Understand Consumer Online Fashion Renting Experiences: A Text-Mining Approach

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Introduction: Renting clothes provides an option to reuse clothing products and fulfill an individual's fashion needs (Watson et al., 2014), while also reducing the production of new clothes. Consumers can gain significant benefits from clothes renting service. Fashion renting facilitates people who do not want to purchase specific clothing but prefer to wear for a short period of time. Without taking ownership, consumers are able to pay a portion of the original price of the products (Botsman & Rogers, 2011). Consumers also have some concerns about online shopping. Shopping over the internet does not allow consumers to touch or try the product. The delays of the deliveries also prevent consumers from reusing renting service (Chang & Tseng, 2013). Researchers have evaluated consumers' behavior of fashion renting with both quantitative and qualitative methods (Lang & Joyner Armstrong, 2018; Pedersen & Netter, 2015). However, most of these studies employed survey methods and did not utilize actual data from fashion renting websites. To date, there is no study has been done to examine and analyze a large amount of feedback from consumers who have had real experiences of fashion renting.

Therefore, this study is expected to fill the research gap to evaluate consumers' real renting experiences. Specifically, the objectives of this study include: (1) To identify both positive motivations and negative concerns when consumers rent fashion products online; thus to understand the issues and problems with customers' renting experiences. (2) To discover the similarities and differences on the evaluation and comments for three large online fashion renting companies, Rent the Runway, Gwynnie Bee and Bag Borrow or Steal; thus to better understand consumers' opinion about the rental companies, products, and services. The theory of customer value was adopted in this study in order to understand the motivations and concerns revealed from consumers' experiences better. According to this theory, perceived value is the trade-off between benefits and cost by customers(Boksberger & Melsen, 2011). In this study, the motivations that positive comments reveal represent customer perceived benefits, and the concerns that negative comments reveal represent perceived cost. Thus, positive motivations and negative concerns in online fashion renting context could be identified and investigated based on customer value theory.

Research method: To achieve the research objectives, three unbiased customer review platforms were chosen for this study. Specifically, 1,230 reviews of Bag Borrow Steal, 757 reviews of Rent the Runway and 411 reviews of Gwynnie Bee and the corresponding ratings were collecting by Python
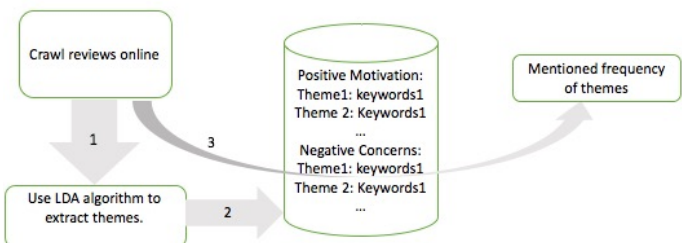

Figure 1. Research method schema

web crawler. These reviews were classified as "positive", "negative" and "neutral" based on ratings. Text mining process was shown in Figure 1. Latent Dirichlet Allocation(LDA), an effective algorithm to acquire topics from a large dataset (Yu, Zhang, & Luo, 2010), was implemented to extract the topics from positive reviews and negative reviews separately by Python. The themes of positive motivations and negative concerns, as well as associated keywords, then emerged from these topics. Figure 2 shows an example of topics extracted from positive reviews. From this topic, two themes, financial value, and ease of use were found. For example, "easy website", "easy process" and "easy navigation" could be considered keywords associated with the theme-ease of use. These themes and associated keywords made up a dictionary. The reviews were detected based on this dictionary. When a keyword was detected, the related themes were considered to be mentioned in the review. The reference frequencies of each theme were counted.

