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Assessing consumers' propensity towards Product-Service Systems in the fashion industry: A cross-national comparison between Russia and Italy

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ASSESSING CONSUMERS' PROPENSITY TOWARDS PRODUCT-SERVICE SYSTEMS IN THE FASHION INDUSTRY: A CROSS-NATIONAL COMPARISON BETWEEN RUSSIA AND ITALY

Abstract

In order to assess the propensity of Russian and Italian fashion consumers to use Product-Service Systems (PSSs), the study develops a set of hypotheses to identify the drivers and the barriers to the adoption of PSSs and to determine which ones are the most relevant respectively for Russian and Italian consumers. Finally, the study compares the level of interest in PSSs for Russian and Italian consumers. The methodology implements a quantitative comparative study between Russian and Italian respondents, using an online survey leading to a final sample of 328 participants. From the findings it emerges very clearly that national culture plays a pivotal role in determining the propensity of fashion consumers to use PSSs. This has highly significant implications both for theory and for practice.

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1. Introduction

There is a growing awareness of the issues associated with the environment, climate change and lack of resources. Material waste and resource inefficiency are closely associated with the concepts of sustainability and, in particular, the circular economy which aims to decouple economic growth from

natural resource depletion and environmental degradation through activities that reduce, reuse and recycle materials in production, distribution and consumption processes (Hvass and Pedersen, 2019). Global companies, such as Google, Renault and Unilever have created a range of initiatives to achieve circular economy goals (Bocken et al., 2017). The concept of circular economy has also gained considerable attention from governments and policymakers all over the world¹. Academic research has also devoted increased attention to the circular economy concept (e.g., Tukker, 2015; Geissdoerfer et al., 2017; Saha et al., 2020; Elf et al., 2022).

Despite this momentum, in 2019 the Circularity Gap Report showed that only 9% of the world economy was circular (PACE, 2019). In particular, the textile and clothing industry is considered one of the most polluting industries worldwide (EMF, 2017; Huynh, 2021; Colucci and Vecchi, 2021), whereby circular practices to reduce its environmental footprint are required and rather urgent. From a sustainability perspective, not only fashion production but also the consumption of fashion items should become less environmentally and socially harmful. The desire for novelties primarily drives the consumption of fashion products, and the falling prices and diminishing quality of clothing have encouraged further consumption, resulting in increasing garments disposal (Armstrong et al., 2015). Involving the consumer is absolutely pivotal to determining the success of circular economy-driven initiatives (e.g., Ferasso et al., 2020; Saha et al., 2020; Elf et al., 2022).

Several initiatives have been recently established to provide consumers with alternatives to purchasing new, inexpensive, low-quality clothing, such as rental services and styling consultancies (Armstrong et al., 2015)². Among the different solutions, Product-Service Systems (PSSs) represent an effective practice to achieve product longevity in the fashion industry. Various types of PSSs, such as take-back, renting, repair, and many other services, give clothes a second life or help to dispose of

¹ In March 2020, the European Commission adopted a new Circular Economy Action Plan for a Cleaner and More Competitive Europe (European Commission, 2020). Similarly, the Chinese Circular Economy Promotion Law has been developed (Lieder and Rashid, 2016), and in Russia, in 2022, a federal project has been launched to switch to a circular economy (Government.ru, 2022).

² According to Greenpeace (2016), efforts to increase the lifespan of clothes can reduce their environmental impacts: doubling the useful life of clothing from 1 to 2 years reduces the emissions of greenhouse gases over the year by 24%.

the old clothes in the most environmentally friendly ways. Furthermore, some authors have advanced the idea that PSSs success relies on their capability to deliver emotional satisfaction via eco-efficient solutions that are also responsive to social values (Spaargaren, 2003; Armstrong et al., 2015). PSSs fulfil the needs of consumers with radically lower impacts in terms of resource and material flows in the economy. PSSs, defined as a mix of products and services designed to deliver utility rather than personal ownership of a product, imply that they depend upon the interaction between companies and consumers to meet needs and to foster a lifecycle approach to reducing products environmental impact (Briceno and Stagl, 2006; Armstrong and Lang, 2013).

Given the crucial role played by consumers in determining the success of PSSs initiatives (Tunn et al., 2021), it is important to understand consumers' propensity towards each type of PSSs, to acknowledge those factors that increase the acceptance or rejection of PSS schemes. This would in turn allow to design and sell more services that better satisfy consumers' needs.

This paper aims to delve more into the role of PSSs in the fashion industry. In particular, the main focus is on consumers' propensity towards PSS, which has been largely overlooked by extant research (Armstrong et al., 2015; Pal, 2016; Lang and Armstrong, 2018). More precisely, this paper investigates the role of different national contexts (in terms of social, cultural, and economic dimensions) on the propensity towards PSSs, by focusing on Russia and Italy. While research on circular economy has suggested drivers and barriers to the consumption of circular solutions (Armstrong et al., 2015; De Jesus and Mendonça, 2018), only a limited number of comparative analyses between countries has been undertaken (Koszewska et al., 2020).

To assess the propensity of Russian and Italian fashion consumers to use PSSs, the study develops a set of hypotheses to identify the drivers and the barriers to the adoption of PSS and seeks to determine which ones are the most relevant respectively for Russian and Italian consumers. Finally, the study compares the level of interest in PSSs for Russian and Italian consumers. The methodology implements a quantitative comparative study between Italian and Russian respondents, using an online survey on a sample of 328 participants.

The article is organized as follows. While the first section provides an introduction, the second section brings together sustainability, circular economy and the PSSs literature by contextualising these in relation to the fashion industry respectively in Russia and Italy. After presenting the methods adopted, the the fourth section illustrates the findings. Finally, the fifth section addresses the original contribution of the paper, the managerial implications, and their limitations along with directions for future research.

2. Sustainability, Circular Economy and the Concept of Product-Service System

Literature on PSSs has proliferated in the last years and PSSs have become an interdisciplinary topic encompassing the fields of design, engineering, management, and information systems (Boehm and Thomas, 2013; Tukker, 2015; Catulli and Reed, 2017). As a potential avenue to reduce the environmental impact, PSSs have been associated with the concepts of sustainability and circular economy³. According to the literature, PSS is regarded as one of the most effective means to moving society towards a resource-efficient, circular economy (Tukker, 2015). PSS provides a mix of tangible products and intangible services designed to fulfil specific consumers' needs through the provision of more dematerialised services, which are also often associated with changes in the ownership structure (Mont, 2002; Tukker and Tischner, 2006).

Differently from product-oriented business models, service or function-oriented business models – PSSs aim to achieve the so-called “resource revolution” (i.e., circular goals). Research supports the assumption that focusing on final user needs or on the service a user wants would provide need-fulfillment systems with the minimization of resource flows in the economy while maximizing user satisfaction (Tukker, 2015). Indeed, the environmental profile of service industries is less problematic than manufacturing, and manufacturers have started delivering value propositions centred around the provision of (Mont, 2002). Selling products and services together is a traditional business model that

³ While sustainability broadly refers to the balanced integration of economic, environmental and social performance, circular economy specifically considers strategies of design or business model aimed at slowing, closing, and narrowing resource loops that can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling (Geissdoerfer et al.2017)

has received renewed interest as sustainability challenges have increased, focusing on product life extension and the improvement of the product value with intangible services (e.g., Van Halen et al., 2005). Accordingly, PSS offers product development strategies that heighten consumer satisfaction while dematerializing the traditional production-consumption cycle, and ultimately reducing the environmental impact (Armstrong and Lang, 2013).

According to the prevailing definition of PSS, product(s) and service(s) are combined in a sustainable system - or more sustainable than the competing product - to deliver required user functionality (Tukker, 2015; Tukker and Tischner 2006). The literature identifies three main categories of PSSs - *Product-Oriented services*, the least radical and most implemented, in which selling product is core to the value proposition but product-related services are offered as well, such as maintenance or take-back schemes; *Use-Oriented services* that, differently, lack the ownership of the product, which remains to the company, and offer leasing, renting/sharing or pooling schemes; and finally *Result-Oriented services* that are centred around the result (or function) delivered instead of the product sold, like management or outsourcing activities, and that represent the most effective source of reduced environmental impact (Tukker, 2004). The literature review highlights that not all PSSs are by definitions more resource-efficient than (traditional) product-based systems – in particular *Product-Oriented (PO)* services still focus on product sales and *Use-Oriented (UO)* services seem to generate less considered user behaviour when products are leased and rented thus leading to faster replacement (and new materials use). Indeed, *Result-Oriented (RO)* PSSs tend to have the greatest potential to reduce the use of materials and hence the costs but involve the most radical change in the business model, therefore limiting the real contribution to circularity (Tukker, 2015). Companies can escape price competition and find new sources for differentiation by embracing a service-oriented model of manufacturing. Yet, consumers' actual demands and purchasing behaviour seem to confute the assumptions that the customer is more interested in use rather than ownership or is looking for use rather than the product itself (Mont, 2002). Particularly in B2C contexts, consumers appreciate

ownership and sense of control (Halme et al., 2006; Tukker and Tischer, 2006), possessing new, ‘in fashion’ products (Intlekofer et al., 2010), and easy access to the product (Tukker, 2015).

