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Vladimirova, Katia and Henninger, Claudia E and Joyner-Martinez, Cosette and Iran, Samira and Diddi, Sonali and Durrani, Mariam and Iyer, Kavitha and Jestratijevic, Iva and McCormick, Helen and Niinimäki, Kirsi and Thangavelu, Priyadarshini and Sauerwein, Meike and Singh, Renu and Simek, Petr and Wallaschkowski, Stephan (2022) Fashion consumption during COVID-19: Comparative analysis of changing acquisition practices across nine countries and implications for sustainability. *Cleaner and Responsible Consumption*. p. 100056. ISSN 2666-7843

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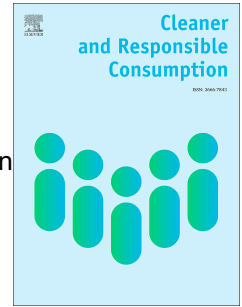
DOI: <https://doi.org/10.1016/j.clrc.2022.100056>

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PII: S2666-7843(22)00010-9

DOI: <https://doi.org/10.1016/j.clrc.2022.100056>

Reference: CLRC 100056

To appear in: *Cleaner and Responsible Consumption*

Received Date: 24 September 2021

Revised Date: 11 February 2022

Accepted Date: 15 March 2022

Please cite this article as: Vladimirova, K., Henninger, C.E., Joyner-Martinez, C., Iran, S., Diddi, S., Durrani, M., Iyer, K., Jestratijevic, I., McCormick, H., Niinimäki, K., Thangavelu, P., Sauerwein, M., Singh, R., Simek, P., Wallaschkowski, S., Fashion consumption during COVID-19: Comparative analysis of changing acquisition practices across nine countries and implications for sustainability, *Cleaner and Responsible Consumption* (2022), doi: <https://doi.org/10.1016/j.clrc.2022.100056>.

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**Fashion consumption during COVID-19:
Comparative analysis of changing acquisition practices across nine countries and
implications for sustainability**

Authors: Katia Vladimirova¹, Claudia E. Henninger², Cosette Joyner-Martinez³, Samira Iran⁴, Sonali Diddi⁵, Marium Durrani⁶, Kavitha Iyer⁷, Iva Jestratijevic⁸, Helen McCormick⁹, Kirsi Niinimäki⁷, Priyadarshini Thangavelu⁷, Meike Sauerwein¹⁰, Renu Singh¹¹, Petr Simek¹⁰, Stephan Wallaschkowski¹¹

Abstract: The COVID-19 pandemic caused and still causes unprecedented disruptions in daily lives of billions of people globally. It affects practices and routines across all household consumption domains, including clothing consumption. Drawing on Social Practice Theory, this article explores and compares changes in clothing acquisition practices during COVID-19 across nine countries: the USA, the UK, Finland, Germany, Switzerland, Iran, Czech Republic, India, and Hong Kong SAR. Data was obtained through a standardized survey containing rated and open-ended questions, which were analyzed through descriptive quantitative analysis and inductive qualitative content analysis of open-ended questions. The results of this cross-country research indicate that all forms of fashion consumption, including more sustainable practices, have decreased during the pandemic. The most visible impacts have occurred in the material arrangements associated with fashion acquisition practices (e.g., closed physical shops, shipping disruptions, cancelled events, remote work, etc.). However, changes that result from these disruptions may be shorter-lived than changes that happened as a result of changing meanings associated with fashion consumption and its more sustainable forms and new competencies and skills acquired during the pandemic that could ensure more lasting practicing of more sustainable forms of fashion consumption.

Keywords: fashion consumption, COVID-19, social practices, sustainability, social change

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1. Introduction

When COVID-19 disrupted the global economy, some have expressed hope that these profound, forced changes may pave a path towards more sustainable patterns of production and consumption in the future (Cohen, 2020). The fashion industry was hit hard when demand for garments worldwide plummeted (Accenture, 2020). Consumers substantially reduced their spending on fashion during the COVID-19 lock-downs, quickly identifying clothes, shoes, and fashion accessories as a 'non-essential' category of consumer goods (Arora et al., 2020). Furthermore, long periods of full and partial lockdowns resulted in unprecedented rates of decluttering wardrobes and increased textile donations (WRAP, 2020).

With a few notable exceptions (Brydges et al., 2020; Liu et al., 2021; Youn et al., 2021), currently (August 2021), scientific publications are lagging to document the changes occurring in fashion production and consumption during the pandemic. Some general trends were reported by mainstream fashion magazines; for example, that consumers opted for comfort and minimalism in clothing during the pandemic (e.g., Aleksander, 2020) and were ready more so than before to pay a premium for sustainably produced garments (Granskog, 2020). Mover, a new "slob chic style" emerged – influenced by a shift from in-person to online work meetings – when consumers started to only "dress up" the upper half of the body that was visible during the online calls (Marx, 2020). However, there are no scientific studies that provide a systemic analysis of changes in fashion consumption during the COVID lockdowns, including more sustainable practices.

To address the limited research on fashion consumption during the pandemic, and especially comparative studies across different geographical areas, this article looks at how and why fashion acquisition practices changed during the pandemic across nine country-contexts (Finland (FN), the United Kingdom (UK), Germany (DE), Switzerland (CH), Czech Republic (CZ), the United States of America (USA), Iran (IR), India (IN), Hong Kong SAR (HK-SAR)). Drawing on Social Practice Theory (SPT), this study focuses on eight fashion acquisition practices, including five that have previously been identified as more sustainable forms of fashion consumption (Vladimirova et al., 2021) and explores how these practices changed across the selected countries. The findings of this study provide a baseline for future research related to how fashion acquisition practices may have changed as consumers around the world transition out of the pandemic.

2. Literature review and theoretical framework

Previously, consumer behavior in relation to clothing and apparel has been studied extensively within the marketing discipline, which ultimately aims to provide useful insights for brands and businesses to market fashion goods more successfully to consumers (e.g., Blazquez et al., 2020; Djafarova & Bowes, 2021). Sustainable consumption studies represent a relatively new and multi-disciplinary research field that started with seminal works of Fletcher (2008) and Niinimäki (2010) but has been rapidly developing in the past 5-10 years, focusing on the changing fashion consumption patterns in the context of sustainability.

Only recently, consumption of textiles and fashion has been recognized as the fourth most polluting lifestyle domain in the EU, after household energy use, mobility, and food (EEA, 2019).

Globally, production of garments has doubled between 2000 and 2014 (Remy et al., 2016) and fast fashion has instilled a new mentality of 'disposable fashion' among the Millennial and Gen Z consumers. The global fashion system generates major negative environmental and social impacts, both at the production and post-consumer textile waste phases (Niinimäki et al 2020). Calls for overall reduction of fashion consumption levels and more sustainable forms of fashion consumption come from NGOs (e.g., Fashion Revolution, 2017), international organizations (UNEP, 2020; EEA 2019), and academic researchers (Henninger et al 2019; Iran et al 2022).

According to the conceptual framework of the International research network on Sustainable Fashion Consumption, consumption of fashion is comprised of three key phases: acquisition, use, and disposal, and at each of these phases, consumers can engage into more sustainable consumption practices (Vladimirova et al., 2021). The widest spectrum of options is available at the acquisition phase, from different forms of collaborative fashion consumption – including buying second-hand, swapping, and renting garments (Henninger et al, 2021), to buying less all together (Kang et al., 2021; Vladimirova, 2021). Admittedly, only a handful of studies (Mukendi & Henninger, 2020) have measured the sustainability dimensions of different forms fashion consumption that are considered "sustainable" (Henninger et al., 2021). Nevertheless, 'slowing down' fashion, reuse and overall reductions in apparel volumes have been widely recognized as solutions to the fashion industry's sustainability problem (e.g., Fletcher & Tham 2019; EEA, 2019).

The fast fashion phenomenon has accustomed consumers to seeing new collections entering high street retailers on a fortnightly basis. Mainstream buying of new garments has become a routinized behavior stimulated by the external environment (Sheth, 2020). Marketing, and especially the Fear of Missing Out (FOMO) technique encourages novelty-seeking behavior from consumers, who are on a constant look-out for new items and shop more frequently (Blazquez et al., 2020). Gardner et al. (2012) state the difficulty with breaking habits lies in the fact that they are formed over a longer period. Changing or developing a new habit can happen within 18 to 254 days, with the average habit development being estimated at 66 days (Lally et al., 2010).

