CIRCULAR FASHION FROM THE PERSPECTIVE OF YOUNG CONSUMERS – MEASUREMENT AND MANAGERIAL RELEVANCE

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Abstract: Previous research on consumption intentions on sustainable fashion products has shown that sustainable fabrics are one of the most preferred product attributes in the case of young consumers. The current research examined the consumer's intention to buy clothes considering sustainable consumption aspects. The consumption side of the sustainable fashion supply chain was examined, namely the sustainability issues in fashion and textiles from young consumers' perspectives. This paper aims to examine the relationships between three aspects and nine attributes of sustainable fashion and the intention differences between demographic segments. The novelty of the paper lies in the following: the circular economy scope of the investigation and development of suitable measures to evaluate young consumers' sustainable consumption intentions. A consumer survey was conducted using a self-administered questionnaire on a sample of 1,543 young consumers aged between 18 and 39 years. Research questions focused on buying behaviour and intentions. Data were analysed using univariate statistics, descriptive analysis and factor analysis. From young consumers' perspective, sustainable fabrics stand out in circularity, while waste reduction with buying second-hand and repurposing clothes are less relevant. For managerial consideration, the findings reveal the importance of marketing communication on sustainable fabrics as it seems to affect buying intentions in the case of young consumer segments. There are significant differences between genders in all three factors examined, fabric choice, frugality and waste reduction. The scale development contributes to managerial and academic literature for further investigation of consumer intentions. It is confident that the present research may be useful for planning further marketing activities and promoting sustainable lines.

Key words: sustainable fashion, innovative fabrics, scale development, young customers.

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Introduction

Sustainability in the fashion industry has importance in the global context. Societies and fashion brands are taking measures to shift from non-regenerable resource consumption and non-sustainable business models to more circular ones that lead to a sustainable consumption pattern. Global, European, and governmental promotions are available; moreover, global measurements are developed in the business sector, and more and more fashion brands communicate their contribution to sustainability.

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Without direct action of business sector and consumers, it is predicted that the fashion industry will be responsible for a quarter of the world's carbon budget by 2050 (UNEP, 2018). Should the global population reach 9.6 billion by 2050, the equivalent of almost three planets could be required to provide the natural resources needed to sustain current lifestyles (UNEP, 2018; EU, 2019). Among the environmental damage caused by the fashion industry, greenhouse gas emissions stand out. In addition, its water consumption, chemical use and microplastic pollution are significant (UN Alliance for Sustainable Fashion, 2021).

The phenomenon of fast fashion chains is due to how this business model manages its production chain and supplies, delivering products to retail outlets in a few weeks in response to growing consumer demand for new garments and accessories. The clothing industry is the second-largest polluter in the world, second only to the oil industry, mainly because of the long and varied supply chains of production, plant and animal raw materials usage, the production of synthetic fibres, the use of energy in the production technology, the transport needs of the supply chains, in addition to excessive consumption and waste. On the other hand, in measurements in supply chains and from the consumer side, awareness of the concern with the consequences of overconsumption gives rise to new ways of consuming and producing fashion, causing less environmental and social impact (Buzzo and Abreu, 2019; Kovacs, 2015; Kovacs, 2021).

The fashion industry continues to grow each year globally and is among the most labour-intensive sectors in the world. It is also a significant driver of employment for traditionally vulnerable groups. In some cases, the industry has been a source of empowerment and a stepping-stone to a better life for these segments. While the COVID-19 crisis has visited a devastating impact on businesses and jobs in fashion supply chains, it may also have accelerated responses that can lead to positive outcomes. Indeed, many fashion companies have taken time to reshape their business models during the crisis, streamline their operations, and sharpen their customer propositions (Amed et al., 2020). According to Clark (2008), three ways are addressed to sustainable fashion: the valuing of local resources and distributed economies; transparent production systems with less intermediation between producer and consumer; and sustainable and sensorial products that have a longer usable life and are more highly valued than typical "consumables".

Changing the sustainable consumption patterns of apparel products and former research gap on the attitudes and intentions of young consumers (Kim et al., 2021; Kovacs, 2021; Sandvik and Stubbs, 2019; Vehmas et al., 2018) prove the relevance of the current research. It would be important to measure sustainable consumption in studies related to attitudes, buying intention and buying habits to monitor the changes. If measuring scales could be developed, apparel consumer segments that are open to sustainability and circular fashion, would become identifiable, and the changes over time would also become traceable. For further research, the recycling of specific textile materials could be considered (Kovacs, 2021; Wagner and Heinzel, 2020), as consumer recycling and disposal awareness, and attitudes and intentions

as critical issues that remain understudied in the current literature (Ki et al., 2020; Kovacs, 2021).

