



**THE IMPACT OF COVID-19 ON E-COMMERCE
PRODUCT RETURN STRATEGIES: A CROSS-
NATIONAL STUDY**

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Graduate School
Izmir University of Economics

Izmir

2021

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Master's Program in Business Administration

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ABSTRACT

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Master's Program in Business Administration

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This study explores e-commerce return management strategies during the Covid-19 pandemic in a multi-national context. More specifically, it aims to disclose how restrictions and measures imposed further to the pandemic spread by governments and e-commerce activity regulation organisms have influenced the way e-tailers manage their product returns in an uncertain, complex, and fast-changing environment. We carried out a qualitative study to answer our research questions. First, we conduct semi-structured interviews with e-commerce companies' employees from different management levels to have an overview of the operation of returns from different perspectives. Second, we conduct semi-structured interviews with these companies' customers to learn about the effectiveness of strategies adopted to handle online returns during the pandemic spread from customers' perspectives. Results reveal three main strategies followed by e-tailers: (i) changing over the return policy adopted prior to the crisis to align with restrictions in effect in

the country in question, (ii) upgrading the return policy used before the pandemic spread, and (iii) conserving the same return policy. From the standpoint of companies as well as customers, each category has proven its effectiveness in certain contexts relating to specific countries. The findings show that e-tailers have outsourced the management of online returns during the Covid-19 crisis, given that in their countries delivering parcels is complicated and subject to special procedures. In other contexts, companies have introduced the contactless feature to online returns strategies to align with restrictions regarding minimizing social interactions. Similarly, other e-tailers have allowed exchanges only using the “Deliver and Collect” strategy in areas where strict lockdowns were in effect. In addition, we identify online returns management strategies that are commonly used during the crisis, such as “contactless carrier parcel collection” and “contactless post office drop-off services”. Based on the results, we propose a set of actionable recommendations and implications to help managers in their decisions for eventual similar crises, as well as researchers to conduct further empirical research in the field.

Keywords: online returns management, e-commerce, Covid-19 crisis, returns management strategy, multi-national study, qualitative research.

ÖZET

COVID-19 SALGINININ E-TİCARET ÜRÜN İADE STRATEJİLERİ ÜZERİNDEKİ ETKİSİ: ÇOK ULUSLU BİR ARAŞTIRMA

Hida, Kawtar

İşletme Yüksek Lisans Programı

Tez Danışmanı: Doç. Dr. Metehan Feridun Sorkun

Aralık, 2021

Bu çalışma, çok uluslu bir bağlamda Covid-19 salgını sırasında e-ticaret iade yönetimi stratejilerini araştırmaktadır. Spesifik olarak, hükümetler ve e-ticaret faaliyeti düzenleme kurumları tarafından getirilen pandemiye yönelik kısıtlama ve tedbirlerin, e-perakendecilerin ürün iadelerini yönetme şekillerini nasıl etkilediğini ve değiştirdiğini açıklamayı amaçlamaktadır. Bu amaç doğrultusunda kalitatif araştırma yöntemi kullanılmıştır. Farklı ülkelerde faaliyet gösteren e-ticaret şirketlerinin çeşitli pozisyonlarında görev alan çalışanlarıyla yarı yapılandırılmış mülakatlar yapılmıştır. Ayrıca izlenen stratejilerin etkinliğini öğrenmek için bu şirketlerin müşterileriyle de yarı yapılandırılmış mülakatlar yapılmıştır. Sonuçlar, e-perakendecilerin izlediği üç ana stratejiyi ortaya koymaktadır: (i) söz konusu ülkede yürürlükte olan kısıtlamalara uyum sağlamak için pandemi öncesinde benimsenen ürün iade politikasını değiştirmek, (ii) pandemiden önce kullanılan iade politikasını güncellemek ve (iii) aynı iade politikasını korumak. Şirketler ve müşteriler açısından, her strateji kendi bağlamında etkinliğini göstermiştir. Bulgularımız, e-

perakendecilerin, ülkelerinde paket teslimatının karmaşık ve özel prosedürlere tabi olduğu durumlarda çevrimiçi ürün iade yönetiminde dış kaynak kullandığını göstermektedir. Diğer bağlamlarda, e-perakendecilerin, sosyal etkileşimleri en aza indirmeye ilişkin kısıtlamalara uyum sağlamak için çevrimiçi iade stratejilerinde temassız operasyonları kullandığı görülmektedir. Sıkı karantina kurallarının geçerli olduğu bağlamlarda “Teslim Et ve Al” stratejisi kullanılarak sadece ürün değişimlerine izin verilmiştir. Ayrıca, “kargoların temassız alınması” ve “kargoların posta kutularına temassız bırakılması” gibi çevrimiçi iade yönetimi stratejilerinin öne çıktığı görülmüştür. Bu bulgulara dayanarak çalışmamız yöneticilere olası benzer krizlerde uygun strateji belirlemelerine yardımcı olabilecek ve ayrıca araştırmacıların bu alanda ampirik araştırma yapmalarına olanak sağlayabilecek bir dizi eyleme geçirilebilir önerilerde bulunmaktadır.

Anahtar Kelimeler: çevrimiçi iade yönetimi, e-ticaret, Covid-19 krizi, iade yönetimi stratejisi, çok uluslu çalışma, nitel araştırma.



To my Parents and Sister

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LIST OF ABBREVIATIONS

3DPAM: 3D Printing and Additive Manufacturing
3PL: Third Party Logistics
AAAJ: Accounting, Auditing & Accountability Journal
ABM: Asian Business and Management
AE: Agricultural Economics
AI: Amazonia Investiga
AJAE: American Journal of Agricultural Economics
AJIR: Asian Journal of Interdisciplinary Research
AJMS: Asian Journal of Multidisciplinary Studies
AMJ: Academy of Management Journal
AMS: Annals of Medicine and Surgery
AOR: Annals of Operations Research
Ax: Axioms
B2B: Business-to-Business
B2C: Business-to-Customer
BORS: Buy Online Return to Store
BPRCA: Best Practice & Research Clinical Anaesthesiology
CAER: China Agriculture Economic Review
CBR: Chinese Business Review
CE: Computational Economics
CKS: Management & Marketing- Challenges for the Knowledge Society
CMR: California Management Review
DS: Decision Sciences
EJOR: European Journal of Operational Research
FBRC: Frontiers of Business Research in China
FQS: Food Quality and Safety
FRL: Finance Research Letters
GJFSM: Global Journal of Flexible Systems Management
IE: Informaticà Economicà
IEEE-EMR: IEEE Engineering Management Review
IF: Impact Factor

IJFGCN: International Journal of Future Generation Communication and Networking

IJIM: International Journal of Information Management

IJISCM: International Journal of Integrated Supply Chain Management

IJLM: The International Journal of Logistics Management

IJLRA: International Journal of Logistics Research and Applications

IJOPM: International Journal of Operations & Production Management

IJPDLM: International Journal of Physical Distribution & Logistics Management

IJPE: International Journal of Production Economics

IJPR: International Journal of Production Research

IJS: International Journal of Surgery

IJSPM: International Journal of Strategic Property Management

IMM: Industrial Marketing Management

IO: International Orthopaedics

IQJHMS: Idojaras Quarterly Journal of the Hungarian Meteorological Service

IRJESM: International Journal of Research in Engineering, Science and Management

IRJET: International Research Journal of Engineering and Technology

ISM: Information Systems Management

ISR: Information Systems Research

ITO: IntechOpen

JBL: Journal of Business Logistics

JBR: Journal of Business Research

JEEE: Journal of Entrepreneurship in Emerging Economies

JESG: Journal of Economic & Social Geography

JOM: Journal of Operations Management

JoR: Journal of Retailing

JRCS: Journal of Retailing and Consumer Services

JRFM: Journal of Risk and Financial Management

JSCM: Journal of Supply Chain Management

JSJU: Journal of Shangai Jiaotong University

JSR: Journal of Service Research

MAS: Modern Applied Sciences

MCQ: Managing Communication Quarterly

MGT-IRJ: Managing Global Transitions- International Research Journal
MktSc: Marketing Science
MS: Management Science
MSCRA: Modern Supply Chain Research and Applications
OD: Organizational Dynamics
OE: One Earth
ORM: Online Returns Management
PO: Plos One
POM: Production and Operations Management
PTUD: Pazarlama Teorisi ve Uygulamalari Dergisi
QPI: Sciendo- Quality Production Improvement
RCR: Resources, Conservation & Recycling
RIBF: Research in International Business and Finance
RiG: Research in Globalization
ScJL: LogForum- Scientific Journal of Logistics
ScJMULF: Scientific Journal of the Military University of Land Forces
SC: Supply chain
SCM: Supply Chain Management
SOC: Sustainable Operations and Computers
SPC: Sustainable Production and Consumption
SSRN: Social Science Research Network
SUS.: Sustainability
TFSC: Technological Forecasting and Social Change
TRIP: Transportation Research Interdisciplinary Perspectives
TRP.E: Transportation Research Part E

CHAPTER 1: INTRODUCTION

In a globalized and connected world, consumers' behavior and consumption patterns have shifted dramatically. Indeed, online shopping is thriving given the easiness it provides to customers to directly fulfill their needs. The statistics show that, during 2019, e-commerce sales have ascended to 3,53 trillion US dollars, and it is expected to reach 6,54 trillion US dollars in 2022 (Statista Global Retail e-commerce sales, 2020). A Deloitte report also states that by 2022, 4 billion parcels will be returned worldwide (Lefebure, 2021). Thus, online channels seem to be the main sales channel for both customers and brands, due to the easy access to goods and services and the pricing strategy (Muthitacharoen et al., 2006, p. 687). However, e-commerce returns are the major challenge that emerges, given that its volume increases following the growing volume of sales (Mollenkopf et al. 2007).

Online returns are complicated and hard to manage while keeping customers satisfied. They are even more complicated during the Coronavirus (Covid-19) pandemic spread, as all the shopping experience components have undergone a change. In times of crisis, customer experience becomes even more important than in normal times, as the company's interaction with its customers can lead to an immediate and lingering impact on the whole shopping experience, and particularly on their trust and loyalty.

The Covid-19 pandemic is a unique shock to the world economy, especially to global supply chains, as the coordination and communication across supply chain partners were hard to maintain, which have caused acute disruptions to the whole system (Mora Cortez and Johnston, 2020; Danielsson et al., 2020; Tang et al., 2021). Indeed, the high level of uncertainty of the development of the epidemiological situation in the short run makes the Covid-19 crisis unique (Mora Cortez and Johnston, 2020; Belhadi et al., 2021). Furthermore, the unpreparedness of governments and businesses has emphasized the intensity of the crisis; in fact, there was no adapted contingency plan that would match the ongoing crisis' settings. From another angle, firms imposed a sanitary protocol inside their sites to control the spread of the virus, through the application of social distancing and all the precautionary measures to

preserve communities' health, as well as applying the quarantine to received products (National Retail Federation, 2020; International Labour Organization, 2020), supporting the claim that Covid-19 is a unique crisis that requires specific strategies in each business area, including product returns. Moreover, the Covid-19 crisis requires concerted efforts from governments, businesses, and social communities in order to contain the virus spread, which is not the case for other crises and makes the Covid-19 pandemic a unique type of disruption. Therefore, it is vital to elaborate on a crisis-specific plan to manage e-commerce product returns during extreme issues, such as Covid-19 and other similar shocks.

Literature on managing supply chain amid crises has principally concentrated upon risk management strategies (Ivanov and Das, 2020; Arunachalam and Crentsil, 2020; Sharma et al., 2020), global supply chain redesign (Reardon et al., 2021; Tang et al., 2021), the digitization of supply chain processes (Hasanat et al., 2020; Dvorak et al., 2021), and the adoption of outsourcing strategy to deal with supply chain disruption during an extreme event (Wang et al., 2021). As far as we know, scholarly articles, research papers have not presented yet practical solutions to deal with online returns during a health-based crisis, especially the Covid-19 crisis. Indeed, managing online returns during a unique crisis such as Covid-19 require special strategies, adapted to the context where social interaction is minimized and where special restrictions are in effect that change by changing the country.

Given the specific settings of the Covid-19 crisis, borrowing ancient and generic theories will not fit the current context. Thus, the purpose of the current study is to address the issue of handling online returns during the Covid-19 pandemic in a multi-national context. The study presents a set of practical implications aiming at providing useful and actionable recommendations for e-commerce companies on how to manage online returns during the Covid-19 pandemic while aligning with restrictions imposed by governments of different countries. The framework would also be useful to face eventual brutal climate shocks in the future, which are characterized by high impact and low probability (Sarkis et al., 2020), like the Covid-19 crisis, which induce a high level of uncertainty; hence the unpreparedness of e-businesses that is of an issue that needs to be tackled. Thus, the key theoretical contribution of this study is to examine online returns management while integrating

key concepts related to crisis and extreme issues management and Covid-19 crisis into the study, in order to expand prior literature regarding online returns management that is, exclusively, risk management-oriented; by that means, studies with regard to online returns management (ORM) amid an extreme issue, such as Covid-19, were omitted. Therefore, the current study will be an advance for the current literature.

Lessons from Covid-19 would help practitioners overcome future unprecedented shocks such as those due to climate changes. Thereby, the current research would be valuable to give an insight to practitioners on how to handle unexpected situations. Besides, the present research would be useful for practitioners and scholars alike to adopt new trends and future proclivity in the subject of handling online returns amid new circumstances. It is noteworthy that the findings of this study would enable managers to be prepared to face future shocks as regards managing online returns. Guidelines and actionable recommendations will be provided to manage more efficiently e-commerce returns. Accordingly, we will adopt a conceptual lens for our study to answer the following research questions:

1. How has the Covid-19 pandemic affected product returns patterns of e-commerce activity in different countries over the last year?
2. How have online returns management patterns been altered after the Covid-19? What are the most common e-commerce strategies for handling online returns amid Covid-19 crisis in a cross-national context?

To answer these questions, exploratory research has been carried out. Semi-structured interviews have been conducted with managers, supervisors, front-line employees, and customers of e-tailers from different countries, offering different product categories. We investigated how these firms handled online returns during the pandemic spread, and how practitioners experienced the turmoil of their respective activities. The contribution of this study lies in presenting to practitioners and scholars field-based strategies and guidelines to manage online returns during extraordinary and unprecedented circumstances, namely after the peak period of Covid-19 crisis.

CHAPTER 2: MATERIAL COLLECTION & DESCRIPTIVE STATISTICS

2.1. Material Collection

The material for literature was collected through scientific research databases, such as “Web of Science” and “Google Scholar”, using specific keywords related to the concepts of supply chain management and online returns management during crises. Boolean operators were used in order to expand, exclude and join keywords. The keywords used are “The impact of Covid-19 on e-commerce” OR “Coronavirus and Supply Chain Resilience” OR “Online Returns Management in the light of Covid-19” OR “Supply Chain Management using new technologies during Covid-19 pandemic”. Publications related to the topic are scarce given its newness. In order to develop a deep understanding of the concept’s subject of the current research, forward and backward articles collection were both adopted. In addition, practitioner-oriented and academician-oriented articles were used alike. The material collection was conducted from 10th September 2020 until June 15th 2021. Time limitation was set in order to be able to move forward in the study. The literature review process started with locating the materials in order to identify a list of pertinent publications and exclude irrelevant data. Furthermore, the research scope of the current study is online returns management during the crisis, which is an emerging topic. Therefore, several databases were selected in order to expand the research extent. Google Scholar, Web of Science, Wiley Online Library, Scimedirect, Taylor and Francis Online, Emeraldinsight, and Springer Link, were used. Moreover, new and agile supply chain management solutions related keywords were used in order to uncover the impact of these technologies on managing supply chains, including e-commerce products return, as well as to identify conventional and breakthrough strategies applicable in the field, under the Covid-19 era. Boolean operators were used in every database to retrieve articles. The Web of Science database provides different filters such as the *Title search* and *Topic search* strings that were adopted in order to include only relevant data to the subject. Table 1 below provides detailed research strings used for each database, as well as articles found for each source.

Table 1. Full Boolean Search Strings used for each Database

Databases	Full Boolean Search Strings	Articles Found
<p>Web of Science Database</p>	<p><u>Supply chain-related Keywords:</u> TIS=(SCM OR ‘supply chain’ OR ‘online returns’ OR ‘online returns management’) OR TOS= (reverse logistics OR logistics operations OR logistics management OR E-commerce OR returns management)</p> <p style="text-align: center;">AND</p> <p><u>Risk and crisis management-related Keywords:</u> TIS=(Resilience OR Vulnerability OR ‘supply risk’ Or robustness) OR TOS=(supply disruptions OR risk mitigation OR crisis management OR extreme issues OR Covid-19 OR Coronavirus OR SARS-CoV-2 OR radical issues OR disaster</p> <p style="text-align: center;">OR</p> <p><u>New Supply Chain Management Solutions-related Keywords:</u> TOS= (‘agile’ OR ‘new technologies’ OR ‘Industry 4.0’ OR ‘Intelligent Management’)</p>	<p>239</p>
<p>Google Scholar</p>	<p>(SCM OR supply chain OR online returns OR Reverse logistics OR returns management)</p> <p style="text-align: center;">AND</p> <p>(Resilience OR vulnerability OR robustness OR risk mitigation OR crisis management OR extreme issues OR disruptions OR Covid-19 OR Coronavirus OR SARS-CoV-2 OR radical issues OR disaster)</p> <p style="text-align: center;">OR</p> <p>(‘Agile’ OR ‘new technologies’ OR ‘Industry 4.0’ OR ‘Intelligent Management’)</p>	<p>127</p>

Table 1 (cont'd)

<p>Wiley Online Library, Scencedirect, Taylor & Francis Online, Emeraldinsight and Springer Link</p>	<p>(SCM OR supply chain OR online returns OR Reverse logistics OR returns management)</p> <p>AND</p> <p>(Resilience OR vulnerability OR robustness OR risk mitigation OR crisis management OR extreme issues OR disruptions OR Covid-19 OR Coronavirus OR SARS-CoV-2 OR radical issues OR disaster)</p> <p>OR</p> <p>(“Agile” OR “new technologies” OR “Industry 4.0” OR “Intelligent Management”)</p>	<p>43</p>
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2.2. Material Evaluation

2.2.1. Search criteria

Aiming to observe closely the impact of extreme issues on the supply chain, namely the effect of the Covid-19 on e-commerce returns, six search and prescreening criteria, presented in Table 2, were set to narrow the scope of the research and be more related to the RQ, afterward more specific and research-related inclusion criteria were set.

Table 2. Search Criteria

Decisional Parameters	Search Criteria
Time Limitation	Only considering publications published up to June 15 th 2021
Language	Only publications in English were considered
Redundancy	Eliminate duplicate publications gathered from different sources

Table 2 (cont'd)

Publications Type	Only research articles, research papers and reviews were considered
Source Quality	Only peer-reviewed journals with an impact factor > 1,10 were considered. An exemption is applied to some publications
Content Quality	Only relevant studies were selected following title, abstract and full-text sieving

It is noteworthy to mention that the “content quality” parameter helps enhance the relevance of the articles to the research question. The process is triggered by a pre-scanning of the publications collected through assessing the relevance of keywords to the concept’s subject of the research, namely, Supply chain, Supply Chain Management, Crisis Management, Supply Chain Resilience, E-commerce, Online Returns Management, Reverse Logistics, Covid-19....

The studies reviewed come from multiple sources. Based on the list of inclusive selection criteria presented in Table 3, the titles and abstracts of all publications collected were reviewed and assessed according to their relevance to the research question. The content of the abstracts was decisive; indeed, articles that encompass any information about supply chain resilience under extreme issues and online returns management during the crisis were included. In addition, given the scarcity of publications in the subject of handling online returns during an unprecedented shock such as Covid-19 and the newness of the topic, the process of the material collection was inclusive rather than exclusive. With the aim of finding out about strategies and ways to manage online returns amidst a global extraordinary crisis, the remaining articles were investigated.

Table 3. Inclusion Criteria

Inclusion Criteria	Justification
Abstracts must focus on supply chain resilience or online returns management during crisis	To narrow the scope of the research and limit the study to supply chain crisis management to better answer the research question
The abstract must show a clear indication of handling online returns or managing supply chain during an extreme issue and/or during the Covid-19 pandemic	The purpose of the study is to find out how to handle online returns during a global crisis
Check internal validity in the study's settings	Enhance the quality of collected materials, hence ensure the trustworthiness of the research
Peer-reviewed journals with an average to high impact factor	Enhance the quality of the publications collected
Only English written publications were considered	The mainstream language of the literature in the subject of Supply Chain Management and E-commerce is English

Then, staged sieving technique is applied in order to exclude irrelevant data, and minimize selection bias. The sieving process starts by excluding articles after going through titles. Afterward, the articles whose abstracts were found irrelevant were omitted. In fact, the paper's abstract had to be relevant to supply chain resilience, crisis management, and supply chain response to severe events. Also, only publications encompassing a relevant discussion in supply chain management and crisis management were included. The final step in the process is going through the articles in full and assessing the possibility of inclusion within the stream of approved articles through assessing the quality of the publication. Figure 1 presents explicitly the process of staged sieving.