With COVID-19 related lockdowns and restrictions, consumers were forced to break from daily routines and change their habits and practices. For example, a habit of browsing high street fashion retailers on a weekend with friends was stopped due to the closure of physical shops. In many countries, COVID-19 related restrictions spanned over months and years, affecting commerce and consumers alike, and providing time necessary to form and adopt new practices. For example, during the pandemic, consumers were reported to declutter, upcycle, or making clothes more frequently than before (WRAP, 2020). The question remains, however, whether these changes will continue after the restrictions are lifted – and why.

This study explores the patchwork of changes in acquisition practices, using the conceptual framework of the International research network on Sustainable Fashion Consumption (Vladimirova et al, 2021) to identify different fashion acquisition practices and applying Social Practice Theory (SPT) to analyze the composition of each practice. SPT is widely used to study (un)sustainable consumption practices in food, mobility, and household energy use and builds on theoretical advances in sociology and philosophy (Reckwitz, 2002; Schatzki, 2012; Sahakian & Wilhite, 2014). Rather than consider fashion consumption as an individual lifestyle choice based

ultimately on rational reasoning, this study engages SPT, which changes the unit of analysis from the individual (behavior) to the social (practice). SPT can help to uncover why and how people engage in certain ways of 'doing' or 'experiencing' fashion over others by considering materials, competence, and meanings involved in different forms of 'routinized behavior' and 'habitual doing' (Shove & Pantzar, 2005; Shove et al., 2012).

Materials refer to different objects, tools, or infrastructure that can help facilitate practices. For example, sewing needles and thread as objects can enable people to repair garments whilst the availability of swap shops may facilitate swapping between individuals. If certain infrastructure or materials are no longer available (e.g., store closures), a change in practices could be anticipated to either overcome limitations by changing to different modes of shopping (online, offline), or developing entirely different practices (e.g., tailoring, reuse) (Heinze, 2020).

Competences are needed to enact practices. For example, it is not enough to have a needle and thread, but rather it is essential to know how to use them. Thus, competences include practical knowledge, skills, and know-how (ibid). Changes in practices may further be determined by an individual's personal ability to enact new practices. For example, in the UK skills such as sewing and knitting have been reported to become a dying trade (EAC, 2019), which implies a decline in practices such as repair, do-it-yourself (DIY), or upcycling.

Meaning refers to the "mind" and, thus, is a mental or emotional activity that can also be linked to the self (Reckwitz, 2002). The reason to act upon certain practices may be influenced by social or symbolic meaning, including social norms and prescriptions around the practice and cultural repertoires (Balsiger et al., 2019). From an SPT perspective, if sustainable fashion consumption practices are seen as socially desirable, consumers may be more inclined to engage with them. Yet, stigma against shopping secondhand clothes in some countries (Iran et al., 2019; Henninger et al., 2021) or perceptions of sustainable fashion as expensive and unattainable (e.g., Lundblad & Davies, 2016) are examples of meanings that inhibit a transition towards more sustainable forms of fashion consumption.

By "fashion consumption practice", this study understands a routinized behavior related to acquiring, using, or disposing of fashion items. This study focuses on the acquisition practices as a window into consumers' ways of satisfying their need for fashion. Acquisition practices considered in this study include online shopping, discount shopping, and impulse purchases (as more conventional forms of acquisition, often also associated with fast fashion) and buying new ethically-made fashion or secondhand clothes, swapping or borrowing clothes, and having clothes made or tailored (generally viewed as more sustainable forms of fashion consumption) (Vladimirova et al. 2021).

3. Research design

This research investigates if and how fashion consumption practices changed during the COVID-19 pandemic. Data were collected via an online survey in nine countries (CH, FN, UK, IR, DE, US, IN, CZ, HK-SAR) and provides insights into whether practices changed, remained the same, or were abandoned during COVID-19.

3.1 Survey Development

The survey was developed by a core team¹² of researchers during April-June 2020 through a series of eight online workshops coordinated by the first author. The survey contained a total of 35 questions, 14 of which were designed to explore fashion acquisition practices and are analyzed in this study. The survey was split into two parts: 1) socio-demographic information (e.g., age, gender); and 2) mix of multiple-choice and open-ended questions (see Annex 1). Questions in Part 2 explored pre-pandemic fashion acquisition practices and how they may have changed during COVID-19.

Based on existing literature, researchers identified a list of practices that make up “fashion consumption” and its more sustainable forms (e.g., Heinze, 2020; Henninger et al., 2021; Vladimirova et al., 2021). Respondents could indicate in which practices they were engaged before the pandemic and whether this engagement had changed during the pandemic. Additionally, there was an open-ended question in which respondents could indicate “other fashion consumption practices”, to capture behaviors that were not included in the list. Clothing rental was excluded from the pre-identified practices, as, at the time of development of the survey, various rental businesses had limited operations and experienced disrupted infrastructures (Chan, 2020). However, respondents could mention this practice, if exercised, in the open-ended question.

3.2 Data Collection and sample description

Data were collected between June 2020 and April 2021. The survey was administered across a variety of channels, such as university mailing lists, personal and professional networks, social media, and online fora. In Finland, an agency was hired to conduct the survey. The survey was translated into local languages where necessary (e.g., German, Persian, French, Finnish). To ensure accuracy, all questions were back-translated and checked by multiple researchers. Data collection followed a convenience sampling approach in CH, DE, IR, UK, and HK-SAR; purposive (students only) convenience sampling in IN, US, and CZ; and a representative panel in FN. Annex 2 provides an overview of the sample.

A total of 5,802 people took part in the survey and in most countries (except for FN and UK) the samples contained primarily student populations. Most survey respondents identified as female¹³ (67% on average). In some countries participation of women was as high as 94% (UK), 81% (CH), and 78% (USA). A sample skewed towards female participants is unsurprising. Women are the primary target of fashion retailers as they shop for clothes for themselves and often purchase garments and accessories for their children, partners, and dependents (e.g., Brennan, 2013; Statista, 2019). Data from Finland, obtained through a consumer panel representative of the female population, has a more balanced gender representation (51% female; 49% male participants).

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¹³ For ease of writing anyone, who identifies as female, will be referred to as a female in this research. The same will hold true for those identifying as male.

Over a third of respondents had at least a high school degree (37%), followed by bachelor's (32%) and advanced degrees (23%). In CH and IN, most respondents had or were in the process of obtaining an advanced degree (64% and 40%, respectively), which is above the country comparison average. Although the survey was distributed through a variety of channels, in most countries respondents were students, except for the UK (82% non-students) and FN. Annex 2 provides a more detail information about participant's profiles in each country.

3.3. Data Analysis

The quantitative part of the data was analyzed using a descriptive approach, as this allows for a more nuanced understanding of the changes in fashion consumption practices during COVID-19. This was done purposefully to ensure the analysis is not contingent on a minimum number of responses and is inclusive of qualitative insights and different sample sizes for comparative purposes.

In line with ethical requirements, participants could skip questions, which has implications for data analysis. For a given answer to any of the survey questions, the percentage of participants providing that answer is different from the true percentage in the population with a specific error margin. This error depends on the size of the sample and how many participants within that sample provided the answer. The smaller the sample and the closer the sample proportion to 50%, the higher the error margin.

To obtain a confidence interval around the sample proportion, a confidence threshold needs to be chosen. While 95% confidence intervals are common, within this research confidence intervals were chosen that allowed to visually estimate that two proportions are different if their error bars do not overlap. In that case, the threshold has been shown to be 83.4% (Austin & Hux, 2002; Burruss & Bray, 2005). The confidence intervals were calculated using the Clopper–Pearson formula without approximations as implemented in the Python EBCIC package. Note that these error bars are a visual aid, and a formal statistical analysis (notably considering multiple comparisons correction) is outside of the scope of the current study.

The qualitative part of the data set was analyzed following a systematic approach. Key themes were identified from the literature, and a coding guide developed. In this research, qualitative data plays a supporting role and is used to explain trends that either emerged from or were not captured in the quantitative data.

4. Findings and Discussion

4.1 Data presentation

The following sections present the findings of the analysis. Section 4.1. provides a general overview of the fashion consumption context (disposable income, apparel spending, and shopping frequency). Questions about changes in these areas were asked to all the participants and findings are visualized as figures called “descriptive statistics” for each question.

In sections 4.3 and 4.4 the questions focused on changes in practices, in which consumers were already engaged prior to COVID-19, to measure if there were any changes in these practices during the pandemic. To indicate how many (percentage wise) participants per country engaged in certain practices before the pandemic, the second figure is added by practice. Representation in terms of percentage has been chosen as opposed to nominal value (number of responses) due to different size samples by country.

