I rent, swap or buy second-hand - comparing antecedents for online collaborative

clothing consumption models

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Abstract

The purpose of the study was to explore consumers' behaviour together with the motivational

drivers and barriers that influence participation in three online collaborative clothing

consumption models (i.e., renting, swapping and buying second-hand clothing). A survey was

used to collect primary data from South African consumers (n = 766) over 19, who shopped

online. Exploratory and confirmatory factor analyses were performed to uncover the factors

influencing participation in the three models. Subsequently, three multiple regression models

determined which drivers and barriers influenced the particular collaborative clothing

consumption model. A collaborative lifestyle was the only driver for renting while swapping

was positively affected by hedonic dimensions, collaborative lifestyle and economic benefits,

and negatively impacted by hygiene issues, unfamiliarity with the concept and materialism.

Buying second-hand clothing indicated that hedonic dimensions, environmental, and

economic benefits were motivational drivers, while hygiene issues, unfamiliarity with the

concept, online trust issues, and materialism prohibited second-hand buying.

Keywords

Collaborative clothing consumption, drivers, barriers, renting, swapping, second-hand

clothing

1

1. Introduction

The sharing economy has been hailed as a global paradigm shift that has radically changed consumers' attitudes from ownership to access (Arrigo, 2021; Belk, 2014; Todeschini *et al.*, 2017). In South Africa, an emerging economy, the tradition of sharing is nothing new - a large informal custom of sharing has always existed and thrived across the African continent (Manavhela & Henama, 2019). The exponential scaling and monetising of the sharing economy has brought forward many business alternatives in the clothing industry, such as Project Runway, Thredup, and Depop (Chiquoine, 2017), as well as a significant entrepreneurial upside to curb unemployment (Mara, 2020). Concurrently, the development of and access to digital technologies has escalated consumer participation in these alternative consumption models (Hazée *et al.*, 2020; Perlacia *et al.*, 2017).

Under the sharing economy, online collaborative clothing consumption (CCC) surged as a model where two or more individuals engage in a joint online activity to save resources through the shared utilisation of clothing items (Dall Pizzol *et al.*, 2017). This interaction between buyer and seller differs from the actual act of sharing, where the goal is a selfless act to help others rather than to gain financial benefits (Belk, 2014). Sharing, therefore, is not just caring – it makes good business sense, as at least one party stands to gain financially from the transaction (Arrigo, 2021). Online CCC could entail renting, swapping, or buying second-hand clothing instead of owning or buying new clothes, while using a digital platform for the transaction (Becker-Leifhold & Iran, 2018).

Research has shown that consumers' drive to prioritise access over ownership might be due to the increased awareness surrounding the negative environmental impact the fashion industry propagates (Todeschini *et al.*, 2017). Similarly, consumers were found to be motivated by economic gains (Barnes & Mattson, 2017), hedonic dimensions, the need for uniqueness (Lang & Armstrong, 2018), community and convenience (McNeill & Venter,

2019; Mölhmann, 2015). In contrast, barriers such as hygiene issues, unfamiliarity with the concept and online trust have been identified as inhibitors of online CCC practices (Becker-Leifhold & Iran, 2018). The outbreak of the COVID-19 pandemic heightened fears of contamination and possible contact with the virus (Baek & Oh, 2021). Materialism and the need to retain ownership of goods is another notable barrier as ownership is closely associated with consumers' social standing (Becker-Leifhold & Iran, 2018). Consumers need many coercive practices and incentives to participate as they do not always trust other users or feel a natural affinity with the CCC model (Dissanayake & Weerasinghe, 2021).

The successful adoption of online CCC in developed markets has been fuelled by technologically advanced infrastructure for online commerce (Hazée et al., 2020). On the contrary, online commerce is still evolving in South Africa and is curbed by many challenges such as unequal economic and infrastructure distribution, as well as perceived risks associated with online shopping (Makhitha & Ngobeni, 2021). Still, not enough is known about online CCC and how it may develop differently across various geographical contexts, such as in the case of an emerging economy and how consumers' actual online CCC practices in these contexts transpire. Most research thus far has explored consumer attitudes, behavioural intention and the adoption of CCC, but not necessarily actual behaviour (Arrigo, 2021), opening up concerns regarding the attitude-behaviour gap when a consumer's intention does not transpire into action (Todeschini et al., 2017). Additionally, most studies have focused on a specific CCC model; either renting, swapping, second-hand buying or subscription services, but did not compare the antecedents of different models to differentiate between consumers' behaviour for a specific model (Arrigo, 2021). Therefore, assessing (1) which online CCC models (i.e., renting, swapping, second-hand buying) consumers are currently participating in, and (2) establishing which drivers and barriers influence their participation in different online CCC models in South Africa are imperative. Findings could

potentially offer unique and valuable insights into the main unexplored factors driving or prohibiting consumers in developing countries to participate in online CCC practices. The findings could also direct business strategy for potential entrepreneurial businesses, especially considering South Africa's extreme levels of inequality and unemployment.

2. Literature review

2.1 Collaborative clothing consumption and Web2.0

Collaborative consumption is the adoption of a collective mindset to achieve a sustainable value network through the sharing, lending, trading, renting and swapping of goods and services (Hamari *et al.*, 2016). Profit and growth are created through how many times a clothing item can be reused rather than constantly producing new items (Todeschini *et al.*, 2017). Access to these items is either granted through the transfer of ownership (i.e., gifting, swapping, or buying second-hand) or through temporary usage options for fashion products owned by others (i.e., renting) (Becker-Leifhold & Iran, 2018; Todeschini *et al.*, 2017). Online collaborative consumption is, in many instances, dependent on the Internet with two-way interaction between a website/service provider and the consumer (Arrigo, 2021; Hamari *et al.*, 2016). Thanks to the Internet, collaborative consumption prospers on online platforms by conveniently connecting users and providers and permitting the buying and selling of products (Hazée *et al.*, 2020).

