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The impacts of COVID-19 on the retail industry

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Abstract

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Abstract
Nowadays, the whole world is being afflicted by the COVID-19 pandemic. The lives of humans are threatened. Thus, governments successively published a series of policies to combat the pandemic. However, such situations tremendously affected the business world as well, especially in the retail industry which relies on connecting with customers. According to the government statistics and reliable data, thousands and hundreds of stores and companies were closed or went bankrupted, causing numerous people to lose their jobs. The aim of this research placed emphasis on how retail companies changed internally during the pandemic, providing a glimpse of this transformation.
In this thesis, it applied inductive reasoning and qualitative method to fill out the theoretical part and the empirical part respectively. For the data collection, the secondary and the primary sources were acquired. The secondary sources were grabbed from the literature library, government announcement and statistics, news, famous websites, and other national associations. On the other hand, the primary sources were collected from interviews.
The theoretical part is divided into three main bodies: optimizing company structure, resetting company priority, and retraining employees. Each main body offered sufficient arguments to support the theory. And the empirical part provided evidence by analyzing the answers of interviewees who were selected from different categories of the retail industry on purpose.
In conclusion, the research questions were answered, and the validity and the reliability were verified, accompanied by suggestions for future research.

Keywords
Pandemic, unemployment, working from home, brick-and-mortar store, new normal, hybrid model, supply chain, advanced technology, agility, digitalisation

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Abbreviation

WHO – World Health Organization

PHEIC – Public Health Emergency of International Concern

AI – Artificial Intelligence

BLS – United States Bureau of Labor Statistics

NRF – National Retail Federation

The EU – the European Union

OECD – Organization for Economic Co-operation and Development

DC – Distribution Center

BOPIS – Buy Online, Pickup In-store

AEO – American Eagle Outfitters

SHN – Stay-Home Notice

AI – Artificial Intelligence

O2O – Online-to-Offline

AR – Augmented Reality

RFID – Radio-Frequency Identification

M-payment – Mobile Payment

QR – Quick Response

1   Introduction

This chapter mainly aims to give audiences a brief vision of the background that what happened in the last year and what impacts it has brought to the world. Audiences can be quickly familiar with objectives, delimitations, and research questions to seize why this article is written and what can be learned from this article. After that, the theoretical framework explains the main theories used in the thesis and how to process and develop. Later, in the research method part, it would display this article is in which way to expand. At last, the structure of the thesis is going to be illustrated.

1.1   Background

The novel coronavirus SARS-CoV-2, also known as coronavirus disease 2019 and previously known as 2019-nCoV, was originally outbroken in Hubei Province of the People's Republic of China and stretched to other countries subsequently. On 30th January 2020, due to the increase of the confirmed cases with a ridiculous speed in China and some scattered cases in other countries, a Public Health Emergency of International Concern (PHEIC) was sent to every county by the World Health Organisation (WHO) Emergency Committee. (World Health Organization 2020; Velavan & Meyer 2020.)

The virus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), caused the coronavirus disease in 2019 which was called COVID-19 named by WHO (World Health Organisation). The visibility of symptoms varies on different people. For the majority of the infected people, the illness raises from mild to moderate with no need to go to the hospital. Instead, they are advised to recover by themselves when the illness is still at a mild level. In general, since from the day that the person was infected, the symptom takes 5 to 6 days to appear, but sometimes in 14 days. (World Health Organization.) The professor of medicine and molecular biology and biochemistry and the chief of infectious diseases at UCI School of Medicine Donald N. Forthal, MD says that even though scientists cannot certainly draw a conclusion before the testing applied on more people, COVID-19 is still 10 times threatened more than the seasonal flu, with 0.1% death rate (UCI Health 2020). Indeed, compared to previous viruses, such as H1N1 (swine flu), this novel virus is out of the prior immunity with no similar strains in history and it spends time on building an immune defense from lots of trials and losses, which increases the lethality and the risk to human beings, especially to the elders whose immune system is vulnerable (Gallagher 2020). Up to 30th January 2021, there are 579,808 confirmed cases, including 15,912 deaths reported to WHO in a year since when the PHEIC was declared (World Health Organization). China,

as the epicentre of this pandemic, was the first country to decide to close up more than 16 cities and tested citizens at the end of January. Subsequently, due to the drastic diffusion out of China, many countries, for instance, Spain, Iran, Italy, Denmark, Israel, and Germany, lock down their cities as well and published related policies to restrict the transmission of COVID-19, moderately or strictly. (Kaplan, Frias & McFall-Johnsen 2020.)

Inevitably, COVID-19 has rapidly affected our world, including human daily life, hospitals, economics, education, industries, entertainment, transportation and destroyed the original ways we used to be on (Ozili & Arun 2020; Haleem, Javaid & Vaishya 2020). During the outbreak of the pandemic, companies were influenced by the strike of COVID-19 as well. According to the statistics collected from over 5,800 small businesses registered on Alignable which is a network of 4.6 million small businesses in the period of 28 March to 4 April 2020, 43% of businesses had temporarily closed mainly because of the decrease in demand and protection employees from disease. Take the Mid-Atlantic region with New York City as an example, 54% of firms were closed and the unemployment rate rose 47%. (Bartik et al. 2020.) Furthermore, small businesses are not the only victim, even many giant companies had been crushed by the outbreak. From the restaurant, store to entertainment and clothing, the restrictions on social communication and distancing were stifling the retail companies, such as Muji, Ascena, or Dean & Deluca, leading to bankruptcy. (Pandise 2020.)

Retail is a general term that consists of all kinds of companies, providing jobs for thousands and hundreds of people and profiting dollars in abundance in sales revenue annually (Farfan 2020). Normally, retailers get goods directly from the manufacturer when a commodity becomes a finished product, and then sell to customers (Amadeo 2020a). The Census Bureau split up the retail industry into 13 categories, from auto dealers to miscellaneous retailers (Amadeo 2020b). The whole list is displayed in appendix 1.

Moreover, the changes in consumer behaviour are another factor that influenced the retail industry. Deloitte, an organisation with the best and brightest people in the business, interviewed 50 retail executives and 15 retail subject-matter specialists to figure out what the retail industry is at present and will be in the future. In this pulse survey hold before Thanksgiving Day by Deloitte, there are over half of consumers expressed that they are nervous when shopping under such dangerous circumstances. According to the result, executives stated that "health and safety" and "trust" would be ranked as the first purchase drivers in 2021. Therefore, how to set up a new strategy to make consumers realise their concerns care is an urgent question for retailers. (Deloitte.)

Under the case that there are no certain answers to how the subsequent health and economic crises evolve, and what mindset changes arise, what organisations should do is to improve the digital, social, cognitive, emotional, resilience and adaptability capabilities of employees (Feld et al.). Workers from industries have to come up with an idea of how to adapt to frequent changes in a short time, and for companies, they must find out a way to match workers with imaginable roles and activities. It is not only thinking about reopening business by applying remote working, automation, or AI, but also exploring a new operating model in order to reskill and upgrade the workforce for the future. (Agrawal et al. 2020.) The revolution has already begun affecting the workforce before the pandemic, in business models, technology, and consumer preferences, for example. However, such a worldwide event accelerated this process and raised this problem sharply. (Feld et al.)

1.2   Objectives, Research Questions, and Limitations

This subchapter focuses on forming thesis objectives and seeking the delimitations. The objective is the actions that are taken in achieving the aims of the thesis (Solent University). And delimitation is the characteristic that has an impact on the papers. It is also the constraints on the studies or dissertations, creating challenges to affect internal or external validity and results of the thesis. (USC.) The research questions should be proposed before proceeding with the body parts to guide the direction of the thesis. At the end of this thesis, those research questions are responded, displaying the outcomes of this article.

1.2.1   Objectives

The ultimate aims of this thesis are to try to figure out the two objectives listed below: there are two objectives in this thesis.

Objective 1: To find out how the retail industries would be affected by the three determining changes, optimizing company structure, resetting company priority, and retraining employees, at the initial step during the pandemic.

The first objective is to briefly display the comprehensive changes at the beginning of the body parts. Then, the top three factors that affected the retail industries a lot would be selected from the various changes and expanded further and thoroughly. Each factor is going to be demonstrated from different angles, clearly showing the influences they brought to the industries and panics to employees.

Objective 2: Understanding the policies and orders the retail industries has executed.

After the outbreak of COVID-19 and even the post-pandemic, companies should design appropriate plans to recover their business and adapt to the new conditions. It is undoubted that they have released some rules or policies to prevent the damages to the companies from more destructions. Understanding and analyzing those policies greatly help readers have a deep insight into the scars in retail industries. Therefore, the second objective is for purpose of the reasons why companies were trying to fix the problem like that.

1.2.2 Research Questions

Research questions are the first step to query the targets of this article and to project stage goals for helping promote the process and keep the way in the correct direction. In addition, they are the center to send out thinking and establish the path to the final results. If the research questions are set right, .it is the same to benefit to plan theoretical framework and research methodology. (Formplus 2013.)

The questions underneath are coming up before doing the research. Thinking through the content, the questions are eventually answered at the back of this article.

The main research question in this thesis:

- **How have retail companies been changed during the pandemic compared to the previous working styles?**

Sub-questions are more detailed questions that are of importance due to the reason that they are the bones of the main questions. Good sub-questions are the questions that cannot be answered simply by 'yes' or 'no'. it is not only related to some background information but also connects to the latter parts in papers, fragmenting the content reasonably and making the research more intuitive. (Weebly.) The sub-questions are presented as:

- *What challenges and opportunities did the COVID-19 bring to retail companies?*

- *How did those changes affect employers and employees?*

- *What are the impacts on the future?*

Those three sub-questions make up the loopholes in the main question. They made the aims of this thesis clearer and more extended.

1.2.3 Limitations

All studies have limitations. It is not a weakness to the thesis, but a restriction somewhat helps the author to pay attention to the papers, and at the same time, an impact to be

evaluated on the thesis results. It is considered as an opportunity to improve in the future as well. (USC.)

Despite the decision of concentrating on retail industries, all of the retail industries in the world are countless. Besides, due to the different regions and countries, the national policies and acts vary and lead to disparate results, not even speaking of retail companies in more detailed branches. Furthermore, every company has executed multifarious orders and guidelines. It is impossible to interpret them one by one. Therefore, to reduce the harm to the thesis results, the most common consequences are only exhibited in this paper. The second potential limitation is that the empirical data may not be absolutely accurate if put the outcomes into a given case. This is because people who attend surveys or interviews are of diverse status in society. Employees and managers cannot have the same tasks and instead, they should focus on their own duties. The altitudes they are standing on decide the angles to observe and solve problems. Thus, the results of the survey and interviews hardly conclude everything that happened in retail industries.

1.3   Theoretical Framework

If theories are viewed as the formulas to understand, calculate and analyze phenomena by using existing knowledge to attempt to explain the cases which are out of perception, then the theoretical framework can be considered as a skeleton to hold supporting points, dissecting and describing thesis process and problems in study. (University of Southern California Libraries.)

This thesis is based on the theories of Jost and the other three authors editing the research together, and a series of authors to provide relevant information and reliable data (Jost et al. 2020, 8). The final result is *COVID-19 is shaping a new kind of operating model*, which is the conclusion proved at the end of the thesis. Inspired from their theories, it is unfolded through three points: optimizing company structure, resetting company priority, and retraining employees.
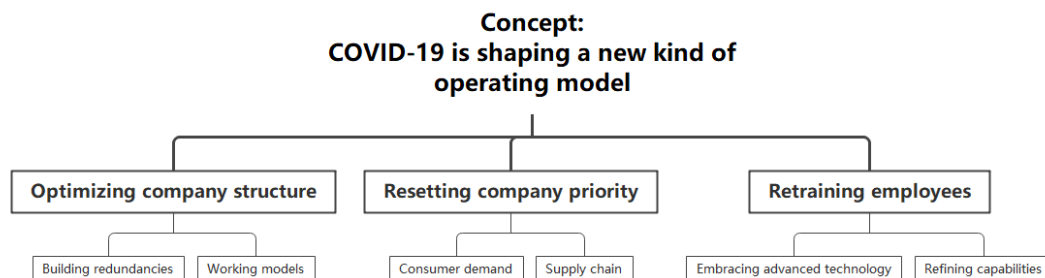
FIGURE 1. Theoretical Framework

In line with the construction mentioned above, the first theory discusses the recombination in layers of companies. As a matter of fact, retail industries cannot afford and raise all of the employees with maintaining low, even zero, profits during the pandemic, many people were fired in order to reduce the loss of finance. Thus, how retail industries cut off the 'burdens', fill the position gap, and bring down the abominably financial impacts as low as possible are the vital topic in the first chapter. The second chapter interprets that retail industries temporarily lessened the efforts on revenues and shuffled the priority when COVID-19 exploded. In the third chapter, how employees could be retrained and reskilled is regarded as the crucial point to broaden more. Undisputedly to say, all those three theories are supported by data, information, and analysis from interviews.

1.4 Research Methodology and Data Collection

This subchapter concludes the research methods and ways of data collection used in this thesis. With initially introducing the various and relative methods, the author indicates which methods are decided to apply.

In the scientific and academic process, deductive reasoning and inductive reasoning are the tools often used to proceed from a general statement to a specific and logical conclusion. Deductive reasoning, also called deduction, is the foundation to prop up valid reasoning. The structure of deductive reasoning usually is two premises and one final reference. In other words, deductive is a syllogism, with two statements, a major premise and a minor premise, and a logical conclusion. Based on the study of California State University, premises are proved they are true by deductive inference conclusions no matter if or not the

generalization is true. On the other hand, compare to deductive reasoning, inductive reasoning is the opposite. It is from wide generalizations to case observations, building conclusions from data. Different from deductive reasoning, the conclusion in inductive reasoning can be false regardless of if premises are true in a statement. (Bradford 2017.) In this thesis, inductive reasoning is chosen as a method to support the theories.