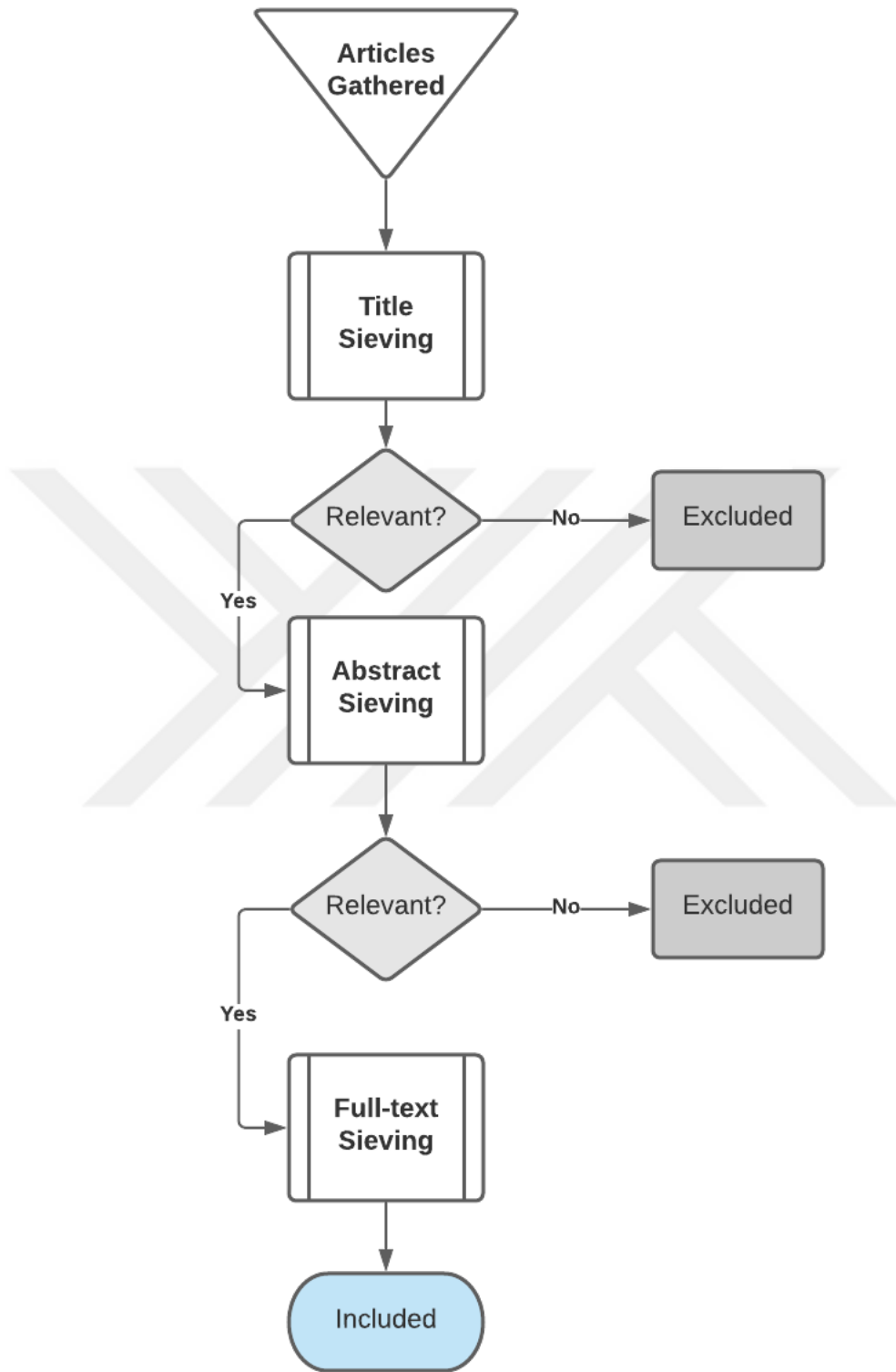


Figure 1. Staged Sieving Process (Source: Parija and Kate, 2018)

The quality assessment tool adopted in the present research was internal validity that helps check the trustworthiness of the paper’s findings in the study settings. Also, only peer-reviewed journals were considered relevant to our study, in order to enhance the quality of the material collected and reduce selection bias as well. Besides, the impact factor of the journals was taken into consideration while selecting articles to minimize bias errors and enhance the robustness of the studies selected. Figure 2 shows a schematic representation of the articles selection and evaluation process, for each source.

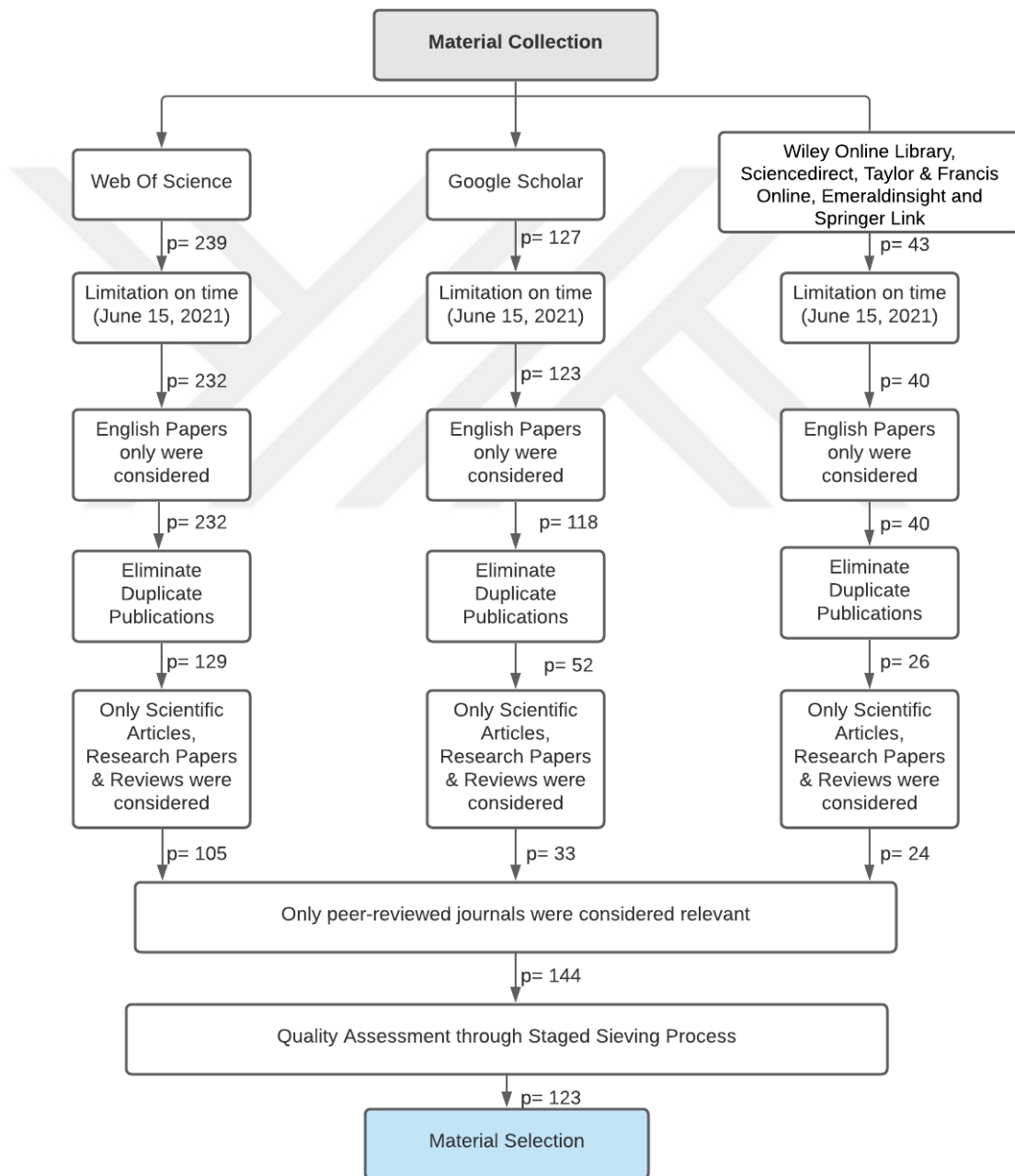


Figure 2. Schematic Representation of the Literature Review Process

N.B: The letter p in the figure stands for publications.

2.2.2. Descriptive Statistics:

The Scatter Chart in Figure 3 illustrates the number of papers and articles published by year. Despite the fact that online returns management is considered as a competitive advantage for firms (Mollenkopf et al. 2007) as it is a decisive factor for customers' satisfaction (Röllecke et al., 2018), especially during extreme issues; up to June 2021, there were no papers related to handling online returns during a global crisis. However, literature encompasses a quite important number of publications in the subject of supply chain management under extreme issues, published between 2020 and 2021, which represent 69.91% of the total of the publications retrieved.

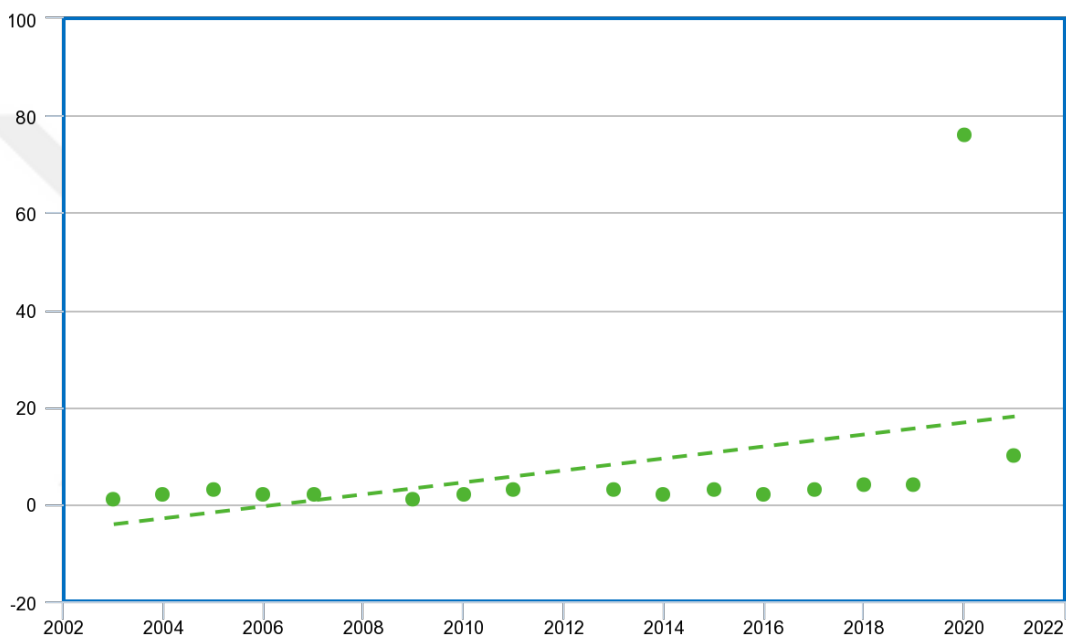


Figure 3. Papers published by year

N.B: Papers were gathered up to June 2021

Table 4 lists journals according to their impact factor (Journal Citation Report, 2019; SCI Journal IF Database), and their respective number of papers retrieved for the study. The content from all journals was related to different scientific areas, ranging from business, engineering, and medicine to logistics research, supply chain management, and other areas. Peer-reviewed journals with an $IF > 1,10$ were considered relevant for the study. This choice emanates from the selection of journals with average to good impact factors. According to the SCI Journal website, an IF that is greater than one is considered average. Nevertheless, there were some journals that did not meet this criterion but were included as they present useful knowledge and

important data after reading their papers' abstracts and their full-text format. The studies published in these journals added value to the literature review of the current study and helped to better sharpen up the research questions and make them more specific. Furthermore, some working papers, reviews, and reports published in scientific magazines, as well as research and studies conducted by non-profit organizations and research centers were considered relevant too for the value it represents for this study. Table 5 shows the sources of papers retrieved.

Table 4. Number of Papers published by Journals and their Impact Factor

Journals*	# of Papers	2019 Impact Factor
3DPAM	1	3,579
AAAJ	1	4,421
ABM	1	2,192
AE	1	2,263
AI	1	-
AJAE	1	3,028
AJIR	1	-
AJMS	1	-
AMJ	1	7,571
AOR	3	2,583
Ax	1	1,829
BPRCA	1	1,86
CAER	2	1,793
CBR	1	0,01
CE	1	1,15
CKS	1	-
CMR	2	3,909
DS	2	2,014
EJOR	1	2,364
FBRC	1	1,194
FQS	1	3,704
FRL	1	3,527

Table 4 (cont'd)

GJFSM	1	3,32
IE	1	1,99
IEEE-EMR	2	0,873
IJFGCN	1	0,4
IJIM	2	7,34
IJISCM	1	-
IJLM	6	2,86
IJLRA	2	2,152
IJOPM	1	4,617
IJPDLM	3	6,571
IJPE	1	6,34
IJPR	2	6,389
IJRESM	2	6,466
IJS	1	3,357
IJSPM	1	2
IMM	3	4,695
IO	1	2,854
IQJHMS	1	0,67
IRJET	1	7,529
ISM	1	1,556
ISR	1	4,484
ITO	1	0,01
JBL	1	4,697
JBR	3	4,874
JEEE	1	3,06
JESG	1	0,95
JOM	2	8,8
JoR	1	5,873
JRCS	2	5,792
JRFM	1	-
JSCM	1	7,78
JSJU	1	0,59

Table 4 (cont'd)

JSR	1	3,37
MAS	1	-
MCQ	1	1,453
MGT-IRJ	1	-
MktSc	1	3,019
MS	1	3,935
MSCRA	1	-
OD	1	1,852
OE	1	-
Omega	1	5,324
PO	1	2,74
POM	1	2,59
PTUD	1	-
QPI	1	-
RCR	1	8,086
RIBF	1	1,801
RiG	1	-
ScJL	1	-
ScJMULF	1	-
SOC	1	-
SPC	1	3,66
SSRN	3	-
SUS	1	2,576
TFSC	1	5,846
TRIP	1	-
TRP.E	3	4,69

* Journals' full names are provided in the List of Abbreviations in the preliminary pages of the current document.

Table 5. Summary of Papers published by Research Centers and Scientific Magazines

Source of Publications	# of Papers Retrieved
ArXiv	2
BLISS- Digital Impact Lab	1
Doctoral Thesis- Lund University	1
ESCP Research Institute of Management	2
IBM Global Service E-strategy Report	1
JSPS Grant-in-Aid for Scientific Research	1
McKinsey Quarterly Magazine	1
Nasscom	1
National Bureau of Economic Research	1
Springer Nature Limited	1
Tennessee Research and Creative Exchange	1
The Financial Inclusion Advocacy Centre	1
US. Bureau of Economic Analysis	1

Since the initiation of the widespread black swan event, journals belonging to different disciplines have started to publish studies and research to enrich literature's mainstream on the subject of managing the supply chain in the wake of the Covid-19 crisis, with all its aspects (financial, products flow management, informational). Figure 4 displays the distribution of papers by journals on the topic mentioned beforehand. Only publications up to June 15, 2021, were considered.

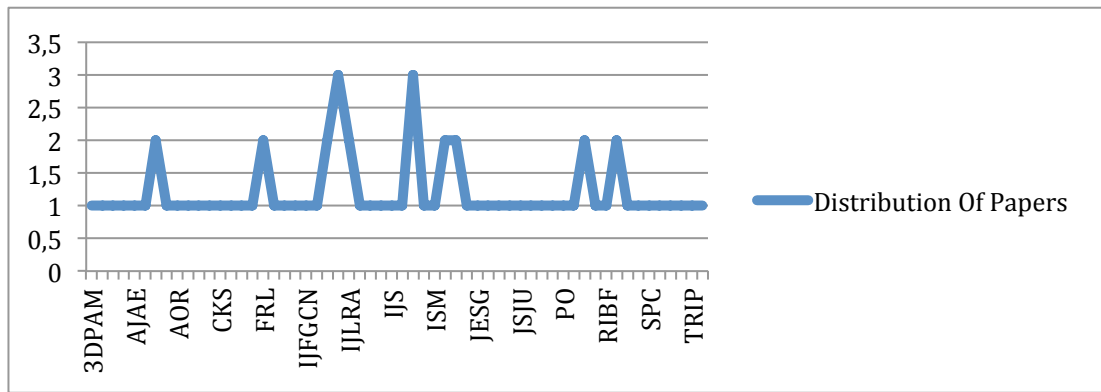


Figure 4. Journals contributing to Supply Chain Management amid Covid-19

It is worth noting that the top 10 journals with the highest impact factor, to wit, Journal of Operations Management, Resources, Conservation and Recycling, Journal of Supply Chain Management, Academy of Management Journal, International Research Journal of Engineering and Technology, International Journal of Information Management, International Journal of Physical Distribution & Logistics Management, International Journal of Research in Engineering, Science and Management, International Journal of Production Research and International Journal of Production Economics (8.80, 8.086, 7.78, 7.571, 7.529, 7.34, 6.571, 6.466, 6.389 and 6.34 respectively), are only responsible for 13% of the publications retrieved, which suggests that the current study's topic is still in the early stages of research.

CHAPTER 3: THEORETICAL BACKGROUND

After the Covid-19 pandemic, the world economy has been affected drastically given the disruptions in both demand and supply sides. According to the findings presented in Fernandes (2020, p. 20), the lockdown policy imposed worldwide caused global turmoil that represented a shock as the world is integrated and global supply chains are deeply affected. The economic recession requires a global recovery plan for all sectors in order to tackle the repercussions of the crisis.

The ongoing health crisis has induced several consequences at different levels. Supply chains have been disrupted due to precautionary measures imposed by authorities to protect public health and to contain the pandemic spread. The lockdown policy and other measures have accelerated the adoption of e-commerce, hence increasing the online purchasing volume, which would increase online returns. However, e-commerce returns management is complicated and represents a heavy burden for e-businesses in normal times, and it would be harder to manage during the ongoing pandemic, given the precautionary measures enforced by authorities that restricted social interaction and hindered several online return processes, such as “Buy Online Return to Store” strategy that was supporting the “Customer First” culture (Jack et al., 2019). Moreover, some e-businesses contribute to containing the pandemic spread by applying items lockdown for a certain period of time to ensure that their products are not vehicles for transmitting the virus, which contributes to incurring costs.

Thereby, prior literature was investigated to find out about the impact of the Covid-19 on e-commerce, as well as strategies and models to manage the supply chain and online returns during crises, especially the Covid-19 crisis.

The literature on the impact of Covid-19 on e-commerce and the way online returns are handled during the pandemic spread is still in its infancy, given the newness of this crisis, and the lack of strategies and measures to manage different supply chain issues in the light of the “new normal” and the related disruptions that go along with it.

After an extensive investigation of the available literature on the subject, the results found were organized thematically following two major categories. The first category will be related to the impact of the Covid-19 pandemic on the supply chain as well as management practices to manage the supply chain during this ongoing crisis; the second one will be connected to the impact of the Covid-19 crisis on e-commerce, in addition to the impact of health-based crises (the case of Covid-19 crisis), financial crises and other types of disruptions on online returns.

3.1. Supply chain management during extreme issues

3.1.1. The impact of extreme issues on supply chain operations

Companies are known to be open systems that interact with the radical changes occurring in their environments (Scott and Davis, 2015). Those variations have consequences on firms' overall productivity and would have a ripple effect throughout the supply chain and its operations (Peck, 2005; Scott and Davis, 2015). Thereby, it is expedient to examine the impact of extreme issues on firms' supply chain to understand their extent.

Prior to initiating the examination of the effect of radical issues on the supply chain, it is important to define this concept. Attempts to define the concept of Supply Chain Management were quite profuse. Gibson et al., (2005, p. 6) defined Supply Chain Management as "the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies".

Supply chains have a global nature given the interconnectedness of their partners, which lead local disasters to become increasingly global (Altay et al., 2010; Kudale, 2020). This results in huge and severe disruptions of the global supply chain. Thereby, the Covid-19 pandemic was found to be the cause of supply chain

disruption and repercussions on the stock market. In fact, firms that produce their products in China were challenged to keep supplying their goods to the rest of the world in the midst of the virus spread. At the macro level, the risks induced by similar shocks bring about a drop in the level of investment and firms' growth scales. The authors suggest being prepared for such global disruptions through sustaining a relationship of confidence with investors. Also, the article's findings suggest businesses reconsider their "global supply chain strategies" to be prepared to face similar future shocks (Tang et al., 2021). Likewise, supply shortage has caused production disruption, consequently resulting in unmet demand due to logistics setbacks, which make the risk of bankruptcy higher for SMEs (Cai and Luo, 2020).

According to Peck, (2005, p. 16), the main issue that makes disasters' impacts on supply chains more significant is the lack of understanding of extreme issues that are likely to occur, which make supply chains more vulnerable. According to the article, vigilance, agility, and constant awareness are key to being able to recover rapidly from a disaster. Besides, severe weather changes are another radical issue that impacts supply chain operations. In fact, Wedawatta et al., (2010, p. 7), claim that extreme weather issues hinder a company's normal activity; indeed it could stop production, and impact negatively customer goodwill, also the downtime would increase inventory costs due to stock-outs, deficiency, and eventual additional storage costs (Kovács and Pató, 2014). Also, severe events, such as natural disasters and pandemics, are costly and have a myriad of effects on supply chain operations and firms' performance (Macdonald and Corsi, 2013; Heckmann et al., 2015). In fact, it results in a decline of the volume of sales, as well as colossal financial losses and a drop in shareholder wealth (Tomlin, 2006; Macdonald and Corsi, 2013). In the same context, supply chain disruptions are unavoidable and necessitate a mitigation plan accordingly. Extreme supply chain issues induce operational and financial risks (Kleindorfer and Saad, 2005). The severity of unexpected disruptions is varying according to the density, complexity, and node criticality of the supply chain (Craighead et al., 2007).

Stock returns and shareholders' wealth would experience a remarkable drop (Macdonald and Corsi, 2013; Kovács and Pató, 2014). In the same vein, Kovács and Pató, (2014, p. 7) stipulate that extreme weather conditions could result in longer

lead times due to rail freezing and deterioration or road damage, also physical delivery of products becomes difficult, even impossible. Furthermore, work hours may be fragmented, which would impact order processing, and as a consequence, customers' satisfaction would be affected.

Within the same perspective, Altay et al., (2010, p. 17) state that disasters and extreme issues have a huge impact on supply chain operations and on firms on a larger scale, due to the unpreparedness of companies, and the lack of understanding and tools to predict the risk level of the disaster. Those radical problems affect firms' productivity, in different sectors. Also, different disasters impact businesses in a different way; hence require the necessity of disaster-specific mitigation plans to overcome sudden shocks (Altay et al., 2010).

In addition, global sourcing makes supply chains more vulnerable to risks and unpredictable issues. The systemic impact of these risks pushes companies to be more focused on supply chain resilience, through the adoption of flexibility and agility as strategies to anticipate and prepare the occurrence of potential risk (Christopher and Peck, 2004). In the same way, the Chinese shutdown caused a disruption of raw materials supply to the Bangladeshi garment manufacturing market. In contrast, a drop in orders from European and North American retailers was noticed, causing thereby payment cancellation or postponement (Fouad, 2020).

As it is forementioned, extreme issues impacting the supply chain could emanate from financial or natural crises. Another type of radical issue is the health-based crisis that has a socio-biological aspect, such as the Covid-19 pandemic. According to the World Health Organization, "Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus" (World Health Organization, 2020, Health topics, Coronavirus Section, para. 1). It is an acute respiratory syndrome SARS-CoV-2 that first appeared amid an outbreak in Wuhan, China, in late December 2019.

Besides, in supply chains of high-demand items, Covid-19 has caused disruptions, represented in a significant rise in demand and a drop in raw material availability. Furthermore, there is a manufacturing capacity shrinkage (Paul and Chowdhury,

2020). To immediately respond to such severance, some countries imposed export restrictions following a shortage in food products and consumers' panic buying behavior, in order to ensure food security (Pu and Zhong, 2020). From the same angle, the chaotic nature of customers' behaviors is fueling the necessity to adapt product returns to cope with the continuous environment change. Flexibility and adaptability of a firm are important parameters to preserve competitiveness within a market and assist systems in adapting to the unpredictability of the environment; the creativity in return processes helps in developing high-quality relationships between customers and firms, which influence company's turnover and revenue size (Espinosa et al., 2021).