2.2 Collaborative clothing consumption models

CCC models in which consumers commonly participate are: (1) renting, (2) swapping, and (3) buying second-hand clothing (Arrigo, 2021). *Renting* is when one party offers another access and use of clothing products for a fixed amount of time in exchange for monetary compensation (e.g., Rent-the-Runway) (Moeller & Wittkowski, 2010). There is no transfer of ownership with this specific business model, only temporary access (Lang & Armstrong, 2018; Kim & Jin, 2020). In South Africa, there is an established market for renting occasion

wear in-store and a few examples for online renting (e.g., Style Rotate and Shared Collective) (Geach 2020; Hartzenberg, 2020), but fewer options are available for everyday wear.

Swapping is the exchange of clothing items, usually not mediated by money, between two or more people online or in-person (Albinsson & Perera, 2012). With this model, there is a permanent transfer of ownership and if revenue is generated, it is through membership and transaction fees (e.g., The Clothing Exchange and Swapstyle.com) (Perlacia *et al.*, 2017). In the process of swapping goods, participants are both the sender and recipient as they exchange their "unwanted, but still fashionable items" with each other (Lang & Armstrong, 2018). In South Africa, swapping occurs mainly in person at swap events like the Fashion Exchange, where participants bring clothing items to exchange (Cupido, 2019), but swapping online is still limited.

Second-hand buying of clothing involves the re-selling of unwanted or pre-owned clothing and includes consignment shops, concession stores, thrift stores and online stores (e.g., Thredup) (Gopalakrishnan, 2018). With this CCC model, the transfer of ownership is permanent (Perlacia et al., 2017). The online resale market also referred to as the recommerce market, is one of online retail's fastest-growing sectors offering an e-commerce platform where members can sell or buy second-hand clothing (D'Adamo, 2022). In South Africa, the second-hand clothing industry has thrived, not only benefitting the less privileged with limited disposable income on the receiving end but also those who sell their clothing (Meyer, 2014). As online re-selling is slowly taking off in South Africa, various online thrift stores, such as Yaga, have launched in the past few years (Benjamin, 2021).

2.3 Factors influencing collaborative clothing consumption

2.3.1 Motivational drivers

Numerous studies relating to consumers' CCC practices have identified drivers that influence intention to participate; one of these is the *environmental benefits* (Becker-Leifhold & Iran,

2018, Cherry & Pidgeon, 2018; Fota *et al.*, 2019; Hamari *et al.*, 2016). Several studies have found that CCC facilitates a sustainability process whereby consumers are given the opportunity to act responsibly to conserve the environment by using the products several times, thus minimising the impact on the environment (Lang & Armstrong, 2018; Perlacia *et al.*, 2017). Some studies have found this an essential motivation for some individuals to partake in CCC (Piscicelli *et al.*, 2015), while other studies have found the opposite is true (Möhlmann, 2015).

Economic benefits refer to factors unlocking financial advantages such as paying a reasonable price for an item, saving money, or getting value for money (Padmavathy *et al.*, 2019). Consumers believe they will benefit financially from using CCC services as consumers can access more products without ownership costs at cheaper prices than by buying new products (Fota *et al.*, 2019). These benefits were frequently cited by consumers who use CCC rentals model to save money (Park & Armstrong, 2019).

Hedonic dimensions measure fun and enjoyment aspects relating to the CCC shopping experience, which highlights more personal motives than merely shopping for practical and functional reasons (Armstrong et al., 2016). CCC participation potentially holds hedonic value for consumers, such as being entertained by the many diverse choices available (Hwang & Griffiths, 2017) or the thrill of the treasure hunt to find unique, one-of-a-kind items online (Chiquoine, 2017). A swapping party emphasises the fun aspect that comes with interchanging clothing with others (Heuer & Becker-Leifhold, 2018). When it comes to shopping for second-hand clothing, respondents describe the delight of acquiring a once-off, exclusive item, as paramount in enhancing hedonic pleasure (McNeill & Venter, 2019).

The *need for uniqueness* is utilising material possessions to develop and enhance personal and social identities that differentiate one from others (Lang & Armstrong, 2018). A consumer's need for uniqueness is closely related to clothing consumption, more specifically

swapping and buying second-hand clothing as it could effortlessly enhance consumers who strive to stand out (Lang & Armstrong 2018; McNeill & Venter, 2019). Therefore, the need for uniqueness is a positive driver to entice individuals in participating, especially if their goal is to express individuality and stand out from the crowd.

Convenience is the reduction of time and effort to complete a task and simultaneously provides comfort and well-being to the individual (Dall Pizzol et al., 2017). Through CCC, time-starved consumers conveniently have everything at their fingertips and have access to products and services without the responsibility of ownership (Shrivastava et al., 2021). The associated convenience of CCC is the perceived time savings, ease of use, and free shipping aspects when participating in a sharing platform or renting online (Tu & Hu, 2018).

Community is more than just belonging to a group. It refers to relational aspects between group members who share a sense of interconnectedness and have a common purpose or ideal (Albinsson & Perera, 2012). Like-minded individuals who share the same concerns about fashion and the environment are more likely to engage and be part of a CCC community striving for more sustainable consumption practices (Beech *et al.*, 2020). When consumers experience a sense of community, they are motivated to participate in activities involving shared resources and engaging with one another, which is essential for the success of CCC (Dall Pizzol *et al.*, 2017). Swapping, for example, facilitates peer-to-peer contact, which creates a sense of community (Park & Armstrong, 2017; Gopalakrishnan, 2018).

