



Typology of E-commerce Shoppers: The Case of COVID-19

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Abstract

Purpose: The spread of COVID-19 has drastically changed the entire market structure and shopping behaviors across the world. While shoppers rushed towards e-commerce platforms during the pandemic, the key debate that rose was on how this behavior will evolve post-COVID-19. The purpose of this study was to explore the different categories of e-commerce platforms' users, and propose a distinctive customer typology in the era of the COVID-19 pandemic.

Methodology: An exploratory qualitative research design was adopted due to the novelty of the subject. 43 participants were interviewed, including 27 consumers and 16 experts in the field of e-commerce.

Findings: Based on the findings, the study distinguishes between two stages of e-commerce usage during the pandemic. Furthermore, it identifies four key typologies of e-commerce shoppers that are expected to form at the end of the coronavirus: *duty-bound*, *e-watcher*, *makeshift*, and *onli-vorous shoppers*. The characteristics and businesses strategies pertaining to each of the identified groups are discussed.

Originality: This research is among the first to identify the different stages, while proposing an innovative typology of e-commerce platform post-COVID-19. It also offers useful recommendations to deal with similar future crises.

Keywords: *COVID-19, pandemic, E-commerce, online shopping, typology*

1. Introduction

Economic crises create strong competitive pressure, which forces companies to alter their marketing strategies (Perrien, Filiatrault and Ricad, 1991). Marketing studies on the influence of economic crises have largely focused on businesses (e.g. Grewal and Tansuhaj, 2001; Ang, 2001; Koksal and Ozgul, 2007; Lythreatis, 2021), yet moderate attention has been paid to consumers. During times of crises, businesses tend to focus on creating greater flexibility and adaptation while trying to stimulate demand. In an apparent contradiction, consumers tend to reduce spending and increase saving (Ang, 2001). The change of buying patterns during economic difficulties is usually

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3 met with changes in business strategies to reduce expenses, maintain profitability, increase
4 promotion, and decrease advertising costs.
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6 Ang (2001) suggests that consumption behavior may require similar adjustments to crises
7 that may have different impacts as crises hit consumers both financially and psychologically
8 (Koksal and Ozgul, 2007). In survival psychology, it is widely agreed upon that human behavior
9 might undergo changes following key events such as natural disasters and disease outbreaks that
10 threaten life (Yuen *et al.*, 2020). A rise of global pandemics has marked the past decades affecting
11 social life and business operations worldwide. In particular, the Covid-19 virus has drastically
12 affected economies (Abosedra *et al.*, 2021; Tran, 2021).
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18 The COVID-19 pandemic has been shaping the marketing world, creating a new normal that
19 companies are striving to adapt to (Islam *et al.*, 2020; Tarhini *et al.*, 2022). It has been changing
20 businesses' go to market strategies and consumers' shopping behavior affecting the retail
21 marketing landscape (Zwanka and Buff, 2021). Hence, the aim of this study was to explore the
22 different categories of e-commerce platforms' users and develop a general typology of shoppers
23 based on the impact of the COVID-19 pandemic. Predictably, shoppers were bound to switch
24 rapidly to e-commerce platforms, forcing businesses to take immediate actions. Subsequently and
25 as our findings show, companies fell into two main categories (1) businesses that have seen
26 COVID-19 as an opportunity to maintain their competitive advantage and maximize profits by
27 shifting towards e-commerce, and (2) traditional retailers that still lagged behind at the threat of
28 vanishing.
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37 As lockdowns across countless global markets were imposed, companies had to focus on
38 the fast-growing information technology to achieve cost efficiency and maintain survival (Laato
39 *et al.*, 2020; Lesame *et al.*, 2021). To maintain their competitive advantage, retailers integrated
40 technology into their physical in-stores through introducing the concept of click and collect (Farah
41 and Ramadan, 2020). In fact, consumers who live through a pandemic might have a long-lasting
42 consumption behavior change (Kim, 2020). Various types of online shoppers emerged with
43 differing perceptions with regards to e-commerce platforms. Accordingly, it became imperative
44 for businesses to understand the change in consumers' usage of these platforms, as well as their
45 engagement level and willingness to purchase online.
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53 Seminal research proposed customer typologies based on motivation (Westbrook and
54 Black, 1985), experience (Gehrt and Shim, 1998), and online channels (Rohm and Swaminathan,
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2004). More recently, e-commerce has been gaining a rising interest amongst businesses for it offers consumers economic gains (Zhang *et al.*, 2017) alongside convenient information on needed products (Li *et al.*, 2020). Given the recency and unprecedented conditions that the COVID-19 virus has brought to business markets, research analyzing the impact of market uncertainties on consumer shopping and businesses' e-commerce-related strategies remain scant.

Though the contemporary literature in the field includes various online shopping typologies, they predominantly focused on the e-commerce landscape before and during Covid-19. Accordingly, this research aims to specifically tackle the different categories of e-commerce platforms' users in the post-COVID-19 environment, which would add significantly to the current literature. Given the substantial shift to e-commerce during Covid-19, our study extends current knowledge of consumer typologies within that context. The suggested typology related to e-commerce can assist businesses to identify and target distinct segments of consumers with tailored offerings post-pandemic. Hence, this paper, which is amongst the first in the post-pandemic literature, proposes an adjustment of companies' marketing strategies. This is done in light of the shift in consumers' online behavior across the different identified segments to answer the following research questions:

RQ₁: What were the stages and key facilitators of e-commerce platforms' usage during the COVID-19 pandemic?

RQ₂: What are the new predominant segments of e-commerce in a post-COVID-19 world?

An exploratory qualitative approach based on semi-structured interviews with both consumers and experts were adopted to address the proposed research questions. Accordingly, this paper first discusses the literature related to consumer typologies, e-commerce characteristics and potentials, and the impact of the COVID-19 pandemic on e-commerce. The literature review is followed by an extensive methodology section and the analysis of the findings. The implications are then presented and discussed alongside possible research venues that can build on this present study.