After choosing the research reasoning, the followed part is research approaches. *Research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation (Creswell 2014, 3).* There are three research approaches: qualitative research, quantitative research, and mixed methods. The qualitative research approach is to explore and understand what a problem means to individuals or organisations viewed as an entirety. The whole process starts from designing questions to collecting and later analysing data from the answers, simple or complex, the interviewees gave. It leads to a conclusion meant to individuals in a specific situation. The quantitative research approach is to find out relationships of variables to support objective theories. Because of the enormous data collected from a large number of test objects, it can be analysed by applying statistical methods to be transformed into evidence, clearly and powerfully advocating theories. The mixed methods research approach is combining quantitative approach with qualitative approach, gathering data from both sides and making good use of each strength to provide a better understanding. (Creswell 2014, 4.) For the reason that the aims of this thesis are to find the extensiveness COVID-19 has brought to retail industries in general and what aspects were affected exactly in details, and in addition, considering the time limitation and trying to avoid being too general, qualitative method is considered as the most suitable research approach.

The last part of this sub-chapter is data collection. It is a systematic process of obtaining primary knowledge and original insights to help the author solve research problems out (Bhandari 2020). This thesis uses both primary sources and secondary sources to push forward the progress of papers. For primary sources, the data is collected through interviews. Interviews aim to investigate personal data. As FIGURE 2 showed below, the entire main information of this sub-chapter was teased out in this figure.
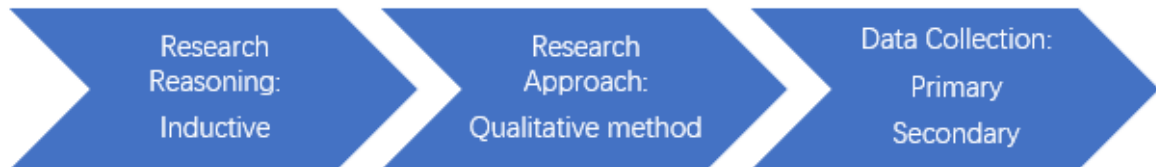
FIGURE 2. Research Methodology and Data Collection

1.5   Thesis Structure

Generally speaking, this thesis comprises two parts: the theoretical part and the empirical part. The intact process is included in the figure below.
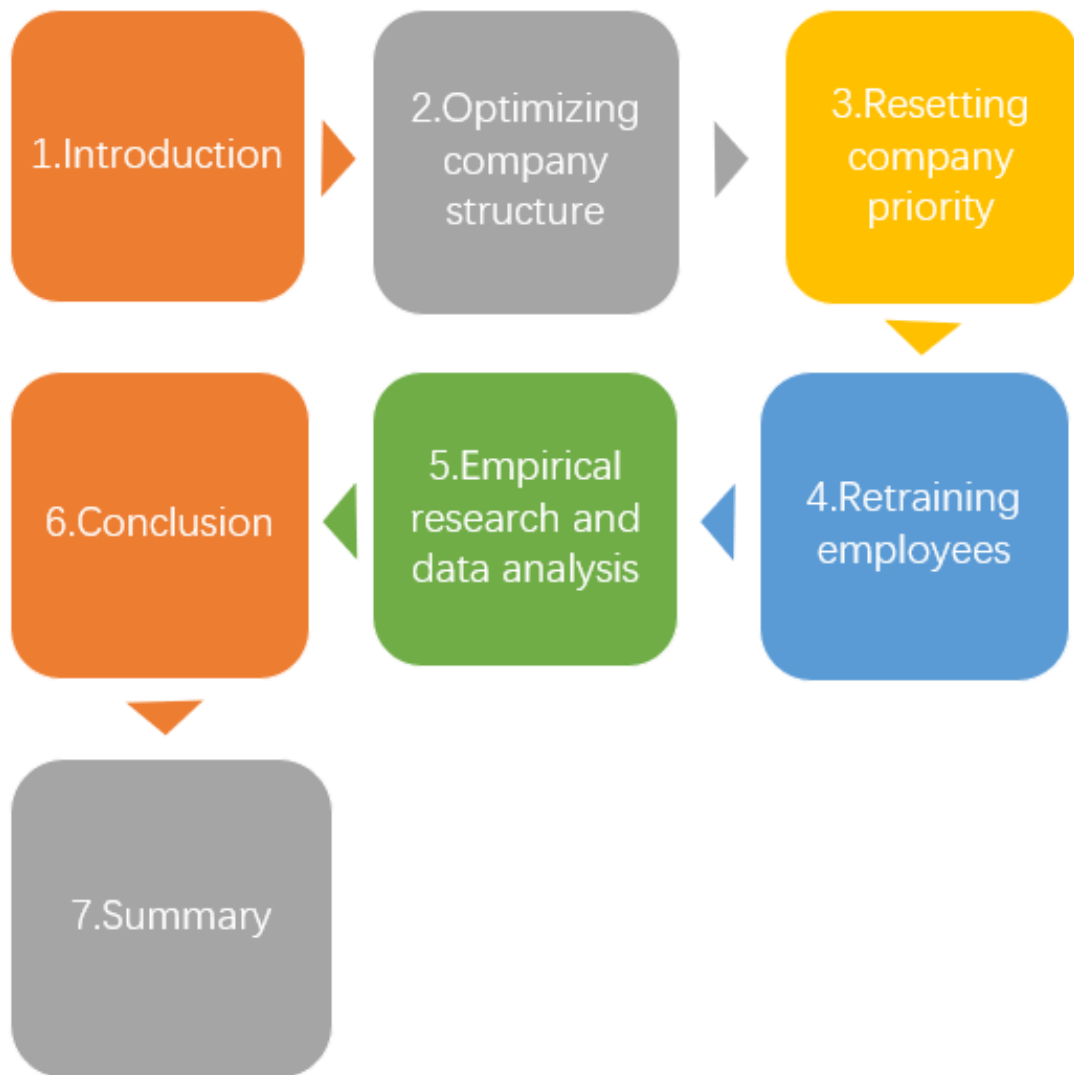
FIGURE 3. Thesis Structure

There are seven steps to reach the goals in this thesis. First of all, the chapter one introduction gives the background and all necessary concepts, objectives, theories, and methods to remind readers of the key ideas while reading. The followed three chapters are the theoretical part to explain the research content and emphasize the importance of this thesis. The fifth chapter presents the data and results collected from interviews, analysing to prove the accuracy and influence of those theories in reality. In the sixth chapter, conclusion, all research questions are answered. Furthermore, the validity and reliability of this thesis are discussed and suggestions are supposed to be given. Finally, the last chapter summarises all of the key information in this paper.

2 Optimizing company structure

When the world is in ferment caused by the COVID-19 pandemic, companies were afflicted by abundant problems simultaneously. Those urgent issues, for example, decreased demand, office closures, supply-chain derailments, forced leaders to turn their original operating mode into so-called "survival minimum" mode, accomplishing unchanged work with less time, resources, and people as possible as they could have. (Jost et al. 2020, 3.)

2.1 Building redundancies

According to the statistics provided by the World Bank (2021), the total unemployment rate in the world rose up to 6.471% in 2020, becoming the highest in the last 30 years. Compared with the rate in 2019, it has increased by 1.098%. The United States, as the biggest country that has the most retailers, has 80 companies on the list of top 250 global retailers (Farfan 2018). In the economy of America, retail has become the greatest industry in contributing to seek in jobs, occupying 15.9 percent of 28 million new job positions in the private sector and providing over one in four jobs for 52 million people who can work in America (National Retail Federation 2020). Considering America is the largest retail country, and additionally has a great deal of data and information related to the retail industry, it is taken as an example in this subchapter.

Based on the data gathered by the United States Bureau of Labor Statistics, the unemployment rate in America ascended to 4.4 percent in March 2020 from 3.5 percent in February 2020. Compare to the same period in last year, it steadied at 3.8 percent with negligible change. This, a 0.9 percent difference, becomes the largest single-month increase since January 1975. (Crouch 2020.) The 33rd retail company in the report *Top 50 Global Retailers 2020* published by National Retail Federation, Best Buy, curtail its labor force when changing the way of operating. It furloughed around 51,000 employees with calling back only half of them. At the same time, the operation was reformed to a curbside pickup-only model, and then accept make appointments to visit stores and later return to the original model but with at most 25 percent of total capacity. Other companies were suffering from similar agony. After filing for bankruptcy, J.C. Penney fired 1,000 workers and closed over 150 stores in the process of reconstruction; Macy's laid off nearly one-fourth of its employees, in other words, 3,900 corporate jobs; and Levi's claimed there would be 15 percent of its workforce all around the world, about 700 jobs, dismissed. On the other hand, some corporations, Walmart, Kroger, and CVS Health, for example, strengthened their manpower by hiring

more people, but many of them are temporary. Online job openings amplified such a tremendous fall. According to the report of Jobs website Glassdoor, there were approximately 458,000 job openings in the retail industry on the list up to June 6, namely a 25 percent decrease year-over-year but a 5.5 percent rise month-over-month. (Repko & Thomas 2020a.) FIGURE 4 well displayed the trend. The tremendous decline between March and April revealed 2.4 million job cuts in the retail industry, and due to the fact of reopening stores, it recovered from the depression and stopped in the middle of the decline in May and June (Repko & Thomas 2020b).

FIGURE 4. Retail industry jobs

Amanda Stansell, a senior economic research analyst for Glassdoor, stated some roles are not affected too much. For example, grocery managers and jobs related to e-commerce orders like warehouse managers and forklift operators are still in need. Nevertheless, those jobs which are for interacting with people in alternative positions, such as for product demonstration and counter sales, are vulnerable. (Repko & Thomas 2020a.)

FIGURE 5 reported by the Labor Department perfectly uncovered this phenomenon. Compare to the retail industry overall loss, the apparel sector is influenced the most, dropped by over 50 percent. (Repko & Thomas 2020b.)
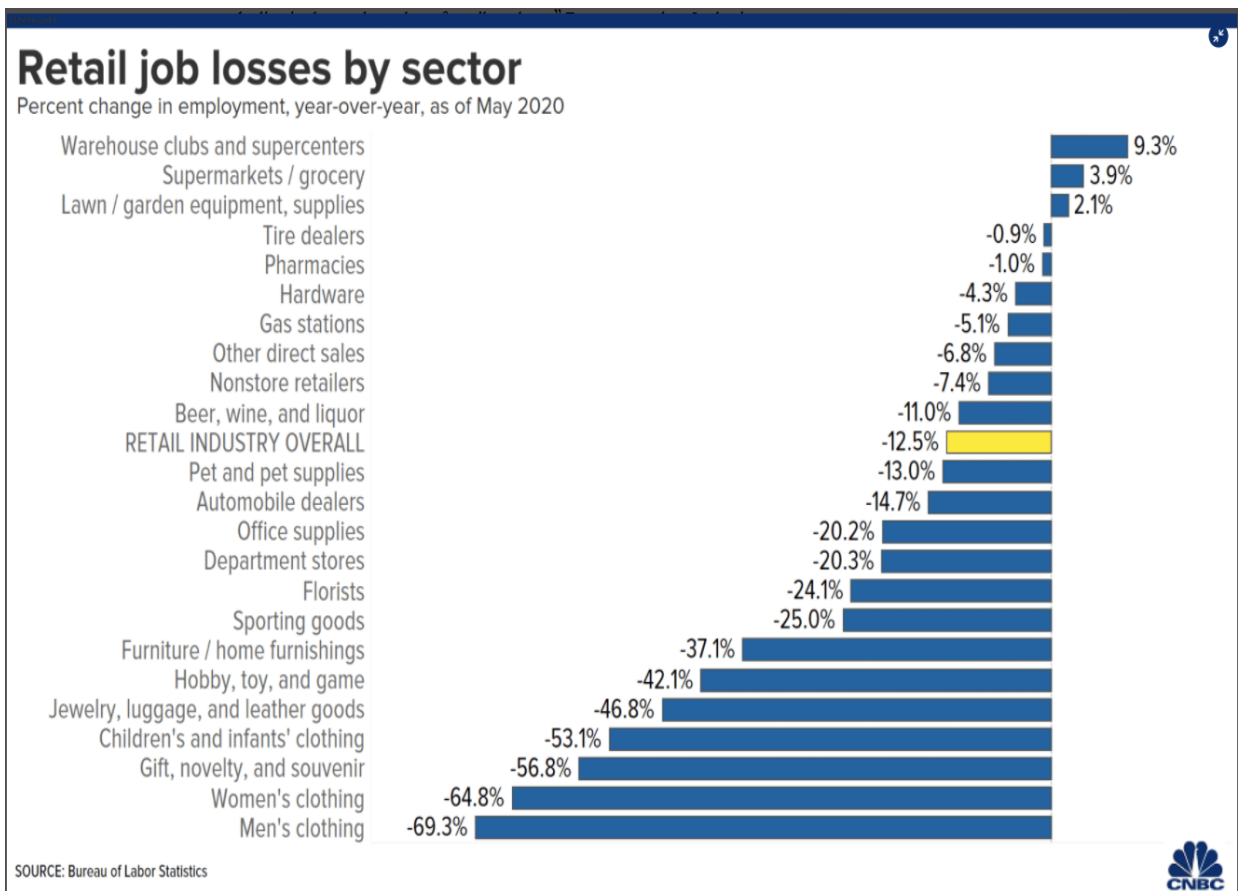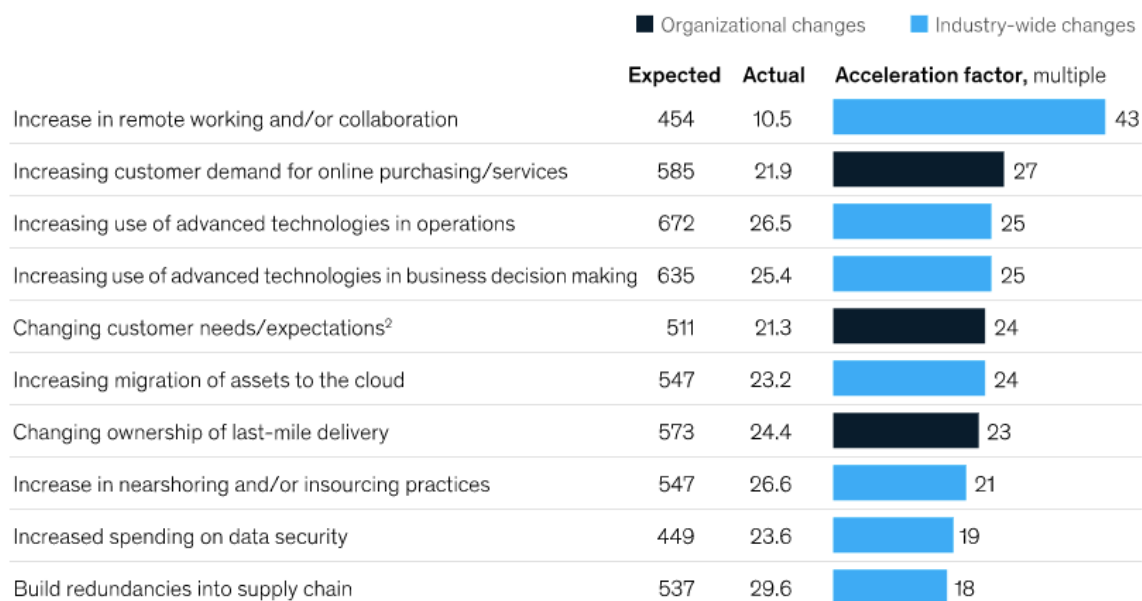
Retail job losses by sector