It was hypothesised (H1a-f) that the motivational drivers (i.e., environmental benefits, economic benefits, hedonic dimensions, need for uniqueness, convenience, and community) would positively affect consumers' participation in CCC models (i.e., renting, swapping, second-hand buying).

2.3.2 Barriers

Previous studies have identified several obstacles or challenges such as hygiene issues, unfamiliarity with the concept, lack of online trust and materialism that affect CCC negatively (Möhlmann, 2015; Hamari *et al.*, 2016).

Hygiene issues have been listed as an apprehension factor influencing a consumer's desire to participate in renting, swapping and buying second-hand clothing (Armstrong et al., 2016; Becker-Leifhold & Iran, 2018; Cherry & Pidgeon, 2018). Of the many products offered by collaborative consumption, clothing is considered intimate because items have been in direct contact with another person's skin (Baek & Oh, 2021). The very nature of the CCC model rests in the fact that clothing is shared and thus worn by multiple users, so consumers naturally have concerns and fears about hygiene and contamination/contagion (Becker-Leifhold & Iran, 2018; Lang & Armstrong, 2018). It is interesting to note that consumers have different levels of sensitivity toward hygiene across the globe. The outbreak of the COVID-19 pandemic heightened consumer concerns about hygiene due to the immediate threat of contact with the virus and made consumers more vigilant about shared consumption (Back & Oh, 2021).

Unfamiliarity with the concept - For many consumers, the practice of CCC is a relatively new experience. The lack of knowledge and associated complexities create perceived risks among users, which could prevent them from participating in these practices (Hazée et al., 2020). Generally, the disadvantages and risks increase as the complexity increases, making consumers more hesitant to use a sharing service for the first time (Fota et al., 2019). This hesitance is often caused by a lack of experience and prior knowledge that goes hand in hand with regularly using this form of consumption (Hazée et al., 2020; Moeller & Wittkowski, 2010).

Online trust issues can be explained as the lack of confidence in online processes due to potential risks that might exploit consumers' vulnerabilities (Lee et al., 2021). Previous studies investigating online activities such as shopping, sharing, and renting clothing have shown that trust is an essential factor in a user's online behaviour (Fota et al., 2019). Without trust, a robust and interactive online environment would not be possible. Typically, perceived risks associated with online CCC are product risks (Lee et al., 2021; Makhitha & Ngobeni, 2021) as well as privacy and security risks (Makhitha & Ngobeni, 2021). Even though COVID-19 brought about an e-commerce boom, many consumers were faced with extremely long lead times, poor service delivery, parcel theft, online fraud and high mobile data costs, all of which hindered South Africans' trust in e-commerce (Dludla, 2020). The greater a user's trust in the sharing partner, the more positive their behavioural intentions are to participate repeatedly in the model (Fota et al., 2019).

Materialism is when owning things or worldly possessions is viewed as a measurement of success, happiness and satisfaction with one's life (Goldsmith et al., 2012). Highly materialistic people relentlessly seek to build their identity through how much they spend on possessions and are less likely to gain satisfaction by engaging in environmentally friendly practices (Lang & Armstrong, 2018; McGregor, 2019). This barrier is of specific interest in South Africa as there is a growing trend among township youth to accumulate expensive fashion brands to portray social status in their communities (Dondolo & Madinga, 2017). This behaviour suggests that materialism might be a key factor influencing South African youth's consumption behaviour. Therefore, one could deduce that a consumer's bond to material goods and physical ownership of those goods may negatively impact their participation in CCC.

It was hypothesised (H2a-d) that the barriers (i.e., hygiene issues, unfamiliarity with the concept, online trust issues, materialism) would negatively affect consumers' participation in

CCC models (i.e., renting, swapping, second-hand buying). **Figure 1** presents the drivers and barriers at play that may halt or encourage participation in the three models that South African consumers have access to (i.e., renting, swapping and buying second-hand clothing).

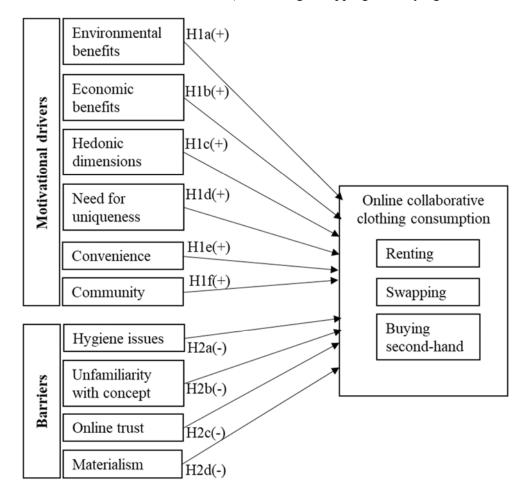


Figure 1. Conceptual model for CCC in South Africa (adapted from Hamari *et al.*, 2015; Becker-Leifhold & Iran, 2018)

3. Method

A survey research design was selected to explore the motivations and barriers affecting participation in three CCC models. The survey was conducted online using a self-administered, structured questionnaire developed through Qualtrics.