2. Literature Review

Recent studies on shoppers' typologies were predominantly based on online motivational, relational, and behavioral aspects that take into consideration human cognitive and affective

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3 motives related to individual gratification and satisfaction (Rohm and Swaminathan, 2004; Sparks
4 and Bradley, 2014). There are two key observations that the literature has not yet paid attention to.
5 Firstly, despite the high number of studies on online consumer typology, the literature – with the
6 exception of a few studies that have directly examined consumer online typology in relation to
7 brand relationships (Mrad and Cui, 2020; Waqas *et al.*, 2020) – tends to ignore the other side of
8 the exchange, namely online businesses with whom consumers interact frequently. This partial
9 inclusion of brands does not mean examining businesses' role in the creation of such typology. In
10 sum, the literature lacks a dyadic approach to properly explore and understand online consumer
11 typology and its impact on e-commerce. Secondly, the literature needs a proper understanding
12 about the impact of economic and natural crises on consumers' usage of the internet. Existing
13 studies that have examined the effect of economic and natural crisis on consumer behavior have
14 solely focused on the offline context (Hampson *et al.*, 2018). Given the significant impact that
15 Covid-19 has on consumers worldwide, the literature is in desperate need for a deeper
16 understanding of the bearing that the pandemic has on e-commerce.
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29 30 *2.1 Consumer typologies*

31 A consumer typology groups individuals based on their shopping patterns, attitudes, motives,
32 similarities and differences. It is characterized by a strong heterogeneity between the different
33 available types (Zoll *et al.*, 2018). In order to address this heterogeneity, marketers base their
34 research on market segmentation to better understand their current and potential consumers, and
35 target specific segments by implementing personalized programs and offers (Bressolles *et al.*,
36 2014). Such a typology thus highlights the classification and categorization of consumers'
37 behaviors. Accordingly, they form the basis for effective marketing strategies (see Table 1)
38 including segmentation, targeting and positioning (Hampson *et al.*, 2018)
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46 In e-commerce related research, studies scrutinize online consumers' behavior based on
47 their attitudes, purchase orientation, shopping intention and experience, as well as psychographic
48 and demographic variables (Ballestar *et al.*, 2018; Ladhari *et al.*, 2019). These segmentation
49 criteria indicate that an online consumer audience cannot be considered as a single segment; it is
50 rather clustered into different online market segments with unique behavioral differentiating
51 characteristics (Huseynov and Yıldırım, 2017). Unlike previous research, Huseynov and Yıldırım
52 (2019) segment online consumers based on psychographic criteria, and identify four different
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3 online consumer segments: *shopping lovers*, *direct purchasers*, *suspicious browsers*, and
4 *incompetent consumers*. *Shopping lovers* enjoy purchasing online as they tend to engage in
5 recurrent online impulsive purchasing. *Direct purchasers* focus on decisive purchases rather than
6 impulsive buying. *Suspicious browsers* use online stores to stay up-to-date on the latest trends and
7 offerings, rather than for online purchases as they are characterized by online-shopping distrust.
8 Characterized by their minor online purchases, *incompetent consumers* do not engage in online
9 shopping as they find it hard to surf e-stores and prefer being physically accompanied for the ease
10 of advice and enjoyable experience.

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12 Updated shopping typologies have also been proposed to analyze consumers' behavior and
13 adaptability during an uncertain situation or a pandemic outbreak (Calvo-Porrall and Lévy-Mangin,
14 2019; Baker *et al.*, 2020). During the COVID-19 pandemic, shopping behavior has been deeply
15 affected; indeed, Hartono *et al.* (2021) have explored the shopping patterns and adaptability of
16 shoppers during the pandemic based on their attitudes and behaviors, and have suggested a
17 typology based on consumers' adaptive patterns during the outbreak. This revised typology
18 incorporates health- and social-consciousness related needs based on key concerns that emerged
19 during the pandemic, which shaped consumers' overall attitudes vis-à-vis online shopping in
20 specific segments.

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22 On another dimension, Wang *et al.* (2020) have identified a typology of marketing
23 innovation strategies for retailers to be able to cope with the disruptive environment and the
24 changing consumption patterns that emerged during Covid-19. The typology was based on two
25 dimensions, the *motivation for innovations* that translates the level of crisis affecting the firm, and
26 the *level of collaborative innovations* that highlights whether the firm will independently innovate
27 by its own resources or co-innovate with other firms to achieve and complement their strategies
28 (Wang *et al.*, 2020).

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30 While the extant literature has suggested different online shopping typologies pre- and
31 during the Covid-19 pandemic, further research is needed specifically for a post-COVID-19
32 environment. This shall inform companies on the relevant marketing strategies that would address
33 the changing online behavior of the various customer segments in a post pandemic landscape.

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55 **INSERT HERE: Table 1:** Review of the online typology literature.

2.2 E-commerce characteristics and potentials

The fast diffusion and constant expansion of technology caused major shifts in commerce (Jindal *et al.*, 2021). E-commerce, which is an electronic means for buying or selling products over the Internet, has surpassed traditional commerce, as it provides accessibility to the smooth flow of information on a practical platform along with a flexible communication process between the buyer and the seller (Tran, 2021). For e-commerce to be effective, firms must highlight the performance efficiency, increased transactions and the cost savings of this platform in contrast to the traditional commerce (Dabbous and Tarhini, 2019). E-commerce has proved to offer many benefits in light of the accelerating pace of globalization, including the ability of firms to compete across several dimensions, reduce costs, access different geographical markets, and create closer relationships between businesses and customers (Lorca *et al.*, 2019). The internet served businesses and retailers to be globally recognized on the web through the optimization of an omnichannel retailing approach (Jindal *et al.*, 2021). In addition, the increased application of “just-in-time” in e-commerce addressed the challenge of inventory surpluses and/or shortages (Islam *et al.*, 2020). Moreover, through analyzing routine purchases, businesses such as Amazon increased revenues by expanding their offerings to include a vast array of products, which helped them reach a larger target audience (Caro *et al.*, 2020).

The rise of e-commerce created the need for last-mile delivery (Joeress *et al.*, 2016; Farah *et al.*, 2020a), which is the final connection, linking the delivery of products from fulfillment centers to the agreed collection locations (Gevaers *et al.*, 2009; Farah *et al.*, 2020b). Last-mile delivery includes investments in autonomous delivery solutions, buy-online-pickup-in-store, and free delivery upon minimum purchase limits (Seghezzi *et al.*, 2020). Compromising between pricing, customers’ expectations, and service levels is a challenge to many businesses since last-mile delivery holds 30 percent of the entire business process (Lim *et al.*, 2018).

