

## Motivações para o consumo colaborativo de bens de consumo: validação de escala no contexto de moda no Brasil

## Motivations for collaborative consumption of consumer goods: scale validation for the fashion context in Brazil

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### RESUMO

Mudanças significativas na indústria da moda têm sido discutidas nos últimos anos na busca pela sustentabilidade. O consumo colaborativo faz parte das macro-tendências da moda sustentável, funcionando como uma alternativa de consumo que reduz os impactos ambientais da indústria ao propor a extensão da vida das roupas por meio do reaproveitamento. Esse tipo de consumo tem sido discutido na literatura de marketing e ganhou popularidade nos últimos anos. Esta pesquisa tem como objetivo validar uma escala de motivações para o consumo colaborativo de bens de consumo no contexto do consumo colaborativo de moda (CFC) no Brasil. Realizamos uma pesquisa online por meio de questionários online para validar a escala no contexto da moda. Para isso, foi realizada uma análise fatorial confirmatória. Os resultados mostram que a escala no contexto do CFC brasileiro parece ser mais consistente se composta por quatro dimensões (preocupação com a sustentabilidade, social, busca de variedade e economia de custos), três itens em cada dimensão, totalizando 12 itens.

**Palavras-chave:** motivações do consumidor; consumo colaborativo de moda; validação de escala; Brasil.

### ABSTRACT

Significant changes in the fashion industry have been discussed in recent years in the search for sustainability. Collaborative consumption is part of sustainable fashion macro trends, functioning as a consumption alternative that reduces the environmental impacts of the industry by proposing the life extension of the clothes through reuse. This type of consumption has been discussed in the marketing literature and gained popularity in recent years. This research aims to validate a scale of motivations for collaborative consumption of consumer goods in the context of collaborative fashion consumption (CFC) in Brazil. We conducted a survey online through online questionnaires to validate the scale in the fashion context. For that, we performed a confirmatory factor analysis. Results show that the scale in the Brazilian CFC context seems to be more consistent if composed of four dimensions (concern-for-sustainability, social, variety-seeking, and cost-saving), three items in each dimension, totaling 12 items.

**Keywords:** consumer motivations; collaborative fashion consumption; scale validation; Brazil.

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## 1 INTRODUCTION

Significant changes in the fashion industry have been discussed in recent years in the search for sustainability (HENNINGER *et al.*, 2017), since the logic of 'buy a lot, use little and dispose quickly' is present within the dominant system in the fast fashion industry. For instance, the amount of clothing sold in the world has doubled in the last 15 years, although the number of times that one wears clothing has fallen by 36% in this period (ELLEN MACARTHUR FOUNDATION, 2017). In this sense, consumers are not only looking for ideal products, but for the experience that comes from this search, the acquisition process (BARROS *et al.*, 2018) and for new ways of buying, using, reusing and disposing clothes (BLY; GWOZDZ; REISCH, 2015). These new ways have been adopted by consumers and used in business models that aim to meet this demand for sustainability in fashion (TODESCHINI *et al.*, 2017).

Collaborative consumption is part of sustainable fashion macro trends (TODESCHINI *et al.*, 2017), functioning as a consumption alternative that reduces the environmental impacts of the industry by proposing the life extension of the clothes through reuse, which maintains the life of garments and avoids their quick disposal (FARRANT; OLSEN; WANGEL, 2010; ZAMANI; SANDIN; PETERS, 2017). This type of consumption has been discussed in the marketing literature and gained popularity in recent years (BARDHI; ECKHARDT, 2012; BELK, 2014; HAMARI; SJÖKLINT; UKKONEN, 2016) since involves sharing of both tangible (e.g., books, toys, and clothes) (SCHOR; FITZMAURICE, 2015) and intangible assets (e.g., space and car rides) (KIM; JIN, 2020).