3.1 Sample, sampling and data collection

The target population for this study was South African consumers aged 19 years and older who currently shop online for clothing. A non-probability sampling technique in the

form of convenience sampling was employed during the collection of data. The reasoning behind the technique is that it is cost-effective and time-efficient, yet the results cannot be generalised beyond the sample (Hair *et al.*, 2014). Ethical clearance was obtained from the Natural and Agricultural Sciences Ethics Committee, University of Pretoria (NAS066/2020), after which the data collection process commenced on 12 May 2020 until 12 June 2020. The online survey made it more accessible to potential participants, but simultaneously excluded individuals who did not have access to the Internet. The questionnaire link was shared on social media platforms (i.e., Facebook, LinkedIn, Instagram), email and WhatsApp. A total of 2 655 participants accessed the link, and 1 759 completed the questionnaire, yielding a 66% completion rate. The sample was further filtered to only include 766 participants who completed questionnaires relating to online CCC practices.

3.2 Instrument development

Scale items were derived from previous studies and adapted for this study. A five-point Likert-type scale, with response options ranging from 1 = Strongly disagree to 5 = Strongly agree, was used for all items relating to the motivational drivers and barriers, while response options ranging from 1 = Never to 5 = Always, were used for items relating to the frequency of participation in online collaborative clothing consumption models. The survey instrument consisted of questions derived from Akbar *et al.* (2016) capturing the frequent use of online CCC models. Furthermore, scales adapted for motivational drivers were derived from the following studies: Hamari *et al.* (2016) – *environmental benefits*, Hamari *et al.* (2016) and Dall Pizzol *et al.* (2017) - *economic benefits*, Hamari *et al.* (2016) and Hwang and Griffiths (2017) - *hedonic dimensions*, Lang and Armstrong (2018) – *the need for uniqueness*, and Dall Pizzol et al. (2017) - *convenience* and *social identity*. In terms of the barriers, the items relating to *hygiene issues* were self-developed by the researchers. Items relating to *unfamiliarity with the concept* and *online trust* were derived and adapted from Möhlmann

(2015), and *materialism* items were derived and adapted from Lang and Armstrong (2018). Before data collection, the online questionnaire was pre-tested to clarify the statements and eliminate any errors.

3.3 Data analysis

Firstly, descriptive statistics were calculated for the demographic characteristics and the frequency of participation in the three online CCC models. Thereafter, statistical software (SPSS 27) was used to conduct the exploratory factor analysis (EFA) and the Cronbach's alphas. IBM SPSS Amos 27 was used to run a confirmatory factor analysis (CFA). Lastly, hypothesized relationships were conducted through three multiple regression analysis models. The EFA utilised principal axis factoring as the extraction method with varimax as the rotation method. Kaiser's criterion (eigenvalue ≥ 1) was used to identify the number of factors and factors with loadings ≥ 0.4 were retained for further analysis (Pallant, 2011). Cronbach's alphas (≥ 0.70) were used to confirm the internal reliability of the retained factors.

4. RESULTS

The sample consisted of South African male (11%) and female (88%) participants residing in urban areas. Generation Z consumers (18-24 years) made up the vast majority (70%) followed by Millennials (25-34 years) 14%, older Millennials (35-44 years) 7% and Generation X (45 – 54 years) 5%.

4.1 Preliminary data analysis

4.1.1 Frequency of participation in online collaborative clothing consumption models

To gain insights into which collaborative clothing consumption model was most frequently used by participants, twelve questions relating to participation in renting, swapping and second-hand buying were included using a five-point Likert-type scale where 1 = Never and 5 = Always. **Figure 2** indicates that, overall, most participants (67.64%)

participated in second-hand buying, while swapping clothing (48.56%) was the second most frequent CCC, and lastly, renting (10.17%) had the lowest uptake amongst participants.

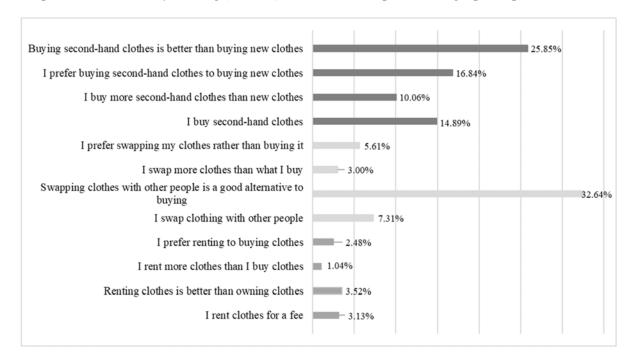


Figure 2. Collaborative clothing consumption practices of South African consumers

4.1.2 Exploratory factor analysis (EFA)

EFA was performed on the dataset (n = 766) to establish the underlying constructs related to South African consumers' CCC practices. The EFA produced nine factors with eigenvalues ≥ 1 and explained 53.71% of the cumulative variance. All factors were scrutinised for cross-loadings, and only factor loadings exceeding the minimum recommended threshold of ≥ 0.4 were retained. As indicated in **Table 1**, the means for the nine factors varied between 2.70 and 4.41. The internal reliability of the variables was confirmed by Cronbach's alpha values ranging between 0.76 and 0.86, indicating a good measure of internal consistency (Hair *et al.*, 2014).