Not only is e-commerce beneficial to businesses, but it also enhances consumers’ overall shopping experience (Trofimov, 2018). Indeed, it facilitates engagement on multiple online channels by integrating various activities across them (Ailawadi and Farris, 2017). The need for convenience gave popularity to online shopping, which allowed consumers to save the time required to search for products and complete the purchase transaction (Khan, 2016). Businesses have been urged to put in place an omnichannel strategy to unify consumers’ experience

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3 (McDermott, 2015; Itani et al., 2022), which strengthened consumer-brand relationship and
4 customer loyalty (Cui *et al.*, 2018; Mrad, 2018; Mrad *et al.*, 2020). With time, the development of
5 innovative technologies redefined the whole consumer journey by creating a highly digitized
6 retailing experience (Farah *et al.*, 2019; Farah *et al.*, 2022). To remain competitive, businesses
7 must keep abreast of the continuous technological innovation as consumers always seek
8 enhancements and creativity in places, products, services, and promotions (Nieroda *et al.*, 2018).
9 In fact, e-commerce helps businesses in (1) building awareness for new customers, (2) sales
10 conversion, and 3) customer retention through the personalization of the online shopping
11 experience (Naeem, 2021).
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20 *2.3 COVID-19 impact on e-commerce*

21 The Coronavirus disease (COVID-19) emerged in Wuhan in the last quarter of 2019. As of
22 February 13 2021, there have been roughly 108 million confirmed cases of COVID-19, including
23 2.373 million deaths reported to the World Health Organization (WHO, 2021). Governments
24 worldwide urged their populations to adopt social and physical distancing, which heavily affected
25 retail sales. Accordingly, businesses found themselves obliged to accelerate the integration of e-
26 commerce and last-mile delivery into their core operations to adapt to the new unforeseen reality
27 and customers' swift shift to online shopping (Joerss *et al.*, 2016).
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34 COVID-19 caused consumer panic purchases, which also led to disruption within the
35 supply chains among retailers as governments imposed self-quarantine and self-isolation (Zheng
36 *et al.*, 2021). Employees at retail stores worked at a faster pace and struggled to meet the
37 overwhelming demand for products. Retailers have also suffered from production fulfillment
38 delays due to halt in production, shut down of factories, shortage in raw material, and decrease in
39 cargo movements (Gaikwad and Dhokare, 2020). Undoubtedly, many shopping habits were altered
40 since consumers under lockdown discovered a more convenient, accessible, and affordable
41 alternative (Sheth, 2020). What started as a restrained and compelled online purchase covering
42 basic necessities, developed into bigger basket sizes, that included numerous product categories.
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50 Although consumers desire social environments and will rush towards retailers after the
51 coronavirus, some are likely to permanently shift towards online shopping, which will have a big
52 impact on the e-commerce businesses in the long run. Nonetheless, according to Laato *et al.*,
53 (2020), the decision of adopting e-commerce goes far beyond the technology it delivers, since it is
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3 capable of shaping the shoppers' online experience by engaging them as they practice community
4 containment during the pandemic (Ginzarly and Teller, 2020). During the evaluation of their
5 experience, consumers would seek fairness in exchange for value, service excellence, efficiency,
6 and satisfaction (Jin *et al.*, 2019; Itani *et al.*, 2019). Accordingly, retailers will have to balance
7 between traditional and technological retail to ensure that consumers enjoy a unified experience
8 post the COVID-19 pandemic.
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15 **3. Research Methodology**

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17 In order to better understand how consumers' shopping behavior and corporate strategies were
18 affected by the spread of COVID-19, a qualitative approach was employed. Semi-structured
19 interviews were designed and conducted with 43 participants, including 27 consumers and 16
20 experts in the field of e-commerce. Accordingly, an exploratory qualitative research design was
21 adopted due to the novelty of the subject. Due to the spread of the COVID-19, all the in-depth
22 semi-structured interviews were conducted using the Zoom online meeting platforms. Each
23 interview lasted an average of 38 minutes. The data collection was conducted spring 2021.
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27 The sample followed a pre-selection criterion to ensure that each consumer shopped online
28 at least once a week during the COVID-19 period. The consumer interviewees' gender split was
29 quasi equal (52 percent male and 48 percent female), and their age ranged from 21 to 48 years. On
30 the other hand, the expert participants included professionals with a variety of relevant roles, such
31 as store managers, IT managers, financial and system analysts, retail and supply managers, e-
32 commerce merchandise managers, and business owners. All the experts had a minimum of 8 years
33 of experience in e-commerce. Non-probability purposeful (convenience) sampling was utilized in
34 the selection criteria for participants (Eisenhardt and Graebner, 2007). The sample size was defined
35 by the data saturation principle (Guest *et al.*, 2006), which was reached by the 25th consumer and
36 14th expert interview. Two additional interviews were conducted with each respondent category to
37 ensure that no additional insight was left out (Morse, 1995). Before proceeding with the interview,
38 all interviewees were assured anonymity and confidentiality and were informed that the interview
39 would be audio-recorded. Interviews were only conducted with those who provided their full
40 consent.
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44 The researchers presented the consumer interviewees with a series of open-ended questions
45 concerning the following subject areas: the impact of COVID-19 on their consumption behavior,
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3 online shopping experience, concerns, and features sought on e-commerce platforms when
4 shopping online, as well as their expectation regarding the future developments of e-commerce
5 platforms post COVID-19. As for the expert interviewees, they were presented with a series of
6 questions regarding the impact of COVID-19 on sales and supply chain, businesses practices that
7 were adopted during the pandemic, risks emanating from e-commerce platforms on brands and
8 retailers, techniques implemented to attract new customers and increase loyalty, and last but not
9 least, their vision towards e-commerce platforms post-COVID-19. Probing techniques were used
10 in order to uncover the hidden motivations behind interviewees' various behaviors and actions
11 (Creswell and Miller, 2000).

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13 Interviews were recorded, transcribed, and coded. The data analysis conducted through
14 NVivo 12 was performed on the verbatim transcriptions of all the interviews to extract key themes.
15 An inductive thematic approach was adopted to code, classify, assess, and record themes (Boyatzis
16 1998). Following key qualitative research approaches and recommendations (Creswell and Miller,
17 2000), validity was ensured through triangulation: member-checking, exploration of respondents'
18 personal experiences, and close collaboration with them. Indeed, inter-coder reliability reached
19 96% on the transcribed data which was then reconciled between two researchers.