Percent change in employment, year-over-year, as of May 2020

Sector	Percent change
Warehouse clubs and supercenters	9.3%
Supermarkets / grocery	3.9%
Lawn / garden equipment, supplies	2.1%
Tire dealers	-0.9%
Pharmacies	-1.0%
Hardware	-4.3%
Gas stations	-5.1%
Other direct sales	-6.8%
Nonstore retailers	-7.4%
Beer, wine, and liquor	-11.0%
RETAIL INDUSTRY OVERALL	-12.5%
Pet and pet supplies	-13.0%
Automobile dealers	-14.7%
Office supplies	-20.2%
Department stores	-20.3%
Florists	-24.1%
Sporting goods	-25.0%
Furniture / home furnishings	-37.1%
Hobby, toy, and game	-42.1%
Jewelry, luggage, and leather goods	-46.8%
Children's and infants' clothing	-53.1%
Gift, novelty, and souvenir	-56.8%
Women's clothing	-64.8%
Men's clothing	-69.3%

SOURCE: Bureau of Labor Statistics

CNBC

FIGURE 5. Retail job losses by sector

2.2 Working models

The conventional wisdom was immensely altered by the changes that happened in the macro environment of the retail industry. Those changes probably initiate a novel era starting with a new structure and circumstance, or a so-called 'new normal', which influences on multi aspects, including politics, economy, human lifestyles, and digital technologies. Because of the quarantine and social distance required by the government, the retail industry was extremely affected. More time spending at home and less going shopping outside largely promote online consumption compare to the age before the pandemic. Not only that, the workstyles were switched from working in offices to working from home, leading to making people accustomed to online channels. Long story short, digital technology has already made living online be familiar to many people, but due to the emergence of the pandemic, the process was pushing forward with an incredible speed. (Abeam Consulting.)

Time required to respond to or implement changes,[1] expected vs actual, number of days

			Acceleration factor, multiple	
			■ Organizational changes ■ Industry-wide changes	
	Expected	**Actual**		
Increase in remote working and/or collaboration	454	10.5		43
Increasing customer demand for online purchasing/services	585	21.9		27
Increasing use of advanced technologies in operations	672	26.5		25
Increasing use of advanced technologies in business decision making	635	25.4		25
Changing customer needs/expectations[2]	511	21.3		24
Increasing migration of assets to the cloud	547	23.2		24
Changing ownership of last-mile delivery	573	24.4		23
Increase in nearshoring and/or insourcing practices	547	26.6		21
Increased spending on data security	449	23.6		19
Build redundancies into supply chain	537	29.6		18

[1]Respondents who answered "entry of new competitors in company's market/value chain" or "exit of major competitors from company's market/value chain" are not shown; compared with the other 10 changes, respondents are much more likely to say their companies have not been able to respond.
[2]For instance, increased focus on health/hygiene.

FIGURE 6. Time required to respond to or implement changes, expected vs actual number of days (Jost et al. 2020)

FIGURE 6 exhibited and ranked the 10 changes that affected companies from the most to the least. The top one change is, undoubtedly, the increase in remote working. Due to the fact that countless employees have shifted their work from workplace to living rooms or kitchen tables, specialists claimed office became the history, followed by an unprecedented age of flexible timetables and migration from cities. This can be explained through meetings, emails, and work time, the three main modern office routines. On the basis of a study published by Harvard Business School researchers, employees attended more meetings via videos instead of face to face, sent more emails, and spent more time on work since from working from home in March. To collect quantitative data, the team asked over 3,000,000 people coming from 16 cities in America, Europe, and the Middle East. By contrast with the standard before lockdown, there is a 13 percent rise in the average number of meetings that employees attend, and at the same time, the average number of attending people increased at a similar level, 13.5 percent. This might because the video conference can take much more space and people than the chamber does. However, working from home does not mean employees can save more time for themselves. Based on the Law of Parkinson,

work expands so as to fill the time available for its completion, working hours have expanded to absorb the surplus time. Within all those 16 cities, people on average have to add extra 48.5 minutes a day to their work. The most likely reason is the time spending on sending emails after normal business hours has risen 8 percent. Furthermore, during normal business hours, both internal emailing and the average number of recipients have increased to make up for the lack of meetings in person. Therefore, the real working hours might be higher than estimated. The virtual-private network provider NordVPN reckoned that there are on average three hours expanded on workdays in April. (The Economist 2020.)

The pandemic has changed the working patterns forever and people were getting used to work remotely, but it is doubted that people are really want to work in offices. By answering the question, Stewart Butterfield, the CEO, and co-founder of Slack, stated his viewpoints. Viewing from a point of employee, this change is vast and consequential: it is irreversibly changing new decisions of people at the place they are willing to settle and adding new expectations about flexibility, working conditions, and life balance. According to the research by the Future Forum, among 4,700 knowledgeable workers, most of them refuse to return to the previous working model. Only 12 percent of workers want to back to the office, and 72 percent workers support of carrying out a hybrid remote-office model. Stewart Butterfield believed that companies who handle digital transformation well are able to drive engagement, achieve organisational agility, maintain alignment and empower teamwork across all disciplines and locations in the 'new normal' era. (BBC Worklife.) Chris Cheap (2020) also expressed the perspective of supporting the hybrid model in the business magazine *Estates Gazette*. The author said it cannot be denied that working from home has brought massive benefits to business and was the best choice during the pandemic, but in the long term, such a model is hard to be sustainable. The inevitable factor is humans are social beings, and sharing working spaces gives dozens of advantages no matter on a personal level or professional level, leading to its non-substitutability. Indeed, the office will not be wiped out and more importantly in the post-pandemic, because not everyone fits working remotely well. Elisabeth Reynolds, the executive director of Task Force on the Work of the Future of Massachusetts Institute of Technology, asserted the commuting hours expand one more hour for those workers who are able to work from home. It is estimated that after the pandemic, about one to three days a week will be consumed by working from home. But the point is those who are not able to work from home. Workers gathered from transportation, food service, cleaning and maintenance, retail, and personal care industries, which are scattered in cities with low paid are facing permanent job loss. At the moment, it

is urgent to shore up the social safety net, cultivate more skills, and create more opportunities for the most vulnerable workers to be educated and trained. (BBC Worklife.)

For the retail industry, mastering comprehensive skills helps a lot for commuters. Mathews of the National Retail Federation said workers are required to shift roles and take on new tasks to help them 'adapt to surges in some areas and lack of demand in other areas.' For instance, hourly workers should move between different brick-and-mortar locations of the same owner instead of just staying at a store steadily. They also may pick online orders as the substitute for being a cashier. Corporate employees may have to play the role of store manager. Mathews said some employees had taken on new tasks, such as reminding customers to wear masks, keeping social distance, testing body temperature, proceeding with online orders, or guiding shoppers in the store. He optimistically thinks that retail workers have large opportunities to be recalled even the job positions differ from the jobs they did before. But workers are still exposed to uncertainty because retailers have not finished their sales patterns and staffing budget yet. (Repko 2020a.)

"This pandemic is going to have a profound impact on the industry, but I don't think it's going to be as bad as a lot of people are saying," he said. "It's important when we look at these numbers and we look at the apocalyptic projections, that we recognize on the other side of the scale are businesses being created and jobs being created as well." (Repko 2020a.)

3 Resetting company priority

To seek out a key to the door of escaping out of the pandemic, companies gave up analysing and carry out multiple missions simultaneously. Instead, they prioritised those most critical goals. Companies that have straightforward and rational purposes can be faster than the counterparts that are multi-tasking to reach their desired results. During the pandemic, one single mission at a time is the most valuable thing to be pondered. (Jost et al. 2020.)

3.1 Consumer demand

COVID-19 highlighted a series of trends that have emerged in the retail industry. The shifting of concentration to online shopping is likely to be speeded up. For example, groceries in America start penetrating into e-commerce from 13 percent before the pandemic to over 31 percent at the end of March. Staying at home turned customers to use mobile applications and websites to purchase incompatible products than they used to purchase in stores which are not necessities under such situations, but buy more pantry staples and at-home occasions. Those who visit local shops felt differently because of the new rules, such as social distancing, hygiene, and wearing masks. (Brown et al. 2020.) Most non-essential retail activities have been cancelled. To those essential retail businesses, they could not avoid trying to cope with huge issues, such as lack of labour force, massive breaking in supply chains and working conditions, and occasional sharp spikes in need for specific items. In America, according to the statistics supported by Census Bureau, there is an 89.3 percent drop in the sales of clothing retailers in April 2020 compared with the same time in the last year and a 13.2 percent rise in the sales of grocery stores. On the other flip, Eurostat collected the data that there is a 23.8 percent drop in the sales of non-food products in April 2020 year-on-year, a 1.2 percent increase in the sales of food, beverages, and tobacco in the region of the European Union (EU). (Organization for Economic Co-operation and Development 2020.)

Up to 4.00 pm on December 31, 2020, there were nearly 15,542 stores closed because of the pandemic (Loeb 2020). Due to the fact that homestay policy was published in most countries and stores shutting down in abundance, the retail industry had to find a way out in such tough days. In fact, consumer appetites do not become bad, they're simply changing the place where to eat food and beverages. Retailers are forced to rethink the customer experience and demand, restaurants offering curbside delivery to home, for example. In Texas, America, even alcoholic beverages can be delivered. (Estay.) On the other flip, re-

tailers are adjusting their business center, cutting down the scale of offline stores, and shift-ing more efforts online. As a result, about 35 percent or even more of sales of retailers is achieved through gradually developing e-commerce, their websites, and social platforms. It is surprising that consumers have switched from physical shops to online orders with in-credible speed. (Loeb 2020.) Undoubtedly, store closure and social distancing measures have extremely disrupted service-based businesses. Companies, such as gyms, salons, and art studios had to start up their digital business and invent new products under some specific situations. Take yoga studios and cooking schools as an example, based on con-sumer demand, they were creating videos to build up virtual classes. An Italian grandmother attended online classes for teaching cooking by herself after the pandemic paralysed the tourism in her village. For businesses which need to interact with consumers in persons, they had found a digital solution to tackle physical shortcoming. Offline events planned to hold at the beginning of 2020 by a beauty brand called Then I Met You were cancelled, but then their founder Charlotte Cho successfully met with their customers online. (Winter 2020.) According to FIGURE 7 showed below, about 24% of U.S. Gen Z and Millennials are using video conferencing for fitness classes (Estay).

Use of video conferencing for fitness classes during the coronavirus (COVID-19) pandemic in the United States as of April 2020, by age
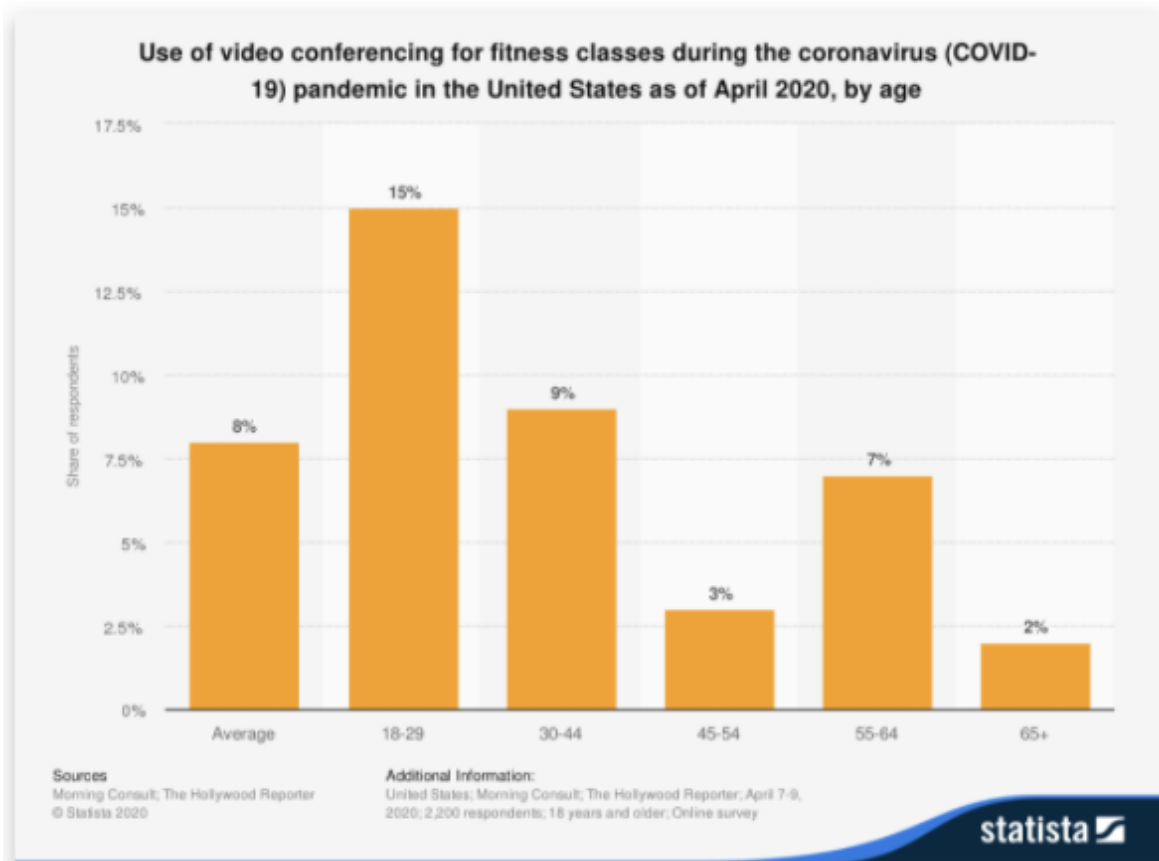
FIGURE 7. Use of video conferencing for fitness classes during the coronavirus (COVID-19) pandemic in the United States as of April 2020, by age

Furthermore, before the outburst, customers spent their money and time looking for clothes and décor items. Since working from home, people started ordering online at off-hours because of limited time and the convenience of online shopping. Although the pandemic force people to nest household necessities, it just emphasized the reliance on e-commerce. (Winter 2020.) Up to the mid of June, through the survey, McKinsey consumer sentiment discovered that over three-quarter of Americans changed their habits – attempting new brands in a new place or altering their shopping styles – due to the pandemic. (Brown et al. 2020.) FIGURE 8 displayed what consumers bought during March 2020. It is obvious to see that people prefer to buy stuff which is easy to nest and with longer storage time because of working from home. For instance, consumers bought preserved/packaged and frozen foods the most, such as packaged meals, packaged produce, frozen bakery, and frozen meals. On the other hand, consumers also bought more fresh food, such as meats, seafood, bakery, and alcohol, with moderate pantry load and a significant increase in at-home consumption. The reason why the sales of hygiene products and cosmetics declined slightly is that people did not use those products as frequently as they thought. The research by McKinsey & Company found that about 70 percent of Americans considered their routines will be transformed in the next year. Researchers are expecting to see the persistent higher demand of categories of preserved/packaged products, bakery, dairy, dish care, and paper and plastics even COVID-19 restrictions have ebbed and flowed on it since March 2020. (Alldredge et al. 2021.)