Table 1. Exploratory factor analysis (n = 766)

Factor structure	Factor loading	Eigen value	Var- iance	α	Mean	Std dev
Factor 1: Collaborative lifestyle	Tomuring.	10.26	23.39	0.81	3.23	0.74
These practices save me time	0.62					
It is more convenient to take part in these practices than to buy new clothes	0.62					
The convenience of using shared clothes fits my lifestyle.	0.52					
I feel part of a community when I participate in these practices	0.50					
Taking part in shared practices improves my image in the community	0.49					
These practices allow me to be part of a group of people with similar interests	0.49					
Belonging to a group that is participating in shared practices is important to me	0.48					
Factor 2: Need for uniqueness		4.53	9.68	0.84	3.92	0.79
I try to find a more interesting version of ordinary clothes because I enjoy being origin	al 0.73					
It is important to me to find something that communicates my uniqueness.	0.72					
I combine clothes in such a way to create a personal image that cannot be duplicated	0.66					
I am often on the lookout for new clothes that add to my personal uniqueness	0.60					
It allows me to get one-of-a-kind products to create my own unique style	0.60					
Factor 3: Online trust		2.72	5.37	0.84	3.69	0.97
I am unsure if they offer secure payment facilities	0.76	· -				
I don't know if I will receive the right products	0.68					
I am not sure that the clothes on the website are presented accurately	0.68					
Online websites selling second-hand clothing are not safe in terms of cyber security	0.62					
I am uncertain whether the products will fit me correctly	0.60					
I am unsure if they have fair return/exchange policies	0.59					
Factor 4: Environmental benefits		2.04	3.76	0.86	4.41	0.69
It is an environmentally-friendly way of consuming clothing	0.77					
It is better for the environment	0.75					
It helps to save the earth's natural resources	0.66					
It is an environmentally sustainable way of living	0.65					
Factor 5: Economic benefits	0.02	1.97	3.62	0.84	4.12	0.73
It benefits me financially	0.73	11,7,	2.02	0.0.	2	0.75
It saves me money	0.73					
It is cheaper than other ways of buying clothes	0.69					
I can reduce my clothing expenses	0.63					
Factor 6: Hygiene issues	0.03	1.48	2.42	0.84	3.76	0.95
I have concerns that second-hand clothes are not hygienic	0.76	1.10	2.12	0.01	3.70	0.75
I worry that if I acquire second-hand clothing, it will be unhygienic	0.76					
Second-hand clothes might not always be as hygienic as new clothes	0.63					
Hygiene in terms of second-hand clothing is important to me	0.54					
Factor 7: Unfamiliarity with the concept		1.34	2.11	0.79	3.16	1.02
Overall, I do not know much about collaborative clothing consumption	0.76					
I have little experience when it comes to these practices	0.61					
I do not know how/where I can take part in such practices	0.59					
I am not familiar with the concept of sharing economy services	0.54					
Factor 8: Materialism	0.5 1	1.30	2.00	0.76	2.70	0.99
It is important to me to own a lot of new clothes	0.73	1.50	2.00	0.70	2.70	0.77
Some of the most important achievements in life include buying new clothes	0.73					
My new clothes indicate how well I am doing in life	0.64					
I like to own fashionable clothes that will impress the people around me	0.59					
Factor 9: Hedonic dimensions		1.00	1.35	0.88	3.87	0.88
It is fun to participate in these practices	0.53					
It is something I enjoy doing	0.49					
It is exciting to take part in these practices	0.47					
It makes me feel good	0.47					
N. t. D. f. it f.d						

Note – Definition of these practices (includes renting/swapping/second-hand buying)

Factor 1 was re-labelled as *collaborative lifestyle* as it collapsed four items from the community construct and three items from the convenience construct; thus combining H1e and H1f (from here on referred to as H1e). CCC often uses online social networks and communities to share resources and engage with one another (Dall Pizzol et al., 2017). At the same time, CCC models offer consumers more convenience to suit their lifestyles and save time (Shrivastava et al., 2021). The collaborative lifestyle factor had the highest eigenvalue of 10.26 and explained 23.39% of the variance. Factor 2, the need for uniqueness, included five items which tapped into how consumers are driven to find one-of-a-kind items as well as enhance their identity through their unique clothing choices (Gwozdz et al., 2017). The third factor, online trust, retained all six items highlighting concerns about secure transactions and receiving the right product. Factor four, environmental benefits, retained all four original items relating to consumers' participation in sustainable clothing practices for the environment's sake. Environmental benefits had a mean of 4.41, the highest among the factors, indicating a strong agreement with the statements relating to environmental benefits. For factor five, economic benefits, four items were retained measuring financial savings associated with CCC. The mean for this factor was 4.12, which indicated that participants strongly agreed that CCC offers them economic benefits. Hygiene issues, factor six, retained four self-developed items measuring concerns about the cleanliness of clothing when participating in CCC. Factor seven, unfamiliarity with the concept, measured consumers' understanding and experience with CCC. However, the standard deviation of 1.02, might indicate that participants were in two minds about this factor. This could be due to the fact that some participants may have been familiar with the concept of online CCC, and others may not have been familiar with it. Factor eight, materialism, aimed to uncover participants' perception of how ownership of new clothing contributes to being successful in life. Hedonic dimensions, factor nine, measured consumers' innate need for excitement and fun as a driver

to participate in CCC. All four items were retained, resulting in an overall mean of 3.87, which indicated that the participants felt relatively strong about the fun and enjoyment associated with participating in CCC.

4.1.3 Confirmatory factor analysis (CFA)

The underlying items and variables retained from the EFA were composed as a nine-factor CFA model using IBM SPSS Amos 27. The factor loadings were used to assess construct and convergent validity (Pallant, 2011). The factor loadings were all above the acceptable threshold of 0.5 (Hair *et al.*, 2014), ranging from 0.58 to 0.90. Numerous fit indices were used to indicate the goodness of fit for this measurement model: CMIN = 1194.175, df = 593, $p \le 0.05$, CMIN/DF = 2.01, GFI = 0.92, AGFI = 0.91, NFI = 0.91, CFI = 0.95, RMSEA = 0.04. All of these indices were indicative of a good fit.