Fashion SCM has suffered from the disruption of its operations following Covid-19 spread as well. Existing risk mitigation methods based on lean SCM have been limited as it lacks the transparency that contributes to enlarged demand volatility. Flexibility is a key factor to overcome SC risks induced by the Covid-19 crisis in the fashion sector (McMaster et al., 2020).

On a different note, as the global economy starts up, supply chains are projected to be curtailed and fragmented with the introduction of Additive Manufacturing (AM) to the ecosystem, under the Industry 4.0 and IoT (Internet of Things) new tide, accelerated by the Covid-19 pandemic (Choong et al., 2020).

Covid-19 crisis has challenged supply chain resilience and has made firms, managers, and policymakers rethink supply chain operations in the light of the new normal. Lessons from the ongoing pandemic would help develop a better understanding of extreme issues, such as climate changes, and be prepared for this kind of unforeseen disruptions (Sarkis et al., 2020).

Furthermore, acute and unforeseen events have significant consequences on supply chains, in different sectors. A critical sector that suffers from the effects of radical issues, such as Covid-19, is hospitals. In fact, the shortages of medical supplies and equipment are the main effects of the ongoing crisis on the supply chain. These consequences are mainly due to the reliance on global sourcing. Efforts should be garnered in order to draw a plan to manage the supply chain, in order to protect

public health and overcome financial challenges amid the covid-19 crisis (Okeagu et al., 2020).

3.1.2. Covid-19 crisis uniqueness and supply chain management during crisis

As it is mentioned, traditionally, businesses suffer from financial crises and natural disasters that may hinder a firm's operations. However, biological hazards made Covid-19 a unique health-based crisis. The Covid-19 crisis is solely an exogenous risk to the global financial system, as it was a sudden shock for which governments and businesses were unprepared (Danielsson et al., 2020).

Additionally, the Covid-19 crisis is inherently different from any other radical financial-based issue or any other type of crisis. Indeed, the crisis spread relies on socio-biological aspects, which makes the level of uncertainty of the crisis development extremely high. In addition, supply chain operations are relying heavily on social interaction, and as the scope of the crisis is human beings, not businesses, global supply chains suffered from an unprecedented shock, as continuous coordination was hard to maintain across its different partners (Mora Cortez and Johnston, 2020).

Besides, the duration of the Covid-19 was and still is unknown, as the virus is shifting genetically and the pace of its spread is also unidentified, which would have atrocious consequences on the world economy. This brutal uncertainty in the short term makes the Covid-19 crisis unique (Mora Cortez and Johnston, 2020).

Another parameter that makes the Covid-19 crisis unique is the unpreparedness of states and businesses. No prepared contingency plan matches the settings of the ongoing crisis. Also, this shock requires joint efforts from governments, the private sector, and the social community in order to contain its propagation, and mitigate its effects. Moreover, the hygienic dimension is the most valuable feature to customers, whatever their position is in the supply chain. In fact, firms adopted social distancing and imposed a sanitary protocol indoors to control the propagation of the virus, which underpin the fact that the Covid-19 crisis is unique (National Retail Federation, 2020; International Labour Organization, 2020), Therefore, managing

supply chain and online returns during uncommon circumstances requires crisis-specific strategies.

Therefore, an investigation of the impact of the Covid-19 crisis on e-commerce turns out to be essential in order to assess the importance of handling online returns amid the ongoing crisis.

The impact of the Covid-19 pandemic on e-commerce is still acute; given the consequences it has on the supply chain operations.

Due to the novel Covid-19 spread, the global supply chain has been affected. Disruptions reached the sourcing of materials and caused a drastic fall in manufacturing capacity and output (Arunachalam and Crentsil, 2020; Queiroz et al., 2020). Lead times have become more than usual given travel restrictions and shipment delays. All those acute consequences of the pandemic spread shed light on the importance for firms to have a contingency plan to face uncertain situations, also the importance of investing in new technologies and data mining to leverage supplier-firm relationships and enhance supply chain visibility and advanced risk assessments (Kudale, 2020). Likewise, Ivanov, (2020, p. 9) underlined the special characteristics of a pandemic as a unique type of supply chain disruption (Arunachalam and Crentsil, 2020). Moreover, the author stressed the importance of simulation-based methodology in forecasting the impacts of the Covid-19 pandemic on the supply chain performance. Decision-makers could use conclusions drawn from this article in order to formulate a long-run plan predicting the impact of pandemics on the supply chain and the possible actions to mitigate risks, enhance resilience through financial support (Karmaker et al., 2021), and supply chain adaptability to market changes (Arunachalam and Crentsil, 2020).

Additionally, the digital presence of a firm increases its volume of sales and could be a competitive advantage compared with firms present in the market only by its bricks-and-mortar stores (Ofek et al., 2011). In fact, online sales channels provide an additional way to make products available for shoppers, which impacts firm productivity in a positive way. Also, it enables companies to face unexpected disruptions, in case of stores shutdown for example during the Covid-19 crisis.

However, managing online returns for omnichannel retailers represent a challenge. Indeed, authors suggest providing more assistance in-store to anticipate eventual returns and increase the perceived value for customers (Mollenkopf et al. 2007; Ofek et al., 2011).

Furthermore, in an interconnected world, global supply chains become more interrelated and induce several linkages. The Covid-19 pandemic has resulted in unprecedented disruptions that have shaken global supply chains in different sectors. "The black swan event" induced a demand-supply mismatching that required the development of a resilient SC. Thus, redesigning and rebuilding SC is a necessity under the new normal to adapt SC operations to span the ongoing crisis, and to thrive post-Covid-19 period (Sharma et al., 2020).

In the same light, the Covid-19 pandemic spread supports the notion of sustainability with its three dimensions, through the use of new technologies and IoT, in order to strengthen supply chain resilience locally (Sarkis et al., 2020). Some firms have started redesigning work procedures to ensure health and safety in the workplace (Ren et al., 2020; Aday and Aday, 2020).

Contrastingly, supply chain resilience capabilities are typically viewed as dormant assets that are used only in case of an eventual emergency (Ivanov, 2021, p.2). Those capabilities proved to be fallible during the ongoing Covid-19 pandemic, as the settings of the crisis are unique and the possibilities to generalize resilience assets were restricted. Thus, reconsidering the position of resilience and making it a value-creating component of SCM decisions would improve operations management efficiency and effectiveness. Lean resilience through the application of the AURA (Active Usage of Resilience Assets) is anticipated to reduce disruption-forecasting efforts and create value out of resilience capabilities (Ivanov, 2021).

Regarding the health sector, decision-makers are rethinking the traditional relationship between the hospital and suppliers to make it strategic with more emphasis on technology and practices that would enhance customer service (Saddikuti et al., 2020). In the same vein, 3D printing or Additive Manufacturing (AM) and Direct Digital Manufacturing were an alternative to deal with supply

shortage and align with market demand during the Covid-19 spread (Manero et al., 2020), as well as limit the recourse to warehousing (Nazir et al., 2020). It is a cutting-edge sustainable technology that is likely to be maintained after the pandemic, hence breaking off traditional manufacturing methods (Nazir et al., 2020; Choong et al., 2020). Therefore, Industry 4.0 was of great help to cope with supply chain disruptions through the use of robots and virtual reality. Companies in a variety of industries have been considering telecommuting using Industry 4.0 techniques as a new business model (Javaid et al., 2020; Lepore et al., 2021).

In order to respond effectively and efficiently to SC disruptions induced by the Covid-19 pandemic, agile production is becoming more popular among businesses, enhancing material visibility and changing conventional distribution strategies as well as inventory policies, through the evaluation of alternative supply sources (Butt, 2021). The literature highlighted the importance of developing localized supply sources and using Industry 4.0 technologies as well as Big Data analysis to provide real-time information on supply sources and global suppliers, which are necessary to overcome SC disruptions caused by the Covid-19 pandemic (Belhadi et al., 2021).

In this respect, the pandemic offered to managers the opportunity to switch to digital supply networks instead of traditional supply chain networks. The aim is to enhance visibility, responsiveness, agility, resilience, and collaboration between SC stakeholders even in crisis time (Kumar et al., 2020). Also, there was an emphasis on developing dynamic systems and raising awareness about smart consumption in order to avoid odd customers' behaviors amid extraordinary circumstances, such as panic buying (Lee et al., 2020).

New and agile technologies were and still are of great support to supply chain operations from planning to distribution, as it improves supply chain visibility and reduces the impact of acute disruptions (Cai and Luo, 2020). Thus, Digital servitization is a breakthrough technology that enables serving customers efficiently in the midst of extreme issues, using IoT and industrial internet platforms, which combined with digitalization make companies less dependent on social interaction and travel (Rapaccini et al., 2020).

From a different perspective, the novel Covid-19 has drastically affected the global supply chain on three levels, demand, supply, and logistics. Grida et al., (2020) investigate the scope of the impact of the protective policies used to stem the tide of the pandemic spread on the three main aspects of the supply chain, through a proposed framework. Findings claim that demand is the most affected aspect of the supply chain by the Covid-19 precautionary measures. From another perspective, outsourcing has a positive effect on a company's overall productivity; however, it could make the supply chain more vulnerable to disruptions caused by uncertain business environments. Hence, supply chain risk management strategies should be assessed and studied according to newly emerged disruptions (Tang, 2006). Similarly and following the lockdown policies imposed during the Covid-19 spread, online shopping is becoming the ideal channel for customers, which made e-tailers face an unprecedented influx in product returns. Hence, reverse logistics strategies are a decisive factor of e-commerce companies' success. Outsourcing reverse logistics processes to a third-party reverse logistics provider (3PRLPs) seems to reduce supply chain risks. Findings present a decision-making process to help e-businesses choose scientifically and accurately the most appropriate 3PRLP, based on some important criteria, to wit: "lead time", "customer's voice", "cost", "delivery and service" and "quality", as well as environmental drivers to ensure sustainable development of a firm (Wang et al., 2021).

Food industry firms' supply chains were also shaken by the precautionary measures taken to contain the Covid-19 spread. Indeed, e-commerce has turned out to be the most suitable channel for B2B and wholesaling operations, which lead to an ephemeral supply chain redesign to cope with the new normal. E-procurement, pivoting by processors and retailers and copivoting by delivery intermediaries are the newly introduced strategies to source and deliver food products (Reardon et al., 2021). Moreover, authors gave a recommendation to test the suggested strategies in different geographical contexts and different situations, when data is available to ensure the relevance of findings (Reardon et al., 2021).

Besides, Free and Hecimovic, (2020, p. 4) place an emphasis on how neoliberal globalization policies have strengthened manufacturing in low labor cost countries like China, and shaped the global supply chain, and made it vulnerable to disruptions

such as the Covid-19 spread. Findings reveal that the ongoing global health crisis will contribute to redesign global supply chains, and will be a call to all countries to regain their sovereignty over national production, without overlooking the important role of international cooperation and collective actions in fighting global causes.

Finally, prior literature highlighted the importance of strategic agility, entrepreneurship, and resilience in fighting the pandemic spread effects (Christopher and Peck, 2004; MC Master et al., 2020); what is more, the Covid-19 crisis has underlined the reliance on China's supply chain as well as relocating strategic manufacturing operations out of China and bringing them back home. The article presents a call for the development of predictive models to help policymakers in the decision-making process (Karmaker et al., 2020), and assess the possibility to integrate digitalization and Artificial Intelligence (AI) in order to enhance efficiency. These tough times represent a call to garner government's and industries' efforts in order to minimize global supply chains disruptions (Liu et al., 2020).

Firms all around the world were looking for strategies to cope with the market changes and respond effectively to the disruptions caused by the Covid-19 pandemic. In this respect, supply chain resilience is an important component to which companies are increasingly interested in order to strengthen their capacity to adapt to market changes and different unprecedented disruptions. The article studies the supply risk mitigation in the Covid-19 era and proposes some measures and recovery recommendations (Ivanov and Das, 2020). In addition, Karmaker et al., (2020) investigate the challenges Covid-19 posed on supply chain sustainability as well as the sustainability drivers to overcome supply chain disruptions in the context of the pandemic spread (de Sousa Jabbour et al., 2020). Results show that some drivers of sustainability may contribute to tackling issues related to supply chain disruptions due to Covid-19, such as "Development of health protocols for stakeholders across the supply chain". The article provides insights for managers and policy-makers in order to enhance and preserve supply chain sustainability even under extraordinary conditions like an epidemic outbreak. Within the same context, de Sousa Jabbour et al., (2020) provide a conceptual framework with a practical approach to build supply chain resilience. Guidelines are also presented for managers and academicians on how to tackle supply chain challenges post-Covid-19 period. The authors highlighted

the critical role of supply chain specialists and politicians working together in order to deliver effective and sustainable services that serve individuals and the whole community.

From the fashion sector and to manage supply chains amid a crisis, MC Master et al., (2020, p. 10) highlights the importance of flexibility as another form of management and a key to mitigating different supply chain challenges and risks. The article is also calling for fashion companies to incorporate agility into supply chains and introduce the “Buffering” strategy in order to reduce the effect of disruptions. In addition, companies could also implement stocking strategies based on actual demand in order to maximize flexibility and have more control over distorted demand patterns. Also, Taqi et al., (2020) investigate the impact of Covid-19 on the ready-made garment (RMG) supply chain for a developing country; an insight is given from the Bangladeshi market. Authors provide strategies to overcome supply chain disruption due to the ongoing Covid-19 pandemic. Findings reveal that “manufacturing flexibility”, “diversification of the supply resource”, and “develop backup suppliers” strategies are proven to have positive impacts to face Covid-19 disruptions in the RMG SC. Strategies were ranked to extract the most effective ones. Flexibility is, according to the literature, a critical parameter to be considered in managing supply chains during crises. Indeed, Song et al., (2018) focus on the optimization of operations and emphasize the critical role of supply chain flexibility in coping with the uncertain demand during emergency management in overcoming a disaster (Duek and Fliss, 2020). The article focuses on the distribution of emergency rescue kits to hospitals and shelters as a case study to verify the strategy proposed. Authors also present recommendations to adopt supply chain flexibility.

Furthermore, Zhao et al., (2019) examine strategies to adapt disruptions in a supply chain network. Authors analyzed the impact of disruptions on the supply chain network and then presented proactive strategies to tackle these disruptions. The study analyzed factors that influence the implementation of the adaptive strategy. Those factors are according to the article: “The evenness of risk among suppliers of the focal firm” and “the ratio of multi-sourcing among suppliers of the focal firm”. The article gives an insight into strategies to face supply chain disruptions to managers and scholars alike. It is noteworthy that those adaptive strategies are effective when a

disruption occurred at a distant firm, not at the focal firm.

With the aim of finding out more about strategies to manage supply chain operations during a crisis, namely the Covid-19 pandemic, a study highlights the contrast between the demand increase of an item used in daily life and the supply shortage to produce this item in the wake of the Covid-19, and provide strategies to deal with this unique situation. Results show that the use of collective emergency sourcing and having manufacturers working together and sourcing jointly, with the focus on matching demand with a basic quality, would solve the demand disruption. This method will help cope with the high-demand for a product used daily and improve the service level at the same time (Paul and Chowdhury, 2020).

Additionally, risk management is not only about taking corrective actions but instead having a “Plan B” to face disruptions (Marzantowicz et al., 2020). The ongoing Covid-19 pandemic spread is an example of the extraordinary and unprecedented disruption that impacted the global supply chain. The research was conducted among supply chain operations managers in Poland, through interviews supported with questionnaires. Results reveal that the lack of “Plan B” hindered supply chain reactions to face disruptions, even if managers were working synergically to overcome the crisis. Digitalization and the use of technologies remain the most suitable solution to build a smart “Plan B” for risk mitigation and supply chain competitiveness enhancement (Fonseca and Azevedo, 2020; Marzantowicz et al., 2020).

Apart from the strategies proposed by the literature in the publications mentioned earlier, some other publications presented models and frameworks, to provide insights and guidelines to supply chain specialists to support their decision-making processes.

Queiroz et al., (2020) propose a framework for supply chain management at the times of Covid-19 spread crossing over adaptation, digitalization, preparedness, recovery, ripple effect, and sustainability. The article proposes a research agenda to help academicians work more on topics related to supply chain management in the pandemics period as a newly emerged research stream. Also, precautionary measures that were taken to protect global health such as lockdowns, curfew, and social

distancing have resulted in a suspension of logistics activities and a disruption of the activity of retailers and shops. The article used a simulation model of the public distribution network to illustrate disruptions of the food supply chain through three different scenarios based on the development of infection cases. The purpose of the study conducted is to match the uncertain demand during the pandemic spread and provide further assistance to decision-makers through an action plan. The emphasis in this article was placed on the importance of warehouses in demand fulfillment during disruptions (Singh et al., 2020). Within the same context, Bode et al., (2011) present strategic responses to supply chain disruptions as well as a model that tests different responses and their occurrence. The responses strategies proposed by the authors are “Bridging” and “ Buffering” that incorporate the public’s voice in dealing with the post-crisis stage. The authors underlined the external and internal factors of a firm that influence the occurrence of supply chain risk mitigation strategies. Similarly, Perry et al., (2003, p. 5) place an emphasis on the important role of Internet-based communication in crisis response, which creates an interaction between organizations and the public that make crisis’ responses and management adaptive and supportive of the survival of an organization.

A framework aiming to manage the post disruption stage was proposed in Chen et al., (2019). The authors evoked three main disruption management process steps, to wit: disruption, discovery, recovery, and learning supply chain redesign. Managerial implications and some insights were given to clarify and guide through the different stages of the post-disruption period.

Forecasting is an important method to anticipate acute consequences and mitigate the risks of their occurrence. In fact, Nikolopoulos et al., (2020) propose a method to forecast critical parameters used as an input for decision-makers. The article underpins the government’s decisions and predicts resources allocations and supply chains operations’ organization. The forecasting model proposed in this article is providing guidance for decision-makers during the ongoing health emergency. Within the same vein, a study provides a framework to enhance the survivability of sustainable supply chains during and post-Covid-19. Findings claim that supply chain resilience may be built through adequate demand planning, forecasting, strong supplier relationships, and anticipating the impact of economic and social

environments. Another factor that will contribute to strengthening the resiliency of the supply chain according to the article is practicing a safety stock supply strategy (Sharma et al., 2020).

3.2. Online returns management & the Covid-19 pandemic

3.2.1. The impact of Covid-19 on e-commerce

Going beyond the infection spread, the Covid-19 pandemic has affected several aspects of our lives, including consumption patterns, consumer behavior, sales channels choice, and all the consequences drawn from this new tide.

The term “e-commerce” is a newly emerged business model that has been an enormous success, given the easiness it provides to customers. According to the literature, e-commerce is the entire business activities process that relies on electronic devices, namely the Internet, to allow shopping in better circumstances efficiently and in convenient prices (Pantelimon et al., 2020; Alam, 2020; Guo et al., 2020; Bhatti et al., 2020). According to Meng, (2020, p. 1), “e-commerce means electronic business activities by using modern communication technology, especially the Internet. It is not only an electronic transaction based on browser/server applications but also a promotion business model setting on modern information technology and information system, and so as to be electronic business activities”.

Prior literature highlighted the opportunity presented by the Covid-19 pandemic to e-commerce firms following the restrictions imposed to protect public health. Gao et al., (2020, p. 1), contend that the adoption of e-commerce has been affected by the Covid-19 outbreak. Indeed, consumers have switched their food purchases to online channels (Watanabe and Omori, 2020; Veeragandham et al., 2020; Dannenberg et al., 2020; Ingaldi and Brožová, 2020). In addition, the Covid-19 pandemic has contributed to the acceleration of the digitization of the shopping processes. The study’s findings reveal that the tide of Covid-19 supported the adoption of e-commerce solutions. Customers’ interest in the digitization of purchasing process was higher than retailers’ (Dvorak et al., 2021, p. 10). However, small retailers are constrained to find agile solutions to conserve their position in the marketplace after

the adoption of digital solutions (Dvorak et al., 2021). Also, from a food safety point of view, the Covid-19 outbreak has made e-commerce a new means to guarantee food demand in cities to overcome food deficiency during the crisis (Guo et al., 2020; Badot and Fournel, 2020; Roggeveen and Sethuraman, 2020). In the same context, Pantelimon et al. (2020) declare that, in the Covid-19 era, all business sectors have suffered from a global downturn, however, there are some sectors that rebounded such as e-commerce, due to the isolation measures and social distancing that influenced drastically activities relying on social interaction such as retail and shopping from physical stores (Chaudhary, 2020; Veeragandham et al., 2020; Dannenberg et al., 2020; Ingaldi and Brožová, 2020). Hence, people steer for e-commerce to buy what they need. This trend was especially seen in European countries, the UK and North America. In Taiwan, The demand for online food shopping has increased in the Covid-19 era, given the precautionary measures imposed by authorities (Chang and Meyerhoefer, 2020).

Generally, according to academic publications, during the pandemic lockdown, consumers' preferences have turned to adopt e-commerce as a preferable purchase channel (Ingaldi and Brožová, 2020; Chaudhary, 2020). Moreover, the outbreak has contributed to the popularity of e-shops given the lockdown policy and restrictions imposed by all countries around the world (Ingaldi and Brožová, 2020). Bhatti et al., (2020) stressed the overall positive impact of Covid-19 on e-commerce trends (Saddikuti et al., 2020). In fact, the virus spread has made shopping online the only option available during lockdowns, despite all the bottlenecks on the logistics side (Hashem, 2020; Chaudhary, 2020). However, international trade is suffering because of restrictions on exchanging items.

In the same respect, according to Alam, (2020, p. 7), it is obvious that the buying behavior of customers has changed during the pandemic spread. The article gives evidence from the Bangladeshi market through a field study. Results show that the health aspect; price aspect; product aspect and place aspect are decisive parameters in the buying decision in the context of Covid-19 while purchasing online (Badot and Fournel, 2020). Product categories were also a subject of research by many publications. Indeed, the article underlines the product categories that were purchased the most during the confinement period in the US. The study shows that

an increase was registered in food and beverage sales (Dunn et al., 2020).

