed and emotionally intelligent, but it has been proven that women are just as good, if not better, in terms of what we think of as male qualities, like being decisive and making tough calls, during a crisis. Prevalent issues like under-representation of women in leadership positions, mismanagement of public health systems, and inaccurate or inconsistent reporting of public health outcomes in the context of the recent pandemic need to be addressed by involving women at all stages of public health management, including planning, decision-making, and emergency response systems. This is important not only for a quick economic recovery in the aftermath of the COVID-19 crisis but also to prevent and manage such disasters in future.

The sixth paper in the special issue, “Managing Uncertainty during a Global Pandemic: An International Business Perspective,” was written by Piyush Sharma, T. Y. Leung, Russel P. J. Kingshott, Nebojsa S. Davcik, and Silvio Cardinali. Pandemics like that caused by COVID-19 are not just passing tragedies of sickness and death. The ubiquity of such a threat, and the uncertainty and fear that accompany it, lead to new consumer trends and norms. People become both more suspicious and less susceptible. The crisis also shines a light on the importance of international business research, which has been overlooked in the years leading up to this crisis. Social and informational uncertainty are likely to have economic repercussions.

As pointed out by the author, successful outcomes of social distancing and other restrictions are highly dependent upon societal acceptance and following through with restrictions. Social uncertainty and unrest among consumers due to being under lockdown for months could lead to a huge stifled demand for the products they missed. In this context, Samsung, a South Korean giant in consumer electronics and home appliances, may be a great case study during the ongoing COVID-

19 crisis. Samsung established a huge manufacturing network over the years, with factories in multiple locations. This was done due to foresight of the risk of single sourcing, the need to fulfill large production demand, and the desire to reduce its dependence on China. This strategy has helped Samsung shift its production from one location to another during the ongoing COVID-19 crisis, thereby facing just a slowdown and not a complete shutdown of 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 products directly to customers.

The seventh contribution, “Competing During a Pandemic? Retailers Ups and Downs During the COVID-19 Outbreak,” was written by Eleonora Pantano, Gabriele Pizzi, Daniele Scarpi, and Charles Dennis. The authors note that retailers who were not quick to adapt and factor COVID-19 into their operations are currently facing an existential crisis. The authors also highlight that retailers can minimize current and future business impacts by addressing four major emergencies.

First, retailers can identify and execute controllable activities. They must identify, optimize, and re-access existing technologies and business models. Specifically, they must understand how their stakeholders operate and interact to reduce response time and optimize communication channels. Second, all retailers, but especially grocery stores, are revisiting their business continuity plans to reassure customers that their needs will be met and manage the inevitable supply chain constraints and highs and lows caused by volatile demand. These retailers are prioritizing critical business activities and creating contingency plans for disruption. Third, retailers need to have an understanding of their financial needs as well as the essential role they play in their communities. For some regular customers, an open and well-stocked supermarket will reassure them that they are being cared for. Fourth, messages that retailers spread online during emergencies need to include information about products’ availability on the shelves and at digital outlets; control panic buying by restricting the quantity that customers can purchase; devise and implement protection plans for consumers and employees; contribute to overall public health; and use surveillance measures to limit the spread of the virus. To these ends, retailers need to improve their customer relationship management systems and promote safe interactions with customers (e.g., through online chats with employees) to provide real-time customer assistance.

In Fabian Eggers’ contribution, “Masters of Disasters? Challenges and Opportunities for SMEs in Times of Crisis,” he identifies small- to medium-sized businesses with low or unstable cashflow as particularly vulnerable during crises, as they are currently struggling for profitability. Studies reveal the interconnectedness between finance and strategy, particularly entrepreneurial orientation and market orientation in strategies. The paper highlights that a combination of entrepreneurial orientation and market orientation can lead to lean and flexible marketing efforts, which are particularly valuable in times of crisis. In addition, entrepreneurial orientation and market orientation can be combined into an entrepreneurial marketing post-disaster business recovery framework that highlights that seeking opportunities, organizing resources, creating customer value, and accepting risk are markedly different in a post-disaster context.