However, its application in the sustainable fashion context is still recent (BECKER-LEIFHOLD; IRAN, 2018; IRAN; SCHRADER, 2017; JAIN; MISHRA, 2020; JOHNSON; MUN; CHAE, 2016; KIM; JIN, 2021; LANG; SEO; LIU, 2019). Collaborative Fashion Consumption (CFC) is a part of the sharing economy trend to use fashion products in various ways (KIM, 2020) for a time of use that will extend the life cycle of these products (IRAN, 2018). Thus, when applied to this context, collaborative consumption deals with access to previously used clothes, whether property acquisition can take place or not through gifts, exchanges, or second-hand clothing purchases, in addition to the use of clothing rental or sharing systems, known as clothing libraries (APTEKAR, 2016; JOUNG; PARK-POAPS, 2013; HENNINGER; BÜRKLIN; NIINIMÄKI, 2019; HU *et al.*, 2015; PEDERSEN; ANDERSEN, 2015).

Studies on this topic have been published in high impact international journals and past research usually takes place in countries such as United States, Finland, Germany, and China (BECKER-LEIFHOLD; IRAN, 2018; IRAN; GEIGER; SCHRADER, 2019; LANG; SEO; LIU, 2019). In countries with emerging markets for this type of consumption, research is still scarce (JAIN; MISHRA, 2020), especially in the context of South America.

Based on this, this research aims to validate a scale of motivations for collaborative consumption of consumer goods, in the context of collaborative fashion consumption in Brazil. The scale of Motivations for Collaborative Consumption of Consumer Goods was considered suitable for the scope of CFC, as it includes aspects related to swapping, trading, renting and second-hand purchases of goods (i.e., in the present study, clothes). Therefore, it covers a variety of CFC types presented in the literature that are generally investigated separately both in qualitative studies, which occupies most of the research on the subject, and in quantitative ones (HENNINGER; BÜRKLIN; NIINIMÄKI, 2019; HU *et al.*, 2015; LANG; SEO; LIU, 2019).

In addition, we argue that Brazil is a relevant emerging market to the study of this type of consumption, given the importance of the clothing sector in the country, which is notable, and also because the proliferation of business models in this area is growing in the market: for instance, clothing libraries for clothes rental in São Paulo (PEDROSO, 2017), Curitiba (GAZETA DO POVO, 2017) and Fortaleza (DIÁRIO DO NORDESTE, 2018). Furthermore, second-hand fashion markets in thrift stores and street fairs in Porto Alegre (MACHADO *et al.*, 2019). Thus, this study contributes to the literature on collaborative fashion consumption through the validation of a research instrument within this context that can be used in future Brazilian studies.

## 2 COLLABORATIVE FASHION CONSUMPTION

Collaborative consumption is a phenomenon that has been addressed in the literature from the perspective of both tangible and intangible goods (BARDHI; ECKHARDT, 2012; BOTSMAN; ROGERS, 2011; SCHOR; FITZMAURICE, 2015), encompassing activities of "obtaining, giving, or sharing access to goods and

services" (HAMARI; SJÖKLINT; UKKONEN, 2016, p. 2050). Besides that, its offerings might embody many types of value propositions (e.g., low-cost, vintage, premium, sustainable) (BAUMEISTER, 2014).

When compared to the nature of consumption of intangible goods, tangible goods can be different "because people can exercise greater control over tangible goods, which results in greater psychological ownership than that for intangible goods" (KIM; JIN, 2020, p. 122). In this sense, its application in fashion consumption is challenging since, in the field of clothing, the idea that the individual is what he owns, and wears, undergoes modifications to consider forms of possession and uses that do not always involve ownership (BELK, 2014; KIM, 2020; WU, 2015).

Collaborative Fashion Consumption (CFC), therefore, involves a combination of general concepts such as collaborative consumption, product service systems, sustainable services, and coefficient services, focused on the idea of sustainability in the field of fashion (ARMSTRONG *et al.*, 2015; BECKER-LEIFHOLD; IRAN, 2018; IRAN; SCHRADER, 2017; PEDERSEN; ANDERSEN, 2015). Iran (2018) states that it promotes sustainability through durability, extending the phase of using a product, using its maximum existing capacity. Thus, consumers choose to access used clothes instead of purchasing new ones, (re)using them at different times, with or without transfer of ownership.

CFC provides "opportunities for gifting, lending, sharing, swapping, renting, leasing, and second hand buying" (IRAN; SCHRADER, 2017, p. 5). This view is similar to that of Hamari, Sjöklint and Ukkonen (2016) on how to categorize collaborative consumption services, following two modes of exchange: access to ownership (e.g., renting) and transfer of ownership (e.g., swapping, donating, purchasing used goods), often with lower cost since consumers may rent or trade items at cheaper prices.