The ongoing global health emergency has influenced consumers' psychology and their shopping habits and preferences. Sheth (2020) states that, following the disruptions caused by the Covid-19 pandemic, consumers' habits are shifting as well (Kim, 2020; Ingaldi and Brožová, 2020). According to the literature, some of the newly acquired habits will be sustained in the time given their convenience; others will die, as the outbreak will be over (Watanabe and Omori, 2020; Veeragandham et al., 2020; Duek and Fliss, 2020). In the same context, Donthu and Gustafsson, (2020) highlight the great challenges posed on businesses following Covid-19 spread, aiming for forecasting customers' demand in these uncertain times and all the consequences on the supply chain due to this crisis (Kim, 2020; Singh et al., 2020; Grida et al., 2020). This article investigates different papers that discuss businesses' reactions and consumer behavior changes in different industry sectors, in the light of the Covid-19 pandemic. Along the same lines, Şen and Duygun, (2020) evaluate the changes in consumers' purchasing behaviors in the period of the Covid-19 pandemic spread, using Maslow's Hierarchy needs theory. Moreover, a multi-country investigation was introduced in the article aiming to study panic buying in the Covid-19 era (Islam et al., 2020). The study shows that external stimuli such as Limited Quantity Scarcity, Limited Time Scarcity and advertisements (Social Media included) arouses the consumers' impulse and obsessive buying (Thakur et al., 2020). In the same perspective, customers buying behaviors shifted during the pandemic spread. Consequently, many businesses have recently built and launched their online storefronts, with the Internet channel accounting for the majority of their sales. Giving insights from Pakistan, the study shows that Covid-19 has had a positive impact on both e-businesses and consumer purchasing behavior. However, e-tailers in Pakistan are facing supply and shipping issues, which negatively impact customers' experience and businesses revenue as well. Besides, customers are concerned with security issues especially with regards to online payments and transactions (Afridi et al., 2021).

The global health crisis has imposed several protective measures in order to contain the pandemic spread, which has impacted the e-commerce sector. Indeed, the Covid-19 crisis influenced logistics operations, given the precautionary measures imposed by governments all around the world in order to contain the pandemic spread, such as

lockdowns and curfew (Choi, 2020). In this article, the author builds analytical models to investigate the use of technologies in logistics operations to transform “Static Service Operations” to “Bring-Service-Near-Your-Home” mobile service operations in the Covid-19 era. This innovative service may comply with the sanitary measures according to the applicable laws, and will also contribute to the increase of online shopping use (Watanabe and Omori, 2020). Moreover, Hao et al., (2020) stress the unpreparedness of e-commerce platforms to handle food demand that exceeds supply in extraordinary situations. In addition, the disruption has enhanced the panic stockpile behavior, which has exacerbated the supply shortage (Ingaldi and Brožová, 2020). Authors propose to customers who used to shop individually, to switch to group purchasing tailored to their needs for a specific time period, to alleviate the risk of shortage due to panic buying; also this process aligns with the sanitary measures (help avoid crowded shops). Within the same context, Abd Elrhim and Elsayed, (2020) explore the impact of Covid-19 on the e-commerce market, through the 5 largest e-commerce companies in the world: Amazon, Alibaba, Rakuten, Zalando, and Asos. The effect of Covid-19 on these companies was very different given the countries they belong to, and the different precautionary measures imposed in each country. The impact was measured by the daily returns of shares traded in global financial markets.

Further to the preventive procedures enforced by authorities all around the world, disruptions have reached all business sectors; global value chains, as well as global supply chains, were interrupted, which contribute to increasing uncertainty levels in demand and supply sides for e-businesses, which made the decision-making process complicated. In this respect, prior literature encompasses some forecasting models that represent support to policy-makers. Yuan et al., (2020) affirm that the Covid-19 spread has caused several disruptions to the e-commerce sector. The paper explores the impact of the outbreak on the Chinese e-commerce market. Findings show that simultaneous disruptions on both the demand side and supply side lead to changes in shopping behaviors that could be forecasted through a multifunctional statistical model built by the authors that will serve to overcome the current outbreak and will help to progress economically after the Covid-19 crisis. Similarly, Safara, (2020) proposes a predictional model for e-commerce for consumer behavior during the Covid-19 pandemic spread. The model also forecasts the most important features that

impact the volume of online purchases. In the same vein, and due to the heavy reliance on China to supply half of its merchandise, e-businesses in Malaysia suffered from the Covid-19 disturbance. Thus, important export and import activities were hampered for all products coming from China. The article recommends deepening research regarding developing logistics patterns for e-commerce in the wake of Covid-19 (Hasanat et al., 2020).

After an extensive investigation of previous academic and field-related publications, studies unanimously claim that digitalization has a critical role in stemming the disruptions' effects on the global supply chain. Hartmann and Lussier, (2020); Reardon et al., (2021) examine the impact of the Covid-19 pandemic on the B2B relationships. The challenges posed by the ongoing health crisis present opportunities to be explored to thrive during and post-crisis time. In fact, sales managers could bond good relationships with their customers using technology and digital tools (Sneider and Sternfels, 2020; Pedersen et al., 2020). Hence, increase the likelihood that their sales increase.

Furthermore, Raj et al., (2020, p. 23) stress an important dimension of firms that are present physically and on digital platforms and its role in building resilience during the Covid-19 crisis. The results of the study show that the digital presence of a firm contributes to the business recovery post-Covid-19 and create resilience to face disruptions (Almeida et al., 2020). From the same perspective Giordani and Rullani, (2020) state that the Covid-19 crisis has underpinned the digital transformation of several sectors (Seetharaman, 2020; Soto-Acosta, 2020). The article proposes a theoretical framework in order to investigate the impact of the Covid-19 pandemic on the sectors' level of digitalization. The built model shows that the temporary shock caused by the outbreak could have a long-lasting impact and transform a market to make it digitalized (Kim, 2020; Almeida et al., 2020). Some publications explicit the impact of the Covid-19 pandemic on the digital transformation of firms and organizations (Almeida et al., 2020; Soto-Acosta, 2020); they also present some guidelines and draw valuable conclusions to help start-ups and organizations, in general, adopt the new tide of digitalization imposed by Covid-19 spread. Furthermore, the new emerging tide of digitalization due to the Covid-19 spread will encourage the emergence of new flexible digital products and services. Digitalization

is also a great challenge that should be overcome by companies to survive the pandemic spread and to recover the post-Covid-19 period. In addition, the adoption of digitalization depends heavily on the adoption of the community, namely, customers, suppliers, partners, and employees (Almeida et al., 2020).

To recapitulate, on one hand, the Covid-19 outbreak has increased the popularity of online shops to the detriment of offline retail shops, further to the protective measures imposed to protect public health and avoid crowding. E-commerce has been, during the lockdown period, the only means for customers to purchase their daily needs, food included. On the other hand, those precautionary measures have had a pejorative impact as they have affected logistics operations and shaken the global supply chain resilience. Consumption patterns and consumers' behavior were also affected by the pandemic spread and made e-commerce the suitable sales channel for shoppers, and at the same time, it made customers more demanding, which made e-businesses' tasks very complicated. Indeed, the hygienic dimension is an additional burden to be considered carefully, as it is what customers value the most during the ongoing pandemic. Consumers' habits are also shifting. Researchers claim that some of those habits are likely to be sustained after the outbreak, while some will fade away.

To summarize, the existing literature proposes strategies and guidelines useful for offline shopping experiences, and some suitable for Internet retailing. In fact, solutions and responses suggested could ease the burden of the impact of Covid-19 on e-commerce as well as brick-and-mortar shops. "Bridging" and "Buffering" strategies are used in supply chain risk management and maybe borrowed to survive the post-Covid-19 phase. The Bridging strategy aims to incorporate the public's voice in decision-making, in order to decrease the gap between the management and the public. The Buffering strategy is organization-centric and aims to manipulate and shape the public's opinion about the company's behavior. Another strategy is to increase the level of safety stock in order to cope up with high demand on certain items used more frequently during the Covid-19 period. The level of uncertainty further to the ongoing global health emergency has increased, given the newness of the crisis; thereby publications have unanimously claimed that flexibility is a key characteristic to adapt to sudden and unprecedented market changes. Indeed, Sneider

and Sternfels (2020) claim that the Covid-19 outbreak could be an opportunity to take a business to the next level. Authors proposed several strategies that enable a firm to thrive in a world drastically affected by a virus, which vaccine has yet to be found. Supply chain-wise, flexibility and adaptability are key parameters to leverage any firm's productivity. Agile strategies are also of huge interest according to the report, especially in rebuilding operations, including the implementation of digital solutions in order to adapt to the new tide imposed by the Covid-19 outbreak (Betta and Owczarzak-Skomra, 2019; Pedersen et al., 2020;).

As we might conclude from the investigation of prior literature, the aftermath of the Covid-19 crisis on e-commerce is acute, which leads to the importance of covering the literature about the way online returns are handled during global crises, namely the Covid-19 pandemic.

3.2.2. The impact of extreme issues on online returns management

The reach of global crises and extreme issues goes beyond the supply chain of offline stores. In other respects, online businesses supply chains suffer as well from the turndown that impacts supply chain partners' interactions as well as logistics operations, given the travel and mobility restrictions enforced by authorities to preserve social safety.

Product returns, the subset of reverse logistics operations, indicate the process of taking items back to the retailers (Stock and Mulki, 2009). In e-tailing, online return refers to the process of taking previously bought products back to the online shops, to receive in turn for a refund or another item in exchange. Whereas, online returns management indicates the supply chain management process by which activities related to returns of merchandise purchased online are managed within the e-business and across supply chain partners (Rogers et al., 2002).

Several conceptual frameworks and exploratory studies were conducted in order to optimize online return management systems through mitigating logistics challenges that influence directly the customer experience (Matsuoka et al., 2017; Sorkun, 2019). Indeed, many publications have investigated the reasons for online returns. Li

and Li (2015) stipulates that online returns for the B2C e-commerce model stem from five main reasons; the first reason is the sellers' dishonesty through selling a different item than the one displayed on the website, secondly, the non-complicated return policies that increase the return frequency as they encourage customers to return for convincing and non-convincing reasons, thirdly, customers' irrational buying decisions due to diverse marketing practices, fourthly, logistics issues and staff mistakes, last but not least manufacturing problems such as product quality. In addition to that, the reasons for returns may be an error in order processing, problems with transportation, or products damages, which are all forms of logistics problems (Matsuoka et al., 2017). Govindan et al. (2017) and Li and Li (2015) state that, an effective and tight return policy, with fewer warranty possibilities, is a must to enable better management of the online returns.

Furthermore, the return rate of products sold online has increased in recent years further to the increase of the volume of products purchased through online channels, which leads companies to upgrade their returns processes (de Araújo et al., 2018). Authors propose some recommendations and strategies through a case study in order to decrease product returns rate, such as developing a post-sales support tool for customers for products with higher return rates and optimizing the processing time of items returned (O'Neill and Chu, 2001; de Araújo et al., 2018).

As discussed earlier, e-commerce returns have a huge impact on the whole business and would incur additional unnecessary costs. O'Neill and Chu, (2001) suggest that the partnership with third-party logistics agents or efficient customer management would help mitigate this issue. In addition, good physical logistics and diverse disposition options would contribute to managing efficiently online returns.

In contrast with the previous idea, tradeoffs could be made while managing customers' online returns efficiently, through reducing the number of customer returns and enabling its handling and processing in an efficient way, and raise the sales volume through product returns management (Leeuw et al., 2016). In the same vein, the value could be created from several sources in the Product Returns Management (PRM) process. Indeed, multi-party interactions in the product return chain are the main driver of value creation in the PRM process (Dapiran and Kam, 2017).

Moreover, the way return management is done is crucial and is a determining factor of whether a business would thrive or not. Therefore, upgrading the return policies and keeping them under continuous control and validation is vital to ensure customers satisfaction (Röllecke et al., 2018). In the same respect, handling online returns has an important and strategic role for an e-tailer. Moreover, return processes should not be too complicated on the customer side as it impacts negatively the whole shopping experience, and would negatively influence future purchasing decisions. Hence, a consistent service quality is required to retain customers, under all circumstances (Mollenkopf et al. 2007). Along the same lines, managing successfully product returns for a global e-tailer that has customers worldwide turns to be challenging, hence ORM strategies should be adapted to culturally diverse markets in a way that the repurchase intention shall be encouraged (Gäthke et al., 2021). Results support the fact that the restrictive nature of return policies is reducing repurchase intention in all cultural contexts involved in the study, whereas the perceived customer-oriented institutional environment upsurges the intention to repurchase. However, the impact of the institutional environment is considered as a variable that is omitted in the context of product returns. The article contributes to the understanding of product returns in different cultural settings, to be able to guide global e-tailers to refine their returns strategies across the world (Gäthke et al., 2021).

In other respects, strategies evoked by scholarly publications regarding managing the supply chain under a global crisis, such as Covid-19, are far to be suited for the e-commerce business context considering the digital particularity of this shopping experience, and the unpreparedness to face such a radical hazard. Furthermore, flexibility is a key factor in the success of online businesses especially while redesigning supply chain operations to better fit with the current situation. Also, it is a decisive factor of e-business stability and progress under the current circumstances, as the level of uncertainty is high. Besides, agility in finding new solutions to the disruptions caused by the pandemic is pivotal in responding to the market demand and cope up with uncertain variations. For instance, agile and flexible return policies are required for online retailers to ensure customers' satisfaction during these extraordinary times.

3.3. The study's objective

Prior literature on managing the supply chain during crises time has mainly focused on risk management strategies (Ivanov and Das, 2020; Arunachalam and Crentsil, 2020; Sharma et al., 2020). To the best of our knowledge, scholarly research has not yet presented practical solutions or frameworks to manage online returns during a health-based crisis, particularly the Covid-19 pandemic. Moreover, studies have not proposed field solutions that would be useful and ready to be applied to solve daily life issues related to e-commerce returns. However, prior literature has identified generic strategies to mitigate risks and manage the disruptions caused by the Covid-19 crisis, such as Bridging and Buffering strategies, increasing the safety stock, and the implementation of digital solutions. Those strategies may not fit in the current context of the ongoing crisis, as it represents a global unprecedented and unique shock, also it doesn't solve issues related to online returns in the context of the health crisis. Besides, prior academic publications did not investigate the changes that occur to returns strategies for e-commerce to be able to measure the impact of the ongoing crisis on returns patterns. Furthermore, the scholarly publications have not presented specific and tailored solutions to the e-commerce sector in special settings in a multi-national context.

As such, the capability of competing is under evaluation during the Covid-19 pandemic spread. Retailers' reaction to adapt to this new tide is a deciding factor of survival or even growth of a firm (Pantano et al., 2020). Indeed, during and after the ongoing health crisis, retailers and e-tailers, in particular, should have an idea about which type of experience customers will value the most, as the current situation has made shoppers more demanding and more concerned about the quality of services provided by e-tailers, especially the way online returns are handled. Thus, e-tailers are in need of agile and flexible returns management strategies that will adapt to fast-changing environment settings.

As mentioned beforehand, the impact of extreme issues on supply chain operations is costly and affects a firm's overall productivity, hence the importance to have a disaster-specific management plan in order to improve the response to the crisis. Furthermore, prior literature has highlighted the uniqueness of Covid-19 and its

repercussions on e-commerce activities, also the ongoing crisis requires combined efforts from the government, private sector, and social community to overcome its spread, which makes this crisis unique. All these factors drive us to the necessity of developing a deep understanding of the mechanism of online returns during extraordinary circumstances. Thus, it is crucial to have a strategic and crisis-specific plan to support e-commerce returns in the Covid-19 era or during a similar shock; therefore, extensive field research is required to develop a better understanding of handling online returns during and after the Covid-19 crisis.

Thereby, the foremost objective of this study is to look for changes that occur to online returns policies during the first period of the Covid-19 crisis as well as the nature of these changes, in order to highlight the differences in companies' responses to the crisis and how they chose to handle products returns. Also, the study aims to explore commonly used strategies that are appropriate for specific contexts.

In this regard, the study's results that are reached aim at giving an insight on how the Covid-19 crisis has affected e-commerce return policies in different countries. In addition, this study will explore the changes affecting online returns management strategies to make them in line with the applicable proceedings imposed by every country's governments, to have the epidemiological situation under control. Moreover, we will develop our understanding of online returns management practices during the Covid-19 crisis through exploring effective strategies, from e-tailers and customers' perspectives, through a series of conversations conducted with companies' customers.

Besides, the current study will look for ways and means used by e-commerce companies to reconcile effective product returns management and good customers service level. To enhance the validity of the study's findings, interviews with customers will be conducted to enquire about their satisfaction from changes that happened to ORM strategies in the midst of the Covid-19 crisis. The second pre-eminent objective of the current study is to be able, through interviews' results, to list the most commonly used online returns management strategies in different countries, which proved their effectiveness from customers' and companies' stances. The aim is to provide supply chain managers with a practical guide, tailored to the settings of

unprecedented and unpredictable disruption, a type of contingency plan that would be useful for future disruptions.

Additionally, the present study integrates three key concepts, online returns management, crisis & extreme issues management, and Covid-19 crisis as an extraordinary circumstance impacting returns processes. In doing so, it expands prior research that has concerned online returns management in normal times and supply chain risk management, where the probability of a hazard occurring is present, unlike radical issues such as the Covid-19 crisis that was an unexpected shock with a high level of uncertainty (Sarkis et al., 2020). Herein is where the key theoretical contribution lies. Finally, a sample from multiple countries is convenient to understand changes occurring in the online returns processes following policies imposed in different countries' settings. The study will add to the mainstream literature on the topic of online returns management in different national contexts and under extraordinary circumstances.

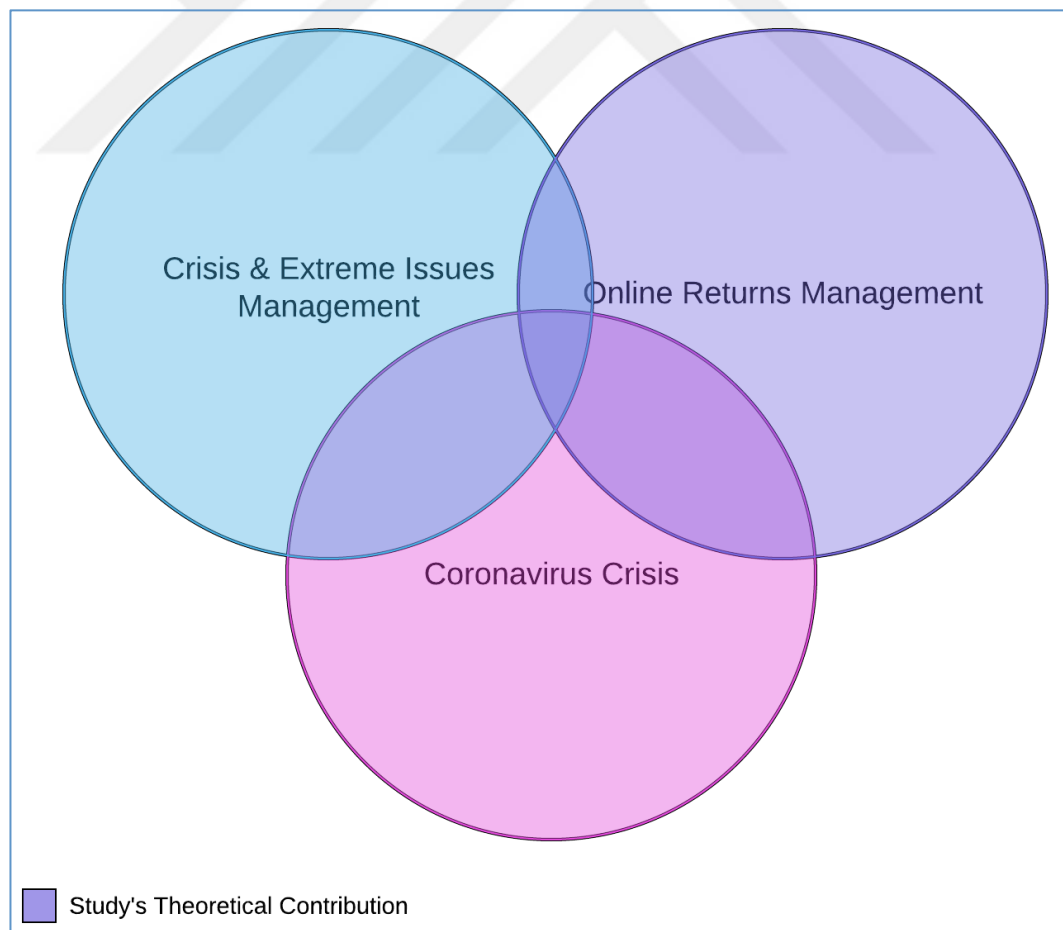


Figure 5. Theoretical Focus

In this respect, the current study will, in the first place, inquire about the way the Covid-19 crisis has affected return policies, and then examine the way e-commerce companies adapted their return strategies during the Covid-19 crisis in terms of changes that occurred to the return policies, in different contexts. Afterward, we will explore online returns management strategies adopted by e-businesses during the new normal to handle customers' returns. Additionally, with the aim of assessing the effectiveness of returns strategies used during the Covid-19 crisis, we will investigate the responsiveness of customers to those adopted strategies, in order to provide a guide to academicians and practitioners about effective returns management strategies during the Covid-19 crisis in different settings.



CHAPTER 4: QUALITATIVE RESEARCH DESIGN

The aim of this chapter is to delineate the problem statement of the current study, define the research methodology, describe the sampling selection, and explain the methods that will help select the sample.

4.1. Problem Statement

Referring to our previous argument in the theoretical background section, the ORM field has been the bottleneck of the SC processes, given that it is challenging to reconcile effective returns management and good customers service level, especially in crises times. However, publications on the subject of managing online returns in different contexts have been scant. Existing knowledge on ORM isn't sufficient to understand OR processes during extreme issues, given the particularity of Covid-19 settings that are substantially different from regular disruptions.

Therefore, online returns management during a health-based crisis is in need of strategies adapted to the ongoing context. Indeed, given the specific settings of health-based crisis, specified in the previous section, such as the Covid-19 pandemic, borrowing theories will not fit the current context. Thus, exploring changes that occurred to strategies to deal with new emerging issues related to ORM should be enclosed in the research agenda of the field.

The emphasis throughout the current study is to understand the factors presiding over managing product returns of e-commerce companies in an unprecedented context, through data collected, and then explore strategies used by e-businesses to adapt this unique type of disruption. The research in its nature is exploratory; therefore requires a flexible design that will help draw relevant findings to elaborate on actionable and practical product returns strategies, derived from the field (Coyne, 1997, p. 630; Elmusharaf, 2012, p. 24).

4.2. Methodology

The nature of the investigation will be qualitative in a descriptive way; as raised by Doz, (2011, p.583):

“Qualitative research is uniquely suited to “opening the black box” of organizational processes, the “how”, “who” and “why” of individual and collective organized action as it unfolds over time in context”.

Inductive reasoning that aims for providing effective implications to manage online products returns in different settings, will be used as the most relevant methodology to answer research questions mentioned beforehand that can be “more faithful to the richness” of ORM issues under extraordinary context (Doz, 2011).

The scope of the investigation includes the time frame overarching the beginning of the virus spread through to the disruptions caused to logistics operations further to the development of the epidemiological situation. The post-Covid-19 period will not be covered as the study is conducted amid the pandemic spread. However, findings would be useful to provide knowledge for corporate learning purposes and eventual system and processes redesign. The research will also emphasize contextual dimensions in ORM during extreme issues, through involving different countries with contextual differences related to government-imposed policies amid the crisis. The aim is to learn about ORM in different contexts during the same extreme issue that hit differently the whole world and then develop insights and deep understanding to be able to comprehend online returns management strategies while acknowledging contexts, rather than assuming away contextual disparities.