Within the food industry's huge spikes of demand, four archetypes have emerged.

Change in demand, % sales change compared to 2019

Archetype

① Significant pantry loading and at-home consumption

② Moderate pantry loading, significant increase in at-home consumption

③ Moderate pantry loading, increased at-home consumption

④ Moderate pantry loading, no increase in at-home consumption

- ● Beverage
- ● Fresh food and bakery
- ● Frozen
- ● Health and personal care
- ● Household cleaning
- ● Preserved/packaged food

Source: Nielsen eXtended-all-outlet-combined (xAOC) data, Oct 3, 2020

FIGURE 8. Within the food industry's huge spikes of demand, four archetypes have emerged

At the early stage of the pandemic, taking care of themselves well was the only thing in consumer mind. There was a large spike in medicines, health items, supplies, cleaning materials, and other hygiene products. Even in the weak time, Amazon had decided to prioritize those products to fulfill customer needs. Now followed by taking a turn for the better, consumer purchasing tendency is inclined to natural and sustainable products. By giving up

choosing natural products in grocery stores, people spent on household terms with anti-bacterial power more. Knowing the fact that this novel virus can keep alive on cardboard for up to 24 hours and on plastic and metal products for up to 36 hours, some grocery stores and retail companies abandoned using reusable bags as well. (Estay.) Simultaneously, sustainability has become the topic for retailers. More than 60 percent of consumers from the UK and German announced that the impact of climate change ranked higher to them. The CEO of Unilever Alan Jope underlined that "any company that wants to stay relevant in the future should think about sustainable behaviour." (McKinsey & Company 2021a.)

As a matter of fact, online and offline shopping is with a complementary relationship but not the competitive one. Considering the pandemic will last for a while, it is undoubted consumers actively shopped online. Also, the social restrictions and increase in online revenues made offline retail channels have to compromise, leading to store closure, reducing spaces, shifting spaces with different usages, and such. Despite online shopping has grown to a dominant place in this crisis, offline channels still have values and cannot be overwhelmed. Because offline distribution channels are a part of the national economy, it is essential to figure out how to combine online and offline shopping. In offline distribution channels, consumers can experience what online shopping is unable to provide, touching the objects, testing the functions, buying niche products such as liquor, gourmet food, and art supplies, and name a few. Additionally, the functions of store spaces should be diversified to get rid of the reliance on offline retail spaces. (Moon, Choe & Song 2021.)

3.2   Supply chain

For retailers all over the world, the most vulnerable and high risky part of their supply chains was revealed by this pandemic, from cross-geography supplier dependencies to outsourced services, and then even to in-house workforces. The supply chain is viewed as the lifeblood of the retail industry, and it is likewise complex. As the robustness of daily operations and contingency plans have been influenced, how to design the future resilience optimisation of supply chains has risen to the top issue for each retail company. Even in the most prosperous time, the supply chain is certainly the core of outsourced, unmanageable costs, and risks, which are the inexorable problems caused by weather, such as driver sickness and traffic jams. If the functions of supply chains can be diversified, the relationship between suppliers and partners of retailers can hopefully build rapport. Thus, understanding the impacts of COVID-19 on the supply chain needs to be learned at once, and smarter retailers have already put their hands to do it. (Subramanian & Flynn 2020.)
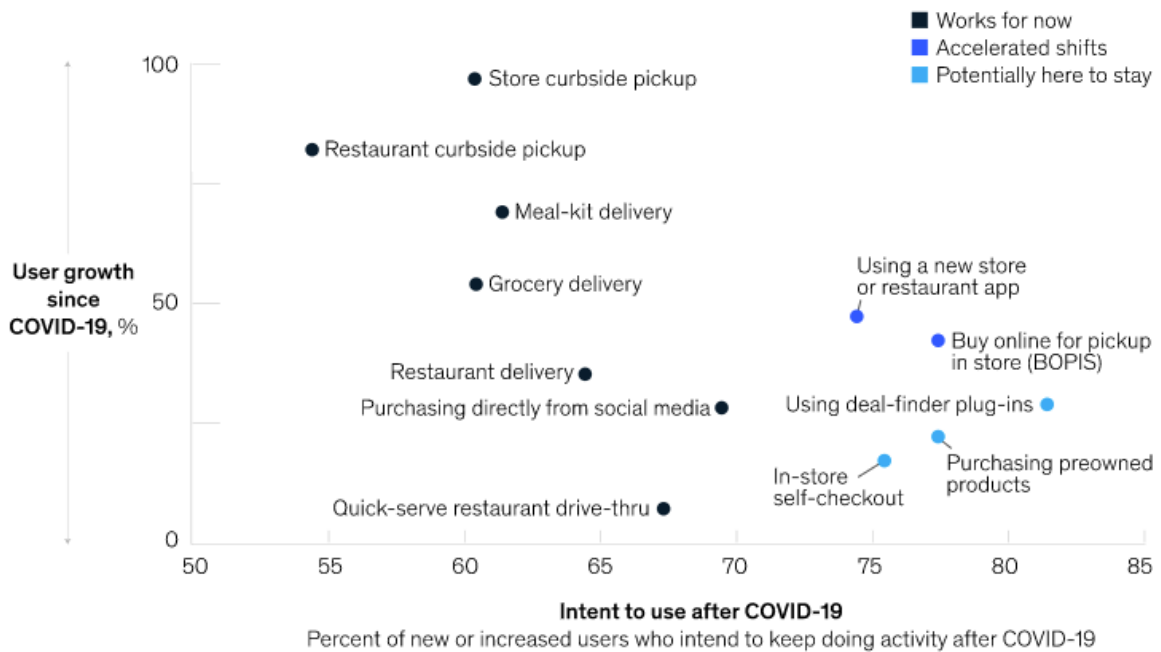
At present, many retailers reckoned that it is necessary to do risk assessment annually or twice yearly, but this pandemic pushed supply chain risks higher. What retailers should consider is not only the unpredictable external factors but also the risks in manageable factors inside the business. Although it might be complicated, it is essential to identify and solve the problems coming from vulnerabilities in nodes connecting with supply chain planning and operations, such as process, compliance, technology, logistics, and workforce. (Subramanian & Flynn 2020.) In the spring of 2020, when the COVID-19 started spreading, there was a great change in the demand for multiple product categories. Some specific categories, such as household supplies and packaged foods, had increased five times in the first months of the pandemic year-to-year, bringing incredible pressure on supply chains and compelling companies to make a change in their portfolios, switching to the flow line production, for example. At the beginning of the stage, one cleaning-supplies manufacturer experienced a large spike in demand so that it is hard for them to achieve its fill-rate target. Then, the company understood the reason why it is impossible to locate and meet multiple customer requests is because of its silos style operated in its commercial, manufacturing, sales, planning, and logistics functions. Later on, a cross-functional team was set up to specialize in each of those functions respectively. By cooperating together every day, this team is able to match the top prior units for which customers and refine the product portfolio. As a result, the company achieved its 98.5 percent fill rate target and avoided taking extra costs on logistics at the same time. (Callaghan et al. 2021.)

Some retailers have already started using their subsidiaries and branch stores to satisfy various demands. They built the most advanced micro-fulfillment centers in urban areas and transformed parts of their stores into mini regional distribution centers (DCs) to deliver faster and more punctually. All of the nodes in supply chains, such as stores, distribution centers, deconsolidation centers, returns-processing centers, pop-up shops, and urban lockers, are possible to rethink their functions and roles. More importantly, such comprehensive and efficient supply-chain analysis has to balance new demand for nodes of retailer with how to cooperate with potential partners, such as local couriers and on-demand deliverymen, to achieve their goals. (Dekhne et al. 2020.) In addition, most retail companies have stable relationships with their suppliers and outsourcing partners who work in freight, transportation, and emergency. However, this is not enough to improve supply chain resilience. Based on the relationships, more and more transparency, understanding, and collaboration should be established. It is crucial to managing the relationships with suppliers clearly and cleanly, which means to explicitly formalize orientation, assessment, and relationship models with each supplier. To secure the supply chains, diversifying, being aware

of the importance of suppliers, and planning stable and punctual sourcing strategies are the key concepts. (Subramanian & Flynn 2020.)

As mobile and digital technology became the main trend, leading to making location-specific offers and product availability come true, keeping the pace of supply chains with sales is a question (McKinsey & Company 2021b). In comparison to the levels before the pandemic, 'buy online, pickup in-store' (BOPIS) has increased by about a half. And it will last even in the post pandemic. (Dekhne et al. 2020.)

Many consumers intend to continue newly acquired habits even after the crisis is over.

User growth since COVID-19, %

Legend:
- Works for now
- Accelerated shifts
- Potentially here to stay

Data points: Store curbside pickup; Restaurant curbside pickup; Meal-kit delivery; Grocery delivery; Restaurant delivery; Purchasing directly from social media; Quick-serve restaurant drive-thru; Using a new store or restaurant app; Buy online for pickup in store (BOPIS); Using deal-finder plug-ins; In-store self-checkout; Purchasing preowned products

Intent to use after COVID-19
Percent of new or increased users who intend to keep doing activity after COVID-19

Source: McKinsey & Company COVID-19 US Consumer Pulse Survey 9/18–9/24/2020, n = 1,026, sampled and weighted to match the US general population 18+ years

FIGURE 9. Many consumers intend to continue newly acquired habits even after the crisis is over

Digitalisation has forced retailers to deliver goods faster for those customers who want to get their packages as soon as possible. According to a survey study by McKinsey, over 50 percent of customers expressed they look forward to receive their apparel orders in two or three days after submitting the payment. The business is developing a full-service model to replace the self-service model. In spite of creating convenience to consumers, the costs

and capital-intensive investment perplexed retailers. Therefore, a new operating model needs to be emerged to jump out of the cycle of selling more with lower margins. American Eagle Outfitters (AEO) is testing a positive strategy to resolve the trouble. Through withdrawing the inventory from its stores and cutting down in-store needs, the company is completing restructure. Despite the contradiction to the directions of most retailers, it seems like, AEO found that such strategy helps close to dynamic demand, increases flexibility and efficiency, minimizes friction, and meets consumers in the way they would like to at anywhere they want. (McKinsey & Company 2021b.)

The latest study of Zebra focusing on Asia-Pacific shoppers demonstrated that nearly nine tenths local retailers said holding real-time inventory visibility were a giant hurdle, and 85 percent of them clearly voiced that more advanced inventory management tools are demanded. This is because, in common situations, the over frequent usage of their systems about e-commerce, customer loyalty, and point-of-sale operations generated the scattered views in various parts of their supply chain. Only by combining all parts together, retailers are capable to raise their margins, inventory turns, and consumer conversions. (Tan 2021.)

4   Retraining employees

The pandemic is creating a new world to mix and concrete the previous one. For the companies that had no choice but still opened their stores, especially small business, that would be a torture to them. The subconscious reaction of those retailers might be reducing the costs in the channels that are not that vital. However, curtail expenses is not a long way to go. On the contrary, companies are obligatory to train their people to make sure they have enough skills to cope with the situations not only for themselves but also for their companies. (Dimoff 2020.)

4.1   Embracing advanced technology

As COVID-19 is constantly involving, experts and specialists could not absolutely come up with the best solution to tackle such a pandemic. Propelling technology into this seesaw battle is not the only way, but it is counted as one of the most effective ways that humans can do in such a case. Needless to say, more often use technology face the risks like data breaches or deepening the current digital divide, and the differences in economics and societies among countries give rise to different results, so leaders in companies should make aggressive strategies and policies about technology after knowing these risks and differences well. (Tonby et al. 2020.)

In Asia, studying and researching technological capabilities and innovations, especially in digital and mobile sectors, helped a lot to meet the challenges. There are six broad kinds of ways to assist governments and local companies in guaranteeing human health and livelihoods (FIGURE 10). (Tonby et al. 2020.)