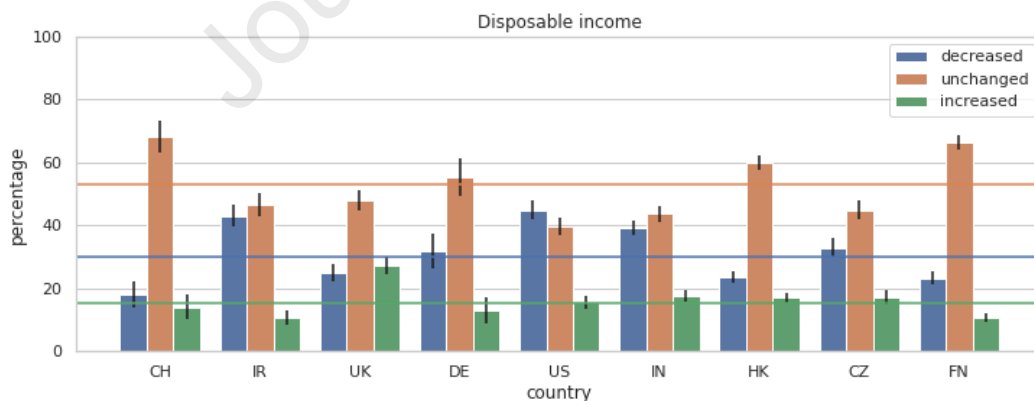
In seven countries (CH, IR, UK, DE, US, IN, HK-SAR), questions on changes in practices were contingent. For example, if respondents indicated that they bought garments on sales prior to COVID-19, they were shown a contingent question on whether this practice changed. In FN and CZ, due to ethical approval procedures, respondents were shown all questions, and thus, questions on changes in practices were not contingent. Therefore, their data are excluded from the means and presented as two stand-alone graphs in each “summary of responses” figure by practice.

4.2 General overview of consumption context

4.2.1 Disposable income

Disposable income across nine countries is reported to have **remained the same or decreased**. For 55% of respondents, disposable income remained the same during the pandemic, while for 31% of respondents it decreased. Only 16% indicated an increase in their disposable income. The strongest decline in disposable income was reported in the US (45%), IR (43%), and IN (39%), while CH, UK, FN, and HK-SAR being the least affected (between 18% and 23%).

Figure 1: Descriptive statistics for disposable income



These findings concur with what has been reported globally (OECD, 2020; Eurostat, 2021). The strongest decline in disposable income was reported in India and Iran, which is confirmed by major market reports (e.g., World Bank, 2020). However, the results reported in this study for the USA also showed a significant decrease in disposable income, which is contrary to the OECD (2020) findings. This could be explained by the sample composition: in the USA, the sample primarily consisted of university students who are an economically vulnerable, not yet

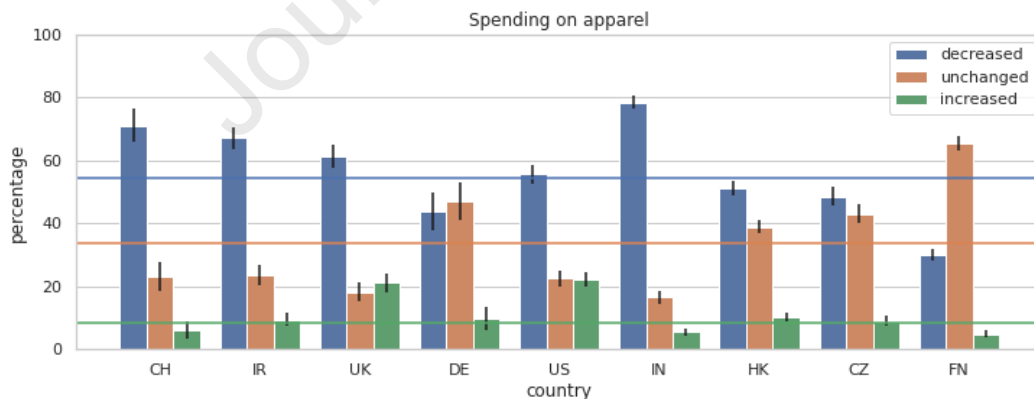
independent group. Students often work part-time jobs that were affected during the pandemic, especially in hospitality.

Minor increase in disposable income recorded in most countries may not necessarily equate to an increase in income; rather, it could be explained by a lack of opportunity to engage in what used to be a routine practice before COVID-19. For example, one respondent indicated an increase in disposable income *“as I was not spending money on travel or food”* (UK). Although social aspects were missed, consumers realized *“how much money I spent going to the pub to socialize, now we will socialize with friends at home, when we are allowed”* (UK). The latter aspect may have further implications for apparel spending, as people may dress differently when they stay at home versus being seen in public by their peers. Similarly, a decrease in disposable income might be linked to changing priorities and changes in personal circumstances (e.g., job losses, caring responsibilities).

4.2.2 Apparel spending

Spending on apparel across nine countries **decreased**. More than half of the respondents (56%) on average across nine countries reported that their spending on apparel had decreased and 33% stated that their spending remained the same. Only 11% of the respondents indicated an increase in apparel consumption during COVID-19. The strongest decrease was reported in IN (78%), CH (71%), IR (67%), and UK (61%). Although the UK showed a strong decrease in apparel spending, it was one of the two countries that had the highest response rate indicating that spending on apparel had increased (21%), only to be overtaken by the US (22%).

Figure 2: Descriptive statistics for apparel spending

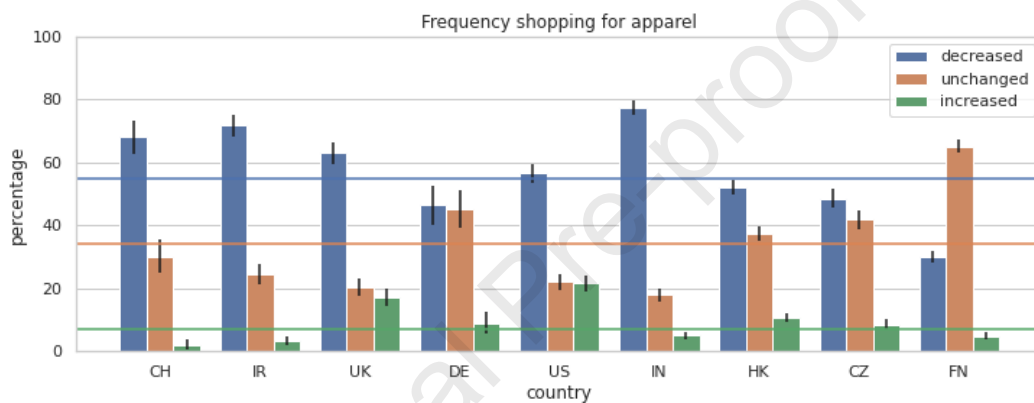


It has been reported that respondents reported a drop in their apparel spending recognizing it as *“non-essential”* (Accenture, 2020). During COVID-19, many consumers *“stopped buying clothes because there was no longer a need to dress up”* (CH). Other respondents indicated: *“I think more about the clothing that I currently have and I will purchase items that fill style holes within my closet”* (US). In Iran, economic challenges, provided further reasons to reduce clothing shopping: *“I do not buy any clothing due to my income drop and inflation rates (everything is now more expensive)”* (IR).

4.2.3 Shopping frequency

Apparel shopping frequency across nine countries **decreased**. Distribution of responses to this question was similar to apparel spending: 57% of respondents on average across nine countries said they shopped less frequently and 34% continued shopping for apparel as often as pre-COVID-19. The steepest decline in shopping frequency was observed in IN (77%), IR (71%), CH (68%), and the UK (63%). In FN, 95% stated that their spending remained the same. In comparison to other countries, the US and the UK had the highest level of responses indicating that their shopping frequency increased (US 21%; UK 17%).

Figure 3: Descriptive statistics for shopping frequency



Reductions in shopping frequency across countries may be linked to several reasons. Reduced disposable income may lead consumers to spend less on non-essential items (Accenture, 2020). Moreover, closure of physical shops created an unprecedented disruption in what Shove et al. (2012) refer to as “material” arrangements within the SPT. Fashion is a highly tactile experience, in which purchasing decisions are often made based on how the garment or accessory ‘feels’ (Williams & Ackerman, 2011). With closed physical stores, consumers switched to online channels but were no longer able to try on or touch things in-store prior to purchasing.

