

Big Data Analysis of the Second-Hand Apparel Market Trends Comparing 2014 and 2019

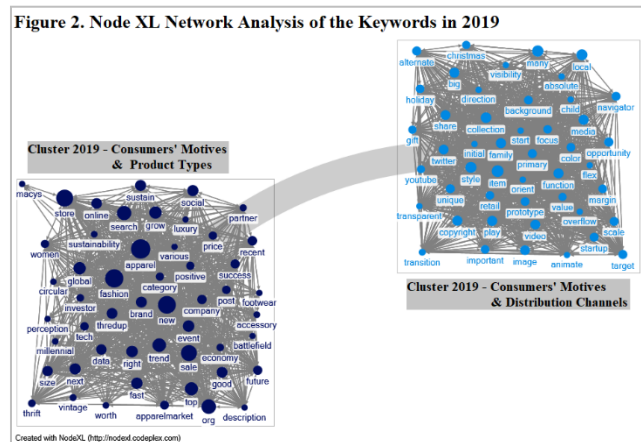
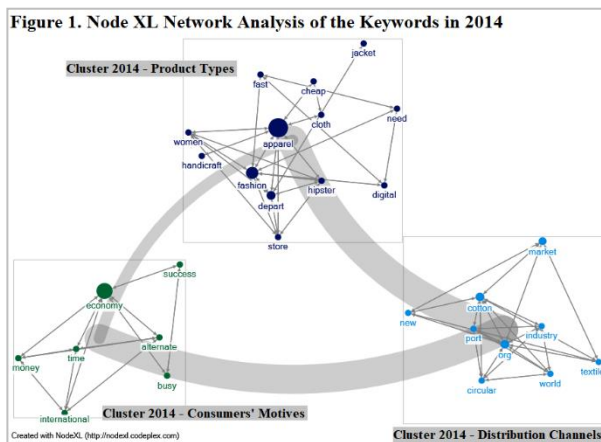
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Introduction: The second-hand apparel market has grown rapidly in the past few years by meeting consumers' increasing concerns about sustainability (ThredUP, 2019). In order to understand what changes in consumers' perception and consumption patterns of second-hand apparel have driven this growth, a comparison of market trends a few years ago and the present day would be useful. However, there have been little attempt to undergo such a macro trend analysis. The purpose of this study is to examine how the second-hand apparel market trends have changed in the past five years by comparing data from 2014 to that of 2019 using a big data analysis. Through this analysis, this study will offer a comprehensive understanding about the changing demands of consumers toward second-hand apparel in recent years, which will provide insight for retailers to use in developing effective marketing strategies for second-hand apparel.

Theoretical Framework and Research Inquiry: The evolutionary economics theory is a well-established theory in economics (Metcalf, 2007). The theory posits that the marketplace is constantly evolving and advanced through dynamic interactions among consumers, marketers, and the market (Metcalf, 2007). Second-hand apparel has had a notable standing in the retail market in the past few years (Hobbs, 2016). Departing from the shabby image of thrift shops, consumers and startups have actively promoted second-hand apparel as a sustainable alternate to fight the problem of apparel waste (ThredUP, 2019). Researchers have suggested that consumers increasingly seek second-hand apparel for social, economic, and environmental reasons (Hobbs, 2016). They have speculated that consumers look for a reasonable price, the thrill of hunting, and value for brands from second-hand apparel shopping (Gopalakrishnan & Matthews, 2018). However, there is still little research that has holistically investigated what transitions have occurred in consumers' perception and consumption patterns of second-hand apparel, as well as how such transitions have changed trends in the second-hand apparel market. According to evolutionary economics theory, it is expected that the second-hand apparel market should have evolved into a more diversified market with expanded consumer interest, product options, and distribution channels. Through an inductive approach, this study investigates the changes in the second-hand apparel market trends based on the following research questions: *RQ1. How are consumers' motives for second-hand apparel consumption different between 2014 and 2019? RQ2. How are the major types of second-hand apparel products different between 2014 and 2019? RQ3. How are distribution channels of second-hand apparel different between 2014 and 2019?*

Method: Big data analysis via text mining is an effective method by which to capture macro market trends by deriving extensive market data in real time (Erevelles, Fukawa, & Swayne, 2016). Using Textom software, this study collected big data from a global search engine, Google, by extracting all web-exposed text in 2014 and 2019 in which the keyword of “second-hand apparel” appears. The data from 2014 and 2019 were compared for two reasons. First, five years were deemed to be an appropriate time difference to identify and display recent changes in market trends (Wood & Dasgupta, 1996). Second, the second-hand apparel market has noticed a major change beginning in 2014 with exploding consumer interest in resale (ThredUP, 2019). Among all of the keywords collected through text mining, including nouns and adjectives, 100 keywords for each year were extracted. Using Node XL software, networks among the keywords were then visualized in order to reveal clusters and relations among the keywords. Clusters present meaningful relational patterns among the keywords, and node size indicates the betweenness centrality of a keyword.



Results: The results clearly indicate that consumers’ interest in second-hand apparel has increased explosively in 2019; a total of 5,435 words were extracted from 2019, compared to only 485 keywords in 2014. The clusters that present relations among the 100 keywords also reveal clear differences between 2014 and 2019, and non-relational words are removed from the networks. Regarding RQ1, consumers mainly sought cost/time-saving value from second-hand apparel in 2014 (Cluster 2014 – Consumers’ Motives: “economy,” “money,” “time,” “busy”), while their motives were much more diverse in 2019, seeking fashion and sustainability, which seems to especially be the trend among young consumers in 2019, through easy access from growing online/mobile market (Cluster 2019 – Consumers’ Motives: “style,” “trend,” “unique,” “gift,” “collection,” “share,” “sustainability,” “circular,” “online,” “millennial”). Regarding RQ2, the type of second-hand apparel in the market was rather limited in 2014 (Cluster 2014 – Product Types: “apparel,” “women,” “handcraft,” “jacket”), whereas the market was much more expansive in 2019, with a variety of product categories, price ranges, and occasions (Cluster 2019-Product Types: “luxury,” “brand,” “footwear,” “accessory,” “category”). Regarding RQ3,

the distribution channels of second-hand apparel was previously limited, including some keywords related to used apparel having been imported from Third World countries (Cluster 2014 – Distribution Channels: “org,” “port,” “world”). However, distribution channels were much more diversified in 2019, including a noticeable rise of emerging startups, social media influence, and local exchange (Cluster 2019 – Distribution Channels: “media,” “Twitter,” “Youtube,” “local,” “startup”).

Discussion: The results indicate that the second-hand apparel market has experienced a noticeable evolution in the most recent five years, as evolutionary economics theory posits. Compared to 2014, when the second-hand apparel market existed only in the form of cheap thrift store shopping, consumers today seek style and sustainability from it, and consider second-hand options when shopping for brand/luxury items, footwear, accessories, and even gifts for others. Popular distribution channels have also changed, from trade and thrift stores to online/social media/startup options. These findings show the current status of the second-hand apparel market and provide insights for researchers and marketers about what values, product types, and distribution channels that the second-hand apparel market needs to offer in order to meet consumers’ needs and today’s consumption patterns.

Acknowledgement

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