Sandeep Krishnamurthy contributed with “The Future of Business Education: A Commentary in the Shadow of the Covid-19 Pandemic.” The paper highlights that social distancing is prompting educational institutions to rethink how they are connecting with their student bodies. Spatial interaction is becoming the new norm, and the blurring of physical and virtual communication is likely to continue until the pandemic is overcome. Globally, the higher education system will undergo a decade of radical technology-led transformation, according to the author. The author identified five trends that will revolutionize how we educate after COVID-19:

1. *The Algorithm as Professor* – Rather than taking a traditional route

and learning from a human professor in classrooms, students will learn remotely from an algorithm. The AI-enabled algorithm will provide customized personal learning experiences. Students will be able to quickly master rudimentary and routinized tasks. Then, the algorithm will prepare them for an in-person experience, where a “warm body” will engage them in Socratic dialogue.

2. *The University as a Service* – Traditionally, we have followed a linear formulation of society. Students go through K-12 education, some get an undergraduate degree, and some go on to further studies. However, the current and future environment is too volatile to sustain this educational structure. Students will need to learn what they need when they need it. Personalized, continuing education will become the norm.
3. *The University as Assessment Powerhouse* – In a world characterized by AI and automation, learning can come from many sources. Students will learn from each other, algorithmic systems, and public information. However, universities will continue to have a powerful place as assessors of learning. Students will come to universities to gain objective credentials based on powerful assessments of learning.
4. *Learning Personalization to Support Diversity* – Students of the future will have access to multiple pathways to learn the same content. For example, a course may be available through algorithmic engagement, animation/video/augmented reality, face-to-face instruction, or any mixture thereof. Using assessment data, the university of the future will be able to pinpoint the learning needs of each student and provide a personalized experience.
5. *Problem Solving Through Ethical Inquiry* - As the influence of artificial intelligence and automation grow exponentially in our lives, there will be a great need for students to become problem solvers through ethical inquiry. Clearly, the future will not simply be about what the answers are; it will be about which problems we wish to solve, given what we know. Students will need to become more comfortable with the need to evaluate AI algorithms based on their efficacy and their ethical foundation.

Contribution number ten, “Consumer Reacting, Coping and Adapting Behaviors in the COVID-19 Pandemic,” is written by Colleen P. Kirk and Laura S. Rifkin. In it, the authors explore numerous consumer insights during a major pandemic outbreak. Mainly, they examine consumer behaviors across three phases: reacting (e.g., hoarding and rejecting), coping (e.g., maintaining social connectedness, do-it-yourself behaviors, and changing views of brands), and longer-term adapting (e.g., potentially transformative changes in consumption and individual and social identity). The authors also identify a number of negative aspects of the pandemic that will likely impact consumer behavior. As they state, given the mandatory close quarters people must keep due to stay-at-home requirements, domestic abuse may be on the rise. In addition, throughout history, pandemics provide an excuse for increased racial and anti-immigrant biases.

In “How Firms in China Innovate in COVID-19 Crisis? An Exploratory Study of Marketing Innovation Strategies,” written by Yonggui Wang, Aoran Hong, Xia Li, and Jia Gao, the authors explore how firms in China worked to make their marketing strategies a success. They do so by identifying the typology of firms’ marketing innovations based on two dimensions: the motivation for innovations and the level of collaboration in innovations.

The authors outline four innovative strategies to combat crises for businesses. The responsive strategy works predominantly for firms that involve physical contact, but it can easily be transferred from offline marketing channels to online channels. A collective strategy can be implemented by firms that are highly affected by the crisis, which need to develop new business by collaborating with other firms during the crisis. A proactive strategy is for firms that are less affected by the COVID-19 crisis (mostly online businesses) to develop new businesses to meet the special demands of existing customers during the COVID-19

crisis. Firms that are less affected during the COVID-19 crisis can take an alternative approach: a partnership strategy. Firms should usually develop new offerings through collaboration with other firms.