Findings: Contextual findings from consumers' comments are presented in Table 1. Four major themes of fashion renting benefits and three major themes of cost were discovered. Benefits themes include
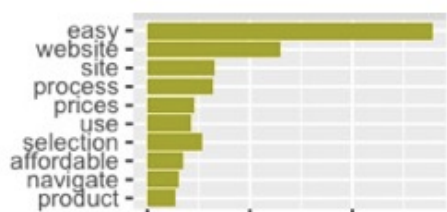

Figure 2. An example topic

experiential value, financial value, ease of use and utilitarian value, and cost themes consist of unsatisfied service, low product performance, and insufficient inventory. These benefits and cost themes have different frequencies in comments of different fashion renting companies. Financial value was always mentioned simultaneously with experiential value since consumers are able to experience high end and high quality products at lower prices and try out products before purchasing. Bag Borrow or Steal is famous for selling and renting designer handbags and accessories (Belk, 2014). Consumers saw experiential value most in comments of this company since Bag Borrow or Steal provide opportunities for consumers to experience luxury brands bags, whose original prices were extremely high. Rent the Runway is famous for a wide variety of collection of occasion dresses and designers clothing (Belk, 2014). Consumers who commented on the benefit of utilitarian value expressed that they were glad to rent formal dresses for certain events and no need to buy such items solely for one-time event in Rent the Runway. Consumers also expressed their satisfaction on commanding the website navigation and dealing with the return process for ease of use. Most consumers mentioned that they were not

Table 1. Benefits and Cost of fashion renting

	Theme	Reference Frequency	Rent the runway	Gwynnie Bee	Bag Borrow Steal
Benefits	Experiential value	355	73	52	230
	Financial value	287	66	52	169
	Ease of use	253	53	21	179
	Utilitarian	163	111	21	31
Total (positive reviews)		1058	303	146	609
Costs	Unsatisfied service	474	326	94	4
	Product performance	193	139	52	2
	Insufficient inventory	19	12	6	1
Total (negative reviews)		686	477	152	7

able to get the necessary support from customer service when they met problems during the process of renting or refund, from negative comments of all three companies. Poor fit, bad quality, wrong sizes and

not as expected were also the major complaints about product performance. It is also disappointing for consumers to see "out of stock" when renting online.

Discussion: By adopting a text mining approach, the findings suggest that consumers perceived experiential value, financial value, ease of use and utilitarian value in online fashion renting. For luxury product renting, consumers mentioned more about the experiential value and financial value. In regards to formal dress renting, consumers perceived more utilitarian value. This research also identified that customer service, product performance and inventory were big issues that online fashion renting companies need to consider. These findings could help retailers to improve their online rental service based on consumers' perceived value and the issues revealed from online comments. Supportive customer service, strict product quality control, exact size description and effective inventory management would be retailers' progress directions. Understanding customers perceived benefit could also help retailers to enhance their competitive advantages.

Reference

Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research, 67*(8), 1595-1600.

Boksberger, P. E., & Melsen, L. (2011). Perceived value: a critical examination of definitions, concepts and measures for the service industry. *Journal of services marketing, 25*(3), 229-240.

Botsman, R., & Rogers, R. (2011). What's Mine Is Yours: The Rise of Collaborative Consumption Harper Business. *New York*.

Chang, E.-C., & Tseng, Y.-F. (2013). Research note: E-store image, perceived value and perceived risk. *Journal of Business Research, 66*(7), 864-870.

Lang, C., & Joyner Armstrong, C. M. (2018). Collaborative consumption: The influence of fashion leadership, need for uniqueness, and materialism on female consumers' adoption of clothing renting and swapping. *Sustainable Production and Consumption, 13*, 37-47.

Pedersen, E. R. G., & Netter, S. (2015). Collaborative consumption: business model opportunities and barriers for fashion libraries. *Journal of Fashion Marketing and Management, 19*(3), 258-273.

Watson, D., Kiørboe, N., Palm, D., Tekie, H., Harris, S., Ekvall, T., . . . Lyng, K.-A. (2014). *EPR systems and new business models: reuse and recycling of textiles in the Nordic region*: Nordisk Ministerråd.

Yu, C., Zhang, X., & Luo, H. (2010). *Mining Hot topics from free-text customer reviews An LDA-based approach.* Paper presented at the 2010 Seventh Web Information Systems and Applications Conference.