

Effect of Fashion Rental Services on Achieving 'Narrow and Slow' Consumption in Clothing

Consumer Experiments and Questionnaire Survey in Japan

Koji Kimita^{1,*}, Yudai Tsurusaki¹, Eri Amasawa²,

¹Graduate School of Engineering, The University of Tokyo;

²Research Center for Advanced Science and Technology, The University of Tokyo

*kimita@tmi.t.u-tokyo.ac.jp

Extended abstract

With the advent of fast fashion business models, clothing became more accessible due to its inexpensive pricing, but also made them more disposable. An estimate reports that clothing production volume has doubled in the past twenty years while the lifetime wears has halved (EMF, 2017). In the recent years, fashion rental services have been attracting attention as an innovative business model to potentially reduce clothing consumptions while meeting consumer demands (Piontek, Amasawa and Kimita, 2020; Amasawa et al., 2023). Many studies have been conducted on the environmental impact of fashion rental services. However, most of these studies focus on occasion wear such as dresses (Johnson and Plepys, 2021), and there is not enough research on casual wear, which is worn daily. Some studies have assessed their environmental impact, while these studies relied on questionnaires in which many respondents provided answers without having experience in renting daily clothes (Armstrong et al. 2016). Therefore, whether rental services of casual wear can reduce environmental impacts remains to be understood.

This study aims to assess the potential of casual wear rental services for reducing environmental impact. Especially, we investigate whether the use of rental services leads to reduce the amount of clothing purchases. For this purpose, first, we conducted a consumer behavior experiment in Japan, where 22 participants were asked to use a fashion

rental subscription service for three months. This service, which provided rental options ranging from casual to office attire, allowed subscribers to rent three pieces of garments each month and freely exchange any garments they did not like. The experiment ran from October 2022 to mid-February 2023. To understand the participants' current behavior and perception of their personal clothing consumption, we conducted in-depth interviews and questionnaire survey before, during, and after the experiment. The interview aimed to identify drivers that lead to reduce the amount of clothing purchases. In the questionnaire, the participants were asked about the types of clothes rented, the rental period, and the number of times they were worn.

Comparing the amount of clothing purchases before and during the use of the service, 15 of 22 participants decreased the amount of clothing purchases due to the use of the service. From the interview, we clarify the reasons for this result. For example, clothing rentals satisfy the consumer wants for “a new piece.” One respondent said, “I find joy in buying new clothes, and there are some that I buy but seldom wear. This desire was fulfilled by receiving new clothes every month through the rental service.” Another consequence of clothing rentals observed was gaining a deeper understanding in the personal styles. Through the opportunity to try out diverse garment styles, many participants noted that they were able to define their personal styles better than before. One respondent said, “by not wearing the clothes that arrived through the rental, I was once again made aware that the clothes I actually wear are limited.” Clothing rentals also has the effect of making consumers aware of the value of clothes that can be worn for a long time. One respondent said, “the clothes I rented were resistant to wrinkles and could be dry-cleaned at home. Instead of buying a lot of the same items, I thought it was good to continue using the ones I liked.”

To verify these qualitative results, second, we conducted the quantitative analysis based on the questionnaire survey in February 2024. There were 1,310 respondents, and about 30% of them were selected as users of a subscription-based rental service. In the questionnaire, respondents were asked about the amount of clothing purchases and ownership, the duration of clothing usage and so on. Questions about the amount of clothing purchases and ownership were asked for each type of clothing, such as skirts and dresses. On the other hand, for the duration of clothing usage, questions were asked about the average for all types of clothing. Regarding the amount of clothing ownership, there was no significant difference observed in between those who had experience with the service and those who did not. For example, regarding tops, sweaters and skirt, the average number of items owned by those with experience in the service was 21.1, 7.18 and 8.51 respectively, whereas those without experience owned 22.6, 6.84 and 7.09 respectively. However, in terms of the duration of clothing ownership, 13.2% of those with experience wear clothing for less than one year, compared to 6.54% of those without experience. Furthermore, these experienced respondents had bought clothes more than inexperienced ones. For example, regarding tops, sweaters and skirt, the average number of items purchased by experienced

respondents during August 2022 to January 2023 was 4.71, 1.51 and 1.38 respectively, while those without experience purchased 2.59, 1.42 and 0.81 respectively. From these results, it is apparent that there is not much difference in the amount of clothing owned between those with experience and those without, but the cycle from purchase to disposal is faster for those with experience than for those without. In fact, only 11.6 % of those with experience responded that their clothing purchases decreased due to the service.

In the questionnaire, we also asked about considerations when purchasing clothes. The group that reported a decrease in purchase volume due to the service and said they buy environmentally friendly or ethical clothing was 7.84%, whereas the group with unchanged or increased purchase volume was 1.81%. For buying fashionable clothes, and for buying bargain or sale items, the group with decreased purchase volume was 13.73% and 21.57% respectively, whereas the group with unchanged or increased purchase volume was 18.35% and 27.13% respectively. In response to questions about concerns related to clothing, the group with decreased purchase volume indicated that 62.7% struggle with coordinating outfits, 43.1% do not know when to dispose of clothes, and 13.7% do not know how to dispose of clothes. On the other hand, the group with unchanged or increased purchase volume reported these concerns at rates of 55.0%, 35.1%, and 10.5%, respectively.

From these results, it is apparent that rental services have a certain effect in reducing the amount of clothing purchases. On the other hand, there is no difference in the amount of clothing owned between those who have and have not experienced rental services, and this is because those who have used such services tend to replace their clothing more frequently. In the future research, more detailed investigations will be conducted regarding the characteristics of consumers who reduce their clothing purchases through rental services.

Keywords

Sustainable fashion, subscription service, social experiment, behavioral shift, collaborative consumption

References

Amasawa, E. *et al.* (2022) 'Designing sustainable fashion rentals based on environmental benefit and consumer preference', in *Conference Proceeding of the 15th Biennial International Conference on EcoBalance (EcoBalance2022)*. Fukuoka.

Amasawa, E. *et al.* (2023) 'Can rental platforms contribute to more sustainable fashion consumption? Evidence from a mixed-method study', *Cleaner and Responsible Consumption*, p. 100103. doi: 10.1016/j.clrc.2023.100103.



Armstrong, C. M., Niinimäki, K., Lang, C., & Kujala, S. (2016) 'A use-oriented clothing economy? Preliminary affirmation for sustainable clothing consumption alternatives', *Sustainable Development*, 24(1), pp. 18–31. doi: 10.1002/sd.1602

Camacho-Otero, J., Boks, C. and Pettersen, I. N. (2019) 'User acceptance and adoption of circular offerings in the fashion sector: Insights from user-generated online reviews', *Journal of Cleaner Production*, 231, pp. 928–939. doi: 10.1016/j.jclepro.2019.05.162.

Johnson, E. and Plepys, A. (2021) 'Product-service systems and sustainability: Analysing the environmental impacts of rental clothing', *Sustainability (Switzerland)*, 13(4), pp. 1–30. doi: 10.3390/su13042118.

Piontek, F. M., Amasawa, E. and Kimita, K. (2020) 'Environmental implication of casual wear rental services: Case of Japan and Germany', in *Procedia CIRP*, pp. 724–729. doi: 10.1016/j.procir.2020.01.076.