A set of in-depth semi-structured interviews with SC operations & logistics managers and logistics agents will be conducted in order to collect field-based data to understand the phenomenon of managing online returns through a global crisis, as well as the induced challenges. In fact, as evoked by Merriam and Grenier, (2019, p. 6), data derived for the field will be useful to develop a deep understanding in the form of categories that will serve academicians and practitioners alike:

“Typically, findings inductively derived from the data in a qualitative study are in the form of themes, categories, typologies, concepts, tentative hypotheses, and even substantive theory”.

The interviewees are part of e-commerce who have experienced the turmoil of the Covid-19 crisis and managed online returns through SC disruptions caused by the pandemic spread. The sampling method will follow the four-point approach derived from Robinson, (2014), usually used to conduct interview-based qualitative research.

Data collection is elaborated upon the principles of qualitative research method using semi-structured interviews stemmed from Patton, (1990); Coyne, (1997); Merriam, (2002); Doz, (2011); Suri, (2011); Merriam and Tisdell, (2015).

4.3. Sampling

The four-point approach consists of four steps to delineate the sample universe of the study through a set of inclusion/exclusion criteria, decide about the sample size, select a sample strategy, and then source the sample. Figure 6 illustrates the major features of this approach.

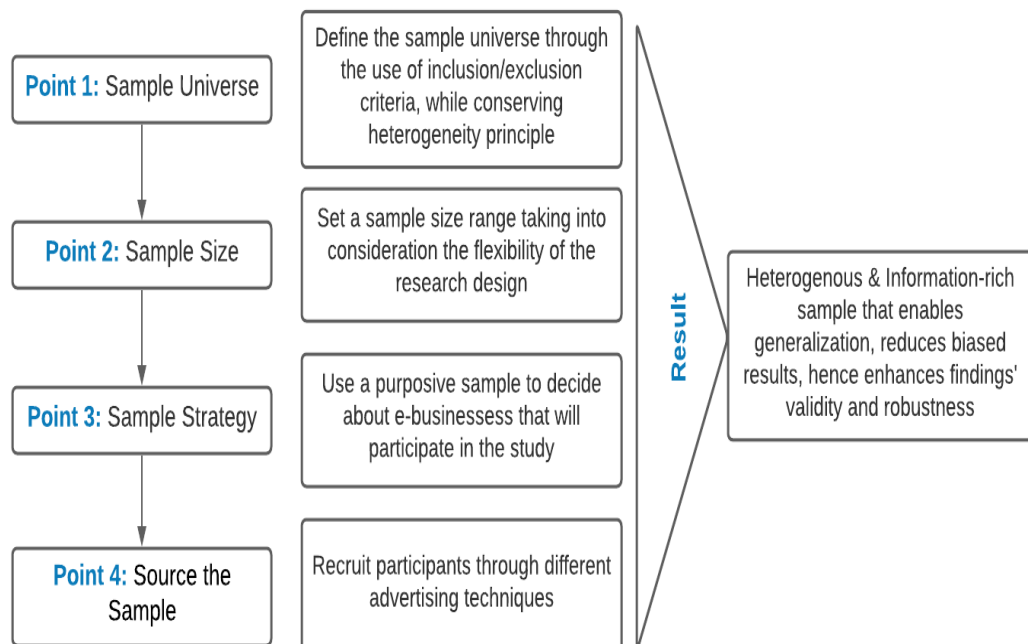


Figure 6. The Four-Point Sampling Approach (Source: Robinson, 2014)

4.3.1. *Sampling Universe*

The research design entails the participation of Internet retailers that have been working through this channel for more than three years and have served their customers during the Covid-19 spread. The objective is to interview companies that were serving customers before and during the Covid-19 pandemic to be able to make comparisons of online returns strategies prior to and during the crisis, also to determine the nature of changes return policies have undergone.

The aim is to select cases based on their relevance to the study and their richness in terms of information provided to enrich the research's findings, which is considered as the essence of qualitative research design (Coyne, 1997, p. 627).

The sample selection will be based upon the principle of heterogeneity evoked by Robinson, (2014). The principle stipulates that the sample should encompass a set of cases that are under the same constraints, with different contexts and settings. The sample of the current study will be geographically heterogeneous. The goal of such a preference is to be able, based on a myriad of contextually different cases; to have an insight on strategies used by the population (Robinson, 2014, p.27). Cases will be selected purposefully in order to be able to select information-rich "Profiles", following a set of inclusion criteria summarized in Table 6.

Table 6. Sampling Inclusion Criteria

Key Decisional Parameters	Inclusion Criteria
Service Duration	E-commerce companies that were working through this channel for three years or more
Service Conditions	Companies that were serving customers amid Covid-19 spread
Context Variation	Participants must belong to different countries

Table 6 (cont'd)

Transparency Requirement	Companies that are willing to share their experiences & strategies candidly
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4.3.2. Sample Size

The research design will be built upon theoretical saturation to determine the sample size. Thus; the principle of sample size flexibility is inherent to the study (Glaser, 1978).

As the study unfolds, selecting participants will follow categories of findings structure. In fact, the sampling will be “organic” (Mason, 2002), which may lead to recruiting more participants than anticipated, until reaching the category’s theoretical saturation, when no more new relevant information is found (Coyne, 1997, p. 629). In contrast, a reduction in the size of the target sample may be required (Strauss and Corbin, 1998). Therefore, collecting and analyzing data at the same time enable real-time judgments to decide whether to collect further data that will contribute to the theory-building process or not. However, giving a sample size range turns out to be essential to direct the study’s flow. Thereby, the study will take a census of 10 to 15 e-commerce companies, with 20 to 30 interviews (taking into consideration companies’ customers).

4.3.3. Sampling Strategy

Different sampling techniques are used to select participants, in accordance with the flexible style of research adopted in the current study. Purposive sampling will be used to select a sample of 10 to 15 e-businesses that experienced the turndown of their activities following the widespread of Covid-19, which affected their product returns processes. The sample is selected for the information-rich data that can yield on the phenomenon of e-commerce companies changing or adapting their returns strategies, according to the environment’s new settings.

The current study will follow a hybrid sampling strategy to trace the principle of flexibility. First and foremost, purposive sampling will be used to select e-businesses based on the list of inclusion criteria listed in Table 6. The rationale for using the purposive strategy is that certain categories of e-businesses have important and different perspectives on the issue of handling online returns, also for their cultural differences, thus their presence in the sample should be assured. Afterward, snowball sampling will be adopted to select further information-rich “profiles” that will enrich the theory-development process; thereby, data gathered is directing the further sampling. Furthermore, key informant sampling will be employed to select relevant people inside every company.

According to Gentles et al., (2015) key informant sampling consists of selecting suitable informers that are able to provide more information and a deeper insight into what is going on around them, given their roles in their respective communities. The same publication defined five key characteristics to target “ideal key informant”:

- Role in community
- Knowledge on the topic
- Willingness to share relevant information to the study
- Communicability
- Unbiased

Besides, the study will be cross-national qualitative research to look for similarities and differences in the way e-commerce companies are dealing with online returns under a cross-context variability, in order to draw a conceptual framework. The aim is to reinforce the validity and transferability of the findings (Silverman, 2010).

4.3.4. Sourcing the Sample

This phase consists of sourcing e-commerce companies from the real world. It requires sensitivity, agility, and ethical skills. Indeed, all potential interviewees would have a clear idea about the study’s aim as well as our expectations from the informants. Additionally, the voluntary nature of the participants will be communicated, the privacy protection settings and anonymity of classified

documents will be preserved as well. All guarantees will be given to the potential participants to help them make a consensual decision to participate.

The method that will be adopted to source the sample is advertising, using the online channels to reach potential interviewees rapidly and in a safe way, given the current epidemiological situation. After that, snowball sampling will also be used as an advertising strategy. It involves asking participants for recommendations in accordance with the inclusion criteria mentioned beforehand, which give rise to “referral chains”. Moreover, inside every company, we will look for “participants recruitment gatekeepers” to select key informants. Their mission will entail publicizing the study and encouraging participation.

The interviews will be conducted through Skype, as it represents an intuitive application, also for the possibility to record sessions, which enable better data analysis. In addition to this medium, face-to-face interviews will be used whenever it is possible and safe for all stakeholders, phone interviews will be used alike to reach busy participants. Furthermore, email conversations will ensue in order to clarify key concepts and ideas about ORM strategies, if there is a need to do so.

Finally, we will offer an executive report of the findings to the participants in order to encourage the sourcing process.

4.4. Data Collection

4.4.1. Data Collection Process

It is noteworthy that the data collection was conducted between the end of the first phase of the Covid-19 pandemic spread (peak) and the onset of the second phase (stability). The aim was to have an insight about how SC managers have compiled disruptions caused by the Covid-19 crisis when nobody had comprehended what this crisis is about, and look for commonly used strategies when the situation tended to become relatively stable.

The data collection stage had lasted 2 months (from 15 July to 15 September).

The research style endorsed by the current study is characterized by its flexibility given the nature of the topic being researched and the unique international context, further to the Covid-19 spread, which makes finding a variety of agile techniques to

collect data a necessity. Thus, electronic semi-structured interviews will be used as a tool for data collection.

The decision criterion of the selection of the interview technique emanate from the literature, which states that interviews are a field-based method of qualitative research that is best suited to SC and logistics studies, as findings are more convenient and have a wide scope, also the resulting model could be more robust once submitted to empirical testing (Flynn et al., 1990; Stuart et al., 2002; Mello and Flint, 2009). Besides, the noteworthy asset of semi-structured interviews is to enable heretofore unexplored information to emerge.

In addition to the interview sessions, a series of communications over time with participants will be undertaken, to complete necessary outputs to the study. The communication will be a series of emails to workers (managers and those operating at the forefront line) who served customers during the crisis.

Participants from every e-commerce company will be selected for the rich and relevant information they will provide to the study. The current study targets different positions from different management levels. Frontline clerks, managers, and strategists will alike be doing their bits.

Thereby, from frontline clerks and in order to learn about the relationship with carriers, inbound customer service, products returns management procedures during Covid-19, as well as challenges faced in handling returns (employing novel or erstwhile strategies) amid unprecedented circumstances; SC & Logistics Coordinator and SC & Logistics Customer Service Coordinator will be sought. Additionally, some participants could be regarded as experts as for the experience accumulated; they will participate as well to provide field-based and daily actions to handle online returns, questions will be simplified to give free rein to their thoughts and opinions. Distribution managers' and supply chain managers' knowledge is required to enrich the study's inputs about distribution operations procedures and customers' returns processing during the Covid-19 pandemic. Besides SC Strategists will contribute by providing extra knowledge on development, implementation, and improvement of SC strategy with regards to products returns, also on the use of organizational culture

in encouraging the adoption of newly elaborated strategies to improve returns operations and customers' perceived added value.

4.4.1.1. Interview Protocol Design

Pre-fieldwork planning is an essential part of any research project. The construction of an interview protocol is an important part of qualitative research employing semi-structured interviews. The interview guide or protocol is a conversational instrument of inquiry that serves as a foundation for the interview process and hence has an impact on following research phases (Rowley, 2012). The primary goal of this study is to investigate e-tailers' response to the Covid-19 crisis in regard to online returns strategies in different countries. Qualitative information collected will serve to understand e-commerce companies' behaviors in dealing with customers' returns amid a global turmoil, as well as elaborating on a conceptual model that will serve companies to face future similar shocks.

Following a thorough assessment of the literature, a methodology based on semi-structured interviews was developed. Thus, an interview protocol hinged on the following themes was designed:

- General information related to Online Returns Management and Company's profile;
- Behaviors, attitudes, and experiences on how to handle online returns during Covid-19 crisis;
- Changes that occur to online returns patterns after the pandemic spread;
- Strategies adopted by the company to manage effectively online returns management during Covid-19 spread;
- Perceptions of challenges faced and constructive suggestions for improvement.

The interview protocol was created with the goal of gathering pertinent information while remaining flexible throughout the process, enabling the interview to be shaped by the respondents' own perceptions and our own interests. The interview protocol's items were handled as prompts, despite the fact that they are displayed as questions, which provides for as much flexibility as possible in the dialogue, while making interviews relevant to the research questions. While the goal is to emphasize new

facts through open-ended questions and a dynamic interview style, several straightforward questions regarding the company's size and returns profile are included. The interview protocol aims to efficiently integrate all relevant aspects to attain the study's goals while upholding clarity and efficiency in displaying questions and follow-up probes.

As mentioned by Roller (2015), the most common and successful method for developing an interview protocol is to start broad and curtail the topic area until it reaches the subject matter that is most relevant to the study objective, so as to build rapport with interviewees and enable them to easily answer relatively sensitive and difficult questions. This method is known as the "Funnel Approach". This method consists of four stages represented in Figure 7.

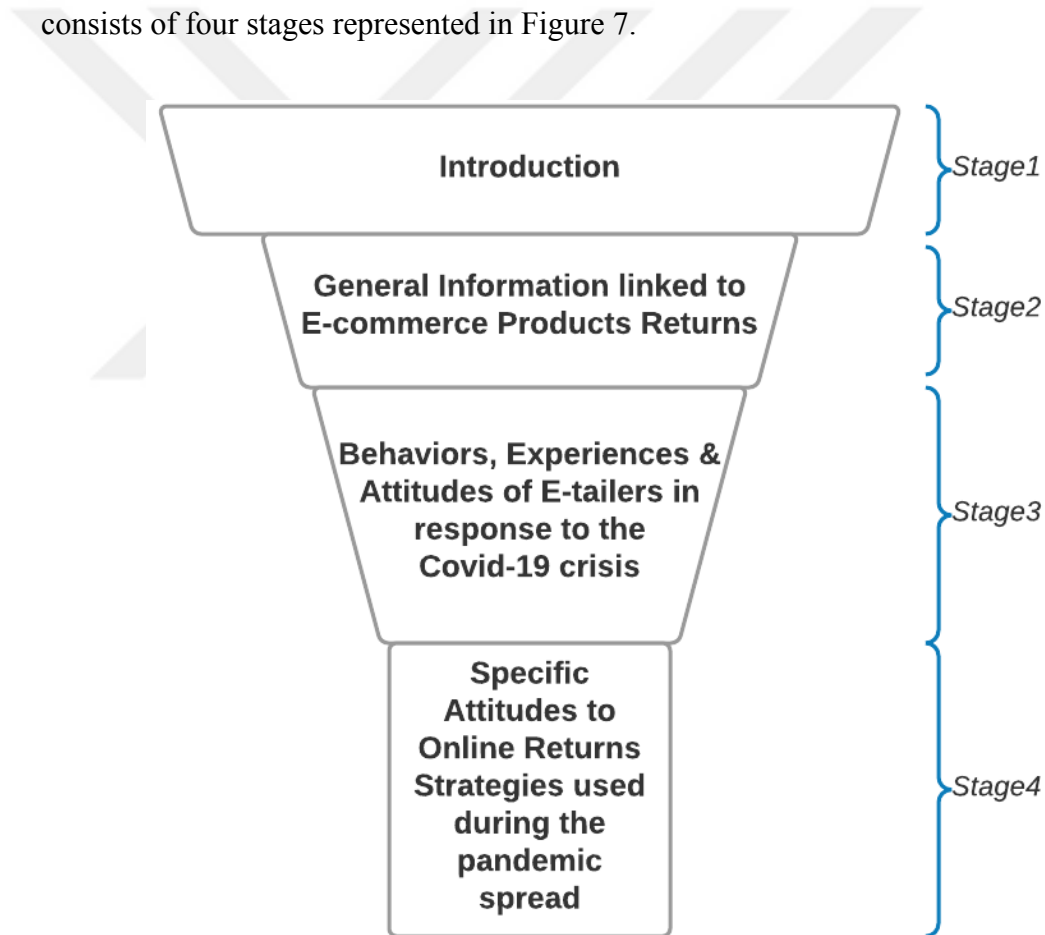


Figure 7. Four-stages Funnel Approach for Interview Protocol Design (Source: Roller 2015)

4.4.1.2. Interview topics and questions

To better answer the research questions and uncover all aspects of the study, two types of semi-structured interviews were used intended for two categories. The first category is e-tailers' employees; the second category is these companies' customers. The interview protocol for companies entails topics and questions that will be adapted according to the position of the interviewee, to the flow of the inquiry-based conversation and the respondents' answers. Primary data will be gathered through online and telephone semi-structured interviews as synchronous interviewing. It will be held through conferencing software "Skype", face-to-face or phone. Besides, in order to complete missing information, clarify some issues, or align with an interviewee's busy schedule, asynchronous interviewing will be used through emails conversations.

Aligning with the research questions, the study aims to collect data related to knowledge holders' (managers, customers, and logistics agents) own perceptions of online return strategies during the Covid-19 crisis. Hence, the type of questions that will be asked to the interviewees fall within the first two and fourth categories of Patton's six types of questions (Table 7) a researcher may ask to his respondents (Patton, 2002), namely Behavior or Experience, Opinion or Belief, and Knowledge.

Table 7. Patton's six types of interview questions by research aim

Patton's Questions Types	Research Aim
Behavior or Experience	A person's endeavors and achievements
Opinion or Belief	Thoughts about a specific issue or experience
Feelings	Emotional responses to an experience
Knowledge	Facts comprehended by interviewees in a specific situation
Sensory	Inquiry about what is seen, heard, tasted, touched and smelled

Table 7 (cont'd)

Background or Demographic	Identify a person's characteristics (age, education...)
---------------------------	------------------------------------------------------------

Questions are organized following five sections, consisting of 16 items for data gathering, where prompts and probes are essential to get as many details as possible. The first section consists of 4 items and it is dedicated to gathering basic information about the company's activity and general information on the interviewee such as seniority. The second set of 2 questions is devoted to finding out about behaviors and experiences on how to handle online returns during the Covid-19 crisis. The third section consists of 3 questions about changes that occur to online returns patterns after the pandemic spread. The fourth section of 3 questions is consecrated to learn about strategies adopted by the company to manage effectively online returns management during the Covid-19 spread, and it consists of three questions. The last section, with its 4 questions, is dedicated to finding out about the perception of challenges faced and constructive suggestions to improve returns management strategy for e-commerce companies from the interviewees' position. On the same basis, probes and prompt questions were used to complete missed information, clarify ambiguous issues, and endow the study with enriched data thereby. The full version of the interview protocol is presented in Appendix A. To explore the efficiency of strategies adopted by e-commerce companies amid the pandemic spread, interviews will be conducted with these companies' customers. Participants are selected purposefully, based on their availability and willingness to participate in the study. The interview protocol for customers was organized in three sections; the first one is related to general information related to customers' relationship with the e-tailers and it encompasses three questions and topics. The second section of three questions is devoted to deepening our knowledge about customers' behaviors and experiences on newly introduced online returns management patterns during the Covid-19 crisis. The last section is consecrated to learn about suggestions for improvement of product returns strategies from the customer's perception. In addition to the questions conferred in the interview protocol, probes questions will be used based on the respondents' answers as well as our own interests to enrich the study's outputs. The interview protocol for customers is displayed in Appendix B.

The two interview protocol formats retrace three important stages, rapport building, thought-provoking questions, and critical event analysis. This flow was followed in order to put the interviewee at ease and then make him comfortable with answering more critical and delicate questions to help uncover all the aspects of online returns management strategies in the wake of the Covid-19 crisis, all these aspects were respected while conserving the flexibility of the interview.

4.4.1.3. Interview Protocol Refinement Process (IPRP)

Before proceeding to data collection, content & face validity, as well as the quality of questions, respecting the flexible dimension of the interview, was assessed through a preliminary test featuring four scholars and four managers selected from e-tailers participating in the study. The aim is to check the validity and pertinence of the interview protocol designed through the involvement of the four-phase process to Interview Protocol Refinement. Figure 8 outlines the process of refinement used to validate the interview protocol.

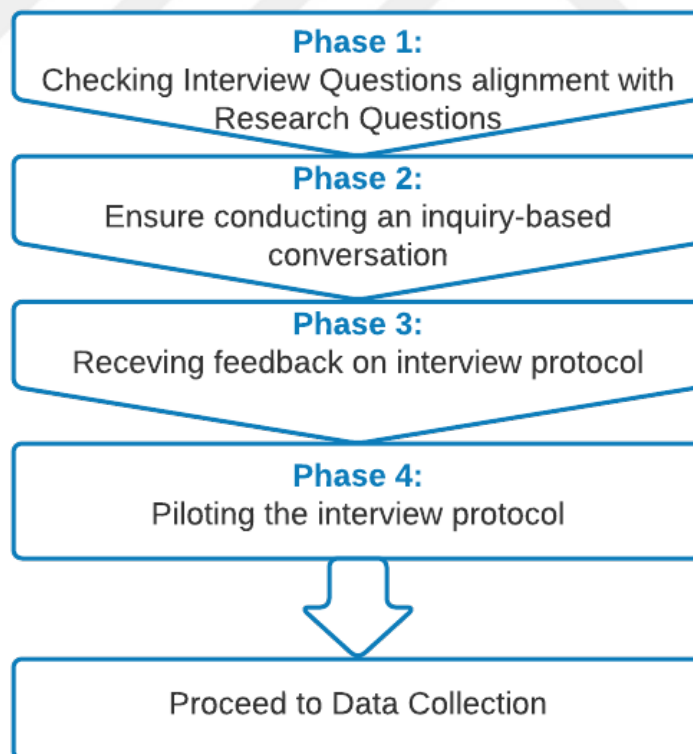


Figure 8. Interview Protocol Refinement Process (Source: Castillo-Montoya, 2016)

A preliminary face and content validity were applied to the interview protocols by assessing the alignment of the interview outline with the research questions. This first step was conducted with the collaboration of an academician specialized in the field of SCM and Logistics and with the study's advisor. Then, four scholars from different disciplines (marketing, logistics, and management) have ensured that the interview questions would lead to an inquiry-based conversation, to serve to collect pertinent data that will provide relevant answers to the research questions.

Feedback on interview protocols was received from scholars that participated in the previous phase of IPRP, and four managers working in the field of e-commerce Logistics and SCM. This phase of refinement resulted in some wording change and some questions reformulation to reach as many participants as we can, from different operational levels. One question was added to the interview protocol for companies in order to learn about strategies used prior to the pandemic spread, to be able to compare ORM strategies in normal times and those during the new normal; also to have more information about the nature of changes that occurred to returns processes of e-commerce companies.

Before proceeding to the data collection, a pilot interview was undertaken with two logistics managers in order to test the protocol in real-like circumstances, also to have an idea about the average time that a real interview will take. This stage enabled us to come with the idea of flexible ways and means to get more participants involved in the study. On average, an interview for companies would take between 20 and 38 min. Thereby, we made it possible for companies to participate through phone or email as a type of asynchronous interviewing that is commonly used in qualitative research (Cachia and Millward, 2011).