In the perspective of tangible assets, Kim and Jin (2020) develop a scale of motivations of collaborative consumption of consumer goods, stating that this type of consumption deals with activities such as renting, swapping, trading and purchasing/selling of used goods. Five underlying dimensions of collaborative consumption of consumer goods were identified in the study: concern-for-sustainability (i.e. ecological and environmental concerns), social (i.g. social relationships that one can create with like-minded people when involved in this type of consumption), variety-seeking (i.e. the large availability of brands and goods to facilitate swap and trade of goods between consumers), fun (i.e. the pleasantness and enjoyment derived from these activities), and cost-saving (i.e. the ability to save costs on goods).

According to Iran and Schrader (2017), collaborative fashion consumption can take place through the interaction between consumers, responsible for transacting fashion products with each other (P2P - peer to peer), or through the use of services from companies that supply products and platforms online or offline (B2C - business to consumer). The first case involves the swapping of clothes between friends, family, co-workers and strangers or giving them as gift or donation (APTEKAR, 2016; GRIMSHORN; JORDAN, 2015; HENNINGER; BÜRKLIN; NIINIMÄKI, 2019). The second involves the purchase of second-hand clothes (FARRANT; OLSEN; WANGEL, 2010; JOUNG; PARK-POAPS, 2013) and the use of clothing libraries, where garments can be shared and rented (ARMSTRONG *et al.*, 2015; PEDERSEN; ANDERSEN, 2015; WU, 2015; ZAMANI; SANDIN; PETERS, 2017).

A literature review sought to identify the reasons for the acceptance and rejection of this type of consumption (BECKER-LEIFHOLD; IRAN, 2018). The acceptance was motivated by utilitarian, biospheric and hedonic aspects. Utilitarian aspects consist of reasons related to the search for bargains, fair price, or frugality. In the same vein, the study of purchase of second-hand clothes, one of the types of CFC, states that economic aspects are relevant to evaluate this type of consumption as it considers a way to obtain a fair price and access to branded products with a lower price (MACHADO *et al.*, 2019). Biospheric aspects represent the search for environmentally friendly consumption and the prevention of disposal of clothes (BECKER-LEIFHOLD; IRAN, 2018). Regarding the latter, Niinimäki (2017) affirms that the CFC avoids the disposal of used clothes, and the consequent generation of pollution and waste in landfills, as a positive effect on the environment.

Finally, hedonic aspects consist in the chance to try new styles and not feel guilty, need for exclusivity, search for clothing combinations. In this sense, topics such as fun, pleasure or enjoyment of the consumption activity has been brought up by consumer literature (HOLBROOK; HIRSCHMAN, 1982). Previous research on sustainable fashion addresses the importance of pleasure in increasing engagement in this type of consumption (BLY; GWOZDZ; REISCH, 2015). According to Johnson, Mun and Chae (2016), enjoyment is

positively related to the purchase intention in the CFC context. Similarly, Iran, Geiger and Schrader (2019), suggest that consumer pleasure in the CFC activity is linked to CFC engagement. The study conducted by Lang, Seo and Liu (2019) on fashion rental services identified the positive influence of perceived enjoyment of fashion renting on fashion renting intention.

Machado *et al.* (2019) revealed the importance of hedonic and recreational aspects in their study of second-hand fashion purchases through pleasant experiences related to the pursuit of something that is not available in the market or interactions with the shop owners, sellers, and other consumers. In addition, visiting these places and seeing this activity as an enjoyable experience. Becker-Leifhold and Iran (2018) also identify the reasons for CFC rejection. They involve concerns about clothing hygiene and users' health (i.e., smell, odor and the possibility of disease transmission or contamination) which was also mentioned by Kim and Jin (2021), lack of trust and information in service providers, difficulties in dealing with the replacement of ownership by a service, in addition to changes in consumption habits that may involve attachment to clothes.