2.1 PSSs in the Fashion Industry: Motivations and Barriers for Consumers’ Adoption

The fashion industry, representing about 2% of the world’s gross domestic product, is undoubtedly one of the largest and most important consumer industries for the entire global economy, that is still growing at a high rate (Global Fashion Agenda and The Boston Consulting Group, 2017; Statista, 2021). The downside of this economic success is represented by the industry’s negative environmental footprint, mainly due to the intensive use of resources such as water, energy and chemicals. The recent Pulse of the Fashion Industry report (2019) estimated that the overall benefit to the world economy could be about EUR 160 billion (USD 192 billion) in 2030 if the fashion industry were to address the environmental and societal fallout of the current status quo. PSSs can become a key asset for a new customer value proposition based on functionality, and drive companies to achieve circular economy goals (Pal, 2016; Stål and Jansson, 2017; Holtström et al., 2019)⁴.

Although PSSs have been implemented for quite a long time, the literature has devoted relatively limited attention to the topic and only in recent times. Some studies have focused on the theoretical content of PSS in the fashion industry (dos Santos et al., 2019; Dissanayake and Weerasinghe, 2021), while others have focused on case studies (Holtström et al., 2019), on the practical application of some PSS (Stål and Jansson, 2017) or consumers’ perspective (Armstrong et al., 2015). In particular, a comprehensive categorization of these services is still lacking. Literature has investigated the role of PSS in the fashion industry, but there is still no shared or acknowledged list of all the services that follow under the PSS label. A categorization, yet, is needed to study PSS thoroughly.

⁴ Some companies are already implementing some PSS services. For instance, Zara, H&M Group, The North Face, and many other companies have their take-back programmes. Such brands as Nudie Jeans, Patagonia, Barbour offer their customers repair services. Fashion renting has become a separate business, with the rental apparel market worldwide revenue of 4.66 billion US dollars in 2021 and forecasted growth to 7.45 billion US dollars in 5 years (Statista, 2022). Some other brands, such as Mud Jeans and Twinset, see renting as an opportunity for the extension of their core business. Kering Group has recently invested in the luxury bag rental service “Cocoon”, confirming that the rental market is booming.

After reviewing the existing literature, by adopting the aforementioned taxonomy (namely Product-Oriented services PO, Use-Oriented services UO, and Results-Oriented services RO), we identify twelve PSSs that are currently implemented in the fashion industry. Renting (UO) is probably the most discussed PSS service. Then the services primarily addressed in the literature are repair service (PO), followed by the take-back system (PO), clothing swaps (UO), redesign (PO), do-it-yourself (PO), consultancy (UO), customized design (PO), second-hand retail (PO), fashion result (RO), washing or break-in advice (PO), and laundry (UO) as depicted in Table 1.

[Table 1 here]

The last four services are rarely found and loosely discussed by the PSS literature, so their relationship to the concept of PSS remains rather questionable. Within the fashion industry, the clothing sector is regarded as probably having the heaviest material consumption and the most harmful environmental footprint in every phase of the product lifecycle, and therefore, the most relevant for implementing new business models aimed at reducing such a negative impact. Since the clothing industry is product-focused (Armstrong et al., 2015), PO services are closer to current business models, while UO and RO services could assist in changing the current ownership-based to service-based consumption (Cherry and Pidgeon, 2018). Despite the fact that PO services are easier to implement, UO services represent a greater opportunity for significant environmental impact reduction (Armstrong et al., 2016).

The wide articulation of PSSs does not guarantee their success or wide diffusion in the fashion market, and companies should consider all the contextual factors that may affect the implementation of such practices. Recent literature has emphasized that consumers' propensity is probably the most critical factor for PSSs implementation and success. They rely on close collaboration between companies and consumers (Armstrong et al., 2015). For instance, propensity towards take-back services, recycling, reuse or sharing-use depends on consumers' awareness and consequent involvement, which is a fundamental element of PSSs design and delivery (Armstrong and Lang, 2013). Despite a lack of implementation, according to some studies, consumers seem interested in PSSs, in particular in rental

and repair services - the most discussed ones (e.g., Diddi and Yan, 2019; Lang et al., 2019) but also in some design strategies (Niinimäki and Hassi, 2011).

Literature has also started to identify barriers and motivations for consumers' adoption of PSSs. Armstrong et al. (2015), for instance, suggest that the environmental benefits can contribute to the positive perceptions of various PSS schemes, as they involve a conscious attitude and understanding of environmental problems. However, some studies argue that such concerns have little impact on clothing purchases, and companies cannot rely on consumers' green attitudes to drive PSSs use (Fisher et al., 2008). The effect of financial motivations also remains ambiguous. Providing cost-saving benefits to consumers could be a way to improve consumer engagement in the circular economy (Dissanayake and Weerasinghe, 2021). However, for example, Hvass and Pedersen (2019) find that financial rewards in discount vouchers did not result in large return volumes in the take-back program. Some other research emphasizes the importance of social motivation for the adoption of PSSs (Armstrong et al., 2016). The emotional attachment may drive PSS, as the higher the consumer's emotional involvement in creating or designing a fashion item, the more likely they will use it or repair – instead of disposing of – it (Dissanayake, 2019). Relatedly, perceived enjoyment positively influences the attitude toward a specific service, such as fashion renting (Lang et al., 2019). Since consumers might be unaware of the PSSs benefits, the information provided by brands might motivate them to use PSS schemes, as well as commercial and promotion initiatives that can demonstrate the value of PSSs. According to some studies, store personnel or the store itself play a crucial role in communicating PSS options (Hvass and Pedersen, 2019; Dissanayake and Weerasinghe, 2021).

As far as barriers to the consumers' adoption of PSSs are concerned, the removal of personal ownership is considered one of the most critical challenges (Armstrong et al., 2015; Armstrong et al., 2016). When product ownership is important for status or a sense of control, the more functional offerings of a PSS may seem unattractive to consumers. Relatedly, some studies argue that the lack of consumer interest, awareness, and education might hinder the development of a circular economy and, in particular, the diffusion of PSSs (Hvass and Pedersen, 2019; Dissanayake and Weerasinghe,

2021), as its value proposition remains unclear for the consumers (Armstrong et al., 2015). In addition, consumers are generally scarcely aware of the environmental impact of their clothing, thus education on circular fashion practices (Dissanayake and Weerasinghe, 2021) and additional information about materials and processes (Armstrong et al., 2015) seem rather needed. Along with that, consumers may have limited confidence in the company to deliver the services successfully and may be skeptical about the company's motives to offer such services (Armstrong et al., 2016). Indeed, the complexity of the service offer is an obstacle to building trust (Armstrong et al., 2015). Inconvenience might also become a barrier to PSS adoption, for example, in take-back programmes (Hvass and Pedersen, 2019). Furthermore, consumers find some of the services time-consuming (Armstrong et al., 2016; Iran et al., 2019). Fashion-oriented consumers and consumers who shop for fashion clothes to express their own identity or fulfil emotional needs are more likely to refrain from switching to PSS as they consider these services as an emotional sacrifice (Armstrong et al., 2016). Similarly, according to Pereira et al. (2021), consumers often buy fashion items to become a part of a certain group or social class. Moreover, to maintain their reputation, individuals have to act according to the expectations of the group members, falling under social pressure to conform (Pereira et al., 2021). Table 2 below provides a summary of the main barriers and motivations for the adoption of PSSs.

[Table 2]

The literature review on consumers' motivations and barriers –referred only to some of the eight primary PSSs (i.e., renting, repair service, take-back system, clothing swaps, redesign, do-it-yourself, consultancy, customized design) - shows some preliminary research direction, yet existing studies are just a few, not all empirical, and they tend to lead to mixed results. There is no established consensus over which barriers might hinder PSS use and which factors might provide an incentive for consumers to switch from traditional linear consumption to the adoption of PSSs. By capitalising on this literature the aim of the paper is to assess the extent to which the motivations and barriers reviewed apply to each of the eight PSSs.

2.2 PSSs Adoption in Italy and Russia

Consumers' attitudes and behaviours are highly affected by socio-cultural and economic factors (Koszewska et al., 2020; Lee and Huang, 2020). Research in the fashion industry has studied differences in consumer behaviours across different countries, showing how different values and norms affect consumers' evaluations of fashion products or services in the circular economy (e.g., Iran et al., 2019; Lee and Huang, 2020; Koszewska et al., 2020). In particular, in a cross-country perspective, only PSSs of fashion renting, swapping and consultancy have been investigated using US and Finnish consumers (Armstrong et al., 2016). Yet, no explicit cross-country comparisons had been performed so far on propensity toward PSS.