Literature Review

Sustainable fashion consumption in the context of circular economy

The circularity in fashion supply chains with the contribution of fashion brands and consumers is poised to transform economic systems and contribute to sustainable development. From the perspective of consumers, the "reduce principle" of circular economy supports the minimization of the overall number of materials, resources, and waste, generated in the whole supply chain through the increase of efficiency in production and consumption while reducing waste and environmental impact. Ghisellini et al. (2016) summarized the goals and short-term consumer actions contributing to sustainable development while purchasing and deposing apparel products. The inflexible consumption habits are the biggest barriers to changing consumption patterns. Consumers are not willing to reduce their consumption level and clothing waste in general, although there seem to be consumer segments that are conscious of waste management (Hazen et al., 2017). The supply chain contribution, such as innovative textile and fashion design and production that is based on circular models, could be the most effective in the short term in shaping consumer behaviors towards sustainable fashion consumption (Niinimäki, 2018; Karrell and Niinimäki, 2020; Kovacs, 2021). Enabling such demands necessitates a deep understanding of consumers and processes by which consumption patterns, and the social practices they result from, are transformed that are stuck with inflexible consumption patterns (Camacho-Otero et al., 2018). Former studies examined the consumption side of the circular fashion supply chain and stated the lack of consumer awareness as the main barrier (Hvass, 2018; Heikkilä et al., 2018; Kirchherr et al., 2017; Rizos et al., 2016). Recent reviews on the topic of the circular economy have indicated that cultural barriers are a significant factor hindering the diffusion of so-called 'circular' business models (Camacho-Otero et al., 2018).

Former studies' results indicate that the positive image of circular products is the most important driver of consumers' acceptance, followed by the product's perceived safety (Calvo-Porral et al., 2020). The gap between attitudes and behavioral intention is based on the lack of information and support from the impact of individual and situational characteristics (Vermeir and Verbeke, 2006), more specifically involvement, PA (perceived availability), PC (perceived certainty), PCE (perceived consumer effectiveness), values, and social norms on consumers' attitudes, and intentions towards sustainable products. Their findings reveal that individual characteristics like involvement with sustainability, certainty concerning sustainability claims, and perceived consumer effectiveness have a significant positive impact on attitude towards buying the products, which correlates strongly with intending to buy. Shrivastava et al. (2021) emphasised the impact of communities in attitudes and intentions towards circular fashion consumption.

The following activities and 're' activities may be compared with the desired behaviors in terms of circular consumption behaviour suggested by Wastling et al. (2018), Chamacho-Otero et al. (2018), and Kovacs (2021) that are visualized in Figure 1.
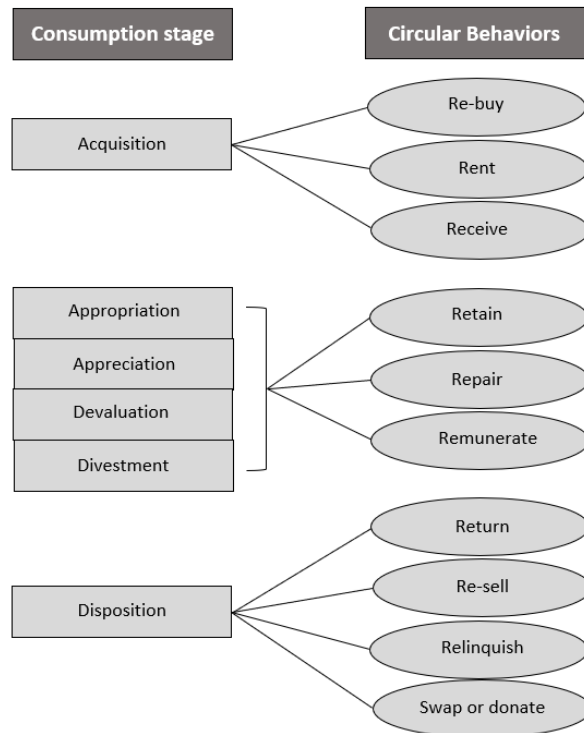

Figure 1: Circular consumption behaviours
Source: own illustration, based on Wastling et al. (2018); Chamacho-Otero et al. (2018); Kovacs (2021)

Awareness towards sustainable fashion consumption
Overall, clothing consumption globally has become unsustainable, while some consumer segments are becoming increasingly aware of the story behind the barcode on their clothes. Every year, tens of thousands of people search for "ethical fashion" and "sustainable fashion" keywords in the United States and Europe. The Ethical Fashion Guide is a tool to help them choose the brands that are doing more to protect the workers in their supply chain (UN, 2019). Nevertheless, Fletcher (2013) emphasised that the key stages of the lifecycle: material cultivation/extraction, production, usage, and disposal are also key determinants of sustainable consumption. The nature of consumption, including service design, localism, speed,

and user involvement, is effective in improvement. The driving force and value come from what they represent together: innovative ways of thinking about textiles and garments based on sustainability values and an interconnected approach to design and usability of garments.