4.2 Multiple regression analysis for the three models

Three multiple regression analyses were conducted. The independent variables: motivational drivers (i.e., environmental benefits, economic benefits, hedonic dimensions, need for uniqueness, and collaborative lifestyle) and barriers (i.e. hygiene issues, unfamiliarity with the concept, materialism, and online trust) were entered into the equation simultaneously to measure their independent impact on the dependent variable (either renting, swapping and second-hand buying). Theoretically, all the independent variables were assumed to act as drivers or barriers in influencing a consumer's online CCC practices. **Table 2** summarises the associated *F*-values and R² values for each model. The *F*-values confirmed that the independent variables predicted the dependent variable for all three models. However, the low R² for renting and swapping shows that the combination of these specific drivers and barriers doesn't adequately explain the variation in these models. In theory, the higher the value of R², the larger the explanatory power of the regression model becomes (Hair et al., 2014). The R² for second-hand buying was 53.9% which indicates that the explanatory power

of the second-hand buying regression model was significant in explaining the strength of the relationship between the dependent and independent variables.

Table 2. ANOVA for CCC models

	odel	Sum of	df	Mean	F	Sig.	\mathbb{R}^2
Dependen	ıt variable	Squares		Square			
Renting	Regression	15.383	9	1.709	7.708	0.000*	0.084
	Residual	167.635	756	0.222			(8.4%)
	Total	183.018	765				
Swapping	Regression	103.525	9	11.503	27.723	0.000*	0.248 (24.8%)
	Residual	313.678	756	0.415			
	Total	417.203	765				
Buying second-	Regression	424.262	9	47.140	98.119	0.000*	0.539 (53.9%)
hand clothing	Residual	363.211	756	0.480			
	Total	787.473	765				

Independent variables: environmental benefits, economic benefits, hedonic dimensions, need for uniqueness, collaborative lifestyle, hygiene issues, unfamiliarity with the concept, online trust, materialism

Table 3 presents the regression model for renting. Only collaborative lifestyle (β = 0.194; t = 3.885, p < 0.001) was statistically significant for online renting, indicating that this CCC model suited the participants' lifestyles as it is convenient, saves time and allows them to belong to a community that values shared clothing practices.

Table 3. Regression model for renting

Dependent variable	Model	Standardised o	<i>t</i> -value	<i>p</i> -value	
	Model	Std. Error	β -values	_ <i>i</i> -value	p-value
Renting	Environmental benefits	0.031	0.006	0.147	0.883
	Economic benefits	0.028	0.003	0.062	0.950
	Hedonic dimensions	0.031	0.074	1.300	0.194
	Need for uniqueness	0.027	-0.009	-0.207	0.836
	Collaborative lifestyle	0.030	0.194	3.885	0.000***
	Hygiene issues	0.020	-0.049	-1.103	0.270
	Unfamiliarity with concept	0.021	-0.048	-1.120	0.263
	Online trust issues	0.025	0.013	0.318	0.751
	Materialism	0.018	0.005	0.135	0.893

Note:***p-value < 0.001; **p-value < 0.01; *p-value < 0.05

The most significant drivers for swapping, hedonic dimensions (β = 0.186; t = 3.622, p < 0.001), collaborative lifestyle (β = 0.195; t = 4.303, p < 0.001) and economic benefits (β = 0.079; t = 2.136, p = 0.033) are indicated in **Table 4**. This indicated that swapping is a fun activity involving social interaction with like-minded individuals which also saves them

money. Hygiene issues (β = -0.122; t = -3.016; p = 0.003) negatively affected swapping at p-value < 0.01, while unfamiliarity with the concept (β = -0.088; t = -2.238; p = 0.026) and materialism (β = -0.083; t = -2.334, p = 0.020) negatively affected swapping at p-value < 0.05.

Table 4. Regression model for swapping

Dependent variable	Madal	Standardis	ed Coefficients	4 valua	a volvo
	Model	Std. Error	β -values	— <i>t</i> -value	<i>p</i> -value
Swapping	Environmental benefits	0.043	0.029	0.728	0.467
	Economic benefits	0.038	0.079	2.136	0.033*
	Hedonic dimensions	0.043	0.186	3.622	0.000***
	Need for uniqueness	0.037	-0.047	-1.172	0.242
	Collaborative lifestyle	0.041	0.195	4.303	0.000***
	Hygiene issues	0.027	-0.122	-3.016	0.003**
	Unfamiliarity with concept	0.028	-0.088	-2.238	0.026*
	Online trust issues	0.034	0.058	1.588	0.113
	Materialism	0.025	-0.083	-2.334	0.020*

Note: ***p-value < 0.001; **p-value < 0.01; *p-value < 0.05

As presented in **Table 5**, hedonic dimensions (β = 0.266; t = 6.608, p < 0.001), environmental benefits (β = 0.067; t = 2.143, p = 0.032), and economic benefits (β = 0.072; t = 2.471, p = 0.014) positively predicted participation for second-hand buying. The need for uniqueness and collaborative lifestyle factors were insignificant precursors for buying second-hand clothing online, whereas hygiene issues (β = -0.206; t = -6.493, p < 0.001), unfamiliarity with the concept (β = -0.187; t = -6.089, p < 0.001), online trust issues (β = -0.124; t = -4.314, p < 0.001), and materialism (β = -0.111; t = -3.998, p < 0.001) negatively impacted buying second-hand clothing online. Although second-hand buying is an enjoyable and fun activity, participants do have reservations in terms of trusting the online process, cleanliness of products, and owning pre-used clothing.