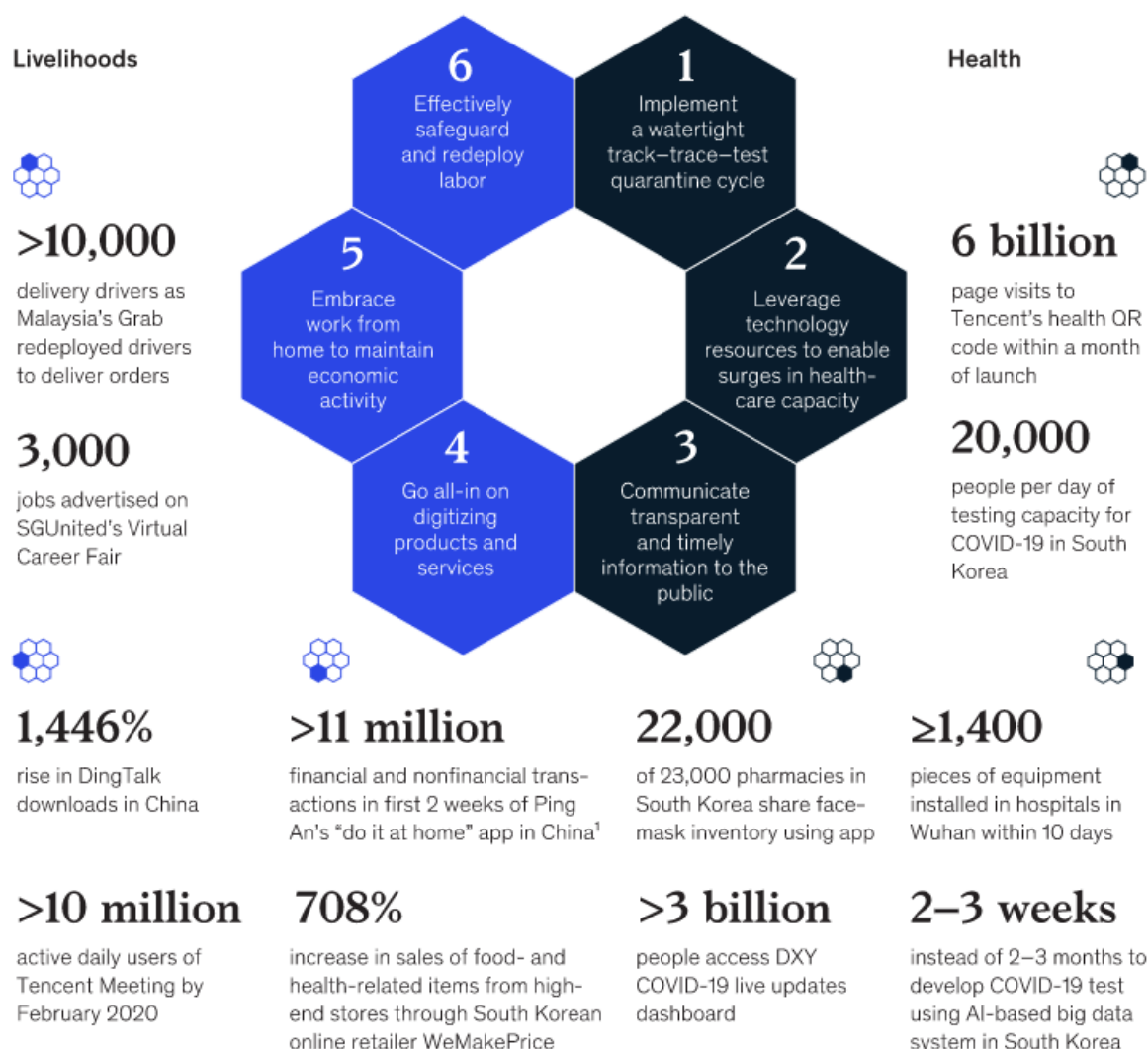**Six ways technology contributed to Asia's response to the COVID-19 pandemic.**

Livelihoods

Health

6 Effectively safeguard and redeploy labor

1 Implement a watertight track–trace–test quarantine cycle

5 Embrace work from home to maintain economic activity

2 Leverage technology resources to enable surges in health-care capacity

4 Go all-in on digitizing products and services

3 Communicate transparent and timely information to the public

>10,000

delivery drivers as Malaysia's Grab redeployed drivers to deliver orders

3,000

jobs advertised on SGUnited's Virtual Career Fair

6 billion

page visits to Tencent's health QR code within a month of launch

20,000

people per day of testing capacity for COVID-19 in South Korea

1,446%

rise in DingTalk downloads in China

>11 million

financial and nonfinancial trans-actions in first 2 weeks of Ping An's "do it at home" app in China[1]

22,000

of 23,000 pharmacies in South Korea share face-mask inventory using app

≥1,400

pieces of equipment installed in hospitals in Wuhan within 10 days

>10 million

active daily users of Tencent Meeting by February 2020

708%

increase in sales of food- and health-related items from high-end stores through South Korean online retailer WeMakePrice

>3 billion

people access DXY COVID-19 live updates dashboard

2–3 weeks

instead of 2–3 months to develop COVID-19 test using AI-based big data system in South Korea

[1]Nonfinancial transactions include online medical counseling, traffic-violation inquiries, and shopping for disinfection-related goods.
Source: Press search; McKinsey Global Institute analysis

FIGURE 10. Six ways technology contributed to Asia's response to the COVID-19 pandemic

Digitization and the deployment of data in public were valid to relieve the invasion of COVID-19. Every government set up track-and-trace systems respectively by inventing mobile applications. For example, South Korea issued Corona Map and Corona 100m to share up-to-date contact-tracing information with the public to retard spreading speed. Technology contributed greatly in raising vigilance in a systematic and thorough manner as well. SenseTime, the world most valuable artificial intelligence company, deployed contactless temperature-detection equipment, which can test 10 people in a second, at the entrance of metro, schools, and public centers in Beijing, Shanghai, and Shenzhen, China. Moreover,

a ride-hailing company called Didi Chuxing in China asked drivers to wear masks when driving and identified and supervised them through an AI-driven facial recognition technology at the same time. Governments in Asia also supervised rigorously by using a bunch of digital and mobile tools during quarantine. Citizens need to send photos or turn on their GPS on their phone to locate where they are to Stay-Home Notices (SHNs). People who passed SHNs receive a text message at a random time every day, unloading their locations through GPS via a web link in the message to refresh their new positional information. Hong Kong did a similar thing, but they used electronic wristbands with a paired mobile application to guard passengers. (Tonby et al. 2020.)

"As far as livelihoods go," Jonathan Woetzel, the McKinsey Global Institute Director and Senior Partner in a video said: "technology has preserved the jobs, whether it is digitizing products and services, enabling a work-from-home culture or a safeguarding and redeploying labour, technology has made the difference." (Woetzel 2020.)

In Asia, governments have decided to temporarily close a large number of stores and offices. Thus, the remote delivery of services became more and more popular. Supported by Asian technology companies, the online-to-offline (O2O) experience evolved more mature and aid business to survive. Take Lazada, the leading Southeast Asian e-commerce platform, as an example, farmers and wholesalers are able to sell their crops and cargo directly to consumers on it in days to mitigate the loss and waste problem from brick-and-mortar stores. As a result, their reports displayed a four to five times increase in the number of online orders. (Tonby et al. 2020.) In America, a similar situation happened, with an over four times spike in sales in non-store retail versus in-store retail by June. As usual, launching an online store or stretching out another fulfillment channel takes a few months, but the pandemic speeded up to weeks even days so that they can minimize the lost sales. (Dupre 2020.)

More and more companies accept to apply the technology into their future visions. Technology such as 5G is forming the higher-level customer experiences, even though it now still exists some uncertainties. Because the high speeds, massive bandwidth, and low latency of 5G make fast recognition of augmented reality (AR) on multiple subjects, customers are able to compare real-time products and view other customer comments from the Internet through a screenshot. For example, if customers dislike nuts or have allergies, what they need to do is only scanning the grocery shelves by a cell phone or other smart devices, the words 'nuts', 'no nuts', or 'traces of nuts' of the products would display on the screen. Besides, instead of the traditional pattern that checks storages once in a while, 5G enabled the possibility to do real-time detection in inventory and supply management for improving operations and forecasting. An application called APM Smartshelf, for example, was tested

in a retail store in Sacramento. For the sellers, if an item is sold out or put at the wrong place on the shelf, the application would remind the staff by alarming them to restock to reduce the lost sales. On backstage, it provides meticulous insights and information about customer behaviours and prime product engagement to make decisions in merchandising, marketing, promotions, and operations. (Dupre 2020.) Referring to stock, technology offered help in supply chains as well. Through over 20 years of evolution, Radio-frequency identification, also known as RFID, calibrated the in-store inventory numbers more precisely to ensure the functions to buy online, pick up in-store or on the curbside, and stimulate agility to cope with the shocks in the supply chain. According to the research study by McKinsey, RFID helped in increasing by up to 3.5 percent in full-price sell-through tied to better management and lower stockouts, decreasing by up to 15 percent in inventory-related labour hours, and an up to 1.5 percent uptrend in revenue by reducing shrinkage and theft. (Adhi & Harris 2021.)

Technology brought benefits to other nodes of the business world simultaneously. With the popularity of the smartphone, mobile payment (M-payment) has dynamically emerged in many industries recently. According to a report of WorldPay, mobile payment has occupied nearly a quarter of global sales. Also, the applications of M-payments in China, Alipay, and WeChat Pay, for example, rose 48 percent of the point-of-sale payments by using Quick Response (QR) codes in 2019. Additionally, China banking and insurance news reported M-payment created 22.4 million transactions in the first quarter of 2020 in China, about twofold (187%) compare to the last year. (Zhao & Bacao 2021.) On the other hand, technology undeniably supported working from home by offering online meetings and teleconferencing. In China, the same type of applications DingTalk was added over one and a half thousand amounts of download increase, and Tencent Meeting embraced over ten million active daily users by February 2020. To some extent, COVID-19 has accelerated the procedure of digitalisation. (Tonby et al. 2020.) The CEO of Vodafone Business Vinod Kumar in an interview said that the ultimate goal of what businesses do is to construct digital workplaces to make every single person comfortable in working in flexible conditions with living their lives as well (BBC Worklife).

4.2   Refining capabilities

The most obvious impact of the pandemic on business is working from home, resulting in personnel changes occurred online in every company. However, remote working is only a little portion. Based on the experiences and understanding accumulated during the pandemic, companies are gradually shifting of weight from people model to which encouraging

skills-based mobility and contributions to replace location-based work and standard functional expectations. (Jost et al. 2020, 6.)

One pharma company that has over 10,000 sales reps has shifted its working place from offices to home in February 2020. Because the pandemic is tending to gentle, working from home is expected to return to working in offices. On the contrary, the company is planning to allocate 30 percent of sales reps to work online and 70 percent to work offline, on the purpose of utilizing their newly developed skills learned from the pandemic. Employees are required to quickly adapt to developing technologies and fresh working models even before the outburst. The McKinsey Global Institute in 2017 predicted that 375 million workers, in other words, 14 percent of the global labour force, are going to change their careers or reskill due to the large application of automation and artificial intelligence. The pandemic raised this issue more sharply. Employees should cope with their strange positions even though they have never done similar work before, and the duties of companies are to help them to fit in the new role and activities as fast as they could. At the early stage of the crisis, numerous numbers of employees got new skills through 'learned by doing' or 'quick and dirty' training, but it would ask for more proficient and multiple skills in the next steps. Sellers are forced to not only know how to formulate video meetings but also manage customer relationships remotely in an effective way. On the other flip, meanwhile, companies need to work out how to lead their teams without communicating in person and how to focus without informal coffee, lunch, or corridor chats. (Agrawal et al. 2020.)

There are many examples to prove companies desire to retrain their workers in urgency. Scott Knaul, the executive vice president of a workforce management firm called Workforce Insight, who is in charge of retail and hospitality, said that restaurants have single-task workers, but they also hire all-purpose employees who have various skills and can be capable of anything in the restaurant through learning. (Fantozzi 2020). Moreover, one grocery-delivery subsidiary of Alibaba called Freshippo gathered workers from closed restaurants and retail outlets, simplified the operational procedures, and retrained them to operate existing supply chain and logistics in an e-commerce environment within only two hours (Tonby et al. 2020). Some companies have gone further with a brisk pace even already started a revolution. One telephone company primarily planned to train 400 employees to do agile practices and product management in three months, but it finally trained 4,000 employees under the pandemic. (Jost et al. 2020, 6.)

As time goes, many companies are taking a step into preparing for the future, and therefore, there are some essential skills that workers must handle. The first skill is digital capabilities without saying. According to McKinsey, over 80 percent of companies mentioned they

speeded up digitalisation. Except for the skill to use digital tools, other abilities from collaboration software to videoconferencing are required. It is no need to understand each digital system or platform, but having knowledge in data literacy, computer programming, big data, the Cloud, artificial intelligence (AI), blockchain and other digital technology can help the person stand out. The second area is communication. Lacey, president of recruitment process outsourcing firm PeopleScout, said that communication skills nowadays exist across platforms as well. Because of the high frequency of using smart devices, speaking briefly and simply to explain thoughts and concepts to others through emails and virtual meetings in an effective and efficient way is necessary. Besides, knowing how to use videos, audio, and digital communication on a useful platform to avoid making needless troubles is another important skill. Last but not the least, as workplaces shifted to hybrid models or immensely transformed their operational ways, adaptability became more and more vital. Working under pressure, tackling sudden and unpredicted deadlines, prioritising tasks, and taking extra missions randomly with an enthusiastic mindset is the core to succeed in work. (Moran 2020; Stephanie 2021.)

5   Empirical research and data analysis

In this chapter, the first thing to go is the process of designing the qualitative study and the reasons of finally deciding the method. Subsequently, data analysis displayed the answers from interviews and simply explained and summarised those answers.

5.1   Reasons and formulation of the empirical research

Initially, the author intended to both qualitative and quantitative methods, in other words the mixed method. However, because of the width of the topic and extensiveness of the retail industry, it takes more time and effort to acquire insufficient results through the survey, triggering the idea of looking for a more efficient way to get enough data in short time. As mentioned in the Research Methodology and Data Collection part, this thesis applied the qualitative method. The way to complete the method was finally decided to do interviews. In fact, at the beginning it confused author of asking what questions that can help the thesis proceed. Based on the research questions and the theoretical part, 14 questions were determined and designed to figure out the answers to each question, as well as to provide evidence to support the theories. The period to select interviewees is from February to the end of 2020.

5.2   Data analysis

The 14 questions are enclosed in Appendix 2. Up to now, there are eight interviewees have answered the questions. All of them are doing the career in the retail industry or they used to during the pandemic. The answers were translated from Chinese to English. It seems wordy and tedious by writing all the answers down, but considering interviewees spent their precious time to help the author, it is a way to show the respects and appreciations of the author.