The used fabrics play an emphatic role in our current understanding of how fashion and textiles contribute to sustainability. They have a relevant role for change and also a valuable commodity for raw material producers, fashion designers, manufacturing industry, consumers, and recyclers who work to reinforce their central role in the early 1990s, natural and recycled fibres dominated trade shows, trend forecasters and industry journalists' views on the sustainability of the fashion industry. In the second, which started in the mid part of the 2000s – and continues today – organic, Fair Trade, and rapidly renewable fibres continue to lead. The question and challenge are how consumers react and purchase the new innovative garments (Fletcher, 2013).

The commissioned research into new and emerging fibres, recycling, and garment durability was found as most accepted (Fletcher, 2014). The findings of Chan-Wong (2012) showed that only store-related attributes of eco-fashion influence positively consumers' eco-fashion consumption decisions, yet such a relationship can be weakened by the price premium level of eco-fashion.

Sustainable clothing purchasing intention

The fashion purchase intention is modified by attitudes, social norms, and self-efficacy beliefs (de Lenne and Vandenbosch, 2017). Examining the product choices, Hartikka and Labat (2016) reported that in the case of young customers, there has been a relationship between avoiding health risks and preferring organic materials during decision making. Former research findings suggest that consumer beliefs about ethical fashion, which are based on their perceptions of a company in terms of its reputation in the fashion industry, influence their support for what they perceive as socially and environmentally responsible businesses (Shen et al., 2014). Even though the findings of Joergens (2006) demonstrate evidence on ethical issues, they found that those do not affect consumers' fashion purchase behaviour in addition to environmental aspects. Marketers and practitioners are required to examine and collect insights on the perceptions and attitudes of young customers on the key sustainable product attributes for developing effective communication tools. According to Valaei and Nikhashemi (2017) and Ajitha and Sivakumar (2019), in the case of luxury clothing, there are significant differences between gender.

McNeill and Moore (2015) found that consumers can be categorized into one of three groups based on motivation and intention: 'Self' consumers, concerned with hedonistic needs, 'Social' consumers, concerned with social image and 'Sacrifice' consumers who strive to reduce their impact on the world. These different groups view fast fashion in conflicting ways, and subsequent implications for marketing sustainably produced fashion products to each group are, thus, significantly different, and gender differences were also identified. In terms of circular fashion, Hamzaoui and Lindon (2010), Lakatos et al. (2016) and Lakatos et al. (2018) found

the concept positively accepted by consumers, but they have low awareness. In other studies, Srikant (2013) and Lundbald et al. (2015) reported attitudes and intentions high in circular garments in the case of sustainable fabrics. All the former results indicate that a national strategy is required, which includes means to sustain the adoption of necessary new consumption behaviors, besides environmental awareness-raising and educational campaigns for explaining to consumers the liaison and the impact of their consumer behavior on the environment.

Textile innovations provide many opportunities to benefit both society and a company's competitive advantage. From the managerial point of view, Pedersen and Andersen (2015), Kozlowski et al. (2018) and Waheed and Khalid (2019) highlighted the importance of the transition of the whole fashion supply chain where consumers have a key role. Eifler and Diekamp (2013) found eco-label innovations in technologies acceptable for consumers. Moreover, innovative design and fabrics' consumer acceptance seems challenging and needs education and promotion resources from fashion companies and brands (Kumar, 2017).

Clothing has different roles in consumption, such as self-expression and necessity, and design and materials affect consumption and the planet. Waste reduction, circular consumption and product longevity of clothing are essential for a more sustainable future. The primary objective of the study is to extend the understanding of sustainable clothing intentions in terms of textile and innovative textiles. The main research topic is whether consumers intend to buy sustainable clothes because of the sustainable fabrics.

Based on theoretical considerations, the following research questions were formulated:

-What are the young consumers' most outstanding intentions in terms of sustainable clothing?

-Is the scale reliable in the studied age group?