### 3 METHOD

To validate the Motivations for Collaborative Consumption of Consumer Goods scale in Brazil, we conducted a survey online, through online questionnaires, focusing on the context of collaborative consumption of fashion. Invitations to participate in the survey were sent via social networks. The accessibility of participants was used to access the sample of this study. A total of 156 respondents completed the survey. After incomplete responses were discarded, 155 responses remained for data analysis.

The sample concentrates respondents from Ceará (62%) and Paraná (16%) due to the researcher's accessibility. The remaining 22% were distributed among other Brazilian states (i.e. Amazonas, Minas Gerais, Pará, Paraíba, Piauí, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina and São Paulo). The sample is characterized by young adults between 20 and 30 years old (53%) and women (78%). Regarding marital status, most of the respondents are single (54%). As for the education level, it was observed that most of the people have higher education level (73.5%) that includes respondents with College, Masters', and Ph.D. degrees. For individual income, most of the respondents earn up to R\$3,000.00 (58%).

The questionnaire had two sections: 1) scale of Motivations for Collaborative Consumption of Consumer Goods (KIM; JIN, 2020); 2) and questions regarding the demographic profile of participants. This scale was chosen because it is suitable for consumer "goods" that may involve, for example, household items, clothes, and furniture. For this study, conducted in Brazil, we chose to apply the scale to the context of collaborative fashion consumption, since this type of consumption, more common in the European and Asian context (IRAN; SCHRADER, 2017; IRAN; GEIGER; SCHRADER, 2019), has gained increasing visibility in the Brazilian market (e.g., PEDROSO, 2017).

At no point in the writing of the questionnaire, the name of the scale was used. Respondents were informed in the initial text of the questionnaire that it was a survey on clothing consumption since the scale was adapted to this context. In this sense, items on the scale that referred to "goods" were replaced by "clothes".

The scale was translated from English to Portuguese and, in reverse, from Portuguese to English. This process allowed us to identify any problems regarding the comprehension of the items by the Brazilian sample. Three professionals translated the scale: (i) a researcher in the field of marketing and consumption; (ii) a professor and researcher in the field of administration, fluent in English and with experience in English teaching; and (iii) a linguist expert in English language. The professionals performed the translation and met virtually to discuss the translation of the scale, taking into account the context of the research, the text semantics, and the sociolinguistic factors. Adaptations were made to the items so that the ideas presented initially were preserved in the Portuguese language.

Motivations for Collaborative Consumption of Consumer Goods, adapted for the clothing consumption context in this paper, is a construct formed by five dimensions (15 items): concern-for-sustainability, social, variety-seeking, fun and cost-saving (Appendix). All items were measured on a seven-point Likert-type scale (1 = "strongly disagree," 7 = "strongly agree"). To achieve the objective of this paper, all

15 items were analyzed using a confirmatory factor analysis (CFA) of maximum likelihood estimation using AMOS 23.0. Both Cronbach's alpha and Composite Reliability (CR) were used to assess the internal consistency of the items (HAIR *et al.*, 2009). Furthermore, the average variances extracted (AVE) and the composite reliability (CR) were used to assess the convergent and discriminant validity of the model, and thus, construct validity (BAGOZZI; YI, 1988; FORNELL; LARCKER, 1981). Model adjustment measures were also used (HAIR *et al.*, 2009).

#### 4 RESULTS

First, we performed a confirmatory factor analysis (CFA) on Motivations for Collaborative Consumption of Consumer Goods Scale, adapted for this study in the context of fashion consumption in Brazil. The model showed the five dimensions (concern-for-sustainability, social, variety-seeking, fun and cost-saving), and consisted of 15 items. Table 1 summarizes the CFA results. Additional results regarding mean, standard deviation, and correlations are presented in Table 2.