Table 5. Regression model for second-hand buying

Dependent variable	Model	Standardised	<i>t</i> -value	<i>p</i> -value	
	Model	Std. Error	β -values	— i-vaiuc	p-value
Second-hand	Environmental benefits	0.046	0.067	2.143	0.032*
buying	Economic benefits	0.041	0.072	2.471	0.014*
	Hedonic dimensions	0.046	0.266	6.608	0.000***
	Need for uniqueness	0.040	0.038	1.221	0.223
	Collaborative lifestyle	0.044	0.037	1.032	0.303
	Hygiene issues	0.029	-0.206	-6.493	0.000***
	Unfamiliarity with concept	0.031	-0.187	-6.089	0.000***
	Online trust issues	0.036	-0.124	-4.314	0.000***
	Materialism	0.027	-0.111	-3.998	0.000***

Note:*** p-value < 0.001; **p-value < 0.01; *p-value < 0.05

In **Table 6**, the support for the hypotheses set for the three CCC models is summarised.

Table 6. Summary of hypotheses formed from EFA factors

Hypothesis	Path to CCC model	Hypothesis valence	Significance	Supported/ Not supported
Renting				
RH1a	Environmental benefits→ Renting	+	NS	Not supported
RH1b	Economic benefits→ Renting	+	NS	Not supported
RH1c	Hedonic dimensions→ Renting	+	NS	Not supported
RH1d	Need for uniqueness→ Renting	+	NS	Not supported
<i>RH1e</i>	Collaborative lifestyle→ Renting	+	S***	Supported
RH2a	Hygiene issues→ Renting	-	NS	Not supported
RH2b	Unfamiliarity with the concept→ Renting	-	NS	Not supported
RH2c	Online trust issues→ Renting	-	NS	Not supported
RH2d	Materialism→ Renting	-	NS	Not supported
Swapping				
SH1a	Environmental benefits→ Swapping	+	NS	Not supported
SH1b	Economic benefits→ Swapping	+	S*	Supported
SH1c	Hedonic dimensions→ Swapping	+	S***	Supported
SH1d	Need for uniqueness→ Swapping	+	NS	Not supported
<i>SH1e</i>	Collaborative lifestyle→ Swapping	+	S***	Supported
SH2a	Hygiene issues→ Swapping	-	S**	Supported
SH2b	Unfamiliarity with the concept→ Swapping	-	S*	Supported
SH2c	Online trust issues→ Swapping	-	NS	Not supported
SH2d	Materialism→ Swapping	-	S*	Supported
Second-hand l				
SBH1a	Environmental benefits→ Second-hand buying	+	S*	Supported
SBH1b	Economic benefits→ Second-hand buying	+	S*	Supported
SBH1c	Hedonic dimensions→ Second-hand buying	+	S***	Supported
SBH1d	Need for uniqueness→ Second-hand buying	+	NS	Not supported
SBH1e	Collaborative lifestyle → Second-hand buying	+	NS	Not supported
SBH2a	Hygiene issues→ Second-hand buying	-	S***	Supported
SBH2b	Unfamiliarity with the concept→ Second-hand buying	-	S***	Supported
SBH2c	Online trust issues→ Second-hand buying	-	S***	Supported
SBH2d	Materialism→ Second-hand buying	_	S***	Supported

Notes: S denotes significant and NS denotes non-significant influence: ***p-value < 0.001; **p-value < 0.05

5. Discussion

The objective of this study was to assess which online CCC models are consumers currently participating in an emerging context and to determine which drivers and barriers influence their participation in these models. As far as the three models were concerned, renting clothing online, at this stage, was the least prevalent among consumers in the South African market. As there is presently an established market for in-person renting of occasion wear in South Africa (Geach, 2020; Hartzenberg, 2020), the idea of renting other categories of clothing online might still be foreign to South African consumers. This was not an unexpected result as a significant paradigm shift is required to view renting as an alternative form of consumption for everyday wear, not just occasion wear (Lang & Armstrong, 2018). Ultimately, *collaborative lifestyle* was the only significant precursor for online renting, confirming that the renting model is considered convenient as it saves participants time and fits their lifestyle while reinforcing their affiliation to a collective community that values sharing resources.

Swapping seems to be a default CCC practice favoured by consumers as many consumers swap clothing with friends and family. The results were more favourable than the renting model, indicating the potential for this model to gain popularity in South Africa. This model has a monetary and non-monetary path consumers can take - informally (between friends and family) or formally (subscription services) (Arrigo, 2021). Motivational drivers for swapping were *hedonic dimensions* and a *collaborative lifestyle*. Together with its sense of community and engagement swapping is fun. Online swapping might be less engaging but the interaction between like-minded swappers still occurs coupled with the enjoyment of the activity that fits consumers' lifestyles. The findings correspond with Lang and Armstrong (2018) whose research highlighted swapping to be driven by lifestyle and a fun activity (Heuer & Becker-Leifhold, 2018). Therefore, it makes sense that hedonic dimensions and

collaborative lifestyle are predictors of swapping. *Economic benefits* also preceded swapping, which indicates that consumers do in fact cut back on their overall clothing expenses and save money by not buying new clothing items.