Italy and Russia represent two main target markets for the fashion industry, having both significantly high fashion expenditures (Statista Apparel Report, 2021a, 2021b). Yet, the two countries are rather different in their socio-cultural and economic viewpoints. The fashion market in Russia is dominated by foreign suppliers (Euromonitor International, 2021c), while Italy relies only for a small share on foreign producers (Euromonitor International, 2021b). The fact that the fashion business is a driving sector of the Italian economy, while for Russia other markets are a priority, has affected the consumption habits and behaviours of their consumers. While the most popular leisure activity for Russians is going to the cinema, Italians prefer to go shopping in their spare time (Euromonitor International, 2021a, 2021d). As for Generation Z, it tends to increase spending on apparel in Italy, whereas, in Russia, it tends to spend more on technology (Euromonitor International, 2021a, 2021d). Culture is a collective phenomenon that affects the views and norms of the members in one group and distinguishes them from the individuals in other groups (Hofstede et al., 2010). Socio-cultural differences between the two countries can be assessed through the concept of "individualism vs. collectivism", which indicates the extent to which individuals are integrated into groups in a society (Hofstede et al., 2010). According to *Hofstede Insights* (2017), Russia is characterized by a collectivist society with an "individualism score" equal to 39, while Italy is considered to have an individualist culture with a score almost twice as much of the one for Russia. Since prevailing beliefs

and social norms in society play a significant role in collectivist cultures (Germani et al., 2021), pushing people to conform to them, in Russia, for instance, wearing second-hand clothes is not socially acceptable as it tends to be perceived as an indication of low income (Sherunkova, 2019). Therefore, the more collectivist culture in Russia may represent a barrier to the adoption of PSSs as consumers' propensity is based on the social system they belong to (Hofstede, 2010). Differently, in Italy, given the high level of individualism, and consequent self-actualization, consumers are likely to be less pressured to conform to societal norms in choosing what to wear.

From the socio-cultural standpoint, the two countries seem to differ also along their attitudes toward sustainability. According to fashion industry experts, the trend toward responsible production and consumption cannot yet be called massive in Russia. According to a survey conducted for *Vogue Business*, less than half of Russian consumers require brands to be environmentally and socially responsible (Maguire, 2021). Differently, in Italy, environmental consciousness and sustainability are becoming a popular discussion topic. According to Euromonitor International (2021a), 73% of Italians claim that they try to positively impact the environment through their everyday actions. Almost eight out of ten then believe that companies should consider the ecological footprint an essential part of their business model (Mossuti, 2021). In addition, according to a recent survey (Statista, 2022), most Italian consumers stated that clothing manufacturers should be bound by law to consider ethical aspects in their operations. In addition, almost half of the Italian consumers surveyed would rather avoid buying new when they can repair items, while in Russia this percentage is only 37 (Euromonitor International, 2021a, 2021d).

As far as sustainability consciousness is concerned, various reports on the Italian market have recently documented that individuals complain some lack of information on what sustainability actually is and what virtuous behaviours to adopt to embrace it more thoroughly. In addition, greenwashing and information dumping create confusion and distrust among consumers that ultimately would prevent them from switching their shopping habits to more sustainable ones (Smith, 2022; Pellegrinuzzi and

Piva, 2022). If provided with more information, Italian consumers would be willing to make some changes to their shopping habits (Smith, 2022).

Finally, depending on the country's economic structure, macroeconomic events can trigger a different response in buying decisions in different countries. At the outset of the COVID-19 pandemic, the Russian fashion market was already in a phase of stagnation in consumer demand, which arose against the backdrop of a slowdown in economic development, a five-year trend of weakening of the ruble and constant pressure from international economic sanctions. Thus, most Russians face financial hardship as two-thirds of the fashion market is in the low-end segment (Sedih, 2019). With the onset of *force majeure* created by the pandemic, clothing and footwear became the first item of savings: in April 2020, the revenue of retail stores in the segment decreased by 50–70% (Kostyrev, 2020). Such economic situation might contribute to the success of PSS among Russian consumers since these PSS make it possible to save money, extend the life of garments, or get new clothes without significant financial investments. Therefore, we can assume that the population will seek financial benefits from using PSSs, instead of buying new products (Sedih, 2019; Kostyrev, 2020; Maguire, 2021).

In Italy, Covid-19 hit as well, as the economic burst was already slowing in 2019, after a modest expansion in 2015 (Crisantemi, 2021). However, according to McKinsey, there are already signs of spending recovery as individuals have confirmed an increasing intention to treat themselves with apparel, shoes, and accessories (McKinsey 2021). Though, demand for fashion is unlikely to bounce back due to restrained spending power amid unemployment and rising inequality (Catena et al., 2021), fashion companies should seize new opportunities to satisfy changing consumers' needs. Italy is one of the leading countries in the global fashion industry, and the fashion business is a driving sector of the Italian economy (Statista Apparel Report, 2021a; Sabanoglu, 2021). Fashion is also an essential part of the Italian culture and tradition. Differently, in Russia the fashion industry is not key to the country's economy, as in fact Russian consumers are supplied mainly by foreign brands (Euromonitor International, 2021b, 2021c; Sabanoglu, 2021). Like all fashion companies, Italian companies are under the spotlight for their negative environmental footprint (Mossuti, 2021; Smith, 2022).

Therefore, they are increasingly embracing those practices aimed at tackling environmental issues, educating consumers in this regard or simply addressing the customer-centric challenges of ethics and responsibility (Sheth et al., 2011). Further, Italians are more mature when it comes to embracing sustainable behaviours.

As discussed in the literature review, PSS services are a relatively a novelty for fashion companies to reduce their environmental footprint, so it is unlikely that companies can develop and offer a complete range of services to consumers. It is also unlikely that consumers would adopt a complete set of PSSs. Therefore, it is interesting to explore a general attitude/interest towards these services and investigate the relative preference for each of the 8 specific services.

The willingness to recommend a product or service in the marketing literature is considered a key driver when studying consumers' attitudes and perceptions (Lewis and Mehmet, 2019). Based on the cultural differences already discussed between Russia and Italy, we can advance that the two contexts face different levels of social pressure (Hofstede Insights, 2017; Germani et al., 2021). In particular, in Russia, even though individuals may be interested in the services, they might not recommend them due to the prevailing beliefs in society regarding the adoption of such services.

In summary, the extensive literature review leads us to hypothesize the following in relation to the motivators driving and the barriers hindering the adoption of PSS among Italian and Russian consumers.

H1a: Environmental benefits are a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians.

H1b: Financial benefits are a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians.

H1c: Social factors are a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians.

H1d: Emotional factors are a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians.

H1e: Information provision is a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians.

H2a: Lack of information is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians.

H2b: Lack of trust in the quality is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians.

H2c: Time required to participate is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians.

H2d: Pleasure from buying products instead of using services is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians.

H2e: Lack of property feeling is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians.

H2f: Social pressure is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians.

H2g: Lack of interest is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians.

3. Methods

A questionnaire was developed to investigate *consumers' propensity* toward PSSs in Russia and Italy. The questionnaire was composed of three sections. The first section set the objective and context of the study, listing the 8 PSSs (i.e., renting, repair service, take-back system, clothing swaps, redesign, do-it-yourself, consultancy, customized design). This section also verified respondents' level of knowledge of the concept of PSS in general and of each specific service. The second section measured the constructs for the hypotheses testing. A 7-point Likert scale was used to measure, for each PSS service, the respondents' level of interest; a 3-point semantic differential scale was used to measure the intention to adopt each service; and an 11-point Likert scale was used to measure the willingness

to recommend each service. Then both the motivations and barriers to adopting PSSs in general were measured by also listing the relevant options implemented by the fashion industry that were reviewed in the literature. Finally, for each PSS service, both the specific motivations and barriers were measured, always listing the relevant options implemented by the fashion industry that were reviewed in the literature. The third and final section of the questionnaire contained demographic questions including age, gender, country, level of income, and level of education; it also included two 7-point Likert scales that measured psychographic questions on the general attitude towards sustainable fashion and intention to buy circular fashion items.

The main goal of the survey was to target Russian and Italian women and men between 18 and 65 years old in order to provide a faithful representation of potential fashion consumers. A combination of a purposive sampling and a snowball sampling was chosen to collect the data (Handcock and Gile, 2011).

As the questionnaire design was developed in English, the questions were respectively translated into Italian and into Russian by native speakers to ensure linguistic equivalence. Furthermore, before launching the survey, the questionnaire was piloted with five Russian and five Italian fashion consumers to pre-test, further refine, and validated its finalised format.

The survey instrument used for administering the survey was Google Forms, a survey administration software provided by Google. Respondents answered the self-administered online questionnaire and all information was stored confidentially. The survey was available for 10 days in January 2022. The total amount of valid responses was 328, of which 177 were from Russia and 151 from Italy.