Table 1 – Confirmatory factor analysis of the scale dimensions

<b>Sustainability</b>	<b>Standardized estimate</b>	<b>Cronbach's α</b>	<b>CR</b>	<b>AVE</b>
CC1. Comprar roupas de segunda mão significa pensar no meio ambiente.	0,910*	0,875	0,882	0,717
CC2. Trocar roupas com outras pessoas é ecológico.	0,918*			
CC3. Negociar roupas é ecologicamente correto.	0,694*			
<b>Social</b>				
CC4. Para mim, comprar roupas de segunda mão parece emocionante.	0,754*	0,883	0,895	0,741
CC5. Trocar roupas com outras pessoas me permitiria fazer parte de um grupo de pessoas com interesses semelhantes.	0,937*			
CC6. Negociar roupas com outras pessoas me permitiria fazer parte de um grupo de pessoas com pensamentos semelhantes.	0,882*			
<b>Variety-seeking</b>				
CC7. Alugar (roupas) me permite ter acesso a itens da moda.	0,451*	0,756	0,800	0,590
CC8. Uma grande variedade de marcas está disponível quando trocamos roupas com os outros.	0,904*			
CC9. Uma vasta variedade de roupas está disponível se eu escolher negociar coisas com outras pessoas.	0,866*			
<b>Fun</b>				
CC10. Comprar roupas de segunda mão parece entediante. <sup>(R)</sup>	0,578*	0,560	0,585	0,328
CC11. Eu acho que alugar roupas é uma atividade divertida.	0,423*			
CC12. A ideia de comprar itens que já pertenceram a outras pessoas é prazerosa.	0,686*			
<b>Cost-saving</b>				
CC13. É econômico negociar roupas com outras pessoas.	0,790*	0,806	0,805	0,580
CC14. Posso economizar dinheiro se eu optar por comprar roupas usadas em vez de comprar roupas novas.	0,726*			
CC15. Negociar com outras pessoas as coisas que tenho pode me beneficiar financeiramente.	0,767*			

Note: n = 155. \* p-value < 0,01.

Source: Research data.

Both Cronbach's alpha and Composite Reliability (CR) were used to assess the internal consistency of the items (Hair *et al.*, 2009): concern-for-sustainability (Cronbach's alpha = 0,875; CR = 0,882), social (Cronbach's alpha = 0,883; CR = 0,895), variety-seeking (Cronbach's alpha = 0,756; CR = 0,800), fun (Cronbach's alpha = 0,560; CR = 0,585) and cost-saving (Cronbach's alpha = 0,806; CR = 0,805). According to Hair *et al.* (2009), all values should be proximate to or greater than the acceptable threshold of 0.7.

As the results show, the dimension "fun" (Cronbach's alpha = 0,560; CR = 0,585) did not show internal consistency according to the Cronbach's alpha and CR scores (< 0.7), while the composite reliability and the Cronbach's alpha of the other constructs were acceptable. The average variances extracted (AVE) were all proximate to or greater than the acceptable threshold of 0.5 (BAGOZZI; YI, 1988), indicating adequate convergent validity of the constructs (FORNELL; LARCKER, 1981; HAIR *et al.*, 2009), except for the "fun" dimension (AVE = 0,328) (Table 1).

Table 2 – Mean, standard deviation and correlations

Construct	Mean	SD	1	2	3	4	5
1. Sustainability	5,434	1,423	<b>0,847</b>				
2. Social	4,265	1,650	0,675*	<b>0,861</b>			
3. Variety-seeking	4,738	1,386	0,641*	0,683*	<b>0,768</b>		
4. Fun	4,000	1,263	0,798*	0,904*	0,732*	<b>0,573</b>	
5. Cost-saving	5,725	1,203	0,594*	0,637*	0,629*	0,573*	<b>0,762</b>

Note: n = 155. The lower triangle of the matrix represents the correlation coefficients between constructs. The diagonal values (boldfaced values) represent the square root of the AVE of each construct. \*p value < 0,01.

Source: Research data.

Table 2 presents the results for discriminant validity of 5-dimension scale. Fornell and Larcker (1981) suggest that the square root of AVE values must be superior to the correlation estimate between any two constructs. The results show that the correlation between the constructs "Social" and "Fun" was greater than the square root of AVE of those constructs (Social and Fun), denoting some inconsistency related to the discriminant validity of the scale.

Table 3 – Adjustment measures of confirmatory factor analysis

Adjustment Measures	Calculated Values	Reference Values
$\chi^2$	186,458 (p value < 0,001)	(p value > 0,05)
Df	80	–
$\chi^2/df$	2,331	≤ 5
GFI	0,872	> 0,90
RMSEA	0,093	< 0,08
CFI	0,922	> 0,90
NFI	0,873	> 0,90
TLI	0,898	> 0,90

Nota: n = 155.