20 21 22 23 24 25 26 27 28 29 30 31 32 33 **4. Findings**

34 The research analysis resulted in the identification of the different stages of e-commerce platforms'
35 usage throughout the COVID-19 pandemic. During the virus outbreak, the stages of e-commerce
36 platforms' usage came as follows for both consumers and businesses: (1) *resigned acceptance*,
37 and (2) *adapting for the new e-normal*, which includes two divergent behaviors namely *reluctant*
38 *usage* and *keen acceptance of the needed change*. The findings also allowed for the identification
39 of a prospective typology of e-commerce users post COVID-19.

40 41 42 43 44 45 46 47 *4.1 The stages of e-commerce platforms' usage during COVID-19*

48 With the spread of COVID-19, some consumers and businesses kept their traditional behaviors
49 and practices, while countless others have shifted their focus towards online platforms in a way to
50 fight back the consequences of the pandemic. Those online behaviors were categorized into two
51 different stages:
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3 “Resigned acceptance” was the first stage of e-commerce usage at the onset of COVID-19. The
4 initial response of both consumers and businesses was an immediate result of enforcement rather
5 than contentment as both entities preferred the traditional methods of shopping. In fact, changing
6 consumers’ behaviors or habits in a short period of time is typically known to be challenging. This
7 held particularly true for consumers who switched their purchases to become online only for
8 necessity goods such as food, water, and hygienic products (Laato *et al.*, 2020).
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13 *“I am not an online shopper; however, due to the lockdown, I started purchasing my food*
14 *and hygiene necessities online since there was no other choice.” (consumer interviewee,*
15 *female, 41 years)*
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20 Purchasing online allowed these shoppers to avoid crowded places and protect themselves from
21 the spread of the virus. Furthermore, the enforced lockdowns as well as the sales limits imposed
22 by supermarkets on the purchase of essential items urged consumers to find alternative shopping
23 methods to survive. This created a barrier for ordinary shopping transactions to take place.
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27 *“It was mandatory to find a way to buy the goods you want without going out from home*
28 *to avoid the spread of the virus.” (consumer interviewee, male, 27 years)*
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32 On the other hand, compelled businesses started implementing basic e-commerce services during
33 COVID-19. These companies did not consider developing an online platform for future uses;
34 instead, their focus was to maintain their basic operations in the short-term. Since fines were
35 imposed on those who did not comply with safety regulations, many offered delivery and pick-up
36 services, as well as phone call ordering to meet consumers’ orders.
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41 *“We targeted elderly by offering an alternative for e-commerce by placing their orders*
42 *through a phone call; the call center places the orders online and the next day customers*
43 *can pick up their order.” (expert interviewee, assistant manager, 13 years of experience)*
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46 *“To comply with the new regulations, we were obliged to adapt to this pandemic and*
47 *encourage customers to check our products online although they still preferred to come to*
48 *our physical stores.” (expert interviewee, business owner, 15 years of experience)*
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53 The second stage was “*adapting for the new e-normal*”. In this stage, consumers and businesses
54 alike were convinced that e-commerce platforms are actually useful and vital; accordingly, they
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3 started adjusting their attitudes and strategies towards e-commerce during the pandemic. Although
4 within this stage people started adapting to the concept of online shopping, the level of adaptation
5 differed. Two types of approaches were actually observed: *reluctant usage* and *keen acceptance*
6 *of the needed change*.
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10 Regarding the *reluctant usage of e-commerce platforms*, rather than making it as a habit,
11 consumers considered e-commerce a temporary method to survive the current pandemic to satisfy
12 their basic needs. Adapting to e-commerce was part of a learning curve, yet was not intended to
13 be developed in the longer-run. Besides, no deep relationship was built between customers and
14 purchased products at that stage, as customers were fixated on product categories rather than
15 specific brands. These consumers are expected to shift back to traditional shopping methods once
16 the pandemic is over.
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22 “During COVID 19 period, using e-commerce platforms was a temporary solution;
23 however, on the long-term, I will shift back to traditional shopping that I enjoy much
24 more.” (consumer interviewee, male, 31 years)
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29 According to the expert interviewees, the adoption of e-commerce platforms by some businesses
30 was a way to have a short-term fix of fast declining sales. They needed to continue catering for
31 their customers’ basic needs, hence, they had to switch their operations online in order to maintain
32 their presence in the market. Accordingly, these companies did not invest heavily in e-commerce
33 platforms, and only used them in their basic form to ensure their survival in the short-term. Indeed,
34 such basic e-commerce presence did not offer features allowing the development of long-term
35 customer loyalty based on consistent engagement and interactions.
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41 “We were so busy salvaging the business that we opted for quick basic solutions to keep
42 operations running. This forced us to focus on basic functionalities such as delivery and
43 pick up organization rather than fostering engagement with our customers.” (expert
44 interviewee, e-commerce merchandise manager, 10 years of experience)
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50 In relation to the *keen acceptance of the needed change*, consumers’ consumption increased as
51 they started shopping for additional categories. Some interviewees even declared that online
52 shopping has become part of their daily life. Due to quarantine and intermittent lockdowns,
53 consumer’s online surfing and shopping became an entertainment. In their home confinement,
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3 shoppers were exposed to new websites and wider ranges of products and services. Their shopping
4 behavior no longer focused solely on necessities, but started including luxuries such as clothing
5 and gadgets.
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8 *“The lockdown increased my emotional shopping. I started purchasing things I do not*
9 *really want because of stress, boredom, and feeling unhappy.” (consumer interviewee,*
10 *female, 29 years)*
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15 Furthermore, and according to experts’ opinion, some businesses started implementing new online
16 practices to enhance their performance in order to survive throughout this economic crisis that has
17 threatened most small to medium-sized businesses. Since companies were incurring costs while
18 their returns remained low due to recurring lockdowns, the latter opted to increase business
19 partnerships to spread costs while ensuring a better experience for customers. Businesses adapted
20 to this particular economic turmoil, preparing themselves for future uncertainties. They extensively
21 developed their e-commerce platforms to engage consumers and build long-term relationships.
22 Besides, increased customers’ screen-time due to home-confinement prompted businesses to
23 launched creative campaigns that encourage consumers to increase their online shopping across
24 various categories.
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32 *“We are considering partnership with other businesses to share costs and increase*
33 *customer retention and satisfaction.” (expert interviewee, financial and system analyst, 23*
34 *years of experience)*
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39 The spread of COVID-19 affected both consumers and retailers alike. It has changed the rules of
40 engagement since the lockdown limited the traditional shopping method for most of the year 2020.
41 Nonetheless, businesses that took advantage of this period to develop their e-commerce strategies,
42 have secured their business sustainability for the long run while achieving higher revenues.
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48 *4.2 Key facilitators of e-commerce usage during COVID-19*