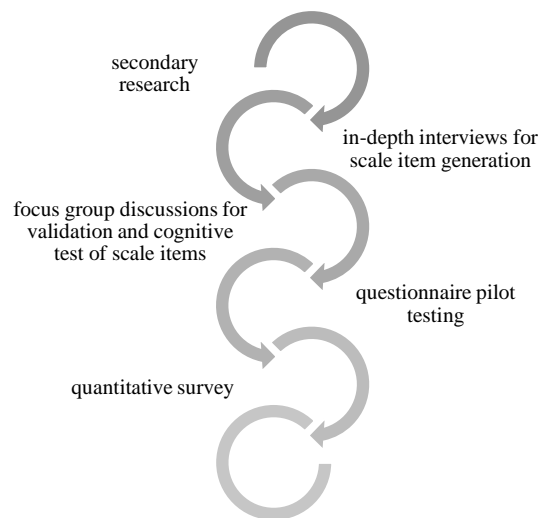-Are there significant differences between genders in intention to buy sustainable clothes?

Figure 2: The five-step research strategy followed in the study.
Illustration: Author.
Stage 1: exploratory research – secondary research,
stage 2: exploratory research – in-depth interviews for scale item generation,
stage 3: exploratory research – focus group discussion for validation and cognitive test of scale items,
stage 4: quantitative research – questionnaire pilot testing,
stage 5: quantitative research – descriptive analysis and scale validation testing. (Figure 2.)

Materials and Methods

Quantitative survey: To accomplish the research goal, a mixed-method study was conducted in separate phases. After the first research period, a qualitative analysis of group discussion was used to test the understandability (Kovacs, 2021) of scale development. In this paper, the quantitative research is described. The methodology of the quantitative research was based on a self-administered survey. To answer the research questions, the questionnaire consisted of three parts: for measuring consumer behaviour, multi-item constructs measurement were used. The questionnaire included open-ended questions on motivation for buying sustainable fashion products. The multi-item constructs were developed to measure the consumption intentions in a circular fashion.

Data collection: A survey was conducted in March 2021 with Hungarian consumers: 1614 young consumers participated in the survey (Table 1). The sample was stratified with a statistical error of 4.8%. After the data cleaning process, 1543 questionnaires were analysed. The structure of the respondents according to age and type of settlement corresponds to the proportions stated by the Hungarian Central

Statistical Office (HCSO, 2021). The respondents aged between 18 and 39 were divided into four age categories like18-24, 25-29, 30-34 and 35-39.

Table 1. Respondent distribution in the sample in per cent

	18 - 24	18 - 24	25 - 29	25 - 29	30 - 34	30 - 34	35 - 39	35 - 39
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Budapest	2.3	2.3	2.3	2.4	2.5	2.5	2.5	2.5
City of county rank	2.8	2.8	2.4	2.3	2.4	2.2	2.3	2.3
Town	4.6	4.3	3.8	3.5	3.8	3.6	3.9	3.8
Village	4.5	4.1	3.8	3.4	3.7	3.3	3.7	3.3

Source: Author's elaboration, N=1543

Data analysis: The quantitative statistical methods used in the analysis are descriptive, comparative statistics (correlation) and factor analysis. Principal component analysis and confirmatory factor analysis was conducted to check the validity and reliability of the scales. To examine the gender differences, T-test was elaborated to analyse the significant differences between males and females. The data processing and interpretations of results were performed by using SPSS Statistics 27 program. The limitations of the research are related to the sampling method and the age group of 18-39.

Results

The research aimed to describe the scale items, statistical structure and the validation of the internal scale structure. The nine amended items for sustainable clothing result from the former two-step qualitative research (Kovacs, 2021). The results of the descriptive statistical analysis and the factor analysis are described in the following chapters. The differences between genders are shown in the last chapter of the results.

Descriptive analysis of the scale items
Of the 1543 sample, examining the descriptive statistical values, the scale item, "high-quality clothes with long durability", has the highest mean, followed by "the intention of giving away or swap clothes that are not being used". On the other end of the rank, buying second-hand clothes and purchasing fewer garments are the ones with the lowest intention. The median values are the same for all scale items except for giving away swap items that are no longer worn, which has a high median. There are significant differences between the standard deviations of the scale items. The most dispersed question was renting and repurposing clothes and, in the third place, buying high-quality and long-lasting clothes. Clothes that respondents no longer wear, they would give away, or swap had the most homogenous answers. See Table 2 for detailed results.