Source: Research data.

The goodness-of-fit test was used to show if the model yielded an acceptable fit (Hair *et al.*, 2009). The results showed the constructs met the standard criteria ( $\chi^2 = 186,458$ ,  $p < 0,001$ ,  $\chi^2/df = 2,331$ , Tucker–Lewis index (TLI) = 0,898, comparative fit index (CFI) = 0,922, normed fit index (NFI) = 0,873, root mean square error of approximation (RMSEA) = 0,093 (Table 3).

The results showed that the "fun" dimension did not present adequate measures for both convergent and discriminant validity and did not reach acceptable reliability parameters. For this reason, this dimension has been excluded, and a new confirmatory factor analysis was performed (Table 4).

Table 4 – Confirmatory factor analysis of the scale dimensions (4-dimension scale)

<b>Sustainability</b>	<b>Standardized estimate</b>	<b>Cronbach's <math>\alpha</math></b>	<b>CR</b>	<b>AVE</b>
CC1. Comprar roupas de segunda mão significa pensar no meio ambiente.	0,904*	0,875	0,882	0,718
CC2. Trocar roupas com outras pessoas é ecológico.	0,924*			
CC3. Negociar roupas é ecologicamente correto.	0,694*			
<b>Social</b>				
CC4. Para mim, comprar roupas de segunda mão parece emocionante.	0,731*	0,883	0,893	0,738
CC5. Trocar roupas com outras pessoas me permitiria fazer parte de um grupo de pessoas com interesses semelhantes.	0,943*			
CC6. Negociar roupas com outras pessoas me permitiria fazer parte de um grupo de pessoas com pensamentos semelhantes.	0,889*			
<b>Variety-seeking</b>				
CC7. Alugar (roupas) me permite ter acesso a itens da moda.	0,449*	0,756	0,800	0,590
CC8. Uma grande variedade de marcas está disponível quando trocamos roupas com os outros.	0,908*			
CC9. Uma vasta variedade de roupas está disponível se eu escolher negociar coisas com outras pessoas.	0,862*			
<b>Cost-saving</b>				
CC13. É econômico negociar roupas com outras pessoas.	0,792*	0,806	0,805	0,580
CC14. Posso economizar dinheiro se eu optar por comprar roupas usadas em vez de comprar roupas novas.	0,725*			
CC15. Negociar com outras pessoas as coisas que tenho pode me beneficiar financeiramente.	0,766*			

Note: n = 155 respondents. \* p value < 0,01.

Source: Research data.

After the initial analysis, in which the "fun" dimension was excluded, the new analysis resulted in a factor analysis of 12 items (4-dimension scale): concern-for-sustainability (Cronbach's alpha = 0,875; CR = 0,882), social (Cronbach's alpha = 0,883; CR = 0,893), variety-seeking (Cronbach's alpha = 0,756; CR = 0,800), and cost-saving (Cronbach's alpha = 0,806; CR = 0,805) (Hair *et al.*, 2009) (Table 4). Also, the average variances extracted (AVE) were all proximate to or greater than the acceptable threshold of 0.5, confirming adequate convergent validity of all the constructs (BAGOZZI; YI, 1988; FORNELL; LARCKER, 1981; HAIR *et al.*, 2009).

Still on the convergent validity, all standardized factor loadings were greater than 0.5, with the exception of item CC7 ("*Alugar (roupas) me permite ter acesso à itens da moda*") (=0,449). However, we chose not to exclude this item due to the adequacy of the dimension in terms of the average variances extracted (AVE = 0,590) (greater than the acceptable > 0.5) (BAGOZZI; YI, 1988), Cronbach's alpha (=0,756) and CR (=0,800), and not to violate Comrey's (1988) assertion that at least three items are needed to identify a common dimension. Therefore, the "variety-seeking" dimension remained with that item.

Table 5 – Mean, standard deviation and correlations (4-dimension scale)

Construct	Mean	SD	1	2	3	4
1. Sustainability	5,434	1,423	<b>0,847</b>			
2. Social	4,265	1,650	0,667*	<b>0,859</b>		
3. Variety-seeking	4,738	1,386	0,642*	0,678*	<b>0,768</b>	
4. Cost-saving	5,725	1,203	0,595*	0,636*	0,628*	<b>0,762</b>

Note: n = 155. The lower triangle of the matrix represents the correlation coefficients between constructs. The diagonal values (boldfaced values) represent the square root of the AVE of each construct. \*p value < 0,01.