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50 The findings revealed that the core factors influencing e-commerce related purchases during the
51 COVID-19 pandemic included: (a) *last-mile delivery*, (b) *new customer recruitment*, and (c)
52 *shopper retention*.
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3 Last mile-delivery is a crucial pillar in the overall e-commerce shopping experience. In
4 fact, the recurrent lockdowns during COVID-19 created demand and supply uncertainty (Zheng *et*
5 *al.*, 2021) as consumers rushed to heavily order supplies online fearing they would run out of basic
6 necessities. Such uncertainty could have a major effect on last-mile delivery services, which could
7 jeopardize the e-commerce experience since consumers expect immediate gratification from
8 online purchases (Ramadan *et al.*, 2019). In such circumstances, companies that manage to offer
9 convenience, same-day or next day delivery and effective delivery-tracking were able to secure a
10 key competitive advantage vis-à-vis the countless e-commerce platforms available.

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17 *“While shopping online, my main concern is the next day delivery [...] Also, other website*
18 *features I look for while shopping online are easy to use, ability to track my order and the*
19 *efficiency of the delivery service (consumer interviewee, male, 25 years).”*
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24 Moreover, interviews conducted with experts revealed companies’ strategies to attract new
25 customers, build long-term relationships and harness loyalty during COVID-19. Since COVID-19
26 imposed quarantine and closure of entertainment locations, time spent daily on the internet
27 increased drastically. Therefore, businesses invested heavily in social media platforms considering
28 it essential to attract new customers (Naeem, 2021).

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33 *“The presence of business on social media is very important because consumers spend*
34 *most of their times there. Social media is where businesses can reach their audience*
35 *through targeted ads.” (expert interviewee, e-commerce manager, 15 years of experience)*
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40 With the surge of e-commerce platforms, competition became fierce. To retain customers,
41 businesses started offering loyalty programs, including cashbacks and points programs. Initiatives
42 were introduced to create a sense of familiarity towards newly updated loyalty programs in order
43 to attract and retain customers.

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47 *“To encourage customers to ‘click’ more, loyalty programs, discounts, and offers geared*
48 *toward online shopping will push customers to buy more, creating a self-conscious loyal*
49 *customer.” (expert interviewee, retail and supply manager, 7 years of experience)*
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53 4.3 A proposed typology of e-commerce users post-COVID-19

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3 According to the findings, it is expected that the usage of e-commerce post COVID-19 would defer
4 depending on the type of users. Indeed, during the pandemic, online shopping behavior was already
5 distinct from a consumer to another, which allowed for the development of a typology of e-
6 commerce users, including *duty-bound*, *e-watcher*, *makeshift*, and *onli-vorous shoppers*.
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10 The first type of e-commerce users identified as “*duty-bound shoppers*” includes those who
11 are resistant to change no matter the circumstances. This category prefers traditional methods of
12 shopping, considering it more convenient. Shopping the traditional way has an evident edge over
13 e-commerce, since it allows consumers to physically touch the products and negotiate pricing and
14 payment methods.
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18 *“I prefer traditional shopping since physically touching the products helps me make better*
19 *purchasing decisions. Besides, it is less risky.” (consumer interviewee, male, age, 24 years)*
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24 Due to the recurrent lockdowns, this category had no other option but to shift to e-commerce
25 platforms. Duty-bound shoppers fall under the “resigned acceptance” stage of e-commerce
26 platforms usage, which is due to compulsion rather than contentment. The main purpose of these
27 users is to minimize contact with people due to the spread of the virus. They only purchase daily
28 necessities such as food, water, medications, and hygiene-related products.
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32 *“COVID-19 obliged me to use e-commerce, but I’m still not very convinced of using online*
33 *shopping, although it made it easier and made it possible during this period, I prefer using*
34 *it only for necessary products when I can't go out.” (consumer interviewee, female, 35*
35 *years)*
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41 In addition, duty-bound shoppers lack trust in online platforms as they have related concerns
42 regarding privacy, reliability, and transparency (Mahdi *et al.*, 2022). These shoppers do not enjoy
43 online shopping, since they were rather compelled to do it during COVID-19. This group is likely
44 to shift back to traditional shopping at the end of the pandemic.
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48 *“I do not trust e-commerce platforms. I am afraid my card would be hacked, that is why I*
49 *always pick pay cash option. I can't wait for the pandemic to end to go back to the stores.”*
50 *(consumer interviewee, female, 24 years)*
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3 The second category is “*e-watchers*”. This type of consumers tends to watch the online activities
4 of businesses without avidly engaging and purchasing. This category is interested in online
5 shopping, yet is reluctant to actively act upon it. Indeed, e-watchers are not keen to develop
6 relationships with e-commerce sites. They use various platforms as a way to stay up-to-date with
7 the latest trends and might consider purchasing either online or offline only after tangibly checking
8 the products in a physical store, basically showrooming.
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13 *“I use e-commerce sites to catch up with new trends regarding clothes and other*
14 *products... I am getting used to it but I still prefer to shop in-store because I can touch and*
15 *sense the product.” (consumer interviewee, female, 35 years)*
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20 During COVID-19, businesses have invested in their e-commerce platforms to engage customers
21 and retain them. However, e-watchers remained silent watchers; they did not interact with what
22 the brand offered although they were constantly checking other consumers’ reviews and
23 recommendations.
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27 *“I am not easily lured into brands’ messages and ads on e-commerce sites. I go there to*
28 *check the reports and real feedback posted by other customers. I typically read online*
29 *reviews before making any buying decision” (consumer interviewee, male, 32 years)*
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34 The third group, “*makeshifts*” are consumers who use all means of shopping whether online or in-
35 stores. They only care about convenience and do not care about building any relationship with the
36 retailer. During COVID-19, this category was interested in online shopping since businesses
37 offered same-day and next-day deliveries as well as offers and discounts. Makeshifts do not show
38 commitment to any specific method of shopping.
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42 *“For some products, I would find it more convenient to do traditional shopping, while for*
43 *other products e-commerce would be more convenient.” (consumer interviewee, male, 30*
44 *years)*
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50 This category searches for the best combination of pricing, offers and discounts, quality, and fast
51 delivery dates. Makeshifts use online shopping when they need international products that are not
52 found in their market. They consider shopping (whether in-store or online) as a mean to fulfil their
53 purchasing need:
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3 *“My main goal while I am shopping online is to save time and find new products especially*
4 *within my expected price range.” (consumer interviewee, male, 38 years)*
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8 The final type of e-commerce users is “*onli-vorous*” who are addicted to online shopping. They
9 purchase their desired products on a daily basis from e-commerce platforms. The users in this
10 category have always been avid online shoppers. With the spread of COVID-19, their online
11 purchased increased drastically as they started shopping for new product categories.
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14 *“I would consider myself as an online shopper addict. I have taken online shopping as a*
15 *habit and even an addiction to some extent. It is just easier, more convenient, and time*
16 *saving.” (consumer interviewee, female, 25 years)*
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22 Since people were home-bound for long periods of time, with no place to go to and little activities
23 to do, online shopping became a habit, and more importantly a driver for a new lifestyle. A strong
24 relationship was built between customers and businesses, especially those who offered loyalty
25 programs for online transactions. Online shopping soared as consumers felt bored, stressed, and
26 unsatisfied. Onli-vorous shoppers considered online purchasing not only a relief, but also a hobby,
27 which is some cases developed into an impulsive consumption behavior (Islam *et al.*, 2020). This
28 category will never consider returning to traditional shopping methods. They believe that e-
29 commerce will further develop their virtual reality features (Farah *et al.*, 2019.) to become even
30 more convenient and enjoyable.
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33 *“Some platforms are becoming extremely interactive and engaging through the use of*
34 *virtual reality, which allows me to experiment with the product I want without having to*
35 *go out of my home. I don’t see myself going back to the crowd of physical stores when the*
36 *pandemic ends”.* (consumer interviewee, male, 33 years)
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46 In sum, the study shows that not all consumers perceive and use e-commerce platforms the same
47 way. Therefore, companies’ approaches must be tailored to the various types of e-commerce users
48 hereby described. During COVID-19, many businesses lost their position in the market because
49 they did not seize the opportunity enough to grow through e-commerce. Nevertheless, companies
50 who have fully integrated e-commerce related technologies into their business have witnessed
51 customer retention, high sales incremental, and stronger market position.
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5. Discussion and Implications