4.4.2. Data Gathering

All interviews were taped and the record length is ranging from 20 to 40 min; the average duration was 27 min. We took a sample of 11 e-commerce companies in which we interviewed 15 participants and 10 customers; hence 25 interviews were conducted. The sample size was not predetermined prior to data collection; indeed it was imposed by the theoretical saturation reached further to in-depth interviews.

Moreover, the literature recommends that a sample of 25 to 30 participants is required in grounded theory studies using in-depth interviews, in order to reach saturation and redundancy (Dworkin, 2012, p. 1320). Participants were selected for online returns and SCM experience, also they are chosen from different companies and sectors. Different interview mediums were used in order to align with the busy schedule and vacation time of some managers and customers. The aim was also to make the study flexible as we can to attract more participants, all without impacting the trustworthiness and the credibility of findings.

For companies' interviews, seven interviews were conducted through the conferencing software "Skype" for its intuitiveness and easiness of use. Six interviews were conducted by telephone. According to the literature, telephone interviews remain a viable mode to conduct qualitative research. Indeed, this medium enables the compilation of rich textual data in the form of interview transcripts, which will be examined afterward using a variety of qualitative analytic methodologies (Cachia and Millward, 2011). One interview was conducted through email to be able to bring the interview timeslot to alignment with the participant's schedule. Only one interview was conducted face-to-face for the feasibility, the proximity to the company, and for the possibility to easily build rapport with the interviewees. The objective was to make sure to conduct interviews in a safe way as the data collection stage coincides with a new tide of the Covid-19 pandemic in the majority of countries all over the world. Additionally, travel restrictions and curfews are always in effect while conducting this study.

All of the ten customers' conversations were conducted by phone and were tape-recorded. The conversations lasted between 5 to 9 min. The participants' recruitment gatekeeper of each company gave the contact of customers that agreed to join the study. Ethical and professional interviews principles were adopted in conducting the interviews through all mediums used. Appropriate time and consideration as well as all confidentiality guarantees were provided to all participants to enable them to respond accurately to all questions. Interviews were conducted in three languages, Arabic, French, and English, following the location of the company and the language mastered by the interviewee. The aim was to disable any language barrier and extract rich data that will be useful for the study.

4.4.2.1. Interviewees' Profile

Information about participants from companies such as position and seniority are presented in Table 8. In Table 9, we give an overview of e-tailers' annual realized sales, products offerings and returns profiles to have an idea about companies' size and returns rate before and during the pandemic, in order to compare customers' behaviors in different contexts and enable a better analysis of the changes that occur to online returns strategies amid the Covid-19 crisis.

Table 8. Overview of Interviewees' Profiles

			Title	Seniority	Role in Handling Online Returns
Online Retailers	A1	I1	Managing Director	7 Years	Supervision & Monitoring
		I2	Frontline Logistics Officer	5 Years	Operational Role
	A2	I3	SC & Logistics Strategists	5 Years	Strategy Elaboration & Monitoring
		I4	Logistics & CRM	6 Years	Process Supervision & control
	A3	I5	Managing Director	Owner & Co-founder	General Knowledge about the process
	A4	I6	Retail Logistics Manager	7 Years	Supervising Role

Table 8 (cont'd)

	A5	I7	B2C & Retail Logistics Specialist	10+ Years	Supervision & Participation to Strategy Elaboration
	A6	I8	Product Compliance & Shipping Specialist	5+ Years	Process Monitoring
		I9	Parcel Deliveryman	3 Years	Operational Role
	A7	I10	Logistics Customer Service Coordinator	3 Years	Internal & External (3PL) Coordination
	A8	I11	Logistics Director	15 Years	Supervision, Strategy Validation
		I12	Logistics & Customer Service Operative	3 Years	Operations Execution (Domestic Services)
	A9	I13	Junior CR Manager	4 Years	Collaboration with Logistics services
	A10	I14	Senior Logistics Manager	6 Years	Planning & Monitoring

Table 8 (cont'd)

	A11	I15	Logistics & Shipping Supervisor	8 Years	Monitoring & Coordination
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P.S: I1 to I15 refers to the interviewees that participated to the study.

Countries selected to participate to the study are: Morocco, Algeria, France, Belgium, UK, Canada, UAE, Egypt and the Netherlands. Countries choice emanates from the accessibility of informants in these countries and the easiness to get access to information-rich profiles that are willing to share their experiences and thoughts candidly, a necessary condition to successfully conduct the current study.

Table 9. Overview of E-commerce Companies

Online Retailers											
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
Products Offerings Description	Print on Demand Items	High Tech and IT Tools	Colors Cosmetics	Ready-to-wear & Fashion Products	Hair and Skin Care Products	Fast Fashion & Lifestyle Products	Gifts, customized products, household gadgets & accessories	Fashion Items	Furniture and Interior Decoration items	Sneakers and Accessories	Electronics, gadgets & Apparels
Annual Realized sales (M\$)	-	5.2	2.376	-	0.224	-	0.798	11	11.22	526.43	533
Returns Rate in Normal Times	Low	Medium	Low	High	Low	High	Medium	Medium	Medium	Medium	Medium
Returns Rate during Covid-19 Crisis	Low	Medium	Low	High	-	-	Medium	High	Medium	Medium	Medium
Customers Satisfaction	-	95%	-	80%	-	-	92.27%	93	95	-	98

Returns Rate:

- Low (<5%)
- Medium (5%-15%)
- High (15%-25%)



CHAPTER 5: DATA ANALYSIS AND FINDINGS

This section will be dedicated to presenting general information related to the impact of the Covid-19 pandemic on e-tailers' activities, according to their answers to the interview questions; as well as the results of data analysis.

The impact of the repercussions of the Covid-19 crisis was different for companies that sell exclusively through the Internet channel. On one hand, 80% of e-tailers that participated to the study assert that they record an increase in sales during the first quarter of 2020. In the same respect, the Product Compliance & Shipping Specialist of a fashion & lifestyle products retailer said that:

“The sales curve has increased significantly in the week following the first lockdown (27% during the first month of lockdown) and this continued to increase incrementally over the ensuing months”.

The interviewee contended that: *“we have invested in improving our e-commerce business, we need to align with our government's restrictions, and at the same time satisfy our online shoppers. We have also changed our return policy to fit the current context.”*

In contrast, during the second period of lockdown, as of April 1st 2020, 50% of companies that sell through the Internet channel and through physical stores registered a strong digital activity that would reach a double-digit increase in online orders. The other half claimed that they have registered an incremental increase, a slight rise in sales or they registered the same turnover via the website. Moreover, interviewees stipulated that the second period of the lockdown enabled them to acquire new customers and serve a larger community.

On the other hand, 20% of Internet retailers declare that they register a drop in sales, which is due to products offerings types, related to household gadgets, home accessories, customized products, and holiday gifts. These categories of products did not register higher demand during the first months of containment. As of April 2020, online sales continued to increase due to customers shifting preferences to e-commerce as the remaining option. Furthermore, participants claimed that they attracted new customers and reached a good level of growth. In the same respect,

during the interview, a logistics director of a fashion brand contended that:

“Thanks to our flexible marketing and good product positioning, we could adapt well to the Covid-19 crisis and the ensuing change in the adoption of online shopping. Our 2020 full-year revenue growth reached 23%. It was proof of the resilience of our brand. We deployed a colossal effort to meet our customer demand for flagship products such as loungewear and sportswear.”

Furthermore, 91% of participants that upgraded their return process declare that they adopted a sanitary protocol to align with the new context. A logistics director of a fashion brand stipulated that:

“We create new working modes imposing social distancing and hygiene in all our processes as well as self-isolation for 12 weeks in case of infection of our employees, conserving all aspects of support that we can provide.”

In the same respect, the founder and managing director of a print-on-demand product company contended that the returned parcel is quarantined at the relay points for 7 days before the return demand processing is triggered; hence the long delays than the usual, which can go from 2 to 3 weeks.

It is noteworthy that participants declare that they observed increased demand in some products categories such as sportswear, loungewear, and household gadgets. In the same context, a make up e-tailer mentioned that they recognize a shift in product preferences from lips make up to eye make up, probably caused by the facemasks. Another observation is that there was a dearth in household staples products in some countries, due to the lack of supply in raw materials following global supply chain disruptions, as well as the increase in demand for those products.

Additionally, the experience of managing online returns amid a global crisis was uniquely challenging, and difficult as 90% of participants have described it, taking into consideration the newly introduced restrictions aiming at preserving public health and at the same time serving demanding customers. Participants were asked to attribute a rating to the degree of easiness of managing online returns during a global

crisis. Figure 10 illustrates the complexity of ORM from participants' point of view, using a scale from 1 to 5; 1 refers to very easy and 10 refers to very difficult.

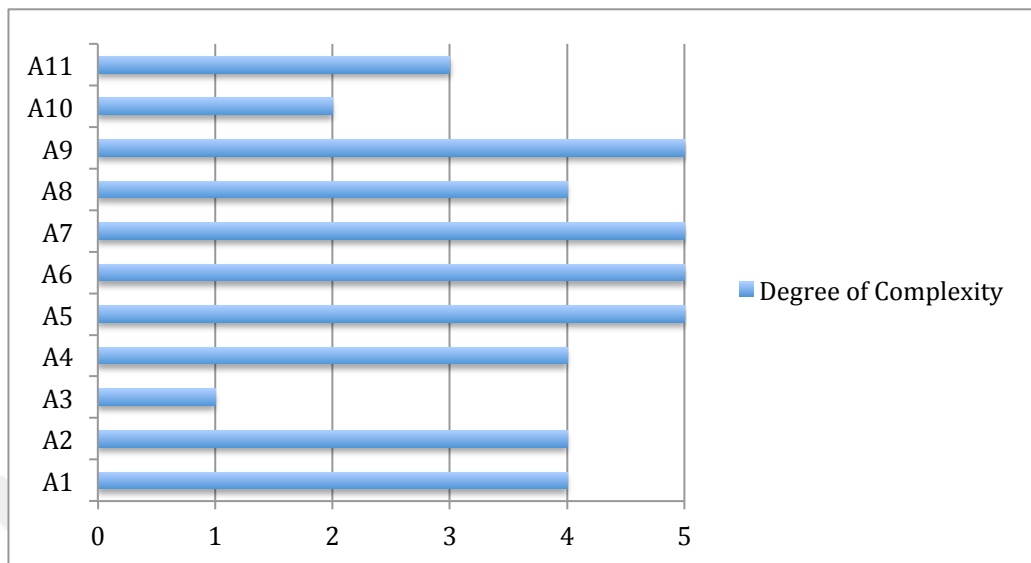


Figure 9. Complexity of Managing Online Returns During Covid-19

We notice that 37% of e-tailers attribute a value of 5 and 37% of them attribute a value of 4 to the complexity of managing products returns amid the global crisis of Covid-19, which support the aim of conducting the current study, as managing returns represents a heavy burden to the e-tailing activity.

Regarding managing products returns, the impact of Covid-19 on online returns patterns resulted in several changes of different types. Table 12 below presents a comparison between strategies used to manage online returns prior to the pandemic spread and those used during the Covid-19 crisis. For each strategy, we specify the type of restriction followed by the country in question. Detailed information about strategies used during the pandemic spread by each Internet retailer is presented in Appendix C.

Table 10. Online returns policy changes after the Covid-19 crisis

Online Retailers	OR Strategies prior Covid-19 crisis	Type of Restriction	Country	Type of change occurred to the return policy	Nature of Change	Newly Adopted OR Strategies
A1	Deliver & Collect (Exchange)	Curfew	Algeria	Change	Complete Change	Carrier Parcel Collection
	Click & Drop Off via Postal Services	Lockdown	France	Change		
A2	-Buy Online Return to Store - Carrier Parcel Collection	Lockdown	Morocco	Upgrade	Return Timeframe Extended	Carrier Parcel Collection
A3	Click & Ship	Lockdown	The Netherlands	No Change	No Change	Click & Ship
A4	Carrier Parcel Collection	Lockdown	Morocco	Upgrade	Return Timeframe Extended	Carrier Parcel Collection

Table 10 (cont'd)

A5	Carrier Parcel Collection	Lockdown	France	Upgrade	Return Timeframe Extended	Carrier Parcel Collection
A6	Buy Online Return to Store	- Curfews - Lockdown	Egypt	Change	Complete Change	No returns were allowed, only exchange via Deliver & Collect
A7	Carrier Parcel Collection	- Nighttime Curfews - Lockdown	Canada	Change	Complete Change	- Carrier Parcel Collection for the first quarter of 2020 - No returns or exchange were allowed as of April 2020
A8	Post Office Drop Off Services	Lockdown	UK	Upgrade	Adding the Contactless Feature	Contactless Post Office Drop Off Services

Table 10 (cont'd)

A9	- Buy Online Return to Store - Carrier Parcel Collection	Lockdown	France	Upgrade	Adding the Contactless Feature	Contactless Carrier Parcel Collection
A10	- Buy Online Return to Store - Return via Postal Services	Strict Lockdown	Belgium	Upgrade	Return Timeframe Extended	Return via Postal Services (Click & Drop Off)
A11	Carrier Parcel Collection	Partial Lockdown	UAE	Upgrade	Adding the Contactless Feature	Contactless Carrier Parcel Collection

5.1. Data Analysis

The analysis of the collected data is stemmed from the principles of qualitative content analysis. As a result of this method, ORM strategies during the Covid-19 crisis will be analyzed and mapped utilizing the content of the semi-structured interviews in a structured manner. Qualitative content analysis is a widely used technique by researchers in the field of SCM (Valet-Bellmunt, Martinez-Fernandez and Capo-Vicedo, 2011; Seuring and Gold, 2012).

Content analysis is used for qualitative and quantitative studies alike, and it enables to study closely latent or manifest content (Bengtsson, 2016; Erlingsson and Brysiewicz, 2017). Besides, qualitative content analysis is appropriate for both inductive and deductive reasoning (Bengtsson, 2016; Graneheim, Lindgren and Lundman, 2017). The current study will be built upon inductive reasoning that aims for generating effective implications to manage online returns in different contexts.

For this exploratory study, content analysis was considered adequate in order to analyze the manifest content in the transcription of the semi-structured interviews, through exploring online returns strategies used during the pandemic spread in multi-national contexts.

Audio records and notes taken during the interview proceedings were the input of the data analysis process. Few interviews' records were transcribed verbatim into text format for extended analysis.

The familiarization process with the audio records and with the transcription of data enabled to decide about which of the remaining interviews require extensive transcription. This technique is widely used by researchers in order to accelerate the data analysis process and optimize the timeslot allocated to the transcription of data (Rowley, 2012, p. 267).

The transcription was followed up by a few email conversations with two participants in order to make some key ideas clear before proceeding to data analysis, related to changes that occurred to specific online returns strategies.

The analyzing process demarcated by the qualitative content analysis process evoked in Bengtsson, (2016), which entails four main stages: the decontextualisation of data,

the recontextualisation, the categorization, and then the compilation of results. This outlined content analysis process trace mainly the analysis proceedings. Following the explorative nature of the current study, the analyzing process adhered to the steps of Inductive Content Analysis presented in Marrying, (2014), which consists of seven stages. The process of analyzing data began with referring to research questions, the subject of this study, as well as the theoretical background reviewed in chapter 3 of this study. The purpose of this first stage is to set the aim of the study clear before initiating data analysis. The second step is the inductive category assignment that consists in defining the level of abstraction we wanted to reach in the study in accordance with the research questions and the study's purpose. Besides, we determine pertinent data be used in the data analysis process. In fact, not all parts of the interview transcript are subject to analysis, except for parts that are relevant to the research questions. Hence, to define relevant data from the interview transcript we defined four rules of selection presented in Table 10. Unlike the summarizing content analysis process of meaning units, in inductive category assignment paraphrasing and condensing interviews' data are skipped, given that the level of reduction is preset, which enables the category formulation step to be triggered (Marrying, 2014, p. 79).

The current research represents a phenomenological study; therefore we focused on exploring how the informants make sense and transform their experiences into a practical guide and actionable implications. Thus, we opted for manifest analysis as the highest level of abstraction for this study to explore and understand ORM strategies as e-tailers and their customers comprehended it during the Covid-19 crisis. The third step consists in working line by line on the text of interview transcription in order to formulate categories and subcategories in accordance with manifest analysis level. Furthermore, we ensured that sub-categories and categories are internally homogeneous and externally heterogeneous in order to enable comparisons to be done between categories. The fourth step entails the revision of categories and sub-categories set in the previous stage, ensuring their relevance to the research questions. The fifth step consists in building final categories according to the pre-determined level of abstraction. The sixth step entails checking the open coding process from the beginning of the material while comparing it to the resulting codes. The final step entails the writing-up process through focusing on exploring

data and developing a deep understanding of ORM strategies during the Covid-19 pandemic as well as looking for efficient strategies to manage online returns in the midst of the ongoing global crisis, from e-tailers and customers' perspectives.

Table 11. Rules of pertinent data selection from interview transcripts

Parameters of Selection	Rules of Selection
Repetition	Highlight the most commonly used and repeated words by interviewees such as “ORM strategies”, “restrictions”, “authorities” and “change”
Keywords Context	Extract keywords relevant to the study’s research questions to comprehend the context in which interviewees used it
Similarity/Contrast	Look for the similar and contrast idea for each specific experience or belief evoked by different informants
Linking Concepts	List all the evoked ORM strategies used during the pandemic and link each strategy with all the regarding concepts and ideas

The coding process was carried out in an iterative way, in accordance with the principle of Inductive Content Analysis. Figure 10 illustrates the final categorization, result of the coding process in the data analysis. This process contributed to creating a structured comprehension of the collected data in a gradual way. Thereby, the first line concepts were dedicated to present codes extracted from the transcription text. Codes are assembled under the sub-category (second line concepts) pertaining to the nature of changes return policies have undergone during the Covid-19 crisis. Those categories were assembled under categories of return policies changes.

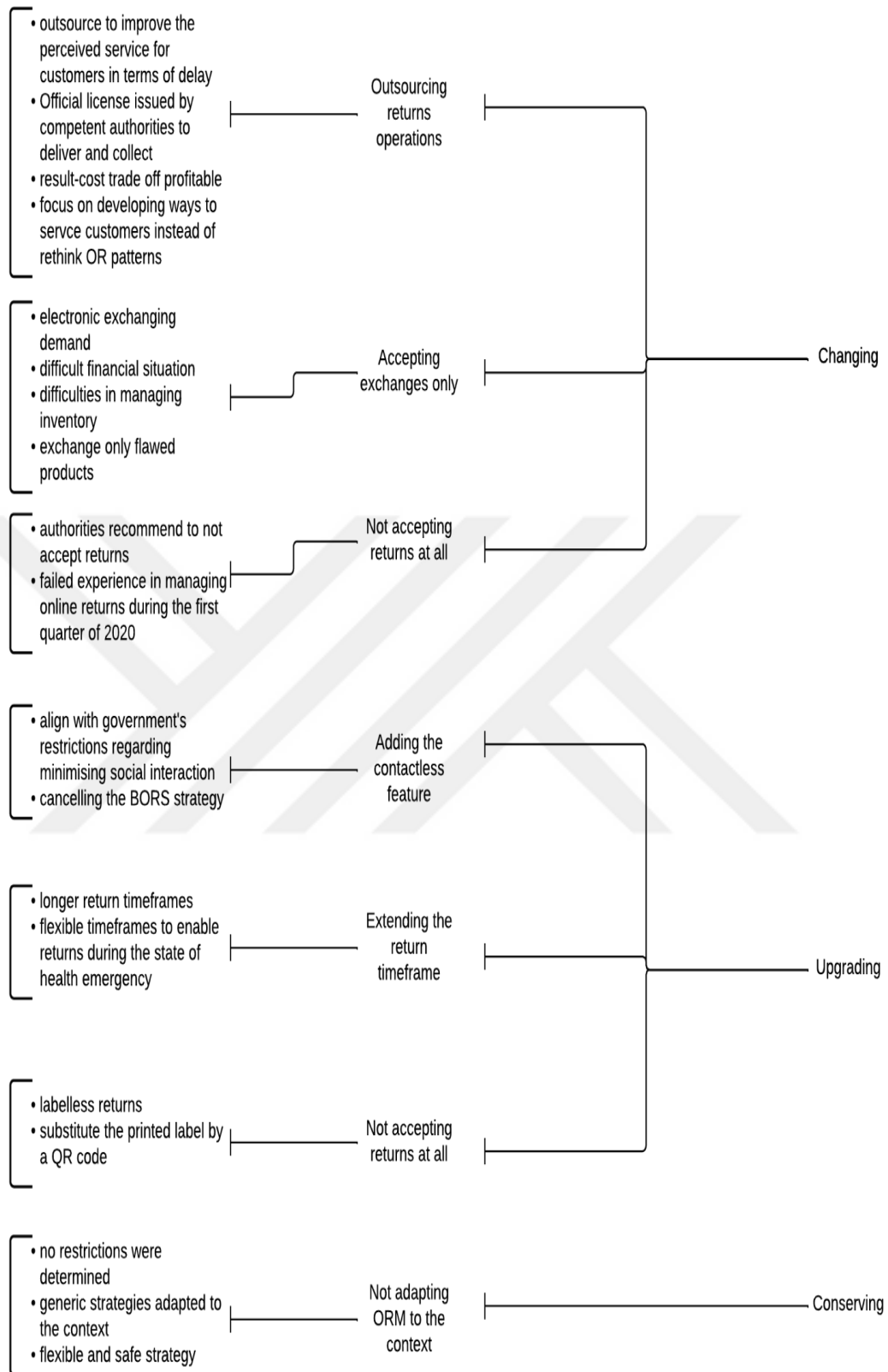


Figure 10. Coding Structure

Research trustworthiness was ensured using the model presented in Elo et al., (2014), which describes trustworthiness for the main qualitative content analysis stages from collecting data to presenting findings. The model to improve trustworthiness of the current study is based on a checklist of questions to examine in every stage of the content analysis study. Table 12 represents the checklist to ensure the trustworthiness through the preparation phase to collect data, the organization phase of data analysis, and the reporting of findings phase.

Table 12. Content Analysis study trustworthiness checklist (Source: Elo et al., 2014)

Stages of Content Analysis	Questions Checklist
<p style="text-align: center;">Preparation Stage</p>	<p>Data Collection Method</p> <ul style="list-style-type: none"> - How to collect relevant data for content analysis? - Is this method adequate to answer study's research questions? - Are semi-structured questions suitable for this study? - How can we pre-test the data collection method? <p>Sampling Strategy</p> <ul style="list-style-type: none"> - What is the best sampling strategy for this study? - Who are the most adequate informants for this study? - What are the most pertinent criteria to be used in participants' selection? - Is the sample universe adequate? <ul style="list-style-type: none"> - Is data well saturated?