4. Empirical Results

4.1 Sample Demographics

A total of 328 females from Russia and Italy responded to the survey. Out of these, 54% of the females were residents of Russia and 46% were residents of Italy. Table 3 summarises some distributions of demographics within this sample. Overall, most of the respondents (72.8%) were between 18-29 years old. This generation composition in our sample is expected and reasonable as there is evidence that

Gen Z is the most involved in circular economy-related topics (Colucci and Vecchi, 2021). They have a higher level of culture and interest regarding environmental and social issues when compared with previous generations such as Baby Boomers and Gen X (Dwidienawati et al., 2021). Gen Z is much more receptive than previous generations, as it was born in an era of maximum diffusion of the web and in particular social media, characterized by a rapid and consistent diffusion of data and information of all kinds. Interestingly, 85.9% of the respondents from Russia aged between 18-29 whilst 90.7% of the respondents from Italy aged between 18-35. Overall, out of all respondents, 72% had completed undergraduate and postgraduate education thereby indicating the sample was highly literate and well-educated. This same percentage was higher for Russia (83.6%) in comparison to Italy (58.3%) indicating more Russian females had completed their university education than Italian females in our sample. Finally, we measured the financial status of the respondents by grouping the respondents on the basis of whether they owned a car or not as research by Dargay (2001) indicates that vehicle ownership tends to rise when income grows and is therefore considered as a luxury purchase. The sample of females from Italy appeared to be more affluent in comparison to the sample of females from Russia.

[Table 3 about here]

4.2 Descriptive Statistics

We began the survey by seeking to understand the familiarity of the sample with the different services that are made available under PSSs. The results uncovered that most of the Russian females were familiar with fashion rental services; clothing repair services; take-back programs; styling consultancy; and customised design. However, they were not familiar with PSS services such as swaps; changes in garment design; and DIY kits. In contrast, most of the Italian females were not familiar with changes in garment design; and DIY kits only. Next, we sought to ascertain the actual usage and attitude towards engaging with PSS services in these two markets (Table 4). The only two services that a considerable proportion of Russian and Italian females did not want to try were swaps and DIY kits. The only two PSS services that either most or almost most Russian and Italian females

had used were take-back programs, clothing repair services. Interestingly, even though changes in garment design had not been used by the majority of Russian females in the past, there appeared to be a high interest in trying it out with 70.6% of the sample indicating they would try it. In contrast, Italian females appeared very keen to try out fashion rental services, changes in garment design, styling consultancy, and customised design with over 70% of respondents indicating they would try it.

[Table 4 here]

According to Yasin and Achmad (2021), when consumers are interested in a service or phenomenon, they are more likely to recommend it or discuss it with their friends. Therefore, we also analysed the respondent's willingness to recommend PSS services to friends. Interestingly, an analysis of the frequency tables showed that 66.1% of Russian females were not keen on recommending swaps which was also the least used PSS service among Russian respondents, to friends, and 52.5% did not wish to recommend DIY kits to friends. In contrast, and interestingly, the majority of the Italian females were more willing to recommend a PSS to friends (including fashion rental service which had the lowest use in that market).

Finally, we assessed the respondent's attitude towards sustainable fashion and purchase intent associated with companies that embrace circularity. If we define interest as those indicating they are either somewhat interested, interested, or very interested on the scale, then 67.8% of Russian females were interested in sustainable fashion whilst 75.5% of Italian females were interested in sustainable fashion. In terms of purchase intent, if we define the likelihood of purchasing as either somewhat likely, likely, or very likely on the scale, then 71.2% of Russian females were likely to purchase from companies that embraced circularity whilst for Italian females the likelihood of purchasing was at 88.7%.

4.3 Impact of Demographics on Engagement with Circular Fashion

4.3.1 Impact of Country of Residence

We begin by seeking to understand the drivers that would motivate (Table 5) and limit (Table 6) female consumers in Russia and Italy to engage with different PSS services. Overall, in general, the high mean responses recorded by Italian females indicates they are more likely to engage with PSS services in comparison to Russian females.

Fashion Rental

Italian female consumers appear to be significantly more likely to engage with fashion rental services than Russian females (Table 5). None of the drivers achieved a mean rating of at least somewhat important among Russian females. The environmentally friendly nature of fashion rental, the prospect for saving money, being better educated about this service and elicitation of positive emotions via the engagement with fashion rental services were significantly more important drivers motivating Italian females to engage in relation Russian females. In terms of the barriers for engagement with fashion rental services (Table 6) Russian females were significantly influenced by their preference for the offline shopping process, not being fans of renting clothing, and the lack of social acceptance of fashion rental among their friends as barriers for engaging with fashion rental services.

[Table 5 here]

[Table 6 here]

Clothing Repair

The key drivers that were significantly motivating Italian females to engage with clothing repair services in relation to Russian females were: being certain that it was more environmentally friendly, the prospect of saving money and the opportunity to experience positive emotions (Table 5). However, a better understanding of how the clothing repair process works would also encourage Italian females. In contrast, Russian females were also likely to engage in clothing repair if it helps them save money and brings them positive emotions. In terms of barriers (Table 6) for clothing repair neither Russian nor Italian females reported any barriers as at least somewhat important for their decision-making process.

Take-back Programs

The drivers motivating engagement across both Russian and Italian females were the fact that it was environmentally friendly, saves money, they could obtain a better understanding of how it works, and it brought about positive emotions. However, Italian females were significantly more driven than Russian females by the environmentally friendly nature of the service and the money-saving prospect. In terms of barriers (Table 6) neither Russian nor Italian females reported any barriers as at least somewhat important for their decision-making process.

Clothing Swaps

The environmentally friendly nature of the service, the opportunity to save money and be educated about how this service works, and the associated positive emotions were significantly more important drivers underlying Italian females' engagement with clothing swaps. Interestingly, none of the drivers were rated as at least somewhat important by the Russian females indicating they were not convinced about using this service at all (like fashion rental). The barriers (Table 6) help understand why Russian females are not welcoming of this service. They have concerns about hygiene, and a significantly more liking towards wearing new rather than used clothes in comparison to Italian females. There were no barriers that recorded at least a somewhat important rating by Italian females.

Fashion Re-design

Italian females are significantly more likely to engage with this service in relation to Russian females due to its environmentally friendly nature, the prospect of saving money, opportunities to improve understanding of how it works and if it brought about positive emotions (Table 5). That said, Russian females too were motivated to engage with fashion re-design to save money, to benefit from positive emotions, and if there were opportunities to improve their understanding of how it works. In terms of barriers (Table 6) neither Russian nor Italian females reported any barriers as at least somewhat important for their decision-making process.

Styling Consultancies

Italian females are significantly more likely to engage with styling consultancies than Russian females because of their environmentally friendly nature, money-saving prospects, and as it brings about

positive emotions (Table 5). Moreover, having a better understanding of how this service works would also motivate engagement. Russian females are motivated by the prospect to save money and benefit from positive emotions. In terms of barriers (Table 6) neither Russian nor Italian females reported any barriers as at least somewhat important for their decision-making process.

DIY Services

The engagement of Italian females in DIY services in relation to Russian females was significantly driven by the ability to save money and benefit from positive emotions (Table 5). However, Russian females did not rate any of the drivers as at least somewhat important towards motivating their engagement. In terms of the barriers (Table 6), Russian females believe its quicker to buy new clothes than make them themselves and believed they did not have the necessary skills to DIY. The latter barrier was also shared with Russian females.

Customization Services

Italian females were significantly more likely to engage with this service in comparison to Russian females because of its environmentally friendly nature, economic benefits, if there were opportunities to understand better how it works, and if engagement brought positive emotions. Russian females were also influenced to engage in this service if it brings positive emotions. In terms of barriers (Table 6) neither Russian nor Italian females reported any barriers as at least somewhat important for their decision-making process.

Table 7 presents a snapshot which identifies the key drivers motivating engagement with different PSS' by country of residence. Interestingly, social influence was not seen as a driver of importance among Russian or Italian females. The summary also points towards the importance of the other four drivers in terms of its wide impact on Italian females engagement with circular practices.

[Table 7]

Table 8 below summarises the outcomes from the hypothesis testing.

[Table 8]

5. Conclusion

The original contribution of the paper is twofold. From the findings it emerges very clearly that national culture plays a pivotal role in determining the propensity of fashion consumers to use PSSs. This has highly significant implications both for theory and practice.

From a theoretical standpoint, we are the first to investigate thoroughly the consumers' propensity towards PSSs. Furthermore, our study provides a more comprehensive categorization of these services. While the literature has only marginally investigated the role of PSSs in the fashion industry, we provide an exhaustive taxonomy of all the services that follow under the PSS label.

Additionally, while extant research has completely neglected the importance of national culture toward the propensity of fashion consumers to use PSSs, our study places national culture at the top of the research agenda (Carranza et al., 2022). From the findings it emerges that amongst the drivers environmental and financial benefits tend to play a greater role when deciding to use PSSs for the Italian fashion consumers than the Russians. Inconclusive results concern emotional benefits, social benefits along with the provision of information. As for the barriers, from the findings it emerges that pleasure from buying products instead of using services is a significantly more important barrier hindering the adoption of PSSs among Russian consumers than Italians and lack of property feeling is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians. Inconclusive results concern lack of trust, time scarcity, social pressure and lack of interest.