Professors Amalesh Sharma, Anirban Adhikary, and Sourav Bikash Borah contributed with “Covid-19 Impact on Supply Chain Decisions: Strategic Insights for NASDAQ 100 Firms using Twitter Data.” During black swan events like the COVID-19 pandemic, which may have severe long-term consequences, a deep understanding of business risks can help organizations establish the right plan. In this article, the authors identified supply chain challenges faced by companies using their Twitter data. To develop insights from the findings, the authors constructed unigrams, bigrams, and trigrams that revealed the supply-chain-related aspects that gain attention on Twitter.

A topic analysis was performed to identify keywords used in discussions about COVID-19. The obtained insights show that the greatest challenge for the organizations was accessing realistic customer demands. A pandemic may increase or decrease demand for specific products, making estimation of realistic final customer demand more difficult and more urgent to address. Some user accounts suggested that organizations are still lacking in terms of technological readiness and that companies are looking to gain visibility across value chains. There are growing discussions about building supply chain resilience by identifying risks. Many organizations are not only focusing on social sustainability but also turning their attention toward environmental sustainability. To deal with the challenges brought on by unprecedented times, the leaders of organizations must reimagine and redesign the supply chain; rely on technology such as artificial intelligence, the Internet of Things, and blockchain in their supply chain designs; and focus on sustainable supply chain.

Finally, Marianna Sigala wrote “Tourism and COVID-19: Impacts and Implications for Advancing and Resetting Industry and Research.” Tourism is experiencing a rapid and steep drop in demand during the COVID-19 pandemic. Despite the tourism industry’s proven resilience in other unprecedented times, the impact of the current pandemic will likely last longer for international tourism than for other affected industries. However, the tourism industry should not only recover but also reimagine and reform the next normal economic order. Currently, there is a lack of research on how crises can alter the industry, how the industry adapts to changes with innovative techniques, and how research that can establish the next norms can be conducted. To study the needs and gaps in research work, the author reviews past and emerging literature to capture its impacts and impart some ideas from different research fields that will allow tourism to grow and evolve.

References

- Asmelash, L., & Cooper, A. (2020). *Nearly 80% of hotel rooms in the US are empty, according to new data*. CNN <https://edition.cnn.com/2020/04/08/us/hotel-rooms-industry-coronavirus-trnd/index.htm>.
- Cacioppo, J. T., & Hawkley, L. C. (2009). Perceived social isolation and cognition. *Trends in Cognitive Sciences*, 13(10), 447–454.
- Campbell, A. M. (2020). An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic Science International: Reports*, 100089.
- Funk, S., Gilad, E., Watkins, C., & Jansen, V. A. (2009). The spread of awareness and its impact on epidemic outbreaks. *Proceedings of the National Academy of Sciences*, 106(16), 6872–6877.
- Jaworski, B., Kohli, A. K., & Sahay, A. (2000). Market-driven versus driving markets. *Journal of the Academy of Marketing Science*, 28(1), 45–54.
- Jorda, O., Singh, S. R., & Taylor, A. M. (2020). *Longer-run economic consequences of pandemics* (Report no. w26934). National Bureau of Economic Research.
- Nowland, R., Necka, E. A., & Cacioppo, J. T. (2018). Loneliness and social internet use: Pathways to reconnection in a digital world? *Perspectives on Psychological Science*, 13(1), 70–87.
- Potter, C. W. (2001). A history of influenza. *Journal of Applied Microbiology*, 91(4), 572–579.
- 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-spreed-nato-warns/#623eada31758>.
- Stöhr, K., & Esveld, M. (2004). Will vaccines be available for the next influenza pandemic? *Science*, 306, 2195–2196.

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>.

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.

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