Source: Research data.

Table 5 presents the results for discriminant validity of the 4-dimension scale. The results show that the square root of AVE of each pair of constructs was greater than the correlations estimate in all cases, confirming the discriminant validity of the scale. Thus, it suggests that the exclusion of the “Fun” dimension improved quality of the results.

Table 6 – Adjustment measures of confirmatory factor analysis (4-dimension scale)

Adjustment Measures	Calculated Values	Reference Values
X <sup>2</sup>	76,709 (p value < 0,001)	(p value > 0,05)
Df	48	–
X <sup>2</sup> /df	1,598	≤ 5
GFI	0,926	> 0,90
RMSEA	0,062	< 0,08
CFI	0,975	> 0,90
NFI	0,936	> 0,90
TLI	0,965	> 0,90

Note: n = 155.

Source: Research data.

As for the goodness-of-fit test, it showed that the model yielded an acceptable fit (Hair *et al.*, 2009). The results showed the constructs met the standard criteria ( $\chi^2 = 76,709$ ,  $p < 0.001$   $\chi^2/df = 1,598$ , Tucker–Lewis index (TLI) = 0,965, comparative fit index (CFI) = 0,975, normed fit index (NFI) = 0,936, root mean square error of approximation (RMSEA) = 0,062 (Table 6). In summary, the CFA analysis supported the scale's reliability, convergent validity and discriminant validity. We conclude that the scale for collaborative consumption of consumer goods, adapted to the Brazilian context of collaborative fashion consumption, consists of four dimensions that can be measured through 12 items.

## 5 DISCUSSION AND CONCLUSIONS

Results have shown that consumer orientations towards collaborative consumption of goods in the context of collaborative fashion consumption in Brazil can be manifested through four dimensions: concern-for-sustainability, social, variety-seeking and cost-saving.

The first dimension, concern-for-sustainability, addressed ecological and environmental concerns in relation to the purchase, swap, or trade of secondhand clothing (KIM; JIN, 2020). Past research shows that collaborative fashion consumption can be associated, in large part, with the search for greater sustainability and disposal prevention of fashion goods (BECKER-LEIFHOLD; IRAN, 2018). In this sense, avoiding the purchase of new clothes by reusing those that the individual already owns or swapps (FARRANT; OLSEN; WANGEL, 2010; JOUNG; PARK-POAPS, 2013), the disposal of used ones, and the generation of pollution and waste in landfills (Niinimäki, 2017). The second dimension, social, referred to the social relationships that one can create with like-minded people when purchasing, swapping, or trading clothes with others (KIM; JIN, 2020). This factor also

shows, for the Brazilian sample, how collaborative consumption of fashion can provide greater interaction between consumers and like-minded people, responsible for transacting fashion products with each other (HENNINGER; BÜRKLIN; NIINIMÄKI, 2019; IRAN; SCHRADER, 2017). It is worth mentioning, however, that this dimension cannot be evaluated with respect to the B2C interaction, whether off-line or not.

The third dimension, variety-seeking, referred to the large availability of brands and clothes to facilitate swap and trade of clothing items between consumers (Kim & Jin, 2020). Regarding item CC7 (“Alugar (roupas) me permite ter acesso a itens da moda”), that we chose to remain in this dimension, we understand that its low score may be related to cultural issues associated with the fact that the sample of this study is Brazilian. In Brazil, there is no culture for renting fashionable clothes different from what usually occurs in other countries, as shown in previous studies on collaborative fashion consumption (BECKER-LEIFHOLD; IRAN, 2018; IRAN; SCHRADER, 2017; IRAN; GEIGER; SCHRADER, 2019; HENNINGER; BÜRKLIN; NIINIMÄKI, 2019; PEDERSEN; ANDERSEN, 2015; ZAMANI; SANDIN; PETERS, 2017). In general, renting is more common in Brazil for specific contexts, for example for renting clothes for parties or events. As mentioned earlier, the presence of business models in the country that work with the rental of fashionable clothes (clothing libraries, for example) is recent. In addition, it still focuses, in terms of access for consumers or enthusiasts of the activity of renting clothes, in specific locations in the country (e.g. Fortaleza, São Paulo, Curitiba) (DIÁRIO DO NORDESTE, 2018; GAZETA DO POVO, 2017; PEDROSO, 2017).