The first question is to briefly classify the region and which branch of retail industry they are in. Also, it helped the author to distinguish whether they are managers or employees.

Interviewee 1: "I stayed in China during the pandemic. I am a head chef in a restaurant, and my duty is to ensure food safety."

Interviewee 2: "I worked in China during the pandemic. I am a head of retail operations in an entry lux firm. My duty is to formulate the retail process and to manage retail operations."

Interviewee 3: "I worked in Finland. I am a cashier in a supermarket. My duty is to help consumers check out and check stock as well."

Interviewee 4: "I worked in China. I am a vice president of a foreign trade corporation which customize and sell ironware and related tools to other countries, and my duty is in charge of finance and budget."

Interviewee 5: "I worked in Finland. My job is cashier and waitress in a restaurant. My responsibility is to check out and decorate the restaurant."

Interviewee 6: "I worked in China in that period. I am a head of operations in an e-commerce platform. I am in charge of decision-making, the flow of goods, and marketing."

Interviewee 7: "I worked in Finland. My job is customer service in a trading company. My job is to be a merchandiser and dispose of some after-sales problems."

Interviewee 8: "Finland. Restaurant manager. In charge of restaurant basic operations."

Surprisingly, the eight interviewees are separated half and half, from Finland or China. According to the retail categories displayed in Appendix 1, three interviewees work in hospitality and leisure, one works in the department store, one works in food and beverage store, one is a non-store retailer, and the remained two interviewees belong to miscellaneous. From the rank, five of them are managers and three are employees.

The second question aims to find out what the governments and companies did to cope with this crisis. In other words, this question refers to the macro environment.

Interviewee 1: "Our restaurant required customers to test their body temperature and clean hands with medicinal alcohol before entering the restaurant. Customers should better pick up or order delivery. Staff must wear masks, sterilize the whole restaurant, test body temperature, and check-in. New employees must do a physical examination before working."

Interviewee 2: "Government deducted the rental fees for stores and postpone the date for paying social security contribution. Also, the government offered medical supplies and COVID-19 test freely."

Interviewee 3: "Employees can get masks and hand washing liquid from the company. Employees should keep a distance when eating."

Interviewee 4: "Government deducted social security contribution and corporate income tax for lightening the burden on the enterprise. For foreign trade companies, there will be

a subsidy if export with a certain amount. In addition, the government claimed the process of making products, spraying lacquer, for example, must be environmentally friendly. My company required employees to work from home."

Interviewee 5: "Consumers must order delivery. They cannot eat in and gathered."

Interviewee 6: "We must inform consumers that our products are checked thoroughly and strictly by emails after they purchased. Second, because of the increase in an international airline, nearly doubled as much as usual, out prize and supply chain was extremely affected."

Interviewee 7: "At my working place, people cannot eat together with over seven staff in one space. Everyone must stay in their position when eating. Everyone must wear a mask when working in the office."

Interviewee 8: "In the first six weeks, the only way for the restaurant to operate is picking up or delivering. The restaurant was under a half-closed to prevent people gathered."

Clearly, from the answers, governments more or less provide tax reduction and supplies to help enterprises overcome this crisis, no matter the company scale is huge or small. For restaurants that have a large public space, governments forced them to close or deliver food to sustain the minimum level if need. For the work which occurs in the office, as the same, employees cannot gather when eating, and meanwhile, they are forced to work from home.

The third question aims to find evidence for the first subsection of theories, building redundancies.

Interviewee 1: "Our restaurant did not clearly say they would fire employees. However, they published a strategy called 'Jing Bing Jian Zheng', which means the daily employees reduced a half, but the amount of work is the same. Also, your rank decreases a level, but doing the same work. If you want to leave, you can get one year salary in advance."

Interviewee 2: "There is no unemployment in my company. On the contrary, salaries of employees increased. The purpose is to help our employees live better."

Interviewee 3: "There is no unemployment, but employees take turns to use their annual leave, and our market hires part-time workers as well."

Interviewee 4: "No job cuts, because we have worked as a team for more than 20 years."

Interviewee 5: "No unemployment, but we work alternately, and sometimes we have hour workers."

Interviewee 6: "No people were unemployed, but the salary was reduced."

Interviewee 7: "Some workers were switched to other positions, especially in storage. People worked alternately because that can help the company reduce expenditure."

Interviewee 8: "Some staff was stopped payment but allow them to stay."

It is shocked that job cuts are not as serious as experts and researchers expected. Instead, for the sake of minimising the losses, companies decided to let employees work alternately. Most of them reduced salaries of workers, or they cut off the working days because some companies pay the wages by it. One derivational problem is the loyalty of employees somewhat depends on the attitudes and treatments of the companies to them. If the company stands by with its employees, employees would return their trust and are more willing to contribute more. On the other hand, if the company disposed of the troubles in a wrong way, that would not only disappoint its workers but also disrupt its reputations.

The goal of the fourth question is to support the second subchapter in Optimizing the company structure, working models.

Interviewee 1: "Customers can only pick up or order delivery. However, just in case, every day we must sterilize our restaurant. Consumer flow volume decreased, the workload became light, but formalism appeared."

Interviewee 2: "Business travel frequency decreased. The offices and stores took two to three hours to sterilize. The office executed A-B shift, which means a half and a half employee work alternately."

Interviewee 3: "The working model use non-contacted. I need to guide customers, but I cannot stay too closely."

Interviewee 4: "Before the pandemic, if we made a deal, the first party will send to a supervisor to give us suggestions and guidance. Because of the traffic tie-up, the first party supervise us via video meetings or hire the third party."

Interviewee 5: "There are no such great changes. The only changes are the outlet of the restaurant scattered more widely, and online orders increased."

Interviewee 6: "The paper documents became electronic ones, and video meeting frequency rose."

Interviewee 7: "Because we mainly communicate with customers even before the pandemic, there are no impressed changes."

Interviewee 8: "The only operation we can do is delivery. There is no permission to eat in."

Obviously, the priority of work was shifted from stores or offices to online. Anything, such as documents, switched to online as well.

The fifth question refers to the third subchapter, consumer demand.

Interviewee 1: "Customers do not have specific needs, but we have. According to the government requirement, customers should keep 1.5 to 2 meters as the social distance. Furthermore, they must show their QR code to prove they are healthy and travel code to register they have been here."

Interviewee 2: "On the layer of customers, the conversion rate increased. There was no big fluctuation. From January to February 2020, the sales dropped but not too much. In April and May, the sales raised a little bit perhaps people want to consume to joy themselves. Also, for luxury, customers need to try, touch, and see from different angles so that they could know whether they want to buy it."

Interviewee 3: "Their shopping frequency decreased, even we deducted the delivery cost from 100 euros to 60 euros."

Interviewee 4: "Our customer projects have delayed, and our asset turnover has lengthened, but both of us had no choice."

Interviewee 5: "There was no change in demand, but sometimes customers cared where the meats from."

Interviewee 6: "Customers bought more goods online. The page view numbers and sales increased, and customers paid less concentration on the prize."

Interviewee 7: "No big changes."

Interviewee 8: "Customers have less choice to decide where and how they could eat."

Undoubtedly, social distancing and staying home had an enormous impact on customer behaviours and demand. Most people started purchasing online. That changed the habits compare to the habits they had before the pandemic, but some stores still need to reopen their brick-and-mortar stores in the post-pandemic. The other noticeable thing is instead of concerning about the prize, consumers care about the origin of the products more.

The sixth question is related to the supply chain, which the fourth subchapter covered.

Interviewee 1: "The accumulation of goods happened. Although we have our own cold chain, fresh food such as vegetables and fruits have to be cleaned up on time. If it is rotten, we have to throw it into the rubbish bin."

Interviewee 2: "Actually, there is no accumulation or deficiency. However, we, unfortunately, do not have factories in China. Therefore, it takes one more month to replenish inventory."

Interviewee 3: "It is true that fresh food is not easy to store, but the pandemic is not the only factor, and also the weather."

Interviewee 4: "It did affect the logistics if transporting cross cities or provinces, but due to the character of our industry, long production cycle, we can do our business with no doubts."

Interviewee 5: "No impacts."

Interviewee 6: "Because of the increase in costs and longer haul cycle, sometimes we would face cargo deficiency."

Interviewee 7: "Some of our cargo is from Asia, and some are from Europe. If the cargo comes from Asia, the costs are expensive, leading to a rise in the price. For the same reason, we sometimes meet the deficiency in inventory."

Interviewee 8: "Our supply chain and logistics are relatively stable, without changes."

Three interviewees claimed that there are totally no problems in their supply chain or logistics. The other three interviewees said although it more or less disrupted their plan, they can continue to do their business. And the remained two interviewees said they experienced cargo deficiency.

The seventh question corresponds with the fifth subchapter, which embraced advanced technology.

Interviewee 1: "Except the health code and travel code which have already been mentioned, our restaurant does not apply other advanced technology."

Interviewee 2: "We had a training sharing platform to offer product knowledge, verbal tricks, and other digital troubles with one another. Besides, we invented a mini-program to report in real-time."

Interviewee 3: "We completely optimized our online store profile."

Interviewee 4: "Also like the character of our industry, we do not need to operate digital profile. Video application is enough for us."

Interviewee 5: "We leveraged delivery sites or platforms to spread our business. And for customers, they can pay bills online or in the restaurant with only a quick scan for avoiding touching."

Interviewee 6: "Absolutely! We are an e-commerce company!"

Interviewee 7: "Technology helps our business a lot, but there is no such significant change whether before the pandemic or after the pandemic."

Interviewee 8: "Delivery platforms and ordering online bring benefits for both restaurants and customers."

Needless to say, each branch of the retail industry enjoyed the advantages of advanced technology. From video meetings to delivery platforms, technology is helping companies to get rid of unnecessary problems and making their work more effective and efficient. Not only that, this pandemic likewise reflected innovation. Take interviewee 2 as an example, such a company did not stop its pace due to the disturbance of the pandemic. In contrast, they combated the challenges bravely and created more tools and values for their business.

The eighth question offered arguments to the last theory, refining capabilities.

Interviewee 1: "Employees need to learn knowledge about anti-pandemic."

Interviewee 2: "Yes. The front-line employees have to learn how to use digital tools and data tracking and analysis."

Interviewee 3: "Because of working alternately, I have to take responsibilities of others. For example, I learned knowledge from stock management, receiving stock, and placing stock to recording expire date, numbers, and prize."

Interviewee 4: "There is no need to learn new skills."

Interviewee 5: "Waiters need to learn how to sterilize and how to arrange appliances."

Interviewee 6: "Employees do not need to learn new skills, but they need to be sophisticated in what they already learned, such as writing a lot report."

Interviewee 7: "Employees do not need to learn fresh skills because they need to pass the test before accepted by the company."

Interviewee 8: "No need."

For the specific positions, what skills they need to know are the skills which are demanded of the job. For people who work in market and restaurants, they need to take care of other work so learning some new skills during the pandemic can help them to save their jobs. And for the employees who are in the positions which require up to date skills, they should better keep pace with times.

The ninth question refers to the first research sub-question.

Interviewee 1: "Both. The challenge is how to survive, and the opportunity is this is the best chance to get access to wealth."

Interviewee 2: "Both. The challenge is reflecting on the current situation. The pandemic accelerated the process of practicing agility. And there are two opportunities. First, the company can reveal their care to employees in virtue of this pandemic, and employees can talk to the company. Second, it is the best chance to advertise and spread digital sales with a low price."

Interviewee 3: "It is a challenge because the daily number of consumers decreased, and it is hard to find jobs in such a situation."

Interviewee 4: "I would not say neither it is a challenge nor an opportunity because I did not feel too much."

Interviewee 5: "I would say both. For the challenge, the consumer flow rate dropped. For opportunity, the government offered allowance."

Interviewee 6: "Both. It quite challenged the stability of the supply chain and logistics. On the other hand, the advertising costs decreased, and the demand in some specific terms, such as hair clipper and razor spiked."

Interviewee 7: "It is a challenge for me personally. There is no difference between this pandemic and other challenges you have met in your life. The only problem is whether you can accept or not."

Interviewee 8: "It is a challenge. It is not easy for consumers to adapt to pickup and food delivery. After all, the cost performance of buffet has a deep impression."

Apparently, this pandemic is certainly a challenge. It rose the challenges not only to enterprises of being agile and flexible to any problems, but also the challenges to individuals of adaptability. Three of eight interviewees positively thought it is an opportunity as well. Truly,

with risk comes opportunity, there must be something abnormal. Once the one was discovered and caught, the company would beyond most competitors at this time.

The tenth question is testing the agility of the company.

Interviewee 1: "I am a manager, so I have to make sure that everyone is doing his or her duty. Also, I need to schedule the time and daily workers."

Interviewee 2: "Manager. For me, it forced me to think over some questions. The first is learning how to look at problems objectively with a low level of expectations. The second is how to offer a circumstance for employees to feel like home."

Interviewee 3: "I am a staff. In my opinion, some are good and some are inappropriate. The good one is company asked employees to wear masks, sterilize, and look after themselves. The inappropriate one is the company can give employees little rights to decide insignificant issues. For example, employees can give the discount by themselves to a nearly expired food, and do not need to report to the manager every time."

Interviewee 4: "I am a manager. Yes, it did. In order to avoid extra problems, we would make and commit the order with a faster speed."

Interviewee 5: "I am an employee. Nothing to say. What I should do is to obey the order."

Interviewee 6: "I am a manager. It is true that the pandemic has affected my decisions. We used to reflect on our business directions, shifting business center to other areas, and concerning employment."

Interviewee 7: "I am an employee. I am well satisfied with the decisions the leaders made. After all, it is not such a big deal."

Interviewee 8: "Manager. I hope employees can accept working in many positions with fewer working hours."

From the pandemic, the three employees in interviewees admitted that they were generally satisfied with the decisions made by companies. On the other flip, managers also wished their workers could understand their judgments and decisions.

The eleventh question is the follow-up question to make up question eight.

Interviewee 1: "I got sterilization method and the advanced news about catering services, but I spent more money at home."

Interviewee 2: "I got more time to accompany my family, and I felt less about losing something."