Unlike earlier research, this study based the proposed post-COVID typology following a thorough analysis of the stages and key facilitators of e-commerce platforms' usage and customers' online shopping patterns during the COVID-19 pandemic. The typology, which has been derived from both consumers and experts' perspectives, depicted the new predominant segments of e-commerce in a post pandemic world. The findings gathered through this exploratory study indicate how the spread of COVID-19 transformed the entire market and the way various online consumers shop.

From a scholarly perspective, this paper fills a sizeable gap in the literature as it tackles the impact of market uncertainty on consumers' shopping behavior and businesses' operating techniques. In fact, the spread of COVID-19 has changed the market structure and created new lifestyles and shopping habits (Sheth, 2020). The identification of two consecutive stages of e-commerce platforms' utilization, characterized by a *resigned acceptance*, followed by an *adaptation to the new e-normal*, enhance the literature on the development of consumers' and businesses' behaviors within an accelerated e-context that was triggered by the pandemic. Nonetheless, the adaptation propensity diverges between reluctant and ardent usage of e-commerce. These findings expand our understanding on forced consumer behavioral changes as well as critically-needed corporate strategic responses that are made under compelling circumstances. The insights of the study also imply that once the initial shift is made, constituents, i.e. consumers and businesses, would follow different adoption patterns, which shows that online shopping growth and acceptance does not follow a linear progression, but is rather influenced by a combination of behavioral characteristics and corporate capabilities and nimbleness. Furthermore, prior typologies proposed by scholars during Covid-19 had focused on the adaptability of shoppers while noting a surge in health and social-consciousness related needs that pertained to the pandemic (see Hartono *et al.*, 2021). The various lockdowns imposed worldwide have created demand and supply uncertainties, making it challenging to estimate the long term economic or societal consequences of the pandemic outbreak (Donthu and Gustafsson, 2020). In addition, the fear of being infected has created different stages and types of users adopting e-commerce platforms (Baker *et al.*, 2020). While this holds true during the outbreak, such a typology is expected to change post-pandemic which our study specifically tackles. In fact, the post Covid-19 typology of e-commerce users and online shoppers shows that consumers would fall into four distinct segments, namely *duty-bound*, *e-watcher*, *makeshift*, and *onli-vorous*. This

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3 typology embeds shopping behavior – both prior and during the pandemic – to elicit the shifting
4 shopping behavioral patterns of consumers that were affected by the fact that they were compelled
5 to use e-commerce platforms during the outbreak (Hartono *et al.*, 2021). Accordingly, the proposed
6 typology is unique in as much as it takes into account that all shoppers had already used e-
7 commerce in a way or another in the past two years. It is important to note that while typologies
8 developed prior to the pandemic (e.g. Huseynov and Yildirim, 2017) and the proposed one all
9 embed the two key factors of internet usage and shoppers' lifestyle, the typologies proposed during
10 the pandemic prioritize health and social-consciousness related needs. The present paper expands
11 the literature related to this nascent research area, which is still expected to further develop in the
12 coming years (Pantano *et al.*, 2020). It adds a fresh perspective on the forthcoming market structure
13 post COVID-19, and complements the rising interest and research in the field of e-commerce and
14 shifting consumer behavior within the context of a pandemic outbreak.

15
16 From a managerial perspective, this paper sheds the light on how the spread of COVID-19
17 caused the rise and fall of businesses depending on their development of e-commerce platforms.
18 The study guides experts on how to counter market uncertainties in the future; hence its
19 implications are pertinent. The findings related to the different stages of e-commerce adoption.
20 show that the spread of the COVID-19 has altered consumer behavior, while at the same time
21 refining companies' strategies. Indeed, the development of technology and its constant innovation
22 have developed convenient methods for people to shop and businesses to operate (Yunis, 2018;
23 Kouatli *et al.*, 2020; Guerreiro *et al.*, 2022). As per the findings, companies are advised to focus
24 disproportionately on key facilitators, namely *last-mile delivery*, *new customer recruitment*, and
25 *shopper retention* in order to achieve incremental online sales. In fact, increasing the online
26 consumer base and retaining it will closely be related to a successful last-mile delivery that
27 responds directly to consumers' need for instant gratification. Accordingly, businesses are
28 encouraged to extensively feature their delivery capabilities especially from a time and
29 effectiveness perspectives on different digital platforms so as to build awareness about their
30 differentiated online services.