Moreover, consumers were changing their shopping patterns based on improved wellbeing and financial benefits from (forced) reduced consumption. One respondent indicated that having been restricted “*made me realize how much I was shopping for the sake of shopping. It's made me change my practices and be even more financially better off*” (UK).

4.3 Fashion consumption practices

4.3.1. Online shopping

For online shopping, **no clear trend** emerged. Over half of the respondents (53%) on average across seven countries¹⁴, indicated that prior to COVID-19, they shopped online. Among those who answered this question, 38% highlighted that their online shopping for apparel increased, 35% decreased and for 27% remained the same. Online shopping increased the most during the pandemic in the US (54%), UK (45%), and IR (45%). Comparatively, online shopping decreased the most in IN (63%), CH (45%), and UK (38%).

Figure 4: Descriptive statistics for online shopping

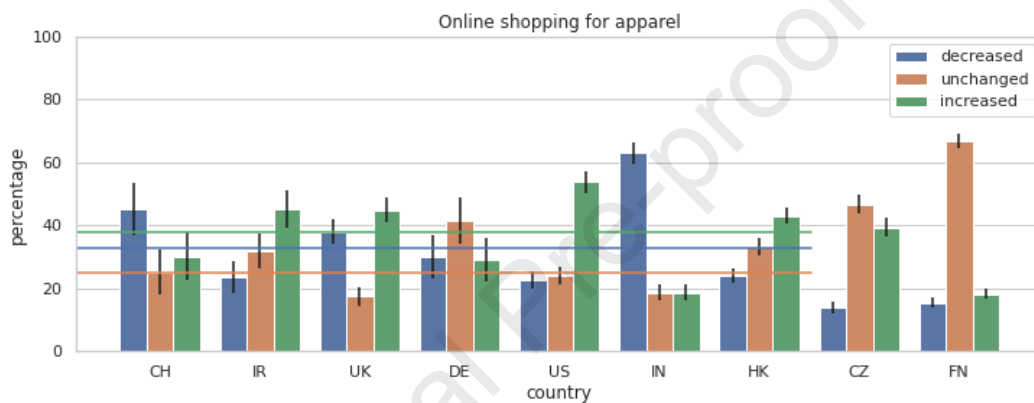


Figure 5: Summary of responses for online shopping



The pandemic caused major disruptions in *material* arrangements related to shopping for apparel online (e.g., shipping and returns) but it also challenged other elements of the practice. Engaging in online shopping requires certain *competencies* (knowing how and where to shop online) and access to infrastructure (internet, delivery infrastructure). Some participants had no problem switching to online channels: “I started shopping on Instagram, online accounts of individuals who

¹⁴ Here – and further in Sections 4.3 and 4.4 – FN and CZ are not included in the means because in these countries questions on changes in practices were not contingent on questions on previous engagement in the practices (see Section 4.1.)

sold their clothes" (FN). Others switched more reluctantly, pointing out that online was the only option, as you "*cannot go out; have no other way to do [but] shop online*" (HK-SAR).

As one respondent noted: "*I am not very good with online shopping as I have an awkward body shape, so mostly things get sent back if I [shop online]*" (UK). This statement illustrates that the consumer was apprehensive to move to online shopping because of a certain *meaning* attached to this practice (disappointment from inconsistent sizing and bad fit of clothes ordered online) and, perhaps, a lack of *competence* to navigate confusing sizing scales or basic alterations for improved fit.

4.3.2 Discount shopping

Discount shopping across seven countries **decreased**. On average, 60% of the respondents across seven countries answered this question, indicating that they engaged in discount shopping pre-COVID-19. For 50% discount shopping decreased during COVID-19, for 35% it remained the same, and 15% said they shopped more on sales. The highest drop in discount shopping was observed in IR (71%), IN (62%), and CH (61%). The highest increase in occurred in the US (25%), HK-SAR (22%), and UK (22%).

Figure 6: Descriptive statistics for discount shopping

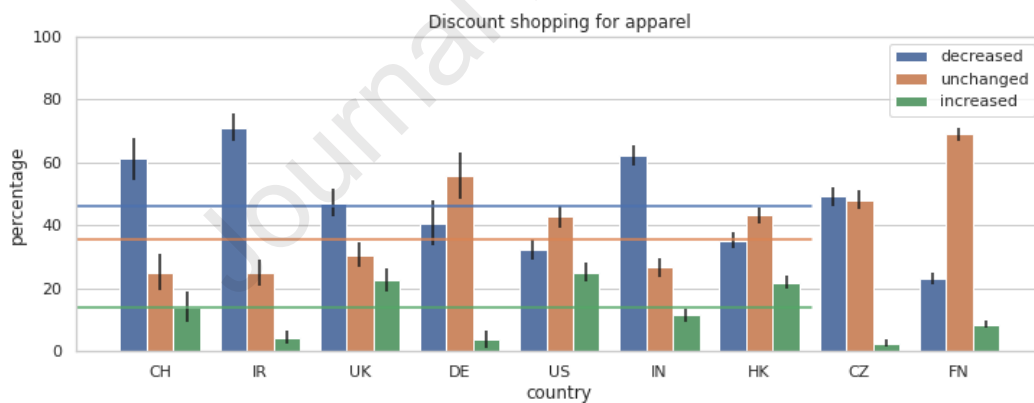


Figure 7: Summary of responses on discount shopping



Decrease in discount shopping may be viewed as part of a broader trend of decline in apparel spending during COVID-19. Respondents indicated that “*I spend more on apparel because I spend less money in other areas e.g. dining out, so I buy more expensive items that are not discounted (before I would wait for high discounts)*” (HK-SAR). This example shows that discount shopping decreased because less socializing in public implied having more disposable money to spend on garments.

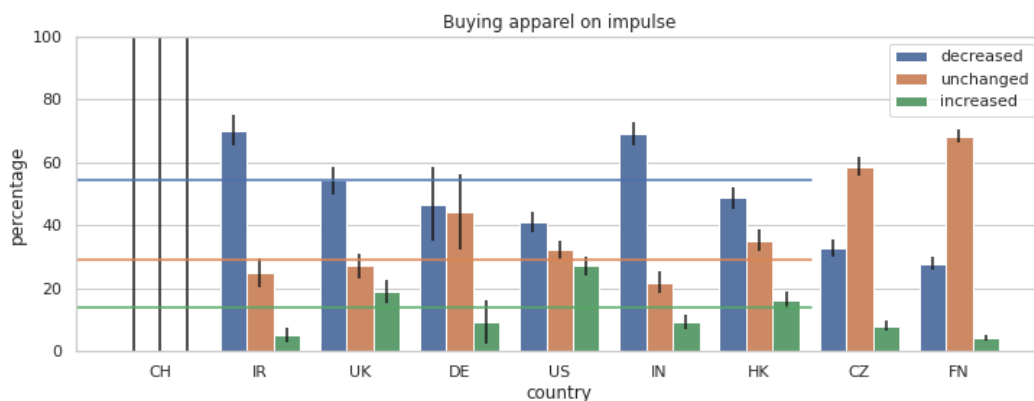
Contrarily, another participant actively looked for discounts to purchase fewer but higher quality (and more expensive) garments: “*I pay more attention to my efforts to buy quality clothes to make them last longer. Now I also have time to research discount sales online and to make bargains that I think are good quality clothing*” (FN). Researching discounts may be considered as an element of *competences* that allows consumers to engage in this practice.

Data showed that although some stopped discount shopping, others started it up. “*I bought items that I might not be interested in before the pandemic. Because there are discounts*” (HK-SAR). Similarly, UK data show evidence of participants insisting “*I buy lots of items in the sales. If it's not discounted I don't think I'm getting a bargain*”. This highlights that, although generally discount shopping may have decreased, there are also instances where it increased, especially in the UK and HK-SAR.

4.3.3 Impulse purchases

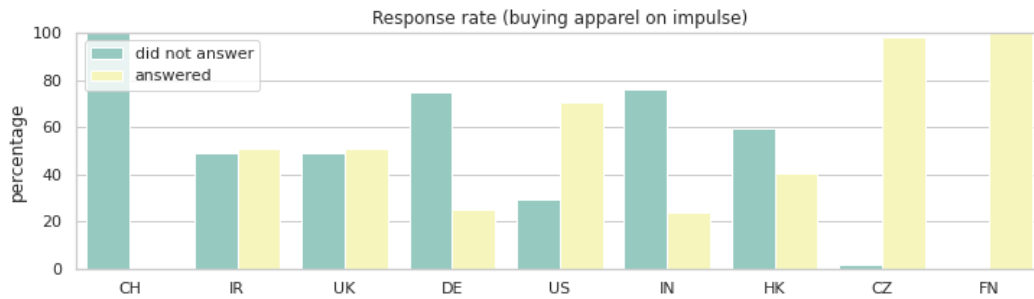
Impulse purchases **decreased**. Almost half (44%) of the respondents on average across six countries¹⁵ indicated that they shopped on impulse prior to COVID-19, with the highest levels recorded in the US (70%) and the lowest – in IN (24%) and DE (25%). Among those who answered this question, 55% said their impulse shopping decreased during the pandemic, for 31% it remained the same and for 14% it increased. The strongest decrease in impulse shopping was reported in IR (70%) and IN (69%) while the strongest increase occurred in the US (25%) and the UK (19%).