Conversely, from the practitioners perspective, being the fashion industry truly globalised and one of the most polluting industries of the planet after oil, the evidence not only further emphasise the pivotal role played by the consumers (Armstrong and Lang, 2013; Tunn et al., 2021) but it also stresses the importance for companies to gain a more in depth understanding of national culture propensity towards the adoption of these PSSs in order to ensure both their scalability and international success. It would be highly beneficial if future research would be focussing on a vast array of cross-national

comparisons besides China and Italy for example (Carranza et al., 2022) to further clarify the role of national culture in PSSs adoption as to cover the full taxonomy of PSS (i.e., PO, SO and RO). Future research should be also carried out in relation to our inconclusive results as to acquire a finer-grained understanding of the consumers' propensity from a cross-cultural perspective. Being these PSSs aimed at introducing circularity in the fashion industry by thus significantly curbing overconsumption, their widespread adoption would be hugely beneficial for society at large.

References

- Armstrong, C. M., Lang, C., 2013. Sustainable Product Service Systems: The New Frontier in Apparel Retailing? *Res. J. Text. and Appar.*, 17(1), 1–12. <https://doi.org/10.1108/rjta-17-01-2013-b001>
- Armstrong, C. M., Niinimäki, K., Kujala, S., Karell, E., Lang, C., 2015. Sustainable product-service systems for clothing: exploring consumer perceptions of consumption alternatives in Finland. *J. Clean. Prod.*, 97, 30–39. <https://doi.org/10.1016/j.jclepro.2014.01.046>
- Armstrong, C. M., Niinimäki, K., Lang, C., Kujala, S., 2016. A Use-Oriented Clothing Economy? Preliminary Affirmation for Sustainable Clothing Consumption Alternatives. *Sustain. Develop.*, 24(1), 18–31. <https://doi.org/10.1002/sd.1602>
- Bocken, N. M., Ritala, P., Huotari, P., 2017. The circular economy: exploring the introduction of the concept among S&P 500 firms. *J. Ind. Ecol.*, 21(3), 487-490. <https://doi.org/10.1111/jiec.12605>
- Boehm, M., Thomas, O., 2013. Looking beyond the rim of one's teacup: a multidisciplinary literature review of Product-Service Systems in Information Systems, Business Management, and Engineering & Design. *J. Clean. Prod.*, 51, 245-260. <https://doi.org/10.1016/j.jclepro.2013.01.019>
- Briceno, T., Stagl, S., 2006. The role of social processes for sustainable consumption. *J. Clean. Prod.*, 14(17), 1541–1551. <https://doi.org/10.1016/j.jclepro.2006.01.027>
- Carranza, R., Zollo, L., Díaz, E., Faraoni, M., 2022. Solving the luxury fashion and Sustain. *Develop.* “oxymoron” : A cross - cultural analysis of green luxury consumption enablers and disablers. *Bus. Strat. Environ.*, 1-21. <https://doi.org/10.1002/bse.3255>

Catena, M., Longo, R., Dufour, L., Zizioli, M., 2021, November 22. Survey: Italian consumer sentiment during the coronavirus crisis | McKinsey.

Catulli, M., Reed, N., 2017. A personal construct psychology based investigation into a product service system for renting pushchairs to consumers. *Bus. Strat. Environ.*, 26(5), 656-671. <https://doi.org/10.1002/bse.1944>

Centobelli, P., Cerchione, R., Chiaroni, D., Del Vecchio, P., Urbinati, A., 2020. Designing business models in circular economy: A systematic literature review and research agenda. *Bus. Strat. Environ.*, 29(4), 1734-1749. <https://doi.org/10.1002/bse.2466>

Cherry, C. E., Pidgeon, N. F., 2018. Is sharing the solution? Exploring public acceptability of the sharing economy. *J. Clean. Prod.*, 195, 939–948. <https://doi.org/10.1016/j.jclepro.2018.05.278>

Colucci, M., Vecchi, A., 2021. Close the loop: Evidence on the implementation of the circular economy from the Italian fashion industry. *Bus. Strat. Environ.*, 30(2), 856-873. <https://doi.org/10.1002/bse.2658>

Crisantemi, M., 2021. Il rapporto Ocse sull'Italia: prospettive economiche mai così favorevoli, ma bisogna puntare sulle riforme. *Innovation Post*. <https://www.innovationpost.it/2021/09/06/il-rapporto-ocse-sullitalia-prospettive-economiche-mai-cosi-favorevoli-ma-bisogna-puntare-sulle-riforme/> (accessed 21 February 2022).

Dargay, J. M., 2001. The effect of income on car ownership: evidence of asymmetry. *Transp. Res. A: Policy Pract.*, 35(9), 807-821.

de Jesus, A., Mendonça, S., 2018. Lost in transition? Drivers and barriers in the eco-innovation road to the circular economy. *Ecol. Econ.*, 145, 75-89. <https://doi.org/10.1016/j.ecolecon.2017.08.001>

Didi, S., Yan, R.-N., 2019. Consumer Perceptions Related to Clothing Repair and Community Mending Events: A Circular Economy Perspective. *Sustainability*, 11(19), 5306. <https://doi.org/10.3390/su11195306>

Dissanayake, D. G. K., Weerasinghe, D., 2021. Towards circular economy in fashion: Review of strategies, barriers and enablers. *Circular Economy and Sustainability*, 1-21. <https://doi.org/10.1007/s43615-021-00090-5>

Dissanayake, K., 2019. Does mass customization enable sustainability in the fashion industry? <https://doi.org/10.5772/intechopen.88281>

dos Santos, P. S., Campos, L. M. S., Cauchick-Miguel, P. A., 2019, July. Adoption of product-service system and the potential as a sustainable solution: A literature view in the fashion industry. *Proceedings of the International Conference on Industrial Engineering and Operations Management*. International Conference on Industrial Engineering and Operations Management, Pilsen, Czech Republic.

Dwidienawati, D., Abdinagoro, S. B., Gandasari, D., Tjahjana, D., 2021, April. Do generation Y and Z really concern about environmental issues?. In *IOP Conference Series: Earth and Environmental Science* (Vol. 729, No. 1, p. 012137). IOP Publishing.

Elf, P., Werner, A., Black, S., 2022. Advancing the circular economy through dynamic capabilities and extended customer engagement: Insights from small sustainable fashion enterprises in the UK. *Bus. Strat. Environ.*, 31(6), 2682-2699. <https://doi.org/10.1002/bse.2999>

Ellen MacArthur Foundation., 2017. A new textiles economy: Redesigning fashion's future. <http://www.ellenmacarthurfoundation.org/publications> (accessed 13 February 2022).

Euromonitor International., 2021a. Consumer Values and Behaviour in Italy. (accessed 12 February 2022).

Euromonitor International., 2021b, July. Apparel in Italy: ISIC 181. Euromonitor.com. <https://www.euromonitor.com/apparel-in-italy-isic-181/report> (accessed 12 February 2022).

Euromonitor International., 2021c, October. Apparel in Russia: ISIC 181. Euromonitor.com. <https://www.euromonitor.com/apparel-in-russia-isic-181/report> (accessed 12 February 2022).

Euromonitor International., 2021d. Consumer Values and Behaviour in Russia.

European Commission., 2020. A new industrial strategy for Europe. https://ec.europa.eu/knowledge4policy/publication/communication-com2020102-new-industrial-strategy-europe_en (accessed 2 February 2022).

Ferasso, M., Beliaeva, T., Kraus, S., Clauss, T., Ribeiro- Soriano, D., 2020. Circular economy business models: The state of research and avenues ahead. *Bus. Strat. Environ.*, 29(8), 3006-3024. <https://doi.org/10.1002/bse.2554>

Fisher, T., Cooper, T., Woodward, S., Hiller, A., Goworek, H., 2008. Public understanding of sustainable clothing: Report to the department for environment, food and rural affairs.

Geissdoerfer, M., Pieroni, M. P. P., Pigosso, D. C. A., Soufani, K., 2020. Circular business models: A review. *J. Clean. Prod.*, 277, 123741. <https://doi.org/10.1016/j.jclepro.2020.123741>

Geissdoerfer, M., Savaget, P., Bocken, N. M., Hultink, E. J., 2017. The Circular Economy—A new sustainability paradigm?. *J. Clean. Prod.*, 143, 757-768. <https://doi.org/10.1016/j.jclepro.2016.12.048>

Germani, A., Delvecchio, E., Li, J., Lis, A., Nartova- Bochaver, S. K., Vazsonyi, A. T., Mazzeschi, C., 2021. The link between individualism—collectivism and life satisfaction among emerging adults from four countries. *Appl. Psychology: Health and Well-Being*. <https://doi.org/10.1111/aphw.12259>

Global Fashion Agenda & The Boston Consulting Group, 2017. Pulse of the Fashion Industry report 2017.

Government.ru., 2022. В 2022 году стартует федеральный проект по переходу на экономику замкнутого цикла. <http://government.ru/news/44337/> (accessed 10 January 2022).