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32 E-commerce platforms are developing rapidly, segmenting its users into different groups
33 based on their varying engagement level and willingness to buy. For businesses to be able to
34 counter the negative impact of the spread of the COVID-19, companies must understand where
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3 their customers stand and how to target them. Hence, managers are advised to take the typology
4 hereby proposed into consideration when targeting the different types of e-commerce users.

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6 Duty-bound shoppers are considered to be the hardest type of consumers to work with as
7 their engagement level and willingness to buy are very low. However, managers must first invest
8 in and focus on creating awareness about their online presence to make sure consumers know about
9 its existence and for the business to maintain its existence in the market. With this group, experts
10 must focus on the functional benefits rather than emotional appeal. Businesses must, as a start,
11 implement a user-friendly platform as this type of consumers have never shopped online. In
12 addition, duty-bound shoppers' main concern is trust; hence, businesses must invest in privacy and
13 security features to keep all information confidential alongside multiple payment methods.

14
15 The case with e-watchers is slightly different. This group of consumers has a more positive
16 attitude toward e-commerce platforms than duty-bound shoppers. Nonetheless, categorizing this
17 group as potential clients is inaccurate as their purchasing behavior is unlikely to show any change
18 in the short term. Managers must target these users so as to improve their overall engagement level
19 as this is likely to enhance their relationship with the company alongside its long-term revenues.
20 This could be done through continuous interaction and engagement not only on the e-commerce
21 platforms, but also on all other channels as this group of users is easily influenced by various
22 socialization factors.

23
24 Makeshifts are considered be the easiest group of consumers to reach and communicate
25 with. These shoppers show businesses low engagement level on their e-commerce platforms. They
26 show no commitment to any shopping method as they mainly seek convenience. Accordingly, it
27 is very important for companies to maintain close interaction with this segment. Managers must
28 emphasize on the convenience customers can benefit from when shopping online and on the
29 attractiveness of their loyalty programs for online purchases (i.e. higher discounts on next
30 purchases, cashbacks, double redeemable points, etc.). Additionally, companies must invest in
31 their last-mile delivery services (short delivery dates and ability to track the package), offer low to
32 zero delivery charges, provide full details product description of the offered products, and include
33 refund and exchange policies. Furthermore, businesses must unify customer's shopping experience
34 by creating an omnichannel approach to integrate all touchpoints.

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36 Last but not least, onli-vorous consumers are considered to be the most valuable asset of
37 e-commerce platforms. Managers must ensure that this type of shoppers are not only satisfied but
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3 also delighted so as for their purchasing behavior not to be negatively affected. Their strategy must
4 focus on constantly enhancing customers' experience to retain them and ensure their loyalty.
5 Building consumer relationship involves enabling interactions on different platforms including
6 social media sites (Ramadan and Abosag, 2016; Chaker *et al.*, 2022), such as replying to
7 customer's comments and including their reviews and recommendations about offerings (Assaker
8 *et al.*, 2020; Tóth *et al.*, 2022). Companies are advised here to integrate new tech tools such as
9 augmented reality (Ramadan and Farah, 2017) and virtual reality (Itani and Hollebeek, 2021) into
10 their e-commerce solutions in order to retain this particular segment of shoppers.
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17 Table 2 summarizes the developed typology of e-commerce users post-COVID-19
18 alongside all the relevant suggested marketing strategies hereby discussed.
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23 **INSERT HERE: Table 2:** A proposed typology of e-commerce users post-COVID-19 and the
24 relevant suggested marketing strategies
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29 6. Conclusion

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31 With the rise of uncertainty and unexpected events, it is essential for organizations to reexamine
32 their emergency business plan to check its effectiveness. The longer the pandemic lasts, the more
33 likely consumers twig to their new habits and businesses battle to adapt. Since early January 2020,
34 consumers have drastically shifted their purchasing behavior online, while adapting e-commerce
35 innovations. In the era where businesses have the advantage of building their online presence to
36 increase customer reach, it is important to know how their target market are segmented. This is
37 critical especially in the case of market uncertainty.
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43 This research paper is among the first to identify the different stages, while proposing an
44 innovative typology of e-commerce platform users post-COVID-19. This study offers useful
45 recommendations to deal with similar future crises on the basis of trending shifts in behavioral
46 online shopping patterns. While typologies of e-commerce users have been extensively conducted
47 in the marketing literature, no study has yet tackled a post-pandemic segmentation that could
48 provide direly needed early-on adaptation of companies' marketing strategies.
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55 7. Limitations and Future Research

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3 This research study is not without limitation due to its exploratory nature and its focus on the
4 specific case of the COVID-19 pandemic albeit it having a worldwide impact. Another limitation
5 is related to the fact that this study tackled online shopping in general without further stressing on
6 various product categories in specific.
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10 Future research can adopt an empirical approach to test the impact of market uncertainty
11 on the various types of shoppers hereby identified. Moreover, future studies could examine the
12 case of different industries alongside a comparison across different regions, cultures and product
13 categories. In addition, potential studies could factor in the different internet penetration and e-
14 commerce platforms' usage across different age groups in specific markets. Future studies could
15 also propose typologies of e-commerce platforms that are mobile-based versus those that can
16 solely be utilized on desktops or tablets. Last but not least, it would be interesting for researchers
17 to tackle e-commerce solutions that embed omnichannel tech-tools such as augmented reality
18 (AR), virtual reality (VR), and self-service replenishing tools, as these can cater for consumer
19 segments of varying demographic profiles and shopping behaviors.
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Table 1: Review of the online typology literature