Table 2. Descriptive statistics of the intent scale items

Scale items	Mean	Median	Mode	Std. Deviation
I would buy high-quality and long-lasting clothes	3.88	3.00	4	2.231
Items that I no longer wear I would give away or swap	3.80	4.00	4	1.570
I would buy products made from certified organic materials	3.74	3.00	4	1.857
I would rent my clothes	3.54	3.00	3	2.499
I would buy products made from recycled materials	3.58	3.00	3	1.977
I would repurpose my clothes	3.57	3.00	2	2.589
I would buy clothes made from innovative sustainable fabrics	3.75	3.00	4	2.013
I would purchase less garments	3.20	3.00	3	2.010
I would buy second-hand clothing	2.94	3.00	2	2.093

4-point Likert scale 1=I definitely would not …, 4=I definitely would ...
Source: Author's elaboration, N=1543

The highest median values had "I would rent my clothes" items (see Table 3). The lowest median is related to repurposing clothes and buying second-hand clothes items. All the other items fall into the "I probably would" answer category. The means of the items are between the "I probably would" and to the "I definitely would" answer categories.

Table 3. Answer frequencies of the scale items

	1 = I definitely would not …	2 = I probably would not …	3 = I probably would …	4 = I definitely would …	Don't know
FR – I would repurpose my clothes	15.3%	27.1%	26.0%	15.0%	16.6%
WA - I would buy second-hand clothing	24.4%	24.0%	26.1%	17.2%	8.3%
WA- I would purchase less garments	14.7%	24.2%	29.9%	22.9%	8.4%
FR - I would rent my clothes	15.1%	19.6%	20.2%	29.2%	15.8%
FA - I would buy clothes made from innovative sustainable fabrics	7.8%	18.3%	34.2%	29.8%	9.9%
FA – I would buy clothes made from recycled fabrics	7.4%	15.7%	36.6%	30.7%	9.7%
FR - I would buy high-quality and long-lasting clothes	6.8%	13.4%	34.4%	31.4%	14.0%
FA - I would buy products made from certified organic materials	5.4%	8.4%	38.9%	38.1%	9.2%
WA - Items that I no longer wear I give away or swap	4.5%	5.6%	27.1%	56.3%	6.4%

Source: Author's elaboration, N=1543

Visualising the "I definitely would" and "probably would" answer frequencies, it seems, the highest proportion of positive answer categories are related to donating and swapping no longer used clothes, buying garments made from certified organic materials or recycled materials, purchasing high-quality and long-lasting clothes and on the fifth-place innovative fabrics (Figure 3). In the case of the item "Innovative fabrics", 30 per cent of the respondents reported the most positive (I definitely would…) answers, and 34 per cent of the respondents probably intend to purchase fashion products made from innovative fabrics. On the other hand, buying second-hand clothes and repurposing clothes had more negative answers.
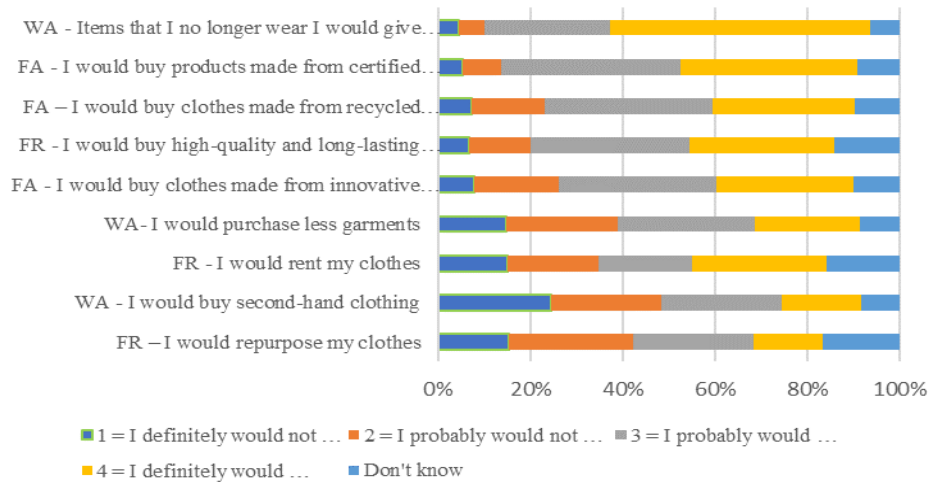

Figure 3. Frequency proportions of scale items on sustainable clothing intentions
Source: Author's compilation.

Scale testing and validation

Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were used to test the validity of the measurement model. The scale items for further studies were combined into three factors. All variables were suitable for the factor analysis according to the KMO and Bartlett's test. Nine scale items were examined utilising exploratory factor analysis, Principal component method: KMO 0.861, Bartlett's Test of Sphericity Approx. Chi-Square 3008.2 df 36, Sig 0.000. Communalities between 0.551 and 0.808. Total Variance Explained 0.833.