Halme, M., Anttonen, M., Hrauda, G., Kortman, J., 2006. Sustainability evaluation of European household services. *J. Clean. Prod.*, 14(17), 1529-1540. <https://doi.org/10.1016/j.jclepro.2006.01.021>

Handcock, M. S., Gile, K. J., 2011. Comment: On the concept of snowball sampling. *Sociol. Methodol.*, 41(1), 367-371. <https://doi.org/10.1111/j.1467-9531.2011.01243.x>

Hazen, B. T., Mollenkopf, D. A., Wang, Y., 2017. Remanufacturing for the circular economy: An examination of consumer switching behavior. *Bus. Strat. Environ.*, 26(4), 451-464. <https://doi.org/10.1002/bse.1929>

- Hofstede Insights, 2017. Country Comparison - Hofstede Insights. Hofstede Insights. <https://www.hofstede-insights.com/country-comparison/italy> (accessed 8 January 2022).
- Hofstede, G., Hofstede, G. J., Minkov, M., 2010. Cultures and Organizations : Software of the Mind : Intercultural Cooperation and Its Importance for Survival. McGraw-Hill.
- Holtström, J., Bjellerup, C., Eriksson, J., 2019. Business model development for sustainable apparel consumption. *J. Strat. Manag.*, 12(4), 481–504. <https://doi.org/10.1108/jsma-01-2019-0015>
- Huynh, P. H., 2021. “Enabling circular business models in the fashion industry: the role of digital innovation.” *Int. J. Prod. Perform. Manag.*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/ijppm-12-2020-0683>
- Hvass, K., Pedersen, E. R. G., 2019. Toward circular economy of fashion. Experiences from a brand’s product take-back initiative. *J. Fash. Mark. Manag.: Int. J.*, 23(3), 345–365. <https://doi.org/10.1108/jfmm-04-2018-0059>
- Intlekofer K, Bras B, Ferguson M., 2010. Energy implications of product leasing. *Environ. Sci. Technol.*, 44(12): 4409–4415. <https://doi.org/10.1021/es9036836>
- Iran, S., Geiger, S. M., Schrader, U., 2019. Collaborative fashion consumption – A cross-cultural study between Tehran and Berlin. *J. Clean. Prod.*, 212, 313–323. <https://doi.org/10.1016/j.jclepro.2018.11.163>
- Ki, C. W., Park, S., Ha- Brookshire, J. E., 2021. Toward a circular economy: Understanding consumers' moral stance on corporations' and individuals' responsibilities in creating a circular fashion economy. *Bus. Strat. Environ.*, 30(2), 1121-1135. <https://doi.org/10.1002/bse.2675>
- Kostyrev, A., 2020. Clothes went hand in hand. *Www.kommersant.ru*. <https://www.kommersant.ru/doc/4537845> (accessed 16 February 2022).
- Koszewska, M., Rahman, O., Dyczewski, B., 2020. Circular Fashion – Consumers’ Attitudes in Cross-National Study: Poland and Canada. *Autex Res. J.*, 0(0). <https://doi.org/10.2478/aut-2020-0029>

- Lang, C., Armstrong, C. M. J., 2018. Fashion leadership and intention toward clothing product-service retail models. *J. Fash. Mark. Manag.: Int. J.*, 22(4), 571–587. <https://doi.org/10.1108/jfmm-12-2017-0142>
- Lang, C., Seo, S., Liu, C., 2019. Motivations and obstacles for fashion renting: a cross-cultural comparison. *J. Fash. Mark. Manag.: Int. J.*, 23(4), 519–536. <https://doi.org/10.1108/jfmm-05-2019-0106>
- Lee, S. H., Huang, R., 2020. Consumer responses to online fashion renting: exploring the role of cultural differences. *Int. J. Retail. Distrib.*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/ijrdm-04-2020-0142>
- Lewis, C. L., Mehmet, M., 2019. Does the NPS ® reflect consumer sentiment? A qualitative examination of the NPS using a sentiment analysis approach. *Int. J. Mark. Res.*, 62, 147078531986362. <https://doi.org/10.1177/1470785319863623>
- Maguire, L., 2021. Will young Russians shop consciously? *Vogue Business*. <https://www.voguebusiness.com/sustainability/will-young-russians-shop-consciously> (accessed 16 February 2022).
- McKinsey, 2021. The State of Fashion 2021. <https://www.mckinsey.com/~media/McKinsey/Industries/Retail/Our%20Insights/State%20of%20Fashion/2021/The-State-of-Fashion-2021-vF.pdf> (accessed 18 February 2022).
- Mont, O., 2002a. Drivers and barriers for shifting towards more service-oriented businesses: Analysis of the PSS field and contributions from Sweden. *The Journal of Sustainable Product Design*, 2(3/4), 89–103. <https://doi.org/10.1023/b:jspd.0000031027.49545.2b>
- Mont, O., 2002b. Clarifying the concept of product–service system. *J. Clean. Prod.*, 10(3), 237–245. [https://doi.org/10.1016/s0959-6526\(01\)00039-7](https://doi.org/10.1016/s0959-6526(01)00039-7)
- Mossuti, S., 2021. I Consumatori Vogliono Più Sostenibilità Anche Quando Acquistano Online. SMC Consulting. <https://www.smconsulting.it/i-consumatori-vogliono-piu-sostenibilita-anche-quando-acquistano-online/> (accessed 16 February 2022).

Niinimäki, K., Hassi, L., 2011. Emerging design strategies in sustainable production and consumption of textiles and clothing. *J. Clean. Prod.*, 19(16). <https://doi.org/10.1016/j.jclepro.2011.04.020>

Pal, R., 2016. Extended responsibility through servitization in PSS. *J. Fash. Mark. Manag.: Int. J.*, 20(4), 453–470. <https://doi.org/10.1108/jfmm-12-2015-0100>

Pellegrinuzzi, F., Piva, A., 2022. Sostenibilità: italiani a confronto con i cittadini di altri 13 Paesi | Altroconsumo. <https://www.altroconsumo.it/vita-privata-famiglia/vivere-sostenibile/speciali/inchiesta-comportamenti-sostenibili> (accessed 16 February 2022).

Pereira, L., Carvalho, R., Dias, Á., Costa, R., António, N., 2021. How does sustainability affect consumer choices in the fashion industry?. *Resources*, 10(4), 38. <https://doi.org/10.3390/resources10040038>

Rexfelt, O., Hiort af Ornäs, V., 2009. Consumer acceptance of product- service systems. *J. Manuf. Technol. Manag.*, 20(5), 674–699. <https://doi.org/10.1108/17410380910961055>

Sabanoglu, T., 2021. Fashion industry worldwide 2021: leading countries. Statista. <https://www.statista.com/statistics/1202694/fashion-industry-leading-countries-worldwide/> (accessed 15 February 2022).

Saha, K., Dey, P. K., Papagiannaki, E., 2021. Implementing circular economy in the textile and clothing industry. *Bus. Strat. Environ.*, 30(4), 1497-1530. <https://doi.org/10.1002/bse.2670>

Sedih, I. A., 2019. Fashion industry. 2019. National Research University Higher School of Economics. <https://dcenter.hse.ru/data/2019/06/03/1495959454/Индустрия%20моды-2019.pdf> (accessed 15 February 2022).

Seles, B. M. R. P., Mascarenhas, J., Lopes de Sousa Jabbour, A. B., Trevisan, A. H., 2022. Smoothing the circular economy transition: The role of resources and capabilities enablers. *Bus. Strat. Environ.*, 31(4), 1814-1837. <https://doi.org/10.1002/bse.2985>

Sherunkova, O., 2019. Why Russians don't buy secondhand. *Issek.hse.ru*; Institute for Statistical Research and Economics of Knowledge, National Research University Higher School of Economics.

Sheth, J. N., Sethia, N. K., Srinivas, S., 2011. Mindful consumption: a customer-centric approach to sustainability. *J. Acad. Mark. Sci.*, 39(1), 21-39. <https://doi.org/10.1007/s11747-010-0216-3>

Smith, P., 2022. Sustainable fashion consumption in Italy - statistics & facts. Statista. <https://www.statista.com/topics/6155/sustainable-fashion-consumption-in-italy/#dossierKeyfigures> (accessed 13 February 2022).

Spaargaren G., 2003. Sustainable consumption: a theoretical and environmental policy perspective. *Soc. Nat. Resour.*, 16, 687–701. <https://doi.org/10.1080/08941920309192>

Stål, H. I., Jansson, J., 2017. Sustainable Consumption and Value Propositions: Exploring Product-Service System Practices Among Swedish Fashion Firms. *Sustain. Develop.*, 25(6), 546–558. <https://doi.org/10.1002/sd.1677>

Statista, 2022. Revenue of the rental apparel market worldwide from 2019 to 2026.

Statista Apparel Report 2021, 2021a. Apparel - Italy | Statista Market Forecast. Statista.

Statista Apparel Report 2021, 2021b. Apparel - Russia | Statista Market Forecast. Statista.

The platform for accelerating the circular economy (PACE), 2019. The circularity gap report 2019.