Figure 8: Descriptive statistics for impulse shopping



¹⁵ This question was not asked in CH

Figure 9: Summary of responses for impulse shopping



Impulse purchases in the fashion industry are predominantly associated with physical stores, and often younger, student populations (Park & Forney, 2010; Cook & Yurchisin, 2017). Findings of this research concur with past studies (ibid), especially among the Indian and Iranian respondents, both of which were student samples. Respondents, therefore, may have been disproportionately affected by COVID-19, as students often have part-time jobs that they were unable to retain. Considering the drastic decline in overall spending on apparel in these countries during COVID-19, it appears that consumers had to limit their fashion consumption practices.

Impulse purchases now have been extended to online shopping. Social media channels which often mimic in-store environments through visual aids, increase the desire to buy on impulse (Djafarova & Bowes, 2021). *“COVID gave me a lot more free time to spend money and browse online shops. I spent less time in thrift/regular in person stores to limit my chances of spreading”* (US). Findings further indicate that during COVID-19 consumers became highly aware of their economic and other constraints and chose to refrain from certain consumption practices.

4.4 Sustainable fashion consumption practices

4.4.1 Buying apparel for reduced environmental impacts and buying ethically-made apparel

Both practices generated almost identical results and showed a weak trend towards **decrease** during COVID-19. Only 26% of respondents on average across seven countries have indicated that they bought apparel for reduced environmental impacts and 28% bought ethically-made apparel pre-COVID-19.

The highest level of engagement with the practice of buying apparel for reduced environmental impacts pre-COVID-19 are recorded in DE (50%) and US (42%) and the lowest – in IN (13%) and HK-SAR (16%). The highest levels of engagement with the practice of buying ethically-made apparel pre-COVID were reported in DE (44%), IR (37%), and US (37%) and the lowest – in HK-SAR (14%) and IN (15%).

Among those who responded to the question, 54% indicated that their engagement in the practice of buying apparel for reduced environmental impacts remained the same, for 31% it decreased and for 14% it increased. Similar results were reported for ethically-made apparel purchases: for 54% respondents it remained the same, for 32% it decreased, and for 14% it increased. The

strongest decrease in buying apparel for reduced environmental impacts occurred in IN (39%), IR (36%), and CH (33%), while the most visible increase took place in the US (25%), DE (20%), and UK (19%). The strongest decline in shopping for ethically-made apparel was recorded in IN (44%) and CH (43%), while the strongest increase occurred in the US (25%).

Figure 10: Descriptive statistics rate for buying apparel for reduced environmental impact

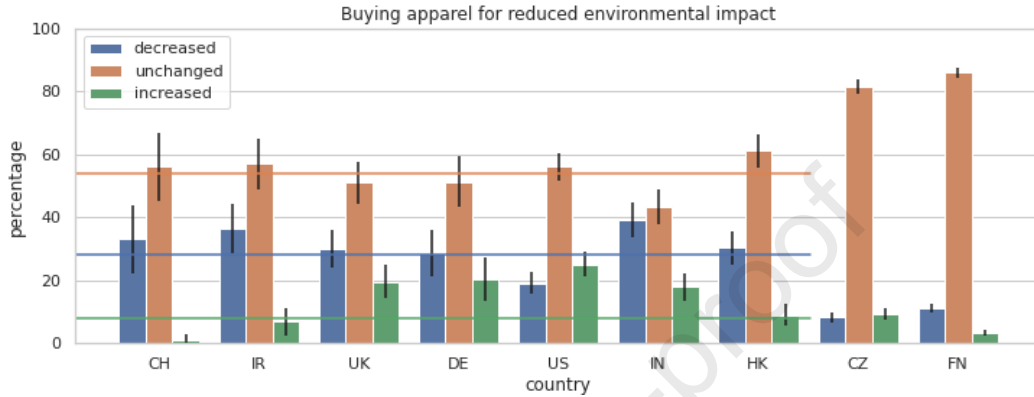


Figure 11: Summary of responses for buying apparel for reduced environmental impact

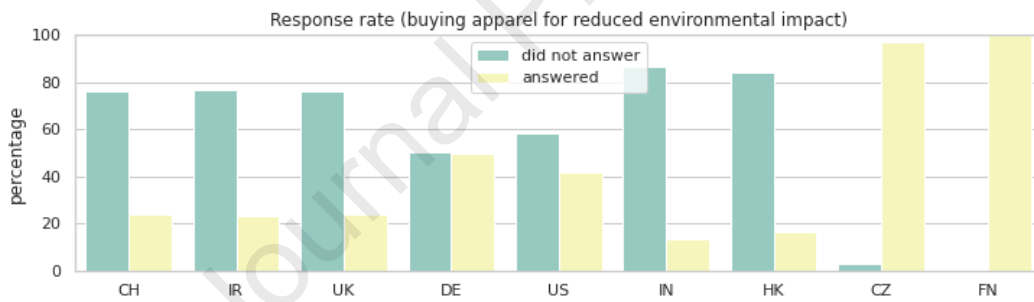


Figure 12: Descriptive statistics rate for buying ethical apparel

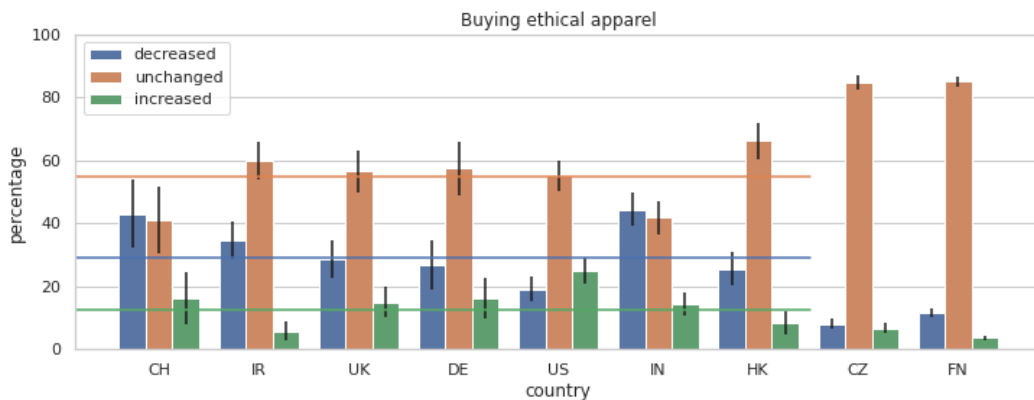
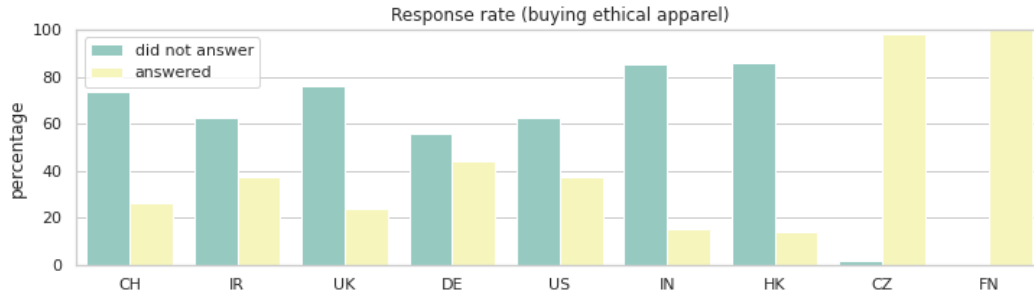


Figure 13: Summary of responses for buying ethical apparel



A majority of those who were already buying environmentally-friendly or ethically-made garments – mostly in DE and US – maintained the practice during COVID-19, although for about a third this activity decreased. The decrease could be related to shrinking disposable incomes and overall spending on apparel. The highest levels of engagement with these conscious shopping practices pre-COVID-19 were reported in DE and US and reflect the size of sustainable fashion markets in these countries and consumer sentiment towards sustainability, as well as higher purchasing power to afford garments at higher prices (WGSN, 2019; Buchholz, 2020).