Authors	Context	Method	Based on	Primary consumer types
Azar <i>et al.</i> (2016)	Consumer-brand interactions on Facebook	Quantitative approach	Typology of motivations to interact with brands on Facebook	(1) Brand detached; (2) Brand profiteers; (3) Brand companions; (4) Brand reliants
Bressolles, Durrieu & Senecal (2014)	E-service quality	Quantitative approach	Predictive typology	(1) The 'involved'; (2) 'browsers'; (3) 'fun seekers'; (4) 'careful'; (5) 'surfers'
Hallem, Arfi & Teulon (2020)	Online sharing platform	Qualitative approach	Typology of online collaborative consumption	(1) Committed; (2) Pragmatists; (3) Intermittent; (4) Skeptical
Hartono <i>et al.</i> (2021)	B2C e-commerce platforms	Quantitative approach	Typology of adaptive shopping patterns in response to the pandemic	(1) Rational, health & social consciousness adapters; (2) Non-panic, young & all-around adapters; (3) Wealthy, young & non-price-sensitive adapters; (4) Minimum adapters; (5) Thrifty, health & social consciousness adapters
Huseynov & Özkan Yıldırım (2019)	B2C e-commerce platforms	Quantitative approach	Typology based on psychographic segmentation of online consumers	(1) Shopping Lovers; (2) Direct Purchasers; (3) Suspicious Browsers; (4) Incompetent Consumers
Karimi, Papamichail & Holland (2015)	Online purchase decision-making (retail banking & mobile networks)	Quantitative approach – Experiments	Typology of online decision-making purchasing behavior	(1) Number of cycles; (2) Duration; (3) Number of alternatives; (4) Number of criteria
Keng Kau, Tang & Ghose (2003)	Online buying behavior	Quantitative approach	Typology of information-seeking patterns and consumers' motivations and concerns for online shopping	(1) On-off shopper; (2) Comparison shopper; (3) Traditional shopper; (4) Dual shopper; (5) E-laggard; (6) Information surfer
Mathwick (2002)	Online community-building infrastructure	Quantitative approach	Typology based on web-based interaction	(1) Transactional community members; (2) Socializers; (3) Personal connectors; (4) Lurkers

Ramadan, Farah, & Dukenjian (2018)	The study identifies the presence of six main categories of online luxury followers:	Qualitative approach	Typology of social media followers of luxury brands	(1) Pragmatists; (2) Bystanders; (3) Trend hunters; (4) Image seekers; (5) Passionate owners, (6) Prime consumers
Rohm & Swaminathan (2004)	Online grocery retailer	Quantitative approach	Motivations for shopping online	(1) Convenience shoppers; (2) variety seekers; (3) balanced buyers; (4) store-oriented shoppers
Shao, Ross & Grace (2015)	Facebook Users	Quantitative approach	Motivation-based segmentation typology of Facebook users	(1) Devotee; (2) Agnostic; (3) Socializer; (4) Finder
Sparks & Bradley (2014)	Hotel accommodation – Online review	Qualitative approach - interviews + conversations drawn from the website	Typology of management responses to negative online reviews	(1) Acknowledgement of the dissatisfying event; (2) an account/explanation for its occurrence; (3) a reference to action taken
Obeidat <i>et al.</i> (2018)	Social media revenge	Qualitative approach	Typology of online revenge behaviors	(1) Materialistic; (2) ego-defending; (3) aggressive; (4) rebellious
Tsimonis, Dimitriadis, & Omar (2019)	Facebook and Twitter	Quantitative approach	Typology of the benefits and costs consumers perceive social media brand pages	(1) Social; (2) functional; (3) enjoyment; (4) special treatment; (5) self-enhancement; (6) advice; (7) status benefits
Wang, Hong, Li, & Gao (2020)	Firms' marketing innovations	Literature review and Secondary data	Typology based on marketing innovation strategies	(1) Responsive strategy; (2) Proactive strategy; (3) Collective strategy; (4) Partnership strategy
Waqas, Hamzah & Salleh (2020)	Social media platforms	Nethnography	Typology of social media branded content experience	(1) Self-identity; (2) social bonding; (3) aesthetic; (4) utilitarian; (5) humor; (6) awe-inspiring; (7) discerning

Table 2: A proposed typology of e-commerce users post-COVID-19 and the relevant suggested marketing strategies

Typology proposed	Characteristics	Managerial Strategies
Duty-bound shoppers	<p><i>Compelled to use e-commerce due to complete lockdown.</i></p> <p><i>Purchase necessities only (food, hygiene products, etc...).</i></p> <p><i>Will shift back to traditional shopping immediately once COVID-19 starts fading.</i></p> <p><i>Consider e-commerce dangerous, unpractical, and inconvenient</i></p>	<ol style="list-style-type: none"> 1. Create & sustain awareness on the brand's online presence across all e-commerce platforms. 2. Prioritize functional benefits of the brand: showcase quality outputs & products attributes/uses in product listing page on the e-commerce site. 3. Implement a user-friendly & simplified e-commerce site to attract and retain this segment. 4- Invest in privacy & security features to keep all information confidential alongside multiple payment methods.
E-watchers	<p><i>Learned and liked the e-commerce concept.</i></p> <p><i>Follow brands and stay updated without having the urge to buy online.</i></p> <p><i>Might consider using e-commerce platforms in future uncertainties.</i></p>	<ol style="list-style-type: none"> 1. Develop a content strategy that prioritizes engagement & interaction with this consumer segment to enhance long-term revenues. 2. Integrate an omnichannel approach across all platforms to provide a consistent experience for E-Watchers. Earned media & WOM are key to succeed with that segment.
Makeshifts	<p><i>Not committed to either traditional or e-commerce shopping.</i></p> <p><i>Main concern is finding convenience and good discounts and offers no matter the shopping method.</i></p> <p><i>Occasional online shopping based on where they find their needs.</i></p>	<ol style="list-style-type: none"> 1. Drive a continuous & consistent relationship and conversation with Makeshifts. 2. Showcase the convenience of online shopping & related loyalty programs. Push notifications, emails & newsletters could share with these shoppers discounts on their next purchases, cashbacks, redeemable points... 3. Tackle the potential concerns regarding online shopping such as <i>delivery costs, refunds and exchanges</i>. Provide clear advantages to physical shopping through free deliveries & flexible return policies.
Onli-vorous shoppers	<p><i>New habits and lifestyles were developed.</i></p> <p><i>Drastic increase in online shopping.</i></p> <p><i>Impulsive consumption behavior.</i></p> <p><i>Traditional shopping methods became obsolete for them.</i></p>	<ol style="list-style-type: none"> 1. Focus on an ultimate shopping experience to retain this lucrative segment. 2. Ensure a flawless customer service and a fast response time 3. Activate progressive shopping tools (such as VR & AR) into the e-commerce solution to delight onli-vorous consumers 4. Showcase their reviews & experience across the company's platforms (owned, earned and paid media).