Tukker, A., 2004. Eight types of product–service system: eight ways to sustainability? Experiences from SusProNet. *Bus. Strat. Environ.*, 13(4), 246–260. <https://doi.org/10.1002/bse.414>

Tukker, A., 2015. Product services for a resource-efficient and circular economy—a review. *J. Clean. Prod.*, 97, 76-91. <https://doi.org/10.1016/j.jclepro.2013.11.049>

Tukker, A., Tischner, U., 2006. Product-services as a research field: past, present and future. Reflections from a decade of research. *J. Clean. Prod.*, 14(17), 1552–1556. <https://doi.org/10.1016/j.jclepro.2006.01.022>

Tunn, V. S., Van den Hende, E. A., Bocken, N. M., Schoormans, J. P., 2021. Consumer adoption of access - based product - service systems: The influence of duration of use and type of product. *Bus. Strat. Environ.*, 30(6), 2796-2813. <https://doi.org/10.1002/bse.2894>

Yasin, A. A., Achmad, G. N., 2021. Influence of word of mouth and product quality on purchase decisions and repurchasing interest. *Int. J. Econ. Bus. Account. Res.*, 5(2), 410-419.

ASSESSING CONSUMERS' PROPENSITY TOWARDS PRODUCT-SERVICE SYSTEMS IN THE FASHION INDUSTRY: A CROSS-NATIONAL COMPARISON BETWEEN RUSSIA AND ITALY

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Declaration of interests

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

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

Dear Editor,

Please find attached our paper "SERVICE SYSTEMS IN THE FASHION INDUSTRY: A CROSS-NATIONAL COMPARISON BETWEEN RUSSIA AND ITALY", which we would like to submit for possible publication in the Journal of Cleaner Production. The paper has not been published elsewhere and is not under review at any other journal.

The textile and clothing industry is considered one of the most polluting industries worldwide. As such, circular practices to reduce the fashion industry's environmental footprint are required and rather urgent and involving the consumer is absolutely pivotal to determine the success of circular economy driven initiatives. Among the different solutions, Product-Service Systems (PSSs) represent an effective practice to achieve product longevity in the fashion industry. Various types of PSSs are aimed at replacing the purchase of a new product with alternative options, such as take-back, renting, repair, and many other services, that give clothes a second life or help to dispose of the old clothes in the most environmentally friendly ways.

In order to assess the propensity of Russian and Italian fashion consumers to use PSSs, this paper features a quantitative investigation. The study develops a set of hypotheses to identify the drivers and the barriers to the adoption of PSSs and to determine which ones are the most relevant respectively for Russian and Italian consumers. The study compares the level of interest in PSSs for Russian and Italian consumers. The methodology implements a quantitative comparative study between Russian and Italian respondents, using an online survey leading to a final sample of 328 participants.

The original contribution of the paper is twofold. From the findings it emerges very clearly that national culture plays a pivotal role in determining the propensity of fashion consumers to use PSSs. This has highly significant implications both for theory and for practice. While the literature has only marginally investigated the role of PSSs in the fashion industry, we provide an exhaustive taxonomy of all the services that follow under the PSS label. Additionally, while extant research has completely neglected the importance of national culture toward the propensity of fashion consumers to use PSSs, our study places national culture at the top of the research agenda. Conversely, from the practitioner's perspective, being the fashion industry truly globalised and one of the most polluting industries of the planet the evidence not only further emphasise the pivotal role played by the consumers, but it also stresses the importance for companies to gain a more in depth understanding of national culture propensity towards the adoption of these PSSs in order to ensure both their scalability and international success.

We hope you will find our paper suitable for consideration for the Journal of Cleaner Production.

Best Regards,

The Authors

- Consumers' propensity towards PSSs in the fashion industry is assessed
- Cross-national comparative analyses between Russia and Italy are undertaken
- Drivers and the barriers to the adoption of PSSs are identified
- National culture plays a pivotal role in Product-service Systems propensity
- Study has notable implications for scalability of PSSs & their international success

Table 1 - PSS Taxonomy as implemented in the fashion industry

Product-Oriented services (PO)	repair service, take-back system, redesign, do-it-yourself, customized design, second-hand retail, washing or break-in advice
Use-Oriented services (UO)	renting service, clothing swaps, consultancy, laundry
Results-Oriented services (RO)	fashion result

Table 2 - Barriers and motivations for the adoption of PSSs

Motivations	Environmental benefits
	Financial benefits
	Social factors
	Emotional factors
	Information provision
Barriers	Lack of information
	Lack of trust in the quality
	Time required to participate
	Pleasure from buying products instead of using services
	Lack of property feeling
	Social pressure
	Lack of interest and education in PSSs

Table 3 - Distribution of selected sample demographics.

	Factor	Overall	Russia	Italy
<i>Age</i>	18-23	39.0%	50.3%	25.8%
	24-29	33.8%	27.7%	41.1%
	30-35	15.2%	7.9%	23.8%
	36-41	5.2%	5.1%	5.3%
	42-47	4.3%	6.8%	1.3%
	48-53	1.5%	1.7%	1.3%
	54 and older	0.9%	0.6%	1.3%
<i>Education</i>	Incomplete Secondary Education	1.8%	1.1%	2.6%
	Secondary Education	21.0%	12.4%	31.1%
	Bachelor's Degree	36.6%	42.4%	29.8%
	Master's Degree	35.4%	41.2%	28.5%

Ph.D	5.2%	2.8%	7.9%
<i>Financial Status</i>			
There is no money to buy food	1.2%	1.7%	0.7%
There is enough money only for food	4.0%	6.8%	0.7%
Enough money to buy food and clothes, but it is difficult to buy most durable goods (e.g., TV, refrigerator)	29.0%	39.5%	16.6%
Buying durable goods (e.g., TV, refrigerator) is not difficult, but I can't afford to buy a car	32.9%	35.0%	30.5%
I can afford to buy a car, but I can't buy an apartment	22.3%	14.1%	31.8%
There is enough money for everything	10.7%	2.8%	19.9%

Table 4 - Summary of respondents' usage of PSS services.

Have you used the following PSS'?	Used	Not Used but Will Try	Not Used Do Not Want to Try
<i>Russia</i>			
Fashion Rental Service	28.2%	48.6%	23.2%
Clothing Repair Service	48.6%	44.6%	6.8%
Take Back Programs	52.5%	40.7%	6.8%
Swaps	7.9%	45.8%	46.3%
Changes in Garment Design	14.7%	70.6%	14.7%
DIY Kits	13.0%	56.5%	30.5%
Styling Consultancy	27.7%	61.0%	11.3%
Customised Design	30.5%	58.8%	10.7%
<i>Italy</i>			
Fashion Rental Service	9.9%	72.2%	17.9%
Clothing Repair Service	44.4%	50.3%	5.3%
Take Back Programs	62.3%	31.8%	6.0%
Swaps	19.2%	51.7%	29.1%
Changes in Garment Design	19.9%	72.8%	7.3%
DIY Kits	13.2%	58.9%	27.8%
Styling Consultancy	19.2%	72.8%	7.9%
Customised Design	20.5%	71.5%	7.9%

Table 5 - Drivers motivating engagement with PSS, by country

Service	<i>Russia</i>			<i>Italy</i>		
	Mean	SD	Mode	Mean	SD	Mode
<i>Fashion Rental</i>						
I was sure that they are more environmentally friendly	4.54	1.898	4	5.46***	1.907	7
It would help me save money	4.93	1.897	7	5.70***	1.758	7
My friends and acquaintances used them too	4.65	1.696	6	4.36	1.927	6
I had a better understanding of how PSS work	4.70	1.744	4	5.07*	1.910	6
They brought me positive emotions	4.85	1.790	6	5.44***	1.761	7
<i>Clothing Repair</i>						
I was sure that they are more environmentally friendly	4.87	1.755	4	5.67***	1.712	7
It would help me save money	5.27	1.826	7	6.01***	1.553	7
My friends and acquaintances used them too	4.89***	1.672	6	4.30	1.949	4
I had a better understanding of how PSS work	4.88	1.730	6	5.05	1.998	7
They brought me positive emotions	5.03	1.724	6	5.40*	1.811	7
<i>Take-back Programs</i>						