In line with Accenture's (2020) findings, some answers indicate that consumers started to search for or buy more sustainable, environmentally-friendly apparel, yet these were not a majority. For example, consumers indicate that they *"started looking for vegan and environment-friendly apparel"* (IN) or *"I was a lot more careful where I bought clothes online, how the company operates its business, and how sustainable the clothing is. I made better conscious purchasing decisions."* (US). Others changed from buying secondhand to organic: *"I have more actively looked for websites selling organic and made in Europe clothing, whereas normally I buy almost everything [secondhand in physical shops]. Suddenly, more new clothes, but less clothes of which I do not know the origin"* (CH). As physical secondhand stores closed, consumers redirected their attention from one practice (secondhand shopping) to another (buying environmentally-friendly/ethically-made garments) that has a rather similar cultural meaning (acquiring apparel in a sustainable manner), as a result of changes in the *material* arrangements (lack of infrastructure).

Respondents indicated that they were *"getting more information on the clothes and their origins"* (DE), with various consumers highlighting that they are *"deciding to not buy from fast fashion brands anymore unless ethically produced/sourced"* (UK). This is an interesting finding that refers to a change in *meaning* attached to fashion consumption: moving away from "retail therapy" towards a more complex understanding of the environmental and social impacts of consumer choices. Acquiring information requires *competencies*, especially online research skills, fact checking, etc. The fact that consumers were engaged in information seeking may represent an important step towards a longer lasting change in practices. According to Reckwitz (2002), motivational and emotional appeals in isolation are insufficient to change practices, yet willingness to learn more could provide the necessary push. Thus, if changes occurred because consumers have made the decision to gain a more in-depth understanding about a situation, practices can change in the long run.

4.4.2 Secondhand shopping

Secondhand shopping **decreased**. Less than a third of respondents (31% on average across seven survey countries) reported buying secondhand apparel pre-COVID-19. The lowest engagement with this practice pre-COVID was reported in IN (5%), IR (7%), and HK-SAR (10%), and the highest – in the US (59%) and DE (58%). Among those who answered this question, 55% highlighted a decrease and 12% an increase in buying second-hand apparel. The steepest decline occurred in IR (72%), CH (68%), and IN (62%). The highest increase was reported in the US (18%), UK (17%), and IN (16%).

Figure 14: Descriptive statistics rate for buying secondhand apparel

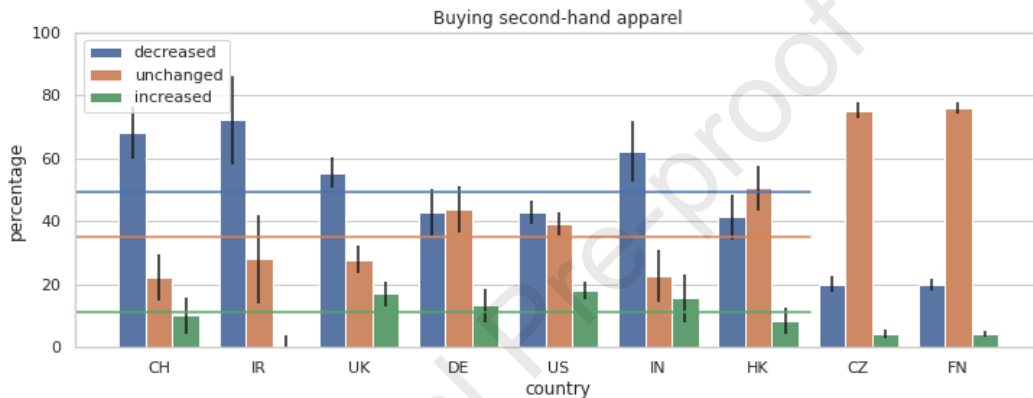
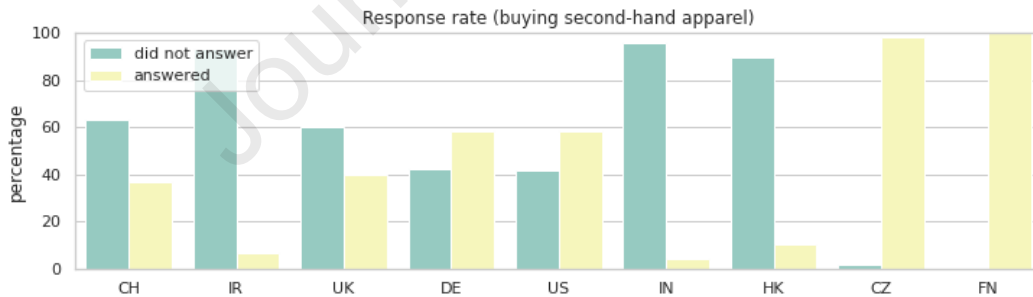


Figure 15: Summary of responses for buying secondhand apparel



Since buying secondhand clothing still involves spending money, the overall decrease may be part of a general trend to put all forms of consumption on hold: “*I stopped buying altogether*” (CH) or “*the purchase of clothing was entirely discontinued*” (DE). One additional explanation that refers to the *material* element of practices has to do with closed shops. One participant stopped buying secondhand because: “*a secondhand store near my home was closed for several months due to the pandemic*” (CH). In CH, online secondhand market is still underdeveloped, among other reasons due to customs restrictions that make peer-to-peer shipping from other countries expensive and complicated. Closed physical shops meant no access to second-hand shopping altogether.

Overall, low pre-pandemic levels of engagement with this practice may be explained in that buying secondhand still has a stigma attached (e.g., poverty, low social standing) in many cultures (e.g., Henninger et al., 2019; Iran, et al. 2019). In HK-SAR and the CZ strong concerns about hygiene also affected consumers' willingness to buy secondhand: *"I would sometimes afraid that the clothes would be virus on it"* (HK), especially from strangers: *"I bought more used clothes more from my friends"* (CZ).

Among the surveyed countries, DE and US report the highest levels of shopping second-hand pre-COVID-19. Respondents indicated different reasons for this engagement, for example: *"I buy more secondhand apparel because it's not as expensive"* (US) or *"I want to be more mindful and buy sustainable or secondhand clothing"* (DE) and *"I decided to buy as few as possible new, to buy less clothing in general and to favor secondhand clothing"* (DE). This conscious mindset among German participants might be explained by the fact that most of them were studying in sustainability-related majors. Previous research highlighted that engage in secondhand consumption in DE may be associated with nostalgic reasons, but overall, the practice still has a negative connotation (Henninger et al., 2019). Perhaps, there may be a cultural shift emerging that has been accelerated through COVID-19 and the fact that consumers now have more time for 'treasure hunting' (ThredUp 2019). If the *meaning* behind buying secondhand changes and stigma is eliminated, consumers may feel more confident to change their practices.

Furthermore, it was highlighted that secondhand consumption is associated not only with purchasing, but also with selling items: *"I stepped completely away from fast fashion and now swear by Depop and eBay for clothes"* (UK). This response indicates that, having more time, people may also gain *competencies* in how to purchase and sell items online. Compared to a one-way money flow in case of buying new clothes, engaging with secondhand markets could reduce the expenses on clothing and even generate income from selling them, which could be a driver to changing practices.

4.4.3 Swapping apparel

Swapping apparel **decreased** during COVID-19. Swapping apparel had one of the lowest engagement levels pre-COVID-19: only 18% of respondents on average across seven countries said they engaged with the practice before the pandemic. The highest levels were reported in DE (36%) and US (28%) and the lowest – in IN (9%) and HK-SAR (8%). Among those who answered this question, 45% indicated that their engagement decreased during COVID-19 and only 10% indicated an increase. The strongest decrease in apparel swapping was reported in IN (72%) and the highest increase in CH (17%).