Table 12 (cont'd)

<p>Organization Stage</p>	<p>Categorization and abstraction</p> <ul style="list-style-type: none"> - How should categories and subcategories be created? - Are there any additional categories to be created? - Is there any overlap between categories? <p>Interpretation</p> <ul style="list-style-type: none"> - What is the level of interpretation of the analysis? - How to ensure that the data represent accurately information that the informants provided? <p>Representativeness</p> <ul style="list-style-type: none"> - How to check the trustworthiness of the analysis process? - How to check representativeness of the data?
<p>Reporting Stage</p>	<p>Reporting Results</p> <ul style="list-style-type: none"> - Are findings reported systematically and logically? - Is the content and structure of findings presented in a clear and understandable way? - Are quotations used systematically? - How well do the categories cover the data? - Are there similarities within and differences between categories? <p>Reporting Analysis Process</p> <ul style="list-style-type: none"> - Is there a detailed description of the analysis process?

5.2. Results and Main Implications

This section is dedicated to presenting findings that arose from the results of the in-depth semi-structured interviews. Findings revealed that ORM strategies were subject to changes following different factors that regard the imposed restrictions in every country to contain the pandemic spread. Main research implications (MI) were elaborated to show how e-tailers have adopted different changes levels in return policies in the context of Covid-19, from a multi-national perspective.

- i. Changing over the return policy adopted prior to the Covid-19 crisis:

Results show that 28% of e-tailers that participated in the study chose to make a changeover for a new strategy to manage online products returns. The study's results show that "outsourcing the returns management operation" is an effective strategy to handle online returns in a fast-changing environmental setting due to the Covid-19 pandemic. E-tailers chose to outsource the returns operation to improve the perceived service by customers in terms of delay while preserving the community's health. Restrictions and sanitary measures hampered the ability to accept products returns as in normal times, hence e-commerce companies were driven to rethink returns management methods.

The key factor for an effective return policy that is tailored to e-tailers' and customers' needs is to assess the feasibility of "outsourcing the returns management operation" to a 3PL service provider that would have the necessary capability and agility to adapt to the fast-changing context imposed by different governments. In some countries, where strict lockdowns were imposed, delivering goods to the customers' doorsteps was subject to an official license issued by competent authorities. The interviewee of company A1 located in Algeria said that:

"Delivering and collecting customers' orders was prohibited for non-certified e-tailers; only logistics companies that hold an official license could provide logistics services. The license issuing was a subject to an audit of the sanitary protocol section and delivery and parcel collection conditions as well."

E-tailers that chose to outsource their returns operations claim that this strategy helped them manage effectively online products returns, as 3PL companies are more skilled to perform such kinds of operations in a fast-changing environment and newly introduced restrictions and barriers. In addition, from the customers' perspective, changing the returns management strategy was effective given that the delay was relatively shorter than before outsourcing the operation.

Therefore, the result-cost tradeoff was profitable as this strategy helped e-tailers gain in improving the time between submitting the return demand and the parcel collection from customers' doorstep. In addition, outsourcing ensure that e-tailers would focus on developing ways to make necessary products available for customers instead of rethinking online returns patterns. Also following restrictions (nighttime curfews, lockdowns) imposed by governments in other countries, delays were too long to be able to collect a parcel from customers' doorstep or to enable customers to drop off his order in the nearest post office, as coordination was hard to maintain with partners.

MI 1: Outsourcing the management of online products returns during the Covid-19 crisis increase the e-tailers' effectiveness and capability of delivering good customer service.

Results reveal that "accepting exchanges only" is one of the strategies that were adopted by e-tailers in order to handle the situation. In fact, companies switched from accepting returns in stores (Buy Online Return to Store) or via parcel drop-off to only accepting exchanging the ordered item by another using the "Deliver & Collect" strategy. This strategy consists in collecting the item to be returned and delivering the new item at the same moment. The customer chooses the new item at the moment of accepting its electronic exchange demand. In case there is a balance to be paid, it is transferred to the customers' digital wallets.

In countries where nighttime curfews and partial lockdowns were in effect, e-tailers preferred to not accept return products. Interviewees from e-commerce companies claim that this decision emanates from the difficult financial situation incurred during these tough times. In this respect, the product compliance and shipping

specialist of company A6 stipulate that:

“I strongly believe that returns policies should be tightened up to be able to recover from the crisis for the upcoming few years. There is no other solution to deal with demanding customers. However, it is crucial to set a balance between customers’ satisfaction and company’s profitability.”

Thereby, to preserve the customer service at a certain level while not jeopardizing the company’s profitability, proposing exchanging an order seems to be a “compromise strategy”, as it enables better inventory level control and real-time upgrades. Also, all exchanging operations are centralized and performed online, which contributes to efforts deployed in containing the virus spread.

Furthermore, the exchange option is subject to some conditions. For instance, allowing exchange only for flawed items and refund wasn’t accepted. Despite the fact that from the companies’ perspective, the “Deliver & Collect” strategy deems appropriate for the Covid-19 context, from the customers’ perspective, being not able to return a product was frustrating. Additionally, these companies’ customers expressed their preference for the “Carrier Parcel Collection” strategy for its flexibility and adaptability to the current context in different countries. However, e-tailers should communicate clearly about their newly adopted strategy through different mediums, in order to improve their customers’ experience.

MI 2: Accepting only exchanges using the “Deliver & Collect” strategy contributes to managing effectively products returns, as long as the company maintains the customer service at a certain level through good communication.

A third scenario that was a result of this study is “not accepting returns at all”. This decision is supported by restrictions imposed by competent authorities such as e-commerce federations of the country in question. In fact, the online sales activity regulations in some countries such as Canada advised e-tailers to not accept returns to help contain the virus, as of April 2020. This decision is based on their experience accepting returns during the first quarter of 2020 using postal services. According to the interviewee of company A7, this strategy was commonly used during the

lockdown following the federation recommendations. Companies would prefer to have dropping points where customers could drop their items and get instant refunds, in order to avoid the polemic they faced further to their decision to not accept returns. According to the e-tailers, customers did not accept this decision. The interviewee stipulated that the challenge was to make the new return policy clear and known before a customer proceed to order an item. We conclude the difference in perceiving online returns management strategies in different countries and contexts under the same crisis. Unfortunately, we couldn't reach this company's customers to get their opinion about not being able to return an order.

MI 3: Not allowing online products returns help alleviate the burden of managing e-commerce returns during the Covid-19 crisis.

ii. Upgrading the return policy adopted prior Covid-19 crisis:

As mentioned at the beginning of this chapter, 64% of e-tailers preferred to upgrade their return policies instead of changing them completely. National contexts impose different constraints to which e-tailers have to align. In fact, participants claimed that they upgrade their returns policies to fit the new normal, through extending the returns timeframe that would reach one month and a half in some countries such as France, to be in accordance with the restrictions of the e-commerce federation, following those of the governments, which impose the alignment of return timeframes with the state of health emergency. The aim is to give more flexibility to customers to return their orders in convenient circumstances.

E-tailers that were used to hybrid online returns management strategies, in other words, combining the use of two different strategies, such as “Buy Online Return to Store” and “Carrier Parcel Collection”; they switch to the use of only one feasible strategy in the context of Covid-19 (for example using only “Carrier Parcel Collection”). Upgrades that reached online returns management strategies are a result of the partial and strict lockdowns and the duration of the state of health emergency. Participants to the study claimed that in order to give more flexibility to customers during the health emergency period, they either “extended the return timeframe” or “added the contactless feature” to the operation of return, or both. Alongside these

upgrades, “other measures” were taken to facilitate the process of returns for customers. Some e-tailers prefer to substitute the printed return label with a code the customer receives on his device after his return demand has been accepted. The label-less return experience was appreciated by customers and e-commerce companies. Indeed, the Logistics Director of company A8 stipulated that:

“The contactless and label-less lockers drop-off service that helped us align with the restrictions and measures imposed by authorities to contain the pandemic spread. It helped us to manage efficiently customers’ returns and at the same time contribute to preserving our community’s health. It was a win-win approach that our top management follows. Also, the availability of the lockers is a decisive factor in the success of this strategy. They are receptive 7d/7 and 24h/24.”

From customers’ perspective, the “Contactless Post Office Drop off Services” strategy was beneficial. A customer of the company A8 claimed that:

“It is a creative and convenient solution. I appreciate it so much for its availability and flexibility. It is a great change that facilitated the return operation and made it easy to do without waiting in a queue or interacting with an officer, which may be dangerous in these times due to the Covid-19.”

Findings also reveal that 71,42% e-commerce companies that opted for upgrading their return policies, used the “Contactless Carrier Parcel Collection” and their customers that participated in the study claimed that the strategy was effective and their return experiences were successful. In contrast, customers of e-tailers that used the “Contactless Post Office Drop Off Services” strategy declared that they prefer the carrier parcel collection option for its flexibility and convenience.

Upgrading online returns management strategies to fit the ongoing crisis required colossal efforts from e-tailers. Participants claimed that the challenge was to maintain communication with customers. E-commerce companies spared no attempt to interact with their customers and communicate the newly introduced return policies. Participants precise that they placed the return policy section in their homepages, they invested in short videos in the form of cartoons that they diffused

on social media to reach as many categories of customers as possible. Interviewees from companies claim that these posts and videos on social media were beneficial to explain the new modes of products returns that customers should follow.

MI 4: The contactless feature and the extension of the return timeframe as well as other measures contribute to managing safely and efficiently e-commerce returns on the condition that the company preserves a good level of interaction and communication with its customers on the newly adopted return policy.

iii. Conserving the return policy used prior to the Covid-19 crisis:

Findings reveal that some countries did not impose that the online sales activity should align with the restrictions in effect. Thereby, e-tailers “did not make any change to their online returns management strategies”.

The Managing Director of company A3 from the Netherlands claim that:

“We did not get any restrictions in relation to product returns, so no change; [our experience of managing online returns] is same as before, so the pandemic did not change anything regarding product returns.”

It is worth noting that the strategy used to handle online returns before the advent of the Covid-19 pandemic is the “Click & Ship” strategy that is still in accordance with the new context. Thereby, competent authorities in these countries (governments and e-commerce federations) where e-tailers did not receive restrictions and guidelines to change or upgrade their strategies, was adopting generic and flexible policies that are easily adjustable to the context with derisory measures (changing the carrier company, limiting time to receive parcels...). We knew through the company that customers’ level of service remained the same as no change reached the return policy.

MI 5: Conserving online products return strategy that was deemed appropriate to the context of the pandemic enable the efficient management of online returns during the new normal in some countries.

5.3. Effective online returns management strategies used during Covid-19 crisis

We asked the participants about the newly introduced strategies that helped manage effectively online returns in the midst of the pandemic spread. We also asked the e-tailers about the perception of their customers of the online returns strategies they use, whenever data is available. Responses are displayed in Table 13.

With the aim of learning more about successful online returns strategies during the pandemic spread, we conducted 10 interviews with customers of the e-commerce companies that participated in the study. We asked customers about their perception of the online strategies used and to which extent they were satisfied with the service of returning products. The purpose is to compare customers' satisfaction from companies' perception and from customers' perception. Table 14 represents the results of the interviews with customers.

Table 13. Customers' satisfaction rate from returns patterns (Companies' Perspective)

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
Carrier Parcel Collection	-	95% ¹			-		92.27% ¹		95% ¹		98% ¹
Click & Drop Off			-	80% ¹				93% ¹		-	

Table 14. Customers' satisfaction rate from returns patterns (Customers' Perspective)

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
Carrier Parcel Collection	93.5% ²	96.5% ²			97%		-		-		99%
Click & Drop Off			-	84,5% ²				100%		88%	

1: Customers satisfaction rates are given by the participants

2: The percentages represent the mean of rates obtained from different customers of the same company.

P.S: For the company A6, no returns were allowed.

From Table 13 and Table 14, we notice that customers prefer the Carrier Parcel Collection strategy to manage online returns during the Covid-19 crisis. The reason behind this choice is the adaptability and flexibility this strategy provides to customers. Carrier Parcel Collection contactless or in a classical way, performed by the company or by a 3 PL service provider is convenient to the circumstances imposed by the pandemic spread, as the parcel to be returned is collected from the customer's doorsteps, which limit movement and interaction. Besides, in all countries involved in the current study, e-commerce federations and governments advise e-tailers to respect a sanitary protocol where movement and social interaction were banned or restricted. Unlike other strategies the Carrier Parcel Collection strategy ensures customers' safety and satisfaction from the return operation, as long as it respects the restrictions in force in the country in question.

To enhance the validity of our findings, we asked customers about strategies they would like companies to use to handle online returns amid this global crisis. Even if customers appreciate the Click & Drop Off service, they said that they prefer the Carrier Parcel Collection strategy. In fact, 82% of customers that joined the study claimed that they wish the e-tailer would use the Carrier Parcel Collection also known as the Click & Pick Up strategy, for the reasons mentioned beforehand.

Besides, some customers that we could reach within the scope of the current study imparted that "Humanless solutions" to handle online products returns would be a great asset a company could have, especially during crises times. Those humanless solutions could be a robot that is designed to perform the return operation in the place of the carrier officer, or a drone to collect high-value orders or light items following the example of Amazon, or even unmanned aircraft to collect voluminous parcels.

In addition, some customers stipulated that investing in technology with regards to managing returns could be a decisive factor in the purchasing decision or in choosing the e-tailer, also it would influence positively in a great way the whole customer experience. As mentioned beforehand, companies couldn't easily achieve those solutions and it requires extensive efforts and a great financial and educational investment.

In the same vein, companies were also asked about solutions that are worth exploring to handle online returns, 36% of answers claimed that outsourcing remains the best solution, as 3PL service providers are more cleared to manage returns than the company can do, given that this will be their core activity. Moreover, during unique and unprecedented circumstances, companies need partners that alleviate the burden of handling returns that are agile, experienced, and flexible, with whom they can share risks.

5.4. New technologies in managing online returns during the Covid-19 crisis

Prior literature highlighted the importance of using new technologies in logistics & supply chain operations in the wake of Covid-19 for effective management with less detrimental effects (Sarkis et al., 2020; McMaster et al., 2020). Moreover, from customers' answers evoked in the previous section, we conclude the importance of the use of new technologies from customers' perspective. However, the interview results showed that only 18% of the participants thought about integrating new technologies in logistics operations, especially ORM patterns. The integration of new technologies was an option that was adopted by one of the participants. It is represented by the use of QR-based postal lockers, which aim at eradicating the printed return label to adapt to the new normal.

Many reasons were at the origin of not investing in new technologies by the majority of e-tailers that participated in the study. The main reason was related to the financial situation of the company. About investing in new technologies to handle online returns, the Customer Relationship Manager of the company A9 said that:

“The financial results of our company did not allow us to invest in new technologies. Only 10% of our stores worldwide were open and they worked only 70% of their day.

All our efforts were going to meet our customers demand in the best delays, including responding to our customers' return and exchange demands".



CHAPTER 6: DISCUSSION AND CONCLUSION

6.1. Overview

The ongoing health crisis has altered the online returns modes, whence the need urged for e-tailers to adapt their returns policies to be able to serve customers in the midst of this unprecedented economic turmoil. Managers of e-commerce companies as well as those who are selling through the Internet channel are in need of redesigned returns strategies to handle effectively customers' demands related to returning a product.

The current study focused on examining changes that happened to return policies during the Covid-19 crisis and pointed out the effective strategies to handle online returns from companies and customers' stance. Therefore, the objective of the study is to enquire about the impact of the Covid-19 crisis on ORM strategies in different contexts related to different countries where different restrictions were imposed, as well as the changes that occurred to return policies to adapt to the new normal. In order to meet the current study's objective, we carried out a qualitative study in a multi-national context, with content analysis using manifest content with an inductive approach, which brings in relevant and field-based results useful to meet the research objective.

The study's findings revealed that e-commerce companies were either upgrading or changing their return policies to adjust their strategies to the changing settings of the market, or even conserving the same return policy as prior to the Covid-19 crisis period when their strategies could be easily transferred and applied during the crisis. Furthermore, results show the perception of customers and e-tailers of the newly adopted strategies. The descriptive framework of the current study delineates the existing links between the restrictions in effect in each country and the changes that affected return policies, and to which extent these changes and upgrades were effective from customers and e-commerce companies' stance.

Besides, this study seeks to make two contributions; a contribution to the literature and a contribution to e-commerce companies managers; both are highlighted in the ensuing subsections.

6.2. Contributions and implications

Eleven e-commerce companies operating in different sectors participated in the study and agreed to share their experiences and thoughts about managing online returns during the Covid-19 crisis. Informants shared their strategies to reconcile between managing effectively product returns while keeping customers' service in a good level, in particular different contexts, specific for each country. Through these interviews, we sought to understand the impact of the Covid-19 crisis on online returns strategies as well as how e-commerce companies managed to handle effectively product returns by either changing, upgrading, or conserving their returns policies, in accordance with the restrictions in effect in their respective countries. Moreover, findings revealed that companies tend commonly to use the carrier parcel collection and postal services drop-off strategies to manage returns during the Covid-19 crisis, with some differences that are related to the nature of restrictions and companies' resources and ability to apply a change to their policies. These differences were affiliated to extending the return timeframe to adapt the return timeframe with the state of health emergency, or adding the contactless feature to adapt the operation's proceedings to the Covid-19 context, or even outsourcing the whole operation to a 3PL service provider, which uses one of the aforementioned strategies that align the best with the company's environment.

It is widely accepted that fostering understanding about extreme issues and the way they influence e-commerce activities, especially ORM patterns, have been a professed aim of supply chain managers and researchers alike. This issue has been stressed with the advent of the Covid-19 pandemic. Yet, despite this emphasis, there is still confusion about the parameters that define the crisis, given its newness, consequently what could be its influence on the supply chain, namely product return policies.

The current study accentuated the uniqueness of managing online returns amid a

global crisis such as Covid-19 given the challenges pertaining to effectively managing product returns. The complexity emanates from the nature of restrictions imposed to contain the virus spread, such as minimizing social interactions, nighttime curfews, and partial or total lockdown. The review of previous studies related to the uniqueness of ORM during Covid-19 was scant; indeed, only Gächke et al., (2021) broached the issue of understanding online returns in different settings, with the aim of providing guidance to global e-tailers to refine their returns strategies across the world. The focus in Gächke et al., (2021) was directed to the comprehension of contextual differences to effectively adapt to online returns in a global market. As a result, there are few previous works to which the current study may be referenced and compared.

In chapter 3, the review of prior literature on the subject highlighted the impact of the Covid-19 crisis on the trend of shopping from virtual stores, which impact customers' behavior and made them more demanding and difficult to satisfy (Alam, 2020; Badot and Fournel, 2020). In the same context, the current study emphasized the strong digital activity registered by 50% of e-businesses that participated in the study; which would reach a double-digit increase in online orders. On a similar note, the other half professed that they have registered an incremental increase in online orders. The intensity of increase in online orders is tributary of the nature of offerings customers tend to purchase during the crisis.

Along the same lines, informants claimed that the Covid-19 crisis influenced ORM strategies and shifted the way they perceived the effective management of product returns. In fact, pursuant to restrictions in effect in their respective countries and to align with the obligations, e-tailers eradicated return services provided in stores such as the BORS strategy and substitute it with mobile services. This supports Choi (2020) and Watanabe and Omori (2020) claims regarding the same subject: in particular, they contended that their analytical models that investigate the use of technologies in logistics operations aim at transforming "static services" to "bring near your home mobile services" amid the Covid-19 crisis. Similarly, the review of the literature (Yuan et al., 2020 and Hasanat et al., 2020), as well as the current study, reached the same conclusion with regards to the critical role of digitalization in stemming disruptions effects on the global supply chain.

Besides, prior literature pointed up the importance of using innovative solutions and new technologies to mitigate risks related to product returns for e-commerce companies, and this through introducing new technologies into online returns strategies to enable agile and effective management and strengthen supply chain resilience and sustainability (Sarkis et al., 2020). Likewise, Ivanov (2020) and Kudale (2020) contended that investing in new technologies, data mining and IoT is a means to leverage supplier-firm relationships as well as contribute to enhancing supply chain visibility and advanced risk assessments. Contrastingly, the current study demonstrated that the majority of informants asserted that they either did not assess the integration of new technologies into ORM strategies, or they did assess their utilization but did not follow up on this idea. The main reason behind that choice is the negative financial results of companies that did not permit any investment in a new field that requires financial efforts and new know-how that is not necessarily acquired and consequently requires extra investment in human resources. In contrast, only one company among 11 participants chose to invest in new technologies through the use of QR code as a substitution to return labels, as explained in the 7-5 section in the previous chapter.

It is evident that ORM strategies require an adjustment to fit the ongoing context, where different restrictions are in effect, in accordance with the country in question. Given the newness of the Covid-19 crisis, publications on the subject of changes that occur to return policies were scant. A previous study carried out by Gätke et al., (2021) emphasized the role of tight return policies in limiting the volume of product returns. The study stressed that the restrictive nature of return policies would reduce the repurchase intention of customers. Contrastingly, the current study highlighted the importance of reconciling effective return management and good customers service. Informants claimed that they conserved, upgraded, or changed over ORM strategies to be in line with their respective governments' restrictions, also to accentuate what customers would value the most, such as the way e-commerce companies were handling returns and to which extent they comprehend the type of experience customers will value the most during the ongoing crisis. Similar research conducted by Pantano et al., (2020) showed that Covid-19 shifted the way customers perceived actions, experiences, and services with added value.

Referring to chapter 3 of the current study, despite the fact that the literature review referred to a number of research papers that highlighted ORM during extreme issues, none of them focused on the change and the nature of this change that occurred to return policies during the Covid-19 crisis in a multi-national context. Thus, there is no previous study to which the current study could be referenced and compared. Thereby, herein lies the foremost contribution of this research.

This study identified that there are three categories resulting from the analysis of the interview data, which will be explored in this section. The first interesting and important finding was e-commerce companies' stance on upgrading their return policies to align with restrictions in force. In Morocco, companies chose to upgrade their return policy by banning the BORS strategy and adopting the carrier parcel collection with an extended return timeframe. According to respondents from Moroccan companies, this choice emanates from the companies' concern to preserve their communities' health and at the same time align with restraints imposed by Moroccan authorities under the national state of health emergency, and to give customers sufficient time to return an order. From the same stance, informants from French e-commerce companies claimed that they substitute the BORS and traditional carrier parcel collection with the carrier parcel collection strategy with either an extended return timeframe or by adding the contactless feature to the operation of return. It is noteworthy that in these countries, competent authorities imposed lockdown as the restriction in force during the second and third quarter of 2020 to contain the virus spread. In UAE, to adapt to the partial lockdown imposed in the country, the e-commerce company that participated in the study adopted the same strategy as prior to the pandemic spread, namely, the carrier parcel collection with the contactless feature.