Interviewee 3: "I got more knowledge about anti-pandemic and managing stock, and I lost the chance to hang out with my friends."

Interviewee 4: "Rather than being flexible at home, it is more effective and more interesting to work in the office. That is what I lost."

Interviewee 5: "It made inconvenience to my life when the public transport paralyzed."

Interviewee 6: "I got more time to rest and stay with my family. Also, it is a great opportunity to reflect on myself and our business. What we lost is revenue and cohesion with our team."

Interviewee 7: "I view this crisis as a chance to improve and practice myself."

Interviewee 8: "I got the happiness of staying home. It is the time to enjoy life."

Half of the interviewees expressed they have a wonderful experience staying at home, not only for accompanying their families but also as a chance to escaping the heavy work temporarily. Additionally, two out of eight indicated that they prefer the circumstance and high efficiency of working in the office. From another angle, these signs well explained the necessity of the office, and it will not eliminate in the future.

The twelfth question is about individual future plans, which is related to the third research sub-question.

Interviewee 1: "It speeded up the process of my dismission, and I changed my job."

Interviewee 2: "I gave up the plan to take part in the postgraduate exams and keep working."

Interviewee 3: "It changed my idea of the future working place. I prefer not to work in a crowded city in the future."

Interviewee 4: "What I wish is only to hope the pandemic can pass soon."

Interviewee 5: "I chose to work for a few more years and delayed my preparation of proceeding master degree."

Interviewee 6: "It helps me prioritized my health and life. I bought commercial insurance and would put my life on the top forever."

Interviewee 7: "I do not have outstanding abilities, so my future plan is to keep going. It did not affect me a lot."

Interviewee 8: "It realized me that I need to enjoy the moment at present, and this idea will last to the post-pandemic."

It is worth noting that for different ages, people have different feelings. For those who just graduated from school, two of eight, they decided to work first. The people who are a little bit older, are conscious of the importance of their lives and health. Work is not the only thing in the whole human life, but also family and friends. But in general, almost everyone changed some of their future plans in the end.

The thirteenth question is collecting the opinions of working environments of interviewees.

Interviewee 1: "The turnover is decreasing, and it would be difficult to hire employees because their reputations collapsed, resulting in pushing the company to the brink of bankruptcy forward."

Interviewee 2: "Company needs to fix staff loss and brand image. Furthermore, more and more outstanding employees are needed. At last, as a company which relies on the traditional operating model, accelerating digitalisation is vital."

Interviewee 3: "The consumer flow rate and turnover will recover. And we will put more effort into our digital profile."

Interviewee 4: "The enormous changes would not happen."

Interviewee 5: "Our business will back to the normal conditions."

Interviewee 6: "Actually, our platform was shut down, and our project was ceased. The pandemic is not the only reason, but it is a blasting fuse."

Interviewee 7: "It is a great chance to expand our business in the post-pandemic."

Interviewee 8: "At present, it starts reviving."

It is sorrowful to hear that one company was closed. And four companies are recovering from this crisis. To some extent, such closure proved the comprehensive and severe disruption of this pandemic. In the final analysis, there are many things for companies to do.

The last question is for making up any missing issues during the interview.

Interviewee 1: "Companies should do the same thing as what they promised."

Interviewee 2: "Remember to take care of yourself well."

Interviewee 3: "Please do not take public transport during the epidemic."

Interviewee 4: "Nothing."

Interviewee 5: "The numbers of entertainment facilities should increase to release mental pressure of people."

Interviewee 6: "Human beings should enhance the awareness of unpredicted disaster."

Interviewee 7: "Nothing special. I was accustomed to it."

Interviewee 8: "Gathered less and do more exercise."

All in all, the final question still collected some useful information such as being aware of uncertainty. Only humans can pay attention to and protest any challenges together so that they would overcome any obstacles much easier.

6 Conclusion

This chapter includes the main information and outcomes of this research. First of all, comparisons in theoretical part and empirical part are demonstrated by answering to objectives. Secondly, the answers for the research questions are displayed. Next, the next subchapter is going to prove the validity and the reliability of this research. At the end, the author gives suggestions for the future research.

6.1 Comparisons in objectives

Objective 1: To find out how the retail industries would be affected by the three determining changes, optimizing company structure, resetting company priority, and retraining employees, at the initial step during the pandemic.

Compared to the theories, there are some similarities and differences with the empirical part through the three theories. First of all, the unemployment in the retail industry was not as severe as the author thought. Instead of the shocked data in the theory, companies executed an alternate working mode to sustain their labour force. Giant corporations even raised salaries and bonus to encourage employees work harder. Secondly, it is the same to the theory in working model. People work from home on the early stage of the pandemic. When the pandemic started mitigating, a hybrid model emerged, helping employees to choose the more comfortable way to do their jobs. The third theory was conflicted to the reality. Interviewees did not notice the specific terms were consumed rapidly, which means the case was relatively optimistic, but it is true that governments asked companies to implement sustainability for preserving environments. The fourth theory is compatible with the answers of interviewees. Disrupting in supply chain has delayed the date and has costed more, particularly for e-commerce company. Nevertheless, it did not stop companies doing their business although sometimes cargo accumulation or deficiency happened. The next theory is almost in line with the empirical study. Companies applied advanced technology, no matter it was invented by governments or companies themselves, technology played a crucial role in this crisis. One more remarkable thing is companies have already leveraged technology, and the pandemic has just accelerated the progress. At last, the sixth theory is consistent with those answers, but with a little flaw. Interviewee admitted they practiced their skills and obtained new skills and knowledge from the pandemic, such as anti-pandemic tricks and handling digital tools. Except that, people are more capable to adapt to the precipitate conversion than the author estimated.

Objective 2: Understanding the policies and orders the retail industries has executed.

In general, there are three the most common rules executed in companies. The most momentous order is sterilizing workplaces, no matter in stores or restaurants, because to secure lives of customers and staves is higher than anything else. The second similar order is transformation in working models. For employees who work in offices, they switched their working location from office to home, responding to the call from governments to prevent from infection. On the other hand, for supermarkets and restaurants, an altering model was implemented. Parts of staves work in positions, and the other parts take their leaves. When the time is over, they changed their turns. Last but not the least, companies tried their best to sustain their business operations. Take restaurants, which the category the most interviewees are working in, as an example, food delivery is a roundabout way to keep the restaurant operating.

6.2   Answers to research questions

There are one main research question and three research sub-questions presented below, which has already mentioned in the introduction. The main question is answered initially. And then, the three research sub-questions are answered subsequently.

How have retail companies been changed during the pandemic compared to the previous working styles?

Before the pandemic, retailers and employees pay attention to the offline stores and work in offices. They are dedicated to improve the customer experience in brick-and-mortar stores. However, as the pandemic outbroke and created the 'new normal', people have to shift their center to online. Followed by store closure and office shut down asked by governments, employees are forced to work from home. Since that time, retailers could not have an informal talk in canteen, have a free cup of coffee to stay focus, and take a corridor chat with their colleagues during the break. Instead, they have to work in the living room, kitchen, or bedroom, submitting reports online and communicating with their teams via videos. For those stores and restaurants that still remained, the scale of operations was restricted. Customers needed to keep a social distance when purchasing. Also, they have to wear masks, test their body temperature, and use hand washing liquid before entering the grocery stores or supermarkets. Some specific terms have quotations to ensure most of people can get it, and when there are many customers at a time, they need to stay in a queue to avoid staying to close to each other. For staves, they have to learn how to sterilize the stores or shops. Furthermore, because of the loss in labour force, learning new skills is crucial for workers to hold their positions.

What challenges and opportunities did the COVID-19 bring to retail companies?

For the challenges part, there are three main barriers. Firstly, in order to keep the business alive, many companies decided to build redundancies, leading to lack of labour force during the period and after the pandemic. It is appreciable that dismissing employees is able to save costs, but how to recover to the original scale becomes a challenge. Secondly, the changes in consumer demand affected the direction of business development. During the pandemic, people started purchasing online, and demand in some specific terms, such as fresh food, frozen products, and goods that are easy to store, had a large spike. Moreover, most consumers insisted buying sustainable products, inspiring companies to think about it. It is also important to offer the same experience for customers when they purchasing online. Last but not the least, how to fulfil the need that some customers want their packages in shorter time became another challenge that companies require to figure out. On the other side, there are three opportunities as well. Initially, it was the great chance to start up or develop their digital channel. Digitalisation will eventually get up to a dominant level in the post-pandemic. The second opportunity is taking benefits and advantages from advanced technology. The popularization of smartphone made tracking COVID-19 possible by downloading the relative applications. Other technologies, such as RFID, helped the work be more efficient. The third opportunity is transformation. There is no doubt that the pandemic made a numerous chaos, but at the same time companies can launch a revolution by this chance, expanding their business channels and enlarging their scales.

How did those changes affect employers and employees?

It did influence employers and employees with comprehensive and profound impacts. Both of them need to be retrained. For employees, they need to learn how to lead teams and take care of the moods and mental health of employees via video meetings. For employees, they are required to practice agility, have abilities to use digital tools, adapt to new situations quickly, and communicate with their colleagues virtually as well as in office so that they can be qualified to their jobs.

What are the impacts on the future?

Many experts advocated that a hybrid model is replacing the traditional operating model. Indeed, many companies declared that they allocate part of their employees to continue working on digital channel for leveraging their new skills, and the remained employees are going to work in the office. the working model has changed forever, but the cohesion, high

efficiency, and harmonious circumstance strengthened the irreplaceability of office. for human beings, it is fatal to improve the awareness of crisis. Otherwise, the next global disaster would cause the similar even more dangerous results.

6.3   Validity and reliability

The usage of validity and reliability is to assess the value of a research. It is a standard to evaluate whether the methods, technique, and experiments are meritorious or not. The accuracy of a measure is calculated by validity, while reliability is in charge of testing consistency. (Middleton 2019.) The purpose of this research is to find out what has happened in the retail industry. The researcher also tried to promote the validity and reliability as much as possible by working on the collection of evidence and data. Nevertheless, no one can confidently declare their study is absolutely objective to reach validity and reliability, not even can anyone say that so in a qualitative research because the personal experiences of interviewees generalised different viewpoints on the same topic, provoking preconceived thoughts to answer questions with more or less emotions. What the author can do is providing the relatively valid and reliable similarities and differences between arguments and experiences, leaving the comments and inspirations for audiences and triggering their own reflections. Moreover, the motivation of this research is to explore some plain changes appeared in the retail industry during the pandemic, establishing step-stones for the further research by providing primary and secondary sources.

6.4   Suggestions for future research

As the research focuses on the impacts of COVID-19 on the retail industry, the results and answers are only helpful for retailers and experts who study the retail industry. Also, during the process of proceeding the research, it is too general to dig a deep insight in one specific area. Furthermore, there is no determined country or region, leading to broad outcomes of this research. Besides, there are 13 categories in the retail industry, but only five categories were included in the interview. And the biggest regret is the author has no time, effort, and ability to do the survey. If anyone in the future is interested in studying further based on this research, they can set about from these breakthroughs.

7 Summary

The goal of this research is to have a view in what has exactly changed in the retail industry. Through designing research questions and objectives, the author started the initial attempt.

In the introduction, the background of the current situation was explained to audiences, from the harmfulness of COVID-19 to the macro environment of the retail industry. Later, the objectives, research questions, and limitations are listed, guiding readers to understand the final targets of this research. In the framework, the original theory was introduced and the inspirations were described. The next subchapter research methodology and data collection narrated the methods and ways that would be used in this research. Those are inductive reasoning, qualitative method, and secondary and primary sources. The fifth chapter is thesis structure, briefly introducing the procedure of this research.

In the main body of the thesis, there are three primary chapters: optimizing company structure, resetting company priority, and retraining employees. All of them are the internal investigation of the company. In the first theory optimizing company structure, the evidence was unfolded through building redundancies and working models, which provide the first aid treatments to ensure the company can survive under the first shock. In the second chapter, there are also two branches, consumer demand and supply chain, discussing the related factors and partners that contribute to the company. The third main body is retraining employees. By filling arguments into embracing advanced technology and refining capabilities, the potential solutions to face the challenges at present and for the future are sought out.

The empirical part came after the theoretical part. In this chapter, author thoroughly described the reasons and ideas of designing interview questions. The period and interviewee number were noted. In the process of collecting data, each answer of the interviewee was carefully recorded and analysed.

All in all, the last two chapters are conclusion and summary. Conclusion gathered the information and data to answer research questions, proved the validity and the reliability, and gave suggestions to later-comers. And summary shrank the whole research into a nut, just being compatible with the introduction.

