ASSESSING FASHION CONSUMERS' PROPENSITY IN ADOPTING PRODUCT-SERVICE SYSTEMS – A CROSS-CULTURAL PERSPECTIVE

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Abstract

Drawing from the literature to assess the propensity of Russian and Italian fashion consumers to use Product-Service Systems, the study develops a set of hypotheses to identify the drivers and the barriers to the adoption of Product-Service Systems and to determine which ones are the most relevant, respectively for Russian and Italian consumers. Finally, the study compares the level of interest in PSS for Russian and Italian consumers. The methodology implements a quantitative comparative analysis 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 Product-Service Systems. This has highly significant implications both for theory and practice. The widespread adoption of PSS would be highly beneficial for society at large. The paper is highly original since extant research has wholly neglected the pivotal role of national culture in shaping the propensity of fashion consumers toward PSS adoption.

Keywords: fashion consumers, product-service systems, national culture, cross-cultural analysis, drivers and barriers

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).

However, 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). Consequently, circular practices to reduce the fashion industry's environmental footprint are required and rather urgent. 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). Thus, among the different solutions, Product-Service Systems (PSS) represent an effective practice to achieve product longevity in the fashion industry.

In this line, it is important to understand consumers' attitudes towards each type of PSS, to acknowledge those factors that increase the acceptance or rejection of PSS schemes. Therefore, this paper aims to delve more into the role of PSS in the fashion industry. In particular, this paper investigates the role of different national contexts (in terms of social, cultural, and economic dimensions) on the attitudes towards PSS, focusing on Russia and Italy.

2. SUSTAINABILITY, CIRCULAR ECONOMY, AND PRODUCT-SERVICE SYSTEMS

As a potential avenue to reduce the environmental impact, PSS has been associated with sustainability and circular economy concepts. While sustainability broadly refers to the balanced integration of economic, environmental and social performance, circular economy specifically considers strategies aimed at slowing, closing, and narrowing resource loops through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling (Geissdoerfer et al., 2017). According to the literature, PSS is regarded as one of the most effective means to moving society towards a resource-efficient, circular economy), by seeking to replace personal ownership and excess consumption of material goods with alternative utilization options (Tukker, 2015). PSS provides a mix of tangible products and intangible services designed to fulfill specific consumers' needs by providing more dematerialized services, which are also often associated with changes in the ownership structure (Mont, 2002; Tukker and Tischner, 2006). PSS introduces alternative scenarios or systems of product use such as sharing/renting/leasing schemes to consumers. It has the potential to decrease the total amount of products (i.e. material goods) and the total environmental burden of consumption (Mont, 2002).

2.1. PSS in the Fashion Industry: Motivations and Barriers to Consumers' Adoption

The Pulse of the Fashion Industry report (2017) estimated that the overall benefit to the world economy could be about EUR 160 billion in 2030 if the fashion industry were to address the environmental and societal fallout of the current status quo.

Although PSS have been implemented for quite a long time, the literature has devoted relatively limited attention to the topic only recently. Some studies have focused on the theoretical content of PSS in the fashion industry (Dissanayake & 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. After reviewing the existing literature, we identify twelve currently implemented PSS in the fashion industry. Renting is probably the most discussed PSS service. Then the services primarily addressed in the literature are repair service, take-back system, clothing swaps, redesign, do-it-yourself, consultancy, customized design, second-hand retail, fashion result, washing or break-in advice, and laundry.

Literature has also started to identify barriers and motivations for consumers' adoption of PSS: these are summarized in the table 1 below.

Table 1. Barriers and motivations for the adoption of PSS

Motivations	Environmental benefits	Fisher et al., 2008; Armstrong et al., 2015)
	Financial benefits	Hvass and Pedersen, 2019; Dissanayake and Weerasinghe, 2021
	Social factors	Armstrong et al., 2016; Camacho-Otero et al., 2020
	Emotional factors	Dissanayake, 2019; Lang et al., 2019
	Information provision	Hvass and Pedersen, 2019; Dissanayake and Weerasinghe, 2021
Barriers	Lack of information	Armstrong et al., 2015; Hvass and Pedersen, 2019; Dissanayake and Weerasinghe, 2021
	Lack of trust in the quality	Armstrong et al., 2015; Armstrong et al., 2016
	Time required to participate	Hvass and Pedersen, 2019; Iran et al., 2019
	Pleasure from buying products instead of using services	Armstrong et al., 2016
	Lack of property feeling	Armstrong et al., 2015; Armstrong et al., 2016
	Social pressure	Pereira et al., 2021
	Lack of interest and education in PSS	Hvass and Pedersen, 2019; Dissanayake and Weerasinghe, 2021

The literature review on consumers' motivations and barriers –referred only to some of the eight primary PSS (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 PSS. By drawing on this literature, the paper aims to assess the extent to which the motivations and barriers reviewed apply to each of the eight PSS.