Finally, the fourth dimension, cost-saving, is related to the ability to save costs on clothes. The sample of Brazilians corroborated that utilitarian aspects such as the search for a fair price or bargains are associated with collaborative consumption of fashion for the respondents (BECKER-LEIFHOLD; IRAN, 2018; HAMARI; SJÖKLINT; UKKONEN, 2016; KIM; JIN, 2020). As for the exclusion of the original fourth dimension, fun, which related to the pleasantness and enjoyment derived from these activities, this factor was mentioned by Becker-leifhold and Iran (2018) as one of the reasons for accepting this type of consumption: hedonic aspects, which involve trying new styles and not feeling guilty, looking for combinations or the need for exclusivity. The exclusion of this dimension might be explained by the idea that fun associated to collaborative consumption is not yet incorporated by Brazilians or because fun might be linked to other dimensions for respondents of this sample (e.g., pleasure and fun due to the social issue, sustainability, the pursuit of variety or cost savings).

In general, past CFC studies have been qualitative. When quantitative, there is a need for suitable instruments that accommodate a variety of CFC types (KIM; JIN, 2021). Thus, this research aimed to validate a scale of motivations for collaborative consumption of consumer goods, in the context of collaborative fashion consumption in Brazil. The validation of this scale in this context contributes is that other researchers can make use of an adequate and validated instrument for the study of the collaborative consumption of fashion in the country. As a limitation of the study, the sample size may have affected the results, since the sample concentrated respondents from the capitals of Paraná and Ceará, due to the accessibility of the researcher. Other studies may use samples from different regions of Brazil to assess possible differences between them.

This study extended the literature on collaborative fashion consumption in different countries, applying it in Brazil through the validation of a scale of motivations in this context. Future studies might explore perceptions about collaborative fashion consumption in cross-cultural contexts (e.g. Brazil-Germany), analyze the influence of cultural variables such as collectivism and individualism in this type of consumption, or identify the reasons why the “fun” dimension is not so important in Brazil. Future research might analyze how motivations for CFC are affected in post-COVID-19 scenario, since before this pandemic event, the concept of collaborative fashion consumption was gaining attention in the fashion industry, retail and society. In this sense, we expect that, with the pandemic, hygiene issues (BECKER-LEIFHOLD; IRAN, 2018), such as concerns about cases of contamination (KIM; JIN, 2021), arising from types of CFCs (e.g., clothing rental), may affect the way consumers feel and behave in relation to this type of fashion consumption. Future studies could also apply the scale of Motivations for Collaborative Consumption of Consumer Goods to different types of CFC proposals, that is, focusing on low-cost, vintage, premium, or sustainable value propositions.

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## APPENDIX

### Scale of Motivations for Collaborative Consumption of Consumer Goods

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#### **Sustainability**

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CC1. Purchasing secondhand goods means thinking about the environment.

CC2. Swapping goods with others is ecological.

CC3. Trading goods is environmentally friendly.

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#### **Social**

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CC4. To me, purchasing secondhand goods from others sounds exciting.

CC5. Swapping goods with others would allow me to be part of a group of people with similar interests.

CC6. Trading goods with others would allow me to be part of a group of like-minded people.

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#### **Variety-seeking**

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CC7. Renting allows me to get access to trendy items.

CC8. A large variety of brands are available when swapping goods with others.

CC9. Wide ranges of goods are available if I choose to trade things with others.

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#### **Fun**

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CC10. Buying secondhand goods sounds tedious.\*

CC11. I think renting goods is a fun activity.

CC12. The idea of purchasing previously owned items is pleasant.

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#### **Cost-saving**

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CC13. It is economical to trade goods with others.

CC14. I can save money if I choose to purchase used goods rather than buying new goods.

CC15. Trading the things I have with others can benefit me financially.

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Note: \*Denotes a reverse item.

Source: Kim and Jin (2020).