Figure 16: Descriptive statistics rate for swapping apparel

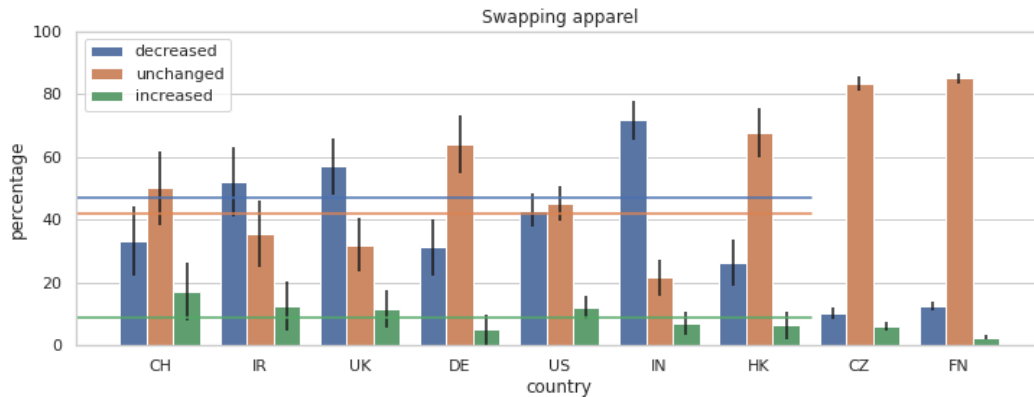
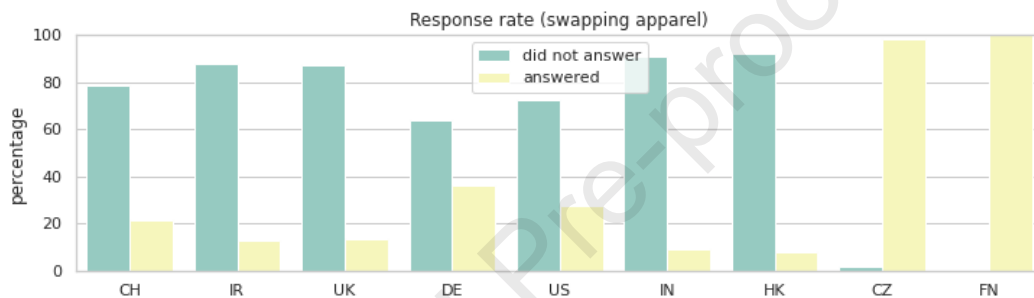


Figure 17: Summary of responses on swapping apparel



Low levels of engagement in swapping pre-COVID-19 show that it is a niche trend, popular only in certain countries and cultures. Surprisingly, data show low engagement levels in the UK, a country which is known for its swapping subculture (Henninger et al., 2019). DE, the US, and CH have the highest levels of engagement, which indicates a much higher level of acceptance of this practice as opposed to India, Iran, and HK-SAR.

A strong decrease in swapping among those who had already been engaged in this practice pre-COVID-19 is likely to be related to a change in *material* arrangements. Various swaps are facilitated offline, often described as social events (e.g., Henninger et al., 2019). With restrictions imposed, swaps, especially those in physical vicinities, were halted. Hygiene and exposure concerns drove this reduction: *“I have only continued to share clothing with my roommates during the pandemic, rather than other friends I typically would to reduce exposure” (US).*

While online swaps exist, switching to online swapping poses multiple challenges related to *competences* (e.g., finding swapping communities, different rules and regulations) and *meaning* (e.g., trust regarding promised quality and delivery). In physical swaps, the organizers may be able to filter out damaged and soiled clothes, which is not possible online. Trust that participants developed face-to-face, can be difficult to replicate among strangers, especially online, when the actual garment is impossible to touch and assess.

4.4.4 Borrowing and lending apparel to friends and family

Lending and borrowing apparel from friends/family have strongly **decreased** during COVID-19. Levels of general engagement in these practices pre-COVID-19 were low (24% lending, 23% borrowing, on average across seven countries). The highest levels of engagement were reported in the US (43% lending, 40% borrowing) and DE (36% for both) and the lowest – in HK-SAR (13% for both) and in India (15% lending, 12% borrowing). Among those who were engaged in lending and borrowing prior to the pandemic, 52% indicated that their lending and borrowing decreased during COVID-19 and only for 7% it increased. The strongest decrease occurred in IN (74% for both) and in the UK (68% lending, 74% borrowing), while the strongest increase was reported in HK-SAR (10% for both).

Figure 18. Descriptive statistics rate for lending apparel

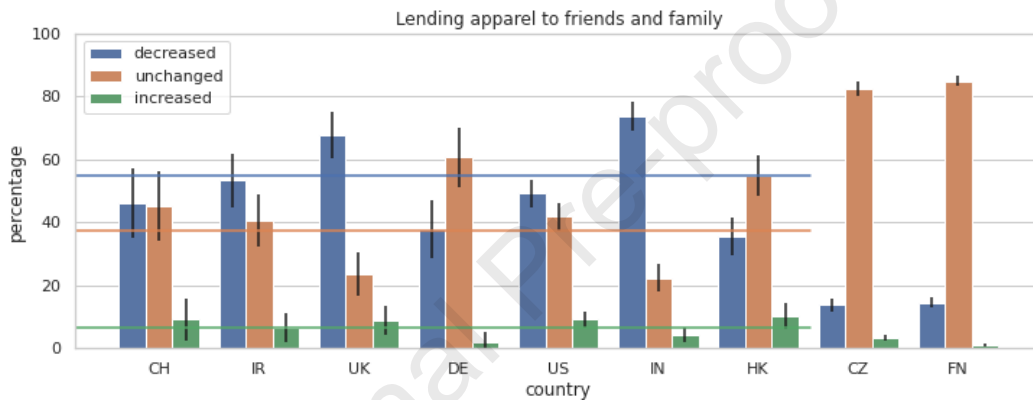


Figure 19. Summary of responses on lending apparel

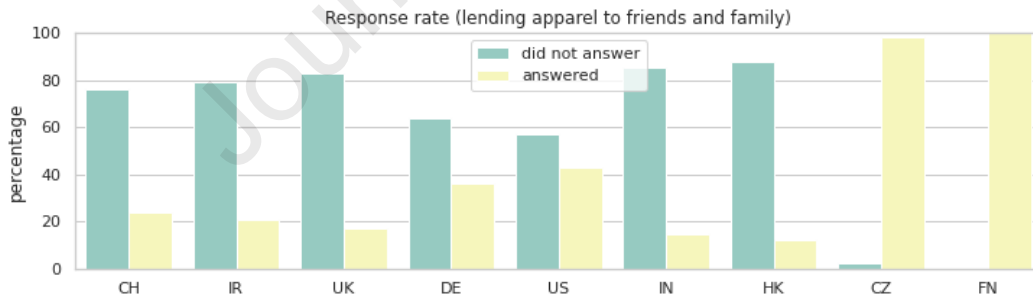


Figure 20: Descriptive statistics rate for borrowing apparel

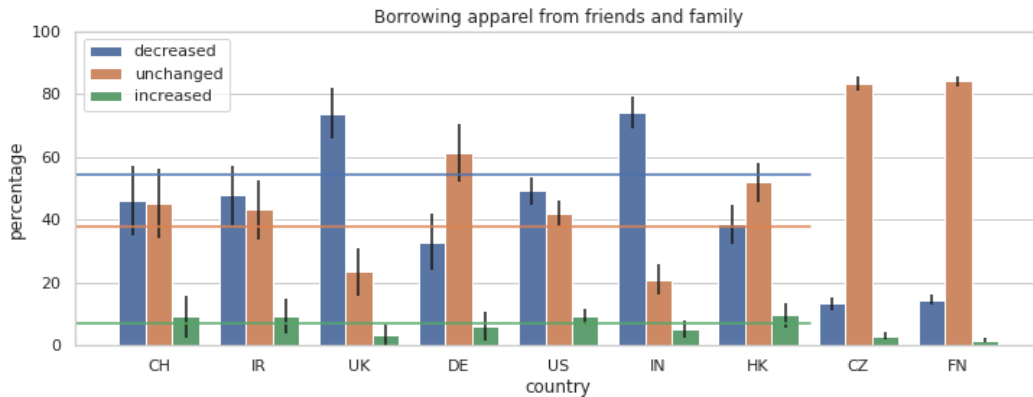
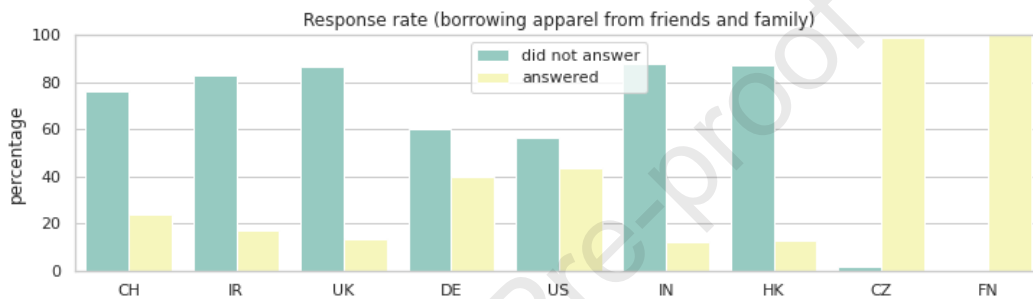


Figure 21. Summary of responses on borrowing apparel



Borrowing and lending apparel implies a non-monetary exchange that usually takes place among relatives or friends. Although the steep decline may be surprising, it can be explained by the fact that lockdown restrictions and social distancing rules forced individuals to stay away from their closer circles. Only those that were able to stay in touch reported continuation of the practice, for example: *“My sister and I still exchange clothes so that didn't change with the pandemic”* (CH).