The three factors identified in the model: Factor 1: FA - fabrics choice - (Cronbach's alpha: 0.881), Factor 2: FR - frugality - (Cronbach's alpha: 0.877), and Factor 3: WA - waste reduction - (Cronbach's alpha: 0.776).

For testing the scale, random splitting of the database was utilized. For validation, Cronbach' Alpha, TVE (total variance explained), and multiple extraction and rotation methods were used: Maximum likelihood and Principal components

methods. The rotation methods were Promax with Kaiser optimization and Varimax rotation. The structure of the factors was stable in all the tested methods. Table 4 shows the exploratory factor analysis results, where the results of the Goodness of fit test were: Chi-Square 44.704, df 12, Sig 0.324. Communalities of the items were between 0.651 and 0.878. The total variance explained was 76.332 using the maximum likelihood method. The correlation and covariance values were acceptable in all cases of the items. The factor structure of three factors, fabrics choice, frugality and waste reduction, is shown in Table 4.

Table 4. Factor structure of the items of the CFC Scale (Circular fashion consumption scale)

	Fabrics choice	Frugality	Waste reduction
FA - I intend to buy products made from certified organic materials	**0.857**	0.033	-0.128
FA - I intend to buy clothes made from innovative sustainable fabrics	**0.792**	-0.083	0.180
FA - I intend to buy clothes made from recycled fabrics	**0.734**	0.093	0.065
FR – I would rent my clothes	-0.196	**0.771**	0.161
FR - I would buy high-quality and long-lasting clothes	0.179	**0.755**	-0.105
FR - I would repurpose my clothes	0.102	**0.726**	0.000
WA- I intend to purchase less garments	-0.122	0.066	**0.854**
WA- I would buy second-hand clothing	0.206	-0.129	**0.758**
WA- Items that I no longer wear I intend to give away or swap	0.028	0.169	**0.619**

Extraction Method: Maximum Likelihood.: Rotation:
4-point Likert scale 1=I definitely would not …, 4=I definitely would …
Source: Author's elaboration.

Intention differences between genders
While examining the differences between man and woman respondents' answers (Table 5), there seems to be a significant difference in six scale items, where the most outstanding difference is between the "I intend to buy clothes made from innovative sustainable fabrics" whereby forty per cent of the women eighteen per cent of women would buy clothes from innovative fabrics. In the case of certified organic materials, the difference is high in the "definitely would" answer category, where forty-two per cent of women and thirty-three per cent of men reported the answers. The answers were closer in the second positive category, "I probably would" (women: 38%, men: 40%). Buying clothes made from recycled fabrics had the most similar answers.

Table 5. Gender differences between the intention scale items

Scale item	Gender	1	2	3	4	na	Value	Appr. Sig
I intend to buy products made from certified organic materials	men	7.6	10.4	37.6	33.2	11.1	0.147	0.000
	women	3.4	6.6	40.0	42.4	7.5		
	sum	5.4	8.4	38.9	38.1	9.2		
I intend to buy clothes made from innovative sustainable fabrics	men	12.7	23.9	31.0	18.6	13.8	0.308	0.000
	women	3.4	13.5	36.9	39.6	6.5		
	sum	7.8	18.3	34.2	29.8	9.9		
I intend to buy clothes made from recycled fabrics	men	8.9	16.0	37.5	27.5	10.1	0.078	0.061
	women	6.0	15.5	35.8	33.5	9.3		
	sum	7.4	15.7	36.6	30.7	9.7		
I would buy second-hand clothing	men	31.6	26.4	21.5	11.4	9.1	0.213	0.000
	women	18.0	22.0	30.1	22.2	7.7		
	sum	24.4	24.0	26.1	17.2	8.3		
I intend to purchase less garments	men	16.8	24.7	28.6	20.8	9.1	0.074	0.088
	women	12.8	23.8	31.0	24.6	7.8		
	sum	14.7	24.2	29.9	22.9	8.4		
Items that I no longer wear I give away or swap	men	5.6	7.8	31.3	47.0	8.3	0.184	0.000
	women	3.6	3.7	23.5	64.5	4.7		
	sum	4.5	5.6	27.1	56.3	6.4		
I would buy high-quality and long-lasting clothes	men	7.9	15.4	34.3	29.0	13.5	0.077	0.068
	women	5.9	11.6	34.5	33.6	14.4		
	sum	6.8	13.4	34.4	31.4	14.0		
I would repurpose my clothes	men	18.6	27.1	24.7	12.4	17.1	0.104	0.003
	women	12.4	27.1	27.1	17.2	16.2		
	sum	15.3	27.1	26.0	15.0	16.6		
I would rent my clothes	men	17.9	23.3	21.5	19.8	17.6	0.198	0.000
	women	12.8	16.5	19.0	37.4	14.3		
	sum	15.1	19.6	20.2	29.2	15.8		

4-point Likert scale 1=I definitely would not ..., 4=I definitely would ...
Source: Author's elaboration.