Second-hand buying had the best uptake amongst the participants, with more than two thirds currently buying second-hand clothes. Globally, second-hand buying is a growing practice. This market is expected to surpass the fast fashion market by twice its size in 2029 (ThredUp, 2021). In terms of the sample, Generation Z's are inclined to shop more secondhand than any other generation (McCoy et al., 2021; Williams, 2021). As the stigma around buying second-hand is dissolving, more and more consumers are thrifting for the thrill of finding the unexpected (Benjamin, 2021). This explains why hedonic dimensions was a significant driver for second-hand buying. Ironically, the fact that hedonic dimensions is such a strong driver could lead consumers to buy more than what is necessary, which could, in turn, lead to hyper-consumption. On the other hand, the moral accolades of participating in a consumption practice deemed more ethical and environmentally beneficial could possibly also contribute to higher participation levels in second-hand buying (Williams, 2021), explaining why *environmental benefits* was significant in predicting second-hand buying. Although research is questioning thrifting in the name of the environment and whether it really contributes to sustainability (Ronobir et al., 2020), it seems as though South African consumers do consider the environmental benefits when buying second-hand clothing to some degree. Seemingly, economic benefits was another important factor driving secondhand buying and provides value in saving financial resources for participants. Higher-income consumers who view second-hand buying as a hobby rather than a financial necessity might not be as driven by the economic benefits as lower-income consumers are (McSherry, 2019).

Hygiene issues negatively impacted swapping and second-hand buying, which corroborates prior research (Becker-Leifhold & Iran, 2018; Cherry & Pidgeon, 2018). The

fear of contamination/contagion is a problematic association to address in the consumer's mind and requires a high level of trust in the service provider or seller (Lang & Armstrong, 2018). Especially, post-COVID, cleanliness and sanitation to prevent negative hygiene associations have become critical (Baek & Oh, 2021). In terms of *unfamiliarity with the concept*, consumers naturally have questions and concerns about the concept, therefore, it is understandable that consumers may be hesitant to participate in online swapping and second-hand buying for the first time due to a lack of experience and prior knowledge. *Online trust issues* also significantly prohibited buying second-hand clothing. South Africans, in general, tend to practice cautious behaviour when transacting online, mainly due to online security and product concerns (Makhitha & Ngobeni, 2021). It makes sense that they would have online trust issues, especially if the concept was still new to them. As online swapping and buying require trust in the seller/service provider regarding the item's condition, accurate representation of products and secure transactions need to be ensured to reduce these concerns (Gopalakrishnan, 2018).

Materialism was also a significant barrier to swapping and second-hand buying as owning and buying new clothing indicates how well one is doing, as opposed to used clothing that might indicate otherwise. Materialistic consumers may be influenced by the image that others have of them through their possessions, and pre-owned items may not contribute positively to the identity they would like to convey (Ronobir et al., 2020). Especially in South Africa, spending money on new clothing signifies wealth and a way to impress others (Dondolo & Madinga, 2017). Buying second-hand clothing or swapping, which is traditionally seen as activities linked to lower-income consumers, contradicts the goal of 'show-off' wealth (Catulli et al., 2013). However, this is changing as participating in CCC practices is gaining popularity and can lead to social prestige amongst consumers (Ronobir et al., 2020).

6. Conclusions and implications

Despite the fact that CCC models are widely valued for being a sustainable, beneficial solution to overconsumption, the findings reflect that this is not the main driver for participation. Findings indicated that consumers still attach a lot of value to having fun while consuming (hedonism), saving money (economic), shopping that suits their lifestyle (convenience and community) and materialism (ownership), and far less value to actually changing their consumption practices for the sake of the environment.

Barriers such as hygiene especially in a post-pandemic market should be addressed by online swapping and second-hand businesses. Hygiene protocols and guarantees that items being sold are pre-cleaned and disinfected should be clearly indicated on websites. To a large extent, South African consumers are still unfamiliar with the concept of swapping and buying second-hand clothing online and therefore continuous positive experiences with these models are likely to remove this barrier. Online information and rating systems between buyers and sellers could serve as checkpoints that could instil confidence in these models (Padmavathy *et al.*, 2019). Generation Z and Y particularly like to create product reviews and leave recommendations (McCoy *et al.*, 2021); hence facilitating this feature online would also be beneficial in addition to other popular applications on social media. Similarly, online trust issues are hindering online swapping and second-hand buying. Ensuring secure and credible transactions with a flexible exchange policy will address product and security concerns (Gopalakrishnan, 2018). As e- and m-commerce are gaining rapid traction among urbanites and rural dwellers in South Africa, the barrier of online trust should be addressed and removed from the minds of consumers (Dludla, 2020).

In conclusion, retailers who are considering entering the collaborative consumption market should focus on leveraging the key drivers and addressing the barriers highlighted by the findings of this study, to encourage consumers to participate in these practices. CCC in

emerging economies is relatively new in comparison to developed countries. This study, therefore, contributes to the literature by establishing an initial empirical understanding of consumer drivers and barriers directly in the context of the different business models (i.e., renting, swapping and second-hand buying). The results could assist in capitalising on opportunities and challenges that are unique within the South African context. Furthermore, this understanding could assist in developing strategies to position and diversify CCC models in the marketplace for prospective and current users.

7. Limitations and possibilities for future research

The study's findings could not be generalised to the whole South African population as non-probability sampling was used to collect data. It is recommended that future studies employ quota sampling to obtain a more representative sample of the South African population. This study did not focus on the cultural differences among the diverse South African population, so addressing specific cultural differences holds potential for future research. As second-hand buying becomes more mainstream and popular, prices are starting to rise, making it harder for lower-income consumers to afford them. It would be of value to address factors influencing the gentrification of buying second-hand and the risk of excluding low-income communities that rely on second-hand shops for clothing. Recent studies abroad also indicate a tendency towards discriminatory behaviour concerning collaborative consumption practices (Edelman *et al.*, 2017). In emerging and developed markets, investigating exclusion based on education, income and race could provide insights into how better accessibility and inclusion strategies for consumers and businesses can be developed.

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