Another reason for reduced borrowing was the general lack of opportunities to wear the clothes in public: *“I have not indulged in any clothing practices involving purchasing or borrowing or making something of my own. There is absolutely no point in investing in them when I can't even go out”* (IN). Interestingly, findings from India show very low levels of engagement in lending and borrowing apparel prior to the pandemic, which is surprising considering extended families and collective ties that are prevalent in this country.

4.4.5 Having apparel made or tailored

Having clothes tailored **decreased**. This practice had the lowest level of pre-COVID engagement: only 13% of respondents on average across seven countries said they had their clothes made or tailored prior to the pandemic. Countries where this practice was most common are IR (36%) and IN (20%), while the lowest levels of engagement were reported in HK-SAR (6%) and the UK (6%). Among those who answered this question, 57% indicated that they reduced this practice during COVID-19, while 10% indicated an increase. The strongest decrease in this practice was reported in IR (72%) and IN (77%). Some increase in tailoring and making clothes were reported in IR (18%) and in DE (35%); in other countries the increase was incremental (between 0 and 7%).

Figure 22: Descriptive statistics rate for tailoring apparel

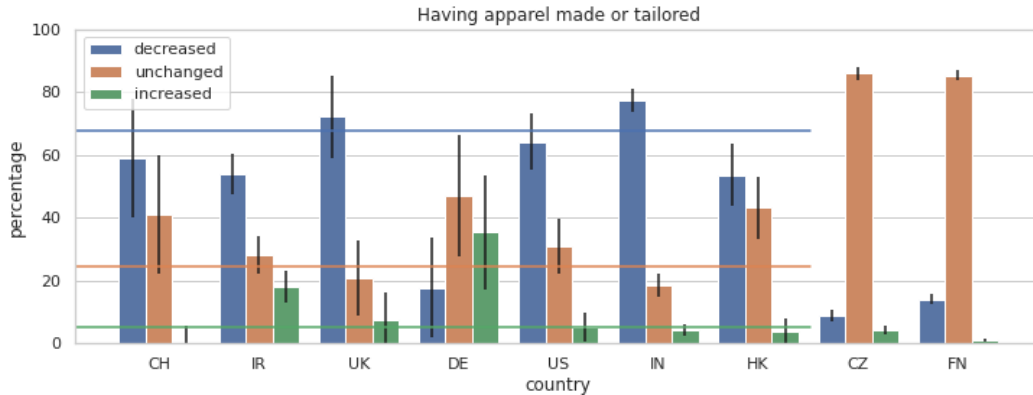
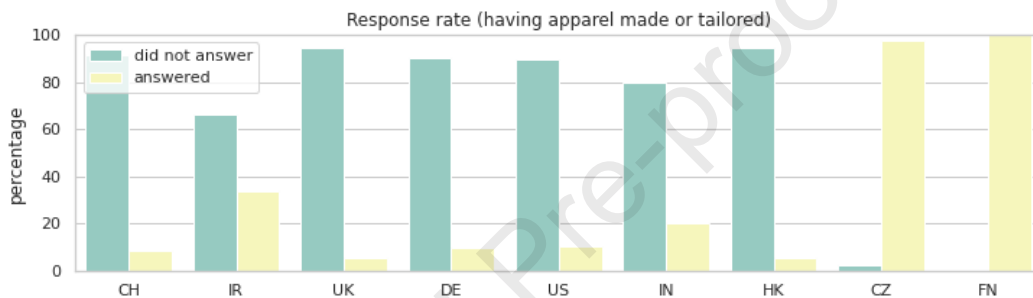


Figure 23: Tailoring apparel across the nine countries



In Iran, having garments tailored is a common practice. Due to political sanctions, fast fashion retailers cannot enter the Iranian market and purchasing formal clothing from shops is still more expensive than having them tailored. During COVID-19, people were more isolated, events were cancelled, and home office was a common practice. Therefore, Iranian consumers were less in need of new outfits.

In some countries a new *meaning* evolved around making clothes when, for example, supply of personal protective equipment fell short and consumers with relevant skills responded by making masks to help fellow citizens and vulnerable groups (McCue, 2020). One German participant indicated they “*start(ed) sewing protective masks*” (DE).

4.5 General discussion

Overall, the results indicate that during the pandemic, all forms of fashion acquisition decreased, even non-monetary exchanges among friends and family. With decreased disposable income and other external factors (e.g., lockdowns), consumers chose to spend less on apparel, reduce discount and impulse purchases. More sustainable forms of fashion consumption, including buying ethically-made and environmentally-friendly new and second-hand apparel, swapping, borrowing and lending, and tailoring apparel all decreased.

Reckwitz (2002) and Shove et al. (2010) suggest that if one of the three elements of practices changing, practices may also change. During the pandemic, changes to *material* arrangements and infrastructure were particularly evident for most practices. Closed physical shops, for new or

secondhand fashion, cancelled swapping parties, physical isolation and lock-downs disrupted most fashion consumption practices. While some practices moved online, shipping disruptions further contributed to the reduction in all forms of fashion consumption. In some practices, like swapping, physical isolation coupled with poor online infrastructure resulted in almost complete abandonment of the practice.

The pandemic had important implications for *competences*. Moving to online shopping, for example, required certain skills and knowledge. Moreover, in some practices lack of knowledge about alternatives to physical stores, which could also be linked to low levels of development of online infrastructure for these practices, resulted in consumers abandoning the practice altogether (swapping, shopping second-hand). Data show a surge in learning new skills (sewing, repair, etc.) and in seeking new information about alternative forms fashion consumption.

Finally, it may be argued that COVID contributed to changed *meanings* that consumers attach to fashion consumption. Fashion quickly became 'non-essential', with consumers increasingly questioning how much clothing they actually need. Continuing as if nothing happened was not an option during COVID, and for most consumers the new "normal" behavior was associated with cautiousness, frugality, and careful spending. Moreover, as data indicates, some consumers learnt about the adverse social and environmental impacts of fashion. New meanings were attached to fashion and compelled some to change their consumption practices accordingly.

Despite major changes in fashion consumption practices during the pandemic, captured by the survey across nine countries, making predictions about longevity of these trends would be a speculation as respondents were not asked about their intentions to engage in the new consumption practice into the future. It could be argued, however, that changes in practices that emerged as a response to a change in external environment (physical restrictions) may be shorter-lived than changes that were based on consumers' internal re-evaluations of the fashion system and their place in it, of their needs and fashion consumption practices. Exploring how fashion consumption practices evolve after COVID-19 will be an interesting avenue for further research.

5. Conclusion

This research provides a comparative overview of fashion consumption practices and the changes that occurred during COVID-19 across nine countries. Data highlight differences among countries, with the Global South being strongly affected by the economic impacts of the pandemic and an income drop. This is the first comparative study across geographical areas to analyze changes in fashion acquisition practices during the COVID-19 lockdown and it contributes to building a foundation for future research on changes that may occur as the world is transitioning out of the pandemic.

Drawing on SPT, the analysis found that disruptions in *material* arrangements were critical for most practices, especially for secondhand shopping and swapping. As a silver lining, the pandemic also created a surge in learning new skills and seeking information about more sustainable forms of fashion consumption. New knowledge may have contributed to developing new meanings associated with the fashion system and how consumers can engage into more

sustainable practices. Changes in practices that occurred as a result of internal re-evaluation by consumers of their needs and place in the fashion system (meaning), as well as knowledge about fashion consumption alternatives and newly acquired skills (competencies) may be more lasting than changes that occurred in response to changes in external environment and material arrangements.

A limitation of the study is the geographical distribution, which reflects a convenience sample of countries in which the authors lived, worked, or have been in contact during COVID-19. The results, therefore, reflect general trends in these specific countries and cannot be generalized to reflect the global picture. Differences in the final numbers of responses per country are the result of different data collection and survey distribution approaches available in each country.

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Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

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