The same logic was followed by UK and Belgium with a minimal change. Indeed, in both countries companies that participated in the study added either the contactless feature or extended the return timeframe to the post office drop-off strategy.

In a similar vein, drawing from the study's findings about the nature of change that happened to return policies, some e-tailers chose to change over to another different ORM strategy than the one used prior to the pandemic spread. In Algeria, the

company's informant declared that they adopted the same ORM strategy in their branches in France and Algeria. Top management chose to change from drop-off via postal services to contactless parcel collection by a 3PL service provider. This decision is justifiable by the restriction in force in these countries, namely nighttime curfews and lockdowns that did not allow companies to serve their customers unless they fulfill a set of conditions. The delivery of orders in Algeria was subject to an authorization issued by competent authorities. In Egypt, the respondent from the company that joined the study contended that they change completely their return policy, given that the strategy used to handle online returns prior to the crisis was no longer adequate to the ongoing context. The company dropped the BORS strategy to not allow returns at all, except for exchanging items using deliver & collect strategy. The informant explained the company's decision by the need to tighten up its return policy as an effective way to recover from the difficult financial result. With the aim of retaining its customers and reconciling between customer service and effective management, the company offered the possibility to exchange faulty items or those that cost more than \$10. In the same context, in Canada, the carrier parcel collection by a 3PL service provider was conserved for the first quarter of 2020, and then the company did not allow returns or exchanges as the e-commerce federation advise e-tailers to not accept returns as a measure to contain the virus spread. The informant professed that this decision runs counter to customers' preferences; however, the company maintained its choice and insisted on diffusing the new return strategy as well as communicating clearly through all available social media platforms.

By contrast, one company, implemented in the Netherlands, decided to not change nor upgrade its return policy. In fact, the click & ship strategy was conserved even after the advent of the Covid-19 crisis. The managing director of the company that participated in the current study contended that they did not receive any restriction with regards to handling online returns during the pandemic; besides, the used strategy was suitable for the new context. On one hand, the click & ship is initiated through the company's website, which is a "covid-friendly" measure, and then the parcel is shipped back to the company. On the other hand, exchanging items were available only for faulty items, which contribute to limiting the volume of exchanged items, consequently limiting social interaction.

Referring to data presented in the previous chapter, we conclude that there were companies that registered an increase in returns rate, and companies that had the same level of returns rate during the period of Covid-19. Additionally, disregarding the parameter of returns rate, 46% of companies that participated in the study claimed that they consider handling ORM during the Covid-19 pandemic complicated and challenging. E-tailers' responses and reactions to the returns rate variation or stagnation as well as the complexity of online returns management were different. In fact, for companies A5, A6, and A8 that registered an increase in returns rate, they predominantly opted for upgrading the return policy to cope up with the rise of the volume of product returns, rather than changing over the whole strategy which, according to the informants, require more time and investment, which is not easily accessible in the ongoing context. Company A6 decided to not accept returns at all in order to contain the induced consequences of a higher returns rate and was only accepting exchanges. Moreover, we noticed that every company implemented in each country interpreted the variation in returns rate differently; this was due to the nature of restrictions imposed in each country and the way e-commerce companies chose to handle the situation, taking into consideration its own resources and agility in facing unprecedented disruptions. Thereby, the response was different and specific for each company.

Besides, companies (A1, A2, A4, A7, A9, A10, and A11) where returns rates were maintained at the same level before and during the pandemic spread, were either changing or, in most of the times upgrading their return policies. Indeed, the parameter that influenced the change in returns policies was not the variation of the volume of returns as the previous statement; instead, it was the complexity of online returns management that pushed companies to rethink their return policies to manage returns that represents a complicated and challenging task for e-tailers in the midst of the Covid-19 crisis. Informants from these e-commerce companies contended that handling online returns is complicated and different compared to before the pandemic spread, even if they did not register an increase in returns rate.

From the same perspective, the company A3 did not register any change in returns rate, consequently did not change their return policy, which is in accordance with the previous statement. The common trait between the two aforementioned statements is

customers' satisfaction. Changes or upgrades operated to returns policies influenced customers' satisfaction rate in a good way. In fact, customers perceived more positively the way companies handled online returns during the pandemic. The satisfaction rate from customers' perspective is maintained at a good level even if they were served in the midst of the Covid-19 crisis.

Nevertheless, customers were wishing for agile and creative solutions that fall under the new technologies arena and "humanless" apparatus to be used by companies to handle online returns such as unmanned aircraft or drones. According to the informants, e-tailers could not integrate new technologies into online returns management strategies, given the uncertain context that influences the productivity of the company, which did not allow them to invest in a new field or innovate solutions that were not adopted beforehand.

Drawing from findings presented beforehand, in countries where lockdown was in effect, companies chose to handle their product returns using either contactless carrier parcel collection or with an extended return timeframe, parcel drop off services with the contactless feature or with an extended return timeframe, or the deliver & collect as an exchanging strategy. The return operations in these countries are mainly performed by 3PL service providers that are skilled and equipped to work in extra-normal circumstances and are most of time authorized to serve customers even in lockdown periods. However, in countries where governments imposed curfews, no return operation was allowed given the uncertainty of the context and the difficulty to forecast the upcoming decisions that would be made by authorities. In fact, curfews were imposed unexpectedly for an unknown period of time; hence the decision of companies to lock the possibility of returning an item. From the same perspective, companies that are implemented in countries where lockdowns were in effect were using principally carrier parcel collection or click & drop off via postal services with either an extended return timeframe or the contactless feature. In countries where curfews were adopted, e-commerce companies decided to not allow returns given the uncertain nature of this measure. This first pattern is illustrated in the Figure 11.

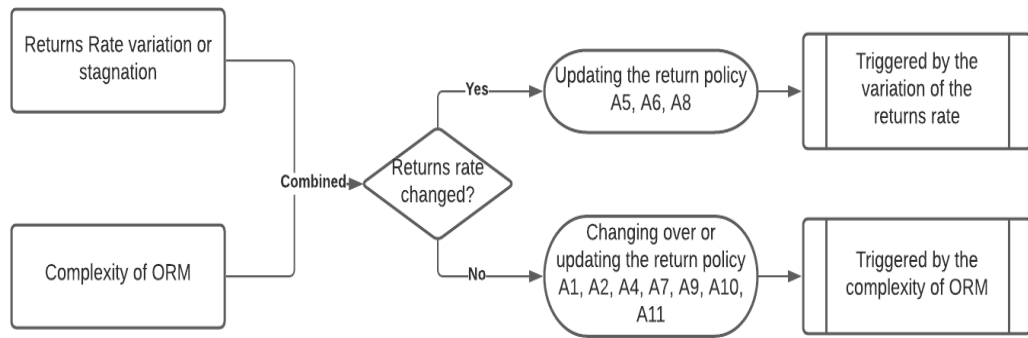


Figure 11. First Main Pattern

From another perspective, and referring to the variation of returns rate, companies were either changing or upgrading their return policies most of time. The motives behind this change or upgrade were either the increase of returns rate or the complexity of online returns management, which, combined with other parameters regarding restrictions imposed by authorities in each country, made the response of each e-tailer specific to its own agility and capacity to manage returns in extra-normal situations This first pattern is illustrated in the Figure 12.

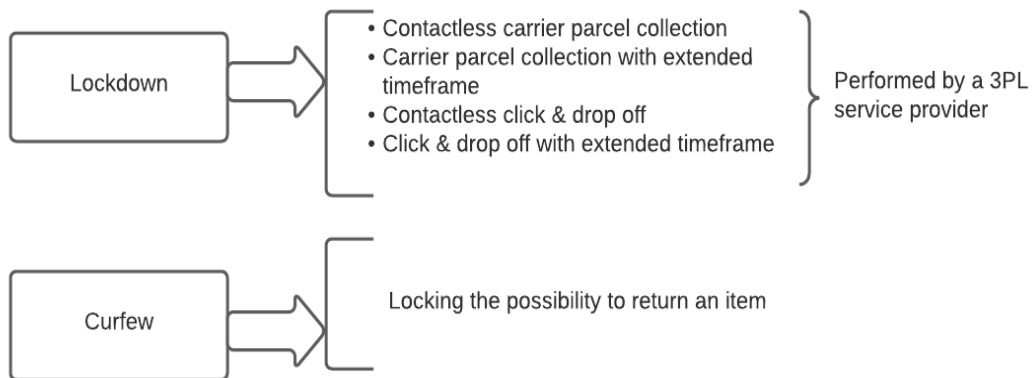


Figure 12. Second Main Pattern

In conclusion, drawing from studies' results, we conclude that companies adopted their return policies according to two important parameters. The variation of returns rate as well as the complexity of ORM during the Covid-19 crisis both influenced changes that occurred to strategies to handle returns. Thereby, changes and upgrades were specific to each country given its interpretation of the contextual settings and its resources and ability to respond to unforeseen disruptions.

6.3. Practical implications

Drawing from the discussion above, after examining the correlations and the intricacies of findings, we firstly identified that there are two major interrelations appertained to upgrading or changing completely a company's return policy to adapt to the new normal under the measures and restraints in effect during the Covid-19 crisis. These results are particularly important for practitioners such as e-tailers' managers and retail companies' managers that are using the Internet channel to sell their products.

The practical contribution of the current study lies in providing supply chain professionals, managers, and policy-makers with field-based and effective strategies to manage online returns during a global crisis such as Covid-19 or any other similar shock. Practitioners would find strategies garnered from the field of relevance as they could adjust them to be in accordance with the e-tailer's environmental settings. In fact, during similar future shocks managers would use solutions found in the current study, by choosing strategies that are in correlation with the context in which the company serves its customers. Thereby, the manager and strategist may choose to upgrade, change or conserve the same strategy to suit the uncertain and changing environment by referring to strategies, results of the study.

The study presents some lessons derived from the findings that could be useful for online retailers' managers. Firstly, an e-commerce company could adapt its return strategies according to an extreme ongoing crisis, such as the Covid-19 crisis. Secondly, e-tailers could serve their customers during an extreme issue and continue to accept products returns by using strategies that are convenient for both companies and customers. Moreover, e-tailers' managers through this study would have an insight into customers' preferences in terms of modes to handle products' returns. Besides, drawing from the study's results, e-tailers should consider the use of new technologies in their supply chain management operations, which are more appreciated from customers' stance, especially in extra-normal situations.

6.4. Limitations and future research directions

The current study includes limitations that should be addressed in future research. While the study focused on inquiring about effective ORM strategies in 9 countries where a specific type of restrictions was in effect, further research could be carried out to investigate ORM strategies during Covid-19 where other restrictions were in effect, an instance is countries where stores were opened.

The current study did not allow having an insight about ORM strategies in effect in Turkey during the pandemic spread, due to the difficulty to access to companies as well as the language barrier. Further research could focus on looking for effective strategies used by Turkish e-commerce companies.

In addition, the sample used in the research did not allow conducting a quantitative analysis. Thus, future research could use the study's data and enlarge the sample to be able to study the correlation between customers' satisfaction rate and the strategies used to manage returns during the Covid-19 crisis.

Further research could be conducted to inquire about the willingness and readiness of the companies' management to adopt and implement "Covid-friendly" and technology-based online returns strategies amid the Covid-19 crisis; especially their willingness to integrate new technologies into online returns strategies for effective management; also what are the barriers to not integrate such solutions to online returns management strategies. An opportunity exists to develop a smart model or guide of ORM that is based on a win-win approach for both e-tailers and customers in the wake of the Internet 4.0 trend.

Extreme issues like Covid-19 represent a new and unprecedented type of supply chain disruptions that bring about new challenges, with which emerge new subjects that need to be researched extensively to enrich the e-commerce management field, especially online returns management. Therefore, regarding problems faced during the virus spread, an opportunity exists to research the response of logistics clusters to the pandemic spread as well as how they handle materials sourcing and returns in a B2B context; which will be a complement to the current study that examined online

returns management during the Covid-19 crisis in a B2C context.



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APPENDICES

Appendix A: Interview Protocol for Companies

Date & Time:	Location:	Company's Code:	Interviewee ID:	Interviewee's Position:
			Tape N°:	
			Storage Path:	

Introduction:

First of all, I want to thank you for accepting to participate to this interview. I am Kawtar HIDA, MBA student at Business School of Izmir University of Economics, and I am conducting a study on online returns management amid a global crisis, particularly Covid-19 crisis. The purpose of the interview is to collect field-based data on strategies to manage effectively e-commerce products returns in the midst of a health-based crisis such as Covid-19, characterized by unique settings that change according to the geographical context.

The answers provided will be totally anonymised through a codification process, to respect confidentiality. Sensitive and classified data will not be published.

To make sure our notes accurately reflect your statements, we would like to tape record the interview. Do you have any objection? Please note that there are no right or wrong answers, we are looking for different perspectives and opinions. Don't hesitate to make a comment or ask questions whenever you feel the need to do so. The interview session will take 25 to 30 min. If you don't have any question, shall we start?

General information related to Online Returns Management and Company's profile:

1. Could you please tell me about your company's activity and size?
 - Products offerings
 - Company's size
 - Annual realized sales

2. Please tell me a little about what your position

- Title
- Seniority
- Role in handling customers' returns

3. Could you please tell me about the impact of Covid-19 on your e-tailing activity?

What are the changes that you observe during this critical period?

4. Returns profile of the company:

- Percentage of products returned per year
- Percentage or ratio of customers' satisfaction after the product return process
- Returns Rate during the Covid-19 crisis

Behaviors/ Attitudes/ Experiences on how to handle online returns during Covid-19 crisis:

5. Reactions to Government's restrictions related to travel restrictions, curfews and banned social interaction from products returns perspective. **PROBE:** you mentioned... Could you tell me more about...?

6. How could you describe your experience managing returns amid unprecedented circumstances? **PROBE:** Could you give a rating to the complexity of ORM on a scale from 1 to 5? (1: very easy; 5: very difficult)

Changes that occur to online returns patterns after the pandemic spread:

7. What are the strategies that you adopted prior to the Covid-19 spread to handle online returns?

8. Further to policies imposed by your Government, how have you adapted your online returns strategies and return policy to be able to serve your customers in the midst of the pandemic spread?

9. Did you assess the integration of new technologies such as Big Data analysis and IoT technology to deal with customers' returns under the wake of Coronavirus? **PROBE.**

Strategies adopted by the company to manage effectively online returns management during Covid-19 spread:

10. What online returns strategies were conserved even after the advent of Coronavirus? PROBE: Could you tell me more about? Could you explain your motives to conserve this/these strategy (ies)?

11. The Covid-19 pandemic spread taught us valuable lessons in diverse areas, according to you, what are the online returns strategies that you consider outdated and should be eradicated?

12. Is there any newly introduced strategies that helped you manage efficiently and effectively online returns during Covid-19?

Perceptions of challenges faced & Constructive Suggestions for Improvement:

13. What were the challenges faced inside the company while setting up new online returns management strategies? (Resistance to change from your coworkers, if any)

14. What was your customers' perception and reaction to your product returns management strategy during the pandemic spread?

15. From your point of view and from your current position, is there any solution that you esteem worth exploring to handle online returns?

- Suggestions to improve managing online returns amid a global health-based crisis

16. Can you consider managing effectively online returns during Covid-19 as a thriving tool for e-tailers? Could you explain how?

Acknowledgment:

I want to thank you for your time, consideration and dedication to accomplish this interview. It was a pleasure to exchange heated ideas on the subject of online returns. Your involvement made a great contribution to the study.

Do you have any question or comment?

Any recommendation of the next interviewee

Do you have any remark to improve the current interview?

Ending the conversation.

Off-the-record discussion.

Appendix B: Interview Protocol for Customers:

Date & Time:	Location:	Company's Code:	Interviewee ID:
			Tape N°:
			Storage Path:

Introduction:

First of all, I want to thank you for accepting to participate to this interview. I am Kawtar HIDA, MBA student at Business School of Izmir University of Economics, and I am conducting a study on online returns management amid a global crisis, particularly Covid-19 crisis. The purpose of the interview is to collect field-based data on strategies to manage effectively e-commerce products returns in the midst of a health-based crisis such as Covid-19, characterized by unique settings that change according to the geographical context. Also, the study aims to learn about customers' satisfaction about the way of handling products returns in the wake of coronavirus pandemic.

The answers provided will be totally anonymised through a codification process, to respect confidentiality.

To make sure our notes accurately reflect your statements, we would like to tape record the interview. Do you have any objection? Please note that there are no right or wrong answers; we are looking for different perspectives and opinions. Don't hesitate to make a comment or ask questions whenever you feel the need to do so. The interview session will take 15 to 20 min. If you don't have any question, shall we start?

General information related to customers relationship with e-tailers:

1. How long have you been customer of this company?
2. Frequency of purchase per month
3. Frequency of returning products

Behaviors, Attitudes and experiences towards newly introduced Online Returns Management patterns during Covid-19 crisis:

4. What is your perception of the company's returns patterns amid coronavirus pandemic? **PROBE Question** (Ask about specific strategies used by each company).
5. What was your reaction to the changes occurred to online returns patterns after Covid-19 crisis? **PROBE Question**
6. To which extent were you satisfied from the product returns processes after Covid-19 crisis? **PROBE Question**

Suggestions for Improvement:

7. Are there any worthwhile online returns strategies to be used during Covid-19 that you consider adequate and tailored to your needs? **PROBE Question** (Ask for more details)

Acknowledgment:

I want to thank you for your time, consideration and dedication to accomplish this interview. It was a pleasure to exchange on the subject of online returns from the customer's perspective. Your involvement made a great contribution to the study.

Do you have any question or comment?

Do you have any remark to improve the current interview?

Ending the conversation.

Off-the-record discussion.

Appendix C: Online Returns Management Strategies used by every e-tailer:

Company A1:

The Managing Director of company A1 states that they outsourced the operation of handling online returns during the pandemic spread to a 3PL service provider. Since delivering or collecting a parcel was prohibited by authorities; only companies that hold a recognized authorization could provide logistics services. To own the authorization, authorities have to check the sanitary protocol of the company as well as delivery and collection conditions. Given the tight restrictions imposed in Algeria, the option that was available was to outsource logistics operations. Therefore, the strategy used to handle online returns was “Carrier Parcel Collection” performed in a contactless way as explained beforehand.

Company A2:

The SC & Logistics Strategists claimed that they were attentive to the upgrades published by the governments to align with the new restrictions and guidelines. Returns wise the company upgraded all the processes including the return policy; the return timeframe was extended to be adapted to the general context imposed by Covid-19 crisis. The Carrier Parcel Collection strategy was adopted before and after the pandemic; the only changing parameter was the timeframe that became longer than usual.

Company A3:

The Managing Director of the company stipulated that they did not change anything about their return patterns, given that they did not receive any kind of restriction regarding returns management in the Netherlands. Moreover, the strategy used prior to the Coronavirus spread is adapted to the ongoing context. In fact, the Click & Ship strategy is reserved to faulty items; thereby any other cause is not eligible for the return operation.

Company A4:

The Retail Logistics Manager declared that they did not change the way they handle online returns. The Click & Drop Off strategy was used prior and during the pandemic spread, with a slight change with regards the return timeframe, which was

extended to provide customers with more time to return their orders during the lockdown. The company chose to outsource the return operation to a courier company; the aim according to the interviewee was to not taking the risk of trying a new strategy in the midst of a global crisis. Also the 3PL service provider is more cleared to manage return patterns, especially during crisis times and uncertain circumstances.

Company A5:

The B2C & Retail Logistics Specialist stipulated that they upgraded the return timeframe so that every customer that prefer to return their order can do it after the end of the state of emergency to preserve customers and employees' health. The Fevad (The French E-commerce Federation) restriction delineate that an order could be returned after 1 month and 14 days from the end of the state of emergency. The adopted strategy to handle returns was the Carrier Parcel Collection. A 3PL company handles the pick up process but the actual return demand processing is done internally.

Company A6:

The Product Compliance & Shipping Specialist contended that they didn't accept returns for items below 10\$ during the lockdown. Given that the physical stores were shut down, which was a huge lost (70% of sales were realized through brick-and-mortar stores). The interviewee declared that to recover from the expense the company have incurred, they had to tighten up their return policy. In addition, the e-commerce federation discouraged offering the possibility to return an order. Therefore, for items below 10\$, no exchange or return were accepted. For items costing more than 10\$, exchange were accepted within 30 days from the date of delivery, as defined by the national e-commerce federation. Also, a faulty item is exchanged.

In order to have extensive details about the actual operation of returns, we interviewed the parcel deliveryman, who was working at the forefront line of logistics operations, he declared that:

“After a customer has scheduled an exchange online and ordered a new product, we collect the parcel and we drop off the newly ordered item. The repayment of the

difference or extra payment is done online, we did not accept any money and we wasn't ask to repay any difference to the customer. To prove that the customer received his order and handed his returned product, we sign in the customer's place, in his presence."

We conclude that the only applicable strategy was "Deliver & Collect".

Company A7:

The Logistics Customer Service Coordinator stipulated that from January to April, they were accepting returns and the operation of collecting returned items was performed by a 3PL (Carrier Parcel Collection). Also, they did not accept returning 2 or more from the same items. As of 31 April, they did not allow any returns. The reason was that in Canada, they don't have laws or restrictions that impose to retailers to accept returns, the consumer protection act gives consumers some rights to get refund, but there are no requirements in this regard.

After an email conversation with the company, they said that after the ease of restrictions and the end of lockdown, they start accepting exchange using the Collect & Deliver strategy.

Company A8:

The Logistics Director said that they used the Contact-free parcel drop off through postal locker drop off services. Also, they specified through email conversation that they extended the return timeframe to give their customers more flexibility.

Moreover, the Logistics & Customer Service Operative asserted that the customer that wants to return a product has to book it online through the portal. The return label is sent as a QR code on the customers' device. Once at the post office, the customer has to scan the QR code, the locker door opens automatically to allow the customer to drop off the parcel. It is the same strategy except for the "label-less" and "contactless" options that are added post-covid-19 crisis to facilitate the return process for customers and minimize contact between customers and post officers.

Company A9:

The Junior CR Manager stipulated that the "Buy Online Return to Store" is no longer a valid option; only carrier collection option was in effect. The newness is the Contactless Carrier Parcel Collection. This strategy was adopted worldwide.

Company A10:

Senior Logistics Manager asserted that they only conserved the “Return via Postal Services” (Click & Drop Off) strategy and they extended the return timeframe up to one month, instead of 15 days from the date of delivery. The Buy Online Return to Store strategy is non longer available as all stores were shutdown by authorities to contain the virus spread.

Company A11:

The Logistics & Shipping Supervisor declared that the company used the Contactless Pick up Courier Service (Carrier Parcel Collection). It consists in customers have to initiate the return online; a pick up timeslot will be scheduled by one of the courier services, company’s partners. The driver collects the parcel from the customer’s doorsteps in a contactless way. It is the same strategy as the one used prior to the pandemic spread, the only changing parameter is the contactless feature.