2.2. PSS Adoption in Italy and Russia

Consumers' attitudes and behaviors are highly affected by socio-cultural and economic factors (Koszewska et al., 2020). However, PSS has been investigated using samples of consumers coming from two geographical contexts (i.e., USA and Finland) only in one study. Yet this study was limited to the specific cases of fashion renting, swapping and consultancy (Armstrong et al., 2016). Furthermore, no explicit cross-country comparisons had been performed on attitudes toward PSS.

Italy and Russia represent two main target markets for the fashion industry, having significantly high fashion expenditures. Both markets are also expected to increase further (Statista Apparel Report, 2021a, 2021b). Yet, the two countries are somewhat different in their socio-cultural and economic viewpoints. Socio-cultural differences between countries can be assessed through the concept of "individualism vs. collectivism", which indicates the extent to which individuals value individual interests and well-being or, differently, more groups and group norms (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 one for Russia. Therefore, the more collectivist culture in Russia may represent a barrier to the adoption of PSS as consumers' attitudes are 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 sociocultural standpoint, the two countries differ also in their attitudes toward sustainability and responsible consumption. According to fashion industry experts, the trend toward responsible production and consumption cannot yet be called massive in Russia (Maguire, 2021). In Italy, environmental consciousness and sustainability are becoming a popular discussion topic (Mossuti, 2021).

Finally, depending on the country's economic structure, macroeconomic events can trigger different response in buying decisions in different countries. Most Russians face financial hardship as two-thirds of the fashion market is in the low-end segment (Sedih, 2019). Therefore,

we can assume that the population will seek financial benefits from using PSS, instead of buying new products (Sedih, 2019; Maguire, 2021). In Italy the post-pandemic, 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). Like all fashion companies, Italian companies are spotlighted for their negative environmental footprint (Mossuti, 2021; Smith, 2022). Therefore, they are increasingly embracing those practices aimed at tackling environmental issues, and educating consumers in this regard (Sheth et al., 2011).

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 adopting such services.

In summary, the extensive literature review leads us to hypothesize the followings:

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 composed of three sections was developed to investigate *consumers' propensity* toward PSS in Russia and Italy (Table 2).

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

Table 2. Content of the questionnaire

Section	Content
1	Verification of respondents' level of knowledge of the concept of PSS in general
2	• The respondents' level of interest for each PSSs (7-point Likert scale) • Intention to adopt each service (3-point semantic differential scale) • The willingness to recommend each service (11-point Likert scale) • Measurement of motivations and barriers (listing the relevant options reviewed in the literature)
3	• Demographic questions (age, gender, country, level of income, and level of education) • Psychographic questions on the general attitude towards sustainable fashion and intention to buy circular fashion items (7-point Likert scales)

The survey instrument used for administering the survey was Google Forms. The survey was self-administered online in January 2022.

4. EMPIRICAL RESULTS

A total of 328 females from Russia and Italy responded to the survey. Out of these, 54% of the females were residents of Russia (177) and 46% were residents of Italy (151). 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 (maybe also Millennials) is the most involved in circular economy-related topics (Colucci and Vecchi, 2021). Interestingly, 85.9% of the respondents from Russia were aged between 18-29 while 90.7% of the respondents from Italy aged between 18-35.

The results uncovered that most Russian females were familiar with fashion rental services; clothing repair services; take-back programs; styling consultancy; and customized design. However, they were unfamiliar 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. Swaps and DIY kits were the only two services that a considerable proportion of Russian and Italian females wanted to avoid trying.

The only two PSS services that most or almost most Russian and Italian females had used were take-back programs, and 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 keen to try out fashion rental services, changes in garment design, styling consultancy, and customized design with over 70% of respondents indicating they would try it.

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, most 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 attitudes 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 a sustainable fashion. At the same time, 75.5% of Italian females were interested in sustainable fashion. Regarding 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 while for Italian females, the likelihood of purchasing was 88.7%.

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

Table 3 below summarises the outcomes of the hypothesis testing.

Table 3. *Hypothesis testing summary*

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

5. CONCLUSION

The original contribution of the paper is twofold. First, from the findings, it emerges very clearly that national culture plays a pivotal role in determining the propensity of fashion consumers to use PSS.

From a theoretical standpoint, while extant research has completely neglected the importance of national culture, our study places national culture at the top of the research agenda about the propensity of fashion consumers to use PSS. More precisely, amongst the drivers environmental and financial benefits tend to play a more significant role when deciding to use PSS for the Italian fashion consumers than the Russians. As for the barriers, pleasure from buying products instead of using services is a significantly more critical barrier hindering the adoption of PSS among Russian consumers than Italians, and lack of property feeling is a significantly more critical barrier impeding the adoption of PSS among Russian consumers than Italians.

Conversely, from the practitioners' perspective, since these PSS aimed at introducing circularity in the fashion industry by thus significantly curbing overconsumption, their widespread adoption would benefit society.

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