The innovative sustainable materials are the most accepted ones for young women and are intended to purchase by more than half of the men. We must highlight, the highest amount of "I don't know" answers were also reported to this item. In the

former stage of the research, the answers of the qualitative interviews suggest that young customers collect information from online WOM and social media platforms where there is a lack of information on fabrics of sustainable clothes. Recycled and organic materials are much more emphasised in advertisements; therefore, customers have more awareness of those.

There is a significant difference in renting clothes and repurposing items related to frugal consumption, which is much more supported by women. Buying high-quality and long-lasting clothes were intended by both genders.

Table 6. T-Test of gender difference between factor scores

Factor Score	Gender	N	Mean	Std. Deviation	Std. Error Mean
Fabric - REGR factor score 1 for analysis 1	man	683	-0.022	1.117	0.043
	woman	783	0.019	0.886	0.032
Frugality - REGR factor score 2 for analysis 1	man	683	-0.035	1.056	0.040
	woman	783	0.031	0.948	0.034
Waste reduction - REGR factor score 3 for analysis 1	man	683	-0.051	1.122	0.043
	woman	783	0.045	0.878	0.031

Scale 4 point, 1 = I definitely would not … 4 = I definitely would …
Source: Author's elaboration.

Examining the differences between genders on the factors, significant differences can be detected in all sustainable clothing factors examined in the study (See Table 5, Table 6 and Table 7). For testing significant differences between factor scores in genders, the results suggest significant differences in all factors, The most outstanding difference is in terms of the first factor, the "fabrics choice" (Levene test, F 25.931, Sig 0.000). As Table 6 shows, the variance difference is significant; therefore, different communication strategies should be used.

Table 7. Independent Samples Test

		Levene's Test for Equality of Variances		T-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
REGR factor score 1 for analysis 1	Equal variances assumed	25.931	0.000	-0.777	1464	0.437	-0.040	0.052	-0.143	0.062
	Equal variances not assumed			-0.765	1295.426	0.444	-0.040	0.053	-0.145	0.064

REGR factor score 2 for analysis 1	Equal variances assumed	5.633	0.018	-1.268	1464	0.205	-0.066	0.052	-0.169	0.036
	Equal variances not assumed			-1.259	1382.410	0.208	-0.066	0.053	-0.169	0.037
REGR factor score 3 for analysis 1	Equal variances assumed	17.118	0.000	-1.829	1464	0.068	-0.096	0.052	-0.198	0.006
	Equal variances not assumed			-1.799	1285.826	0.072	-0.096	0.053	-0.200	0.008

Source: Author's elaboration, N=1543

The propelling growth of the fashion industry where circular fashion has made a mark in fashion sustainability is visible apparently in the younger generation. The examined young generation has a positive attitude, and intention has some factors of circular fashion consumption. The reuse and recycle of products can potentially reduce clothing waste and can have a significant impact on the environment. The factor of fabrics is accepted and means positive intention but apparel reuse, second-hand clothing, and buying garments made from recycled fabrics is a concept in its nascent stage. Circular fashion intentions reported being significantly different for men and women, although some aspects are similarly intended.

Conclusions

This study was conducted to investigate the sustainable fashion consumer behaviour of young customers, with special regards to circular consumer behavior intentions. After analyzing the main circular fashion aspects and conducting a qualitative study, it was possible to develop a measurement scale to examine circular fashion intentions. The paper provides retailers with managerial insights into devising marketing plans to promote sustainable lines, which facilitate fashion companies' development of a sustainable fashion supply chain.

According to the research results, the most preferred items related to the circular economy are high-quality clothes with long durability and giving away or swapping clothes, while the less preferred ones are buying second hand or used clothes. The scale items can be grouped into three factors, fabrics choice, frugality and waste reduction. Fabric choice is the most effective factor, which influences the model structure.

Strategically, there will be imperative to manage commercial opportunities actively and be acute in picking winning segments, markets and channel combinations to grow sustainably. The findings of the study also highlight the narrow role of waste reduction intentions in consumer behaviour and the differences between genders on sustainable consumption intentions. Outstanding trigger words are organic and innovative fabrics in the case of women. Recycled fabrics are attractive for more than half of both men and women.