I was sure that they are more environmentally friendly	5.38	1.780	7	5.99***	1.740	7
It would help me save money	5.08	1.697	7	5.60***	1.804	7
My friends and acquaintances used them too	4.83***	1.734	4	4.34	1.983	4
I had a better understanding of how PSS work	5.21	1.675	7	5.33	2.026	7
They brought me positive emotions	5.36	1.615	7	5.33	1.850	7
<i>Clothing Swaps</i>						
I was sure that they are more environmentally friendly	4.11	1.842	4	5.37***	1.979	7
It would help me save money	4.25	1.882	4	5.52***	1.911	7
My friends and acquaintances used them too	4.17	1.854	4	4.72***	1.987	7
I had a better understanding of how PSS work	4.37	1.879	4	5.15***	2.015	7
They brought me positive emotions	4.29	1.844	4	5.23***	1.975	7
<i>Fashion Re-Design Services</i>						
I was sure that they are more environmentally friendly	4.68	1.639	4	5.63***	1.835	7
It would help me save money	5.03	1.646	4	5.85***	1.651	7
My friends and acquaintances used them too	4.73	1.568	4	4.43	1.924	4
I had a better understanding of how PSS work	5.03	1.637	4	5.44**	1.776	7
They brought me positive emotions	5.20	1.600	6	5.57*	1.783	7
<i>Styling Consultancies</i>						
I was sure that they are more environmentally friendly	4.61	1.676	4	5.09**	1.983	7
It would help me save money	5.15	1.643	7	5.58**	1.838	7
My friends and acquaintances used them too	4.69*	1.633	4	4.31	2.037	4
I had a better understanding of how PSS work	4.88	1.701	4	5.08	2.005	7
They brought me positive emotions	5.37	1.637	7	5.75**	1.790	7
<i>DIY Services</i>						
I was sure that they are more environmentally friendly	4.22	1.856	4	4.92***	2.121	7
It would help me save money	4.35	1.862	4	5.10***	2.138	7
My friends and acquaintances used them too	4.24	1.794	4	4.18	1.939	4
I had a better understanding of how PSS work	4.50	1.883	4	4.89**	2.082	7
They brought me positive emotions	4.68	2.034	7	5.07**	2.020	7
<i>Customization Services</i>						
I was sure that they are more environmentally friendly	4.60	1.673	4	5.56***	1.821	7
It would help me save money	4.60	1.628	4	5.70***	1.640	7
My friends and acquaintances used them too	4.66	1.602	4	4.52	1.907	4
I had a better understanding of how PSS work	4.73	1.593	4	5.38***	1.746	7
They brought me positive emotions	5.23	1.674	7	5.64**	1.651	7

Note: 7-point scale from strongly disagree (1) to strongly agree (7). *** indicates a statistically significant difference between the mean responses of Russian and Italian females based on an Independent Samples T-test at $p=0.01$, ** at $p=0.05$ and * at $p=0.10$.

Table 6 - Barriers for engagement with PSS, by country

Service	Russia			Italy		
	Mean	SD	Mode	Mean	SD	Mode
<i>Fashion Rental</i>						
I don't have enough information about how it works	4.21	1.795	4	4.88***	2.023	6
I am concerned about the quality of the services provided	4.80	1.665	4	4.53	2.071	6
I am concerned about hygiene issues	5.14	1.727	7	4.89	2.123	7
The process of renting takes longer than buying	4.60	1.645	4	4.52	1.932	4
I like the shopping process, which is absent in this service	4.83*	1.677	4	4.46	2.065	6
I like to wear my own clothes instead of renting	5.19*	1.681	7	4.79	1.991	7

Among my friends it is not customary to use this service	4.73**	1.669	4	4.24	2.097	4
I am not interested in it	3.97	1.831	4	3.72	2.085	1
<i>Clothing Repair</i>						
I don't have enough information about how it works	3.96	1.785	4	4.05	2.288	7
I am concerned about the quality of the services provided	4.23	1.611	4	3.91	2.101	1
I like the shopping process, which is absent in this service	4.26***	1.662	4	3.53	2.065	1
It is faster to buy new clothes than repair old ones	4.31	1.654	4	4.13	2.121	1
Among my friends it is not customary to use this service	3.82***	1.570	4	3.26	1.961	1
I am not interested in it	3.10**	1.705	4	2.62	1.910	1
<i>Take-back Programs</i>						
I don't have enough information about how it works	4.01	1.849	4	4.20	2.114	5
I don't trust what companies do with donated clothing	3.94	1.827	4	4.54***	2.019	7
The process of donating clothes takes too long	3.69***	1.657	4	3.09	1.906	1
Among my friends it is not customary to use this service	3.71***	1.611	4	2.77	1.797	1
I am not interested in it	2.80*	1.707	1	2.43	1.711	1
<i>Clothing Swaps</i>						
I don't have enough information about how it works	4.76	1.704	4	4.95	2.019	7
I am concerned about hygiene issues	5.15	1.712	7	4.83	2.135	7
Participation in swaps takes too long	4.63	1.502	4	4.56	1.916	5
I like the shopping process, which is absent in swaps	4.81***	1.623	4	4.05	2.090	1
I like to wear new clothes rather than used ones	5.23***	1.703	7	4.05	2.080	1
Among my friends it is not customary to wear second-hand	4.85***	1.861	7	3.58	2.021	1
I am not interested in it	4.47***	1.727	4	3.42	2.041	1
<i>Fashion Re-Design Services</i>						
I don't have enough information about how it works	4.51	1.844	4	4.85	2.219	7
I am concerned about the quality of the service	4.41	1.614	4	4.17	2.119	1
I like the shopping process, which is absent in redesign	4.32**	1.638	4	3.88	2.065	1
It is quicker to buy new clothes than redesign old ones	4.54	1.655	4	4.31	2.108	7
Among my friends it is not customary to change designs	4.31***	1.540	4	3.73	2.120	1
I am not interested in it	3.51**	1.589	4	3.05	1.952	1
<i>Styling Consultancies</i>						
I don't have enough information about how it works	3.66	1.716	4	3.98	2.165	1
I am concerned about the quality of the service	4.17***	1.594	4	3.59	2.017	1
It is quicker to buy new clothes than to consult a stylist	3.78	1.610	4	4.04	2.169	7
I do not want to spend money on styling consultancy	4.10	1.555	4	4.68***	2.093	7
Among my friends it is not customary to use this service	3.86	1.564	4	3.93	2.148	1
I am not interested in it	3.00	1.735	1	2.99	1.963	1
<i>DIY Services</i>						
I don't have enough information about how it works	4.59	1.798	4	4.78	2.129	7
I am concerned about the quality of the service	4.54	1.610	4	4.31	2.133	7
I like the shopping process, which is absent in DIY	4.56***	1.754	4	3.80	2.114	1
It is quicker to buy new clothes than to make them myself	5.12	1.698	7	4.95	2.070	7
I don't have the necessary skills to DIY	5.20	1.680	7	5.40	1.898	7
Among my friends it is not customary to make clothes via kit	4.84***	1.689	4	3.84	2.203	1
I am not interested in it	4.20**	1.793	4	3.74	2.195	1
<i>Customization Services</i>						
I don't have enough information about how it works	4.23	1.744	4	4.58	2.152	7

I am concerned about the quality of the service	4.09	1.632	4	3.79	2.054	1
Design customization takes too long	4.27	1.604	4	4.11	1.977	4
Among my friends it is not customary to customize things	4.05	1.526	4	3.76	2.035	4
I am not interested in it	3.26	1.742	4	3.36	2.057	1

Note: 7-point scale from strongly disagree (1) to strongly agree (7). *** indicates a statistically significant difference between the mean responses of Russian and Italian females based on an Independent Samples T-test at $p=0.01$, ** at $p=0.05$ and * at $p=0.10$.

Table 7 - Summary of the most important drivers underlying engagement with PSS by country of residence.

Driver	PSS Service	
	Russian	Italian
Environmental benefits	Take-back Programs	Fashion Rental Clothing Repair Take-back Programs Clothing Swaps Fashion Re-design Styling Consultancies Customization Services
Financial benefits	Clothing Repair Take-back Programs Fashion Re-design Styling Consultancies	Fashion Rental Clothing Repair Take-back Programs Clothing Swaps Fashion Re-design Styling Consultancies DIY Services Customization Services
Social factors	-	-
Information provision	Take-back Programs Fashion Re-design	Fashion Rental Clothing Repair Take-back Programs Clothing Swaps Fashion Re-design Styling Consultancies Customization Services
Emotional factors	Clothing Repair Take-back Programs Fashion Re-design Styling Consultancies Customization Services	Fashion Rental Clothing Repair Take-back Programs Clothing Swaps Fashion Re-design Styling Consultancies DIY Services Customization Services

Table 8 - Hypothesis testing summary

Hypothesis	Outcome
<p>Motivators (Table 5)</p> <p><i>H1a: Environmental benefits are a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians</i></p> <p><i>H1b: Financial benefits are a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians</i></p> <p><i>H1c: Social factors are a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians</i></p> <p><i>H1d: Emotional factors are a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians</i></p> <p><i>H1e: Information provision is a significantly more important motivator driving the adoption of PSS among Italian consumers than Russians</i></p>	<p>Supported</p> <p>Supported</p> <p>Partially Supported</p> <p>Partially Supported</p> <p>Partially Supported</p>
<p>Barriers (Table 6)</p> <p><i>H2a: Lack of information is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians</i></p> <p><i>H2b: Lack of trust is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians</i></p> <p><i>H2c: Time required to participate is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians</i></p> <p><i>H2d: Pleasure from buying products instead of using services is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians</i></p> <p><i>H2e: Lack of property feeling is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians</i></p> <p><i>H2f: Social pressure is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians</i></p> <p><i>H2g: Lack of interest is a significantly more important barrier hindering the adoption of PSS among Russian consumers than Italians</i></p>	<p>Not Supported</p> <p>Partially Supported</p> <p>Partially Supported</p> <p>Supported</p> <p>Supported</p> <p>Partially Supported</p> <p>Partially Supported</p>