References

Printed sources

Cheap, C. 2020. The pandemic has changed working patterns forever, and mostly for the better. The Estates Gazette, 2020-11-21, p.42-42

Creswell, J.W. 2014. Research design: qualitative, quantitative, and mixed methods approaches. Fourth edition. Thousand Oaks: SAGE Publications

Electronic sources

Abeam Consulting. The impact of COVID-19 on the retail industry and the next actions to be taken. Abeam Consulting. Retrieved on 12 April 2021. Available at https://www.abeam.com/eu/en/topics/insights/covid19_retail

Adhi, P. & Harris, T. 2021. RFID's renaissance in retail. McKinsey & Company. Retrieved on 1 May 2021. Available at https://www.mckinsey.com/industries/retail/our-insights/rfids-renaissance-in-retail

Agrawal, S., Smet, A.D., Lacoix, S. & Reich, A. 2020. To emerge stronger from the COVID-19 crisis, companies should start reskilling their workforces now. McKinsey Accelerate. Retrieved on 9 March 2021. Available at https://www.mckinsey.com/business-functions/organization/our-insights/to-emerge-stronger-from-the-covid-19-crisis-companies-should-start-reskilling-their-workforces-now

Alldredge, K., Henrich, J., Lal, S. & Verma, V. 2021. COVID-19's impact on demand and costs in the CPG industry. McKinsey & Company. Retrieved on 17 April 2021. Available at https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/covid-19s-impact-on-demand-and-costs-in-the-cpg-industry

Amadeo, K. 2020a. The Retail Industry and Its Impact on the Economy. The balance. Retrieved on 7 April 2021. Available at https://www.thebalance.com/what-is-retailing-why-it-s-important-to-the-economy-3305718

Amadeo, K. 2020b. The Retail Industry and Its Impact on the Economy. The balance. Retrieved on 7 April 2021. Available at https://www.thebalance.com/what-is-retail-sales-3305722

Bartik, A.W., Bertrand, M., Cullen, Z., Glaeser, E.L., Luca, M. & Stanton, C. 2020. The impact of COVID-19 on small business outcomes and expectations. PNAS. Retrieved on 28 February 2021. Available at https://www.pnas.org/content/117/30/17656

BBC Worklife. Coronavirus: How the world of work may change forever. BBC. Retrieved on 14 April 2021. Available at https://www.bbc.com/worklife/article/20201023-coronavirus-how-will-the-pandemic-change-the-way-we-work

Bhandari, P. 2020. A step-by-step guide to data collection. Scribbr. Retrieved on 14 March 2021. Available at https://www.scribbr.com/methodology/data-collection/

Bradford, A. 2017. Deductive Reasoning vs. Inductive Reasoning. Live Science. Retrieved on 13 March 2021. Available at https://www.livescience.com/21569-deduction-vs-induction.html

Brown, B., Hirsch, L., Schmutzler, R., Wamelen, J. & Zanin, M. 2020. What consumer-goods sales leaders must do to emerge stronger from the pandemic. McKinsey & Company. Retrieved on 17 April 2021. Available at https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/what-consumer-goods-sales-leaders-must-do-to-emerge-stronger-from-the-pandemic

Callaghan, S., Cota, J., Kelley, K., Ratner, L., Weaver, K. & Zaidi, A. 2021. How consumer companies are adopting agility during the COVID-19 pandemic. McKinsey & Company. Retrieved on 24 April 2021. Available at https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/how-consumer-companies-are-adopting-agility-during-the-covid-19-pandemic

Crouch, D. 2020. Unemployment Rises and Sales Fall as COVID-19 Takes Hold. Apparel News. Retrieved on 8 April 2021. Available at https://www.apparelnews.net/news/2020/apr/16/unemployment-rises-and-sales-fall-covid-19-takes-h/

Dekhne, A., Gupta, S., Joglekar, A. & Kohli, S. 2020. How retail can adapt supply chains to win in the next normal. McKinsey & Company. Retrieved on 25 April 2021. Available at https://www.mckinsey.com/business-functions/operations/our-insights/how-retail-can-adapt-supply-chains-to-win-in-the-next-normal

Deloitte. 2021 retail industry outlook. Deloitte. Retrieved on 9 March 2021. Available at https://www2.deloitte.com/us/en/pages/consumer-business/articles/retail-distribution-industry-outlook.html

Dimoff, T. 2020. The Importance of Training Employees During This Pandemic. COSE. Retrieved on 28 May 2021. Available at https://www.cose.org/en/Mind-Your-Business/Operations/Importance-of-Training-Employees-During-This-Pandemic

Dupre, M. 2020. Tech transformation of retail in the time of COVID-19. Retail Customer Experience. Retrieved on 1 May 2021. Available at https://www.retailcustomerexperience.com/blogs/tech-transformation-of-retail-in-the-time-of-covid-19/

Estay. Preparing For The Next Era of Retail: How To Succeed In a World Without COVID-19. BigCommerce. Retrieved on 18 April 2021. Available at https://www.bigcommerce.com/blog/retail-and-covid-19/#coronavirus-covid-19-is-influencing-consumer-spending

Fantozzi, J. 2020. Meet the new workers in post-COVID restaurants. New York: Lebhar-Friedman, Inc. Retrieved on 3 May 2021. Available at https://www.nrn.com/workforce/meet-new-workers-post-covid-restaurants

Farfan, B. 2018. World's Largest Retailers by Country. The balance small business. Retrieved on 8 April 2021. Available at https://www.thebalancesmb.com/2010-largest-world-retailers-2892118

Farfan, B. 2020. What is retail? The balance small business. Retrieved on 7 April 2021. Available at https://www.thebalancesmb.com/what-is-retail-2892238

Feld, A., Reich, A., Störk, K. & Durth, S. Thriving after COVID-19: What skills do employees need? McKinsey Accelerate. Blog. Retrieved on 9 March 2021. Available at https://www.mckinsey.com/business-functions/mckinsey-accelerate/our-insights/accelerate-blog/thriving-after-covid-19-what-skills-do-employees-need

Formplus. 2013. Research Questions: Definitions, Types + [Examples]. Formplaus. Blog. Retrieved on 12 March 2021. Available at https://www.formpl.us/blog/research-question

Gallagher, J. 2020. Covid: Why is coronavirus such a threat? BBC. Retrieved on 27 February 2021. Available at https://www.bbc.com/news/health-54648684

Haleem, A., Javaid, M. & Vaishya, R. 2020. Effects of COVID-19 pandemic in daily life. PubMed Central. Retrieved on 28 February 2021. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7147210/

Jost, G., Mahadevan, D., Pralong, D. & Sieberer, M. 2020. How COVID-19 is redefining the next-normal operating model. McKinsey & Company. Retrieved on 12 March 2021. Available at https://www.mckinsey.com/business-functions/organization/our-insights/how-covid-19-is-redefining-the-next-normal-operating-model

Kaplan, J. Frias, L. & McFall-Johnsen, M. 2020. Our ongoing list of how countries are reopening, and which ones remain under lockdown. CME Group. Retrieved on 27 February

2021. Available at https://www.businessinsider.com/countries-on-lockdown-coronavirus-italy-2020-3

Loeb, W. 2020. More Than 15,500 Stores Are Closing In 2020 So Far—A Number That Will Surely Rise. Forbes. Retrieved on 18 April 2021. Available at https://www.forbes.com/sites/walterloeb/2020/07/06/9274-stores-are-closing-in-2020--its-the-pandemic-and-high-debt--more-will-close

McKinsey & Company. 2021a. NEF Spotlight: The path forward for retail's sustainable future. McKinsey & Company. Retrieved on 23 April 2021. Available at https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/nef-spotlight-the-path-forward-for-retails-sustainable-future

McKinsey & Company. 2021b. Navigating the retail storm through supply chain agility. McKinsey & Company. Retrieved on 26 April 2021. Available at https://www.mckinsey.com/industries/retail/our-insights/navigating-the-retail-storm-through-supply-chain-agility

Middleton, F. 2019. Reliability vs validity: what's the difference? Scribbr. Retrieved on 28 May 2021. Available at https://www.scribbr.com/methodology/reliability-vs-validity/

Moon, J., Choe, Y. & Song, H. 2021. Determinants of Consumers' Online/Offline Shopping Behaviours during the COVID-19 Pandemic. MDPI. Retrieved on 24 April 2021. Available at https://www.mdpi.com/1660-4601/18/4/1593/htm

Moran, G. 2020. 6 skills employees will need in the post-pandemic workplace. Fastcompany. Retrieved on 3 May 2021. Available at https://www.fastcompany.com/90568262/6-skills-employees-will-need-in-the-post-pandemic-workplace

National Retail Federation. 2020. Latest study shows heightened importance of retail to the U.S. economy. National Retail Federation. Retrieved on 8 April 2021. Available at https://nrf.com/blog/latest-study-shows-heightened-importance-retail-us-economy

Organization for Economic Co-operation and Development. 2020. COVID-19 and the retail sector: impact and policy responses. Organization for Economic Co-operation and Development. Retrieved on 18 April 2021. Available at https://www.oecd.org/coronavirus/policy-responses/covid-19-and-the-retail-sector-impact-and-policy-responses-371d7599/

Olizi, P.K. & Arun, T. 2020. Spillover of COVID-19: Impact on the Global Economy. SSRN. Retrieved on 28 February 2021. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3562570

Pandise, E. 2020. From Brooks Brothers to L'Occitane, Main Street bankruptcies continue. NBC News. Retrieved on 28 February 2021. Available at https://www.nbcnews.com/business/consumer/which-major-retail-companies-have-filed-bankruptcy-coronavirus-pandemic-hit-n1207866

Repko, M. & Thomas, L. 2020a. Retail workers slammed by job cuts, pushed into new roles as coronavirus shakes their industry. CNBC. Retrieved on 9 April 2021. Available at https://www.cnbc.com/2020/07/22/coronavirus-retail-workers-slammed-by-job-cuts-pushed-into-new-roles.html

Repko, M. & Thomas, L. 2020b. Retail workforce could face permanent decline as companies take blow from pandemic, lockdowns. CNBC. Retrieved on 9 April 2021. Available at https://www.cnbc.com/2020/07/22/coronavirus-retail-workforce-faces-permanent-decline.html

Solent University. Writing Dissertations. Solent Online Learning. Retrieved on 10 March 2021. Available at https://learn.solent.ac.uk/mod/book/view.php?id=116233&chapterid=15294

Stephanie, L. 2021. 9 Skills You'll Need To Succeed In A Post-Coronavirus Business World. QS Quacquarelli Symonds. Retrieved on 3 May 2021. Available at https://www.topuniversities.com/about-qs

Subramanian, K. & Flynn, K. 2020. The retail supply chain after COVID-19: Five imperatives for building resilience. ThoughtWorks. Retrieved on 24 April 2021. Available at https://www.thoughtworks.com/insights/articles/building-resilience-in-the-retail-supply-chain

Tan, A. 2021. Covid-19's impact on the retail supply chain. TechTarget. Retrieved on 26 April 2021. Available at https://www.computerweekly.com/news/252494274/Covid-19s-impact-on-the-retail-supply-chain

The Economist. 2020. How has the pandemic changed working lives? Daily chart. Economist Intelligence Unit N.A. Incorporated. Retrieved on 13 April 2021. Available at https://www-proquest-com.ezproxy.saimia.fi/docview/2435871354/fulltext

The World Bank. 2021. Unemployment, total (% of total labor force) (modeled ILO estimate). The World Bank. Retrieved on 8 April 2021. Available at https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?end=2020&name_desc=false&start=1991&view=chart

Tonby, O., Woetzel, J., Kaka, N., Choi, W., Seong, J., Carson, B. & Ma, L. 2020. How technology is safeguarding health and livelihoods in Asia. McKinsey & Company. Retrieved on 27 April 2021. Available at https://www.mckinsey.com/featured-insights/asia-pacific/how-technology-is-safeguarding-health-and-livelihoods-in-asia

UCI Health. 2020. Why is COVID-19 so dangerous? Retrieved on 28 February 2021. Available at https://www.ucihealth.org/blog/2020/04/why-is-covid19-so-dangerous

University of Southern California (USC). Organizing Your Social Sciences Research Paper. USC Libraries. Retrieved on 11 March 2021. Available at https://libguides.usc.edu/writingguide/limitations

University of Southern California Libraries. Research Guides. University of Southern California Libraries. Retrieved on 12 March 2021. Available at https://libguides.usc.edu/writingguide/theoreticalframework

Velavan, T.P. & Meyer, C.G. 2020. The COVID‐19 epidemic. PubMed Central. Retrieved on 20 February 2021. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7169770/

Weebly. Planning your Research Sub-Questions. Weebly. Retrieved on 11 March 2021. Available at https://urrbraeresearch.weebly.com/planning-your-research-sub-questions.html

World Health Organization. 2020. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Retrieved on 20 February 2021. Available at https://www.who.int/news/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)

World Health Organization. Coronavirus. Retrieved on 21 February 2021. Available at https://www.who.int/health-topics/coronavirus

World Health Organization. Naming the coronavirus disease (COVID-19) and the virus that causes it. Retrieved on 21 February 2021. Available at https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it

World Health Organization. WHO Coronavirus Disease (COVID-19) Dashboard. Retrieved on 27 February 2021. Available at https://covid19.who.int/

Winter, D. 2020. 5 Pandemic Buying Habits That Are Here to Stay—According to Shopify Research. Shopify. Retrieved on 19 April 2021. Available at https://www.shopify.com/blog/consumer-trends

Woetzel, J. 2020. How technology enabled Asia's response to COVID-19. McKinsey & Company. Retrieved on 27 April 2021. Available at https://www.mckinsey.com/featured-insights/future-of-asia/videos/how-technology-enabled-asias-response-to-covid-19

Zhao, Y. & Bacao, F. 2021. How Does the Pandemic Facilitate Mobile Payment? An Investigation on Users' Perspective under the COVID-19 Pandemic. MDPI. Retrieved on 2 May 2021. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7908136/

Appendices

Appendix 1. Retail Categories

Retail Categories

The Census Bureau divides retail sales into 13 categories.[1] The largest category is auto and auto parts stores. Since it's such a large component, the Census Bureau report also shows retail sales without auto.

Here are all 13 retail categories:

1. Auto dealers, including auto parts, new and used vehicle sales

2. Non-store retailers, which means online retail sales

3. Department stores

4. Apparel, such as specialty clothing stores

5. Electronics and appliance stores, including big-box retailers like Best Buy

6. Food and beverage stores, including grocery and liquor stores

7. Building and garden supply stores, such as Lowes and Home Depot

8. Sporting goods/hobby stores, like Hobby Lobby and Michael's

9. Health/beauty shops, including drugstores

10. Furniture stores

11. Hospitality and leisure, including hotels, restaurants, and bars

12. Gas stations

13. Miscellaneous

Appendix 2. Interview Questions

1. During the pandemic, which country do you stay? What is your job and duty?

2. What policies and actions of your companies did to meet this pandemic at your work-place?

3. Have you experienced redundancies or other similar actions to minimize the loss of the company at your workplace?

4. Compared with the situation before the pandemic, what has changed on working model?

5. Have the demands and behaviours of consumers been affected by the pandemic?

6. Was supply chain and logistics stable? Did your company meet the problem such as cargo accumulation or deficiency?

7. Have you benefitted by the Internet or advanced technology at your workplace?

8. At your workplace, did workers need to be retrained to learn some new skills for adapting to the new normal caused by the pandemic? Could you give more details?

9. Do you think this pandemic is a challenge or an opportunity, or both? Why?

10. If you are the employee, what do you think of the decisions made by your managers or leaders? If you are managers, how did the pandemic affected you to make decisions or judgements?

11. For yourself individually, what did you get, lose, or learn from the pandemic?

12. Has the pandemic changed your future plan or thoughts?

13. What do you think of your workplace will be in the post-pandemic?

14. Except the questions mentioned above, are there any other notable things during the pandemic?