For managerial implication, the findings highlight the main product attributes young customers intended to buy and others that are not attractive as keywords. The managerial aspects of the study provide information on intent factors related to sustainable fashion consumption and messages applicable to generation Z customers. Understanding all aspects of perceptions and attitudes can help marketing managers build more effective strategies and campaigns with respect to their circular product lines.

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MODA ZRÓWNOWAŻONEJ KONSUMPCJI Z PERSPEKTYWY MŁODYCH KONSUMENTÓW - POMIAR I ZNACZENIE MENEDŻERSKIE

Streszczenie: Dotychczasowe badania intencji konsumpcyjnych produktów z zakresu mody zgodnej z zasadami zrównoważonego rozwoju wykazały, że zrównoważone tkaniny są jednym z najbardziej preferowanych atrybutów produktów w przypadku młodych konsumentów. W bieżącym badaniu zbadano zamiar zakupu odzieży przez konsumentów, biorąc pod uwagę aspekty zrównoważonej konsumpcji. Zbadano stronę konsumpcyjną łańcucha dostaw zrównoważonej mody, a mianowicie kwestie zrównoważonego rozwoju w modzie i tekstyliach z perspektywy młodych konsumentów. Niniejszy artykuł ma na celu zbadanie związków między trzema aspektami i dziewięcioma atrybutami zrównoważonej mody oraz różnic intencji między segmentami demograficznymi. Nowość artykułu polega na: zakresie badania gospodarki o obiegu zamkniętym i wypracowaniu odpowiednich mierników oceny intencji zrównoważonej konsumpcji młodych konsumentów. Badanie konsumenckie zostało przeprowadzone za pomocą samodzielnego kwestionariusza na próbie 1543 młodych konsumentów w wieku od 18 do 39 lat. Pytania badawcze skoncentrowane na zachowaniach i intencjach zakupowych. Dane analizowano za pomocą statystyki jednowymiarowej, analizy opisowej i analizy czynnikowej. Z perspektywy młodych konsumentów zrównoważone tkaniny wyróżniają się pod względem obiegu zamkniętego, podczas gdy ograniczanie odpadów przy kupowaniu odzieży używanej i zmianie przeznaczenia jest mniej istotne. Z punktu widzenia kierownictwa, wyniki ujawniają znaczenie komunikacji marketingowej dotyczącej zrównoważonych tkanin, ponieważ wydaje się, że wpływa ona na intencje zakupowe w przypadku młodych segmentów konsumentów. Istnieją znaczne różnice między płciami we wszystkich trzech badanych czynnikach, doborze tkanin, oszczędności i redukcji odpadów. Rozwój skali przyczynia się do literatury menedżerskiej i akademickiej do dalszego badania intencji konsumentów. Jesteśmy przekonani, że nasze badania mogą być przydatne do planowania dalszych działań marketingowych i promowania zrównoważonych linii.

Słowa kluczowe: zrównoważona moda, innowacyjne tkaniny, rozwój skali, młodzi klienci.

从年轻消费者的角度看循环时尚 - 衡量和管理相关性

摘要：此前关于可持续时尚产品消费意愿的研究表明，可持续面料是年轻消费者最青睐的产品属性之一。当前的研究调查了考虑到可持续消费方面的消费者购买衣服的意愿。研究了可持续时尚供应链的消费方面，即从年轻消费者的角度探讨时尚和纺织品的可持续性问题。本文旨在研究可持续时尚的三个方面和九个属性之间的关系以及人口细分之间的意图差异。论文的新颖之处在于：循环经济范围的调查和制定合适的措施来评估年轻消费者的可持续消费意愿。使用自填式问卷对 1,543 名年龄在 18 至 39 岁之间的年轻消费者进行了消费者调查。研究问题集中在购买行为和

意图上。使用单变量统计、描述性分析和因子分析对数据进行分析。从年轻消费者的角度来看，可持续面料在循环性方面脱颖而出，而购买二手和重新利用衣服减少浪费的相关性较小。出于管理考虑，调查结果揭示了可持续面料营销传播的重要性，因为它似乎会影响年轻消费者群体的购买意愿。在所考察的所有三个因素中，性别之间存在显着差异，即面料选择、节俭和减少浪费。规模发展**有助于**进一步调查消费者意图的管理和学术文献。我们相信，我们的研究可能有助于规划进一步的营销活动和推广可持续产品线

关键词：可持续时尚、创新面料、规模化发展、年轻顾客