

Explore Retailers' Merchandising Strategy for Sustainable Cotton Apparel in the U.S. Retail Market

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U.S. consumers' increasing awareness of sustainability has led to the fast growth of the sustainable cotton apparel market in the United States (Chi et al., 2019). Retailers ranging from large mass-market brands, such as H&M, to small private labels like Santa Cruz-based brand, are participating in this upward trend and launching more and more cotton apparel products labeled as "sustainable", "organic" or "eco-friendly" to meet customers' growing need (Shen, 2014).

While existing studies have examined consumers' purchasing behavior for sustainable apparel, retailers' merchandising strategy for sustainable cotton apparel products remains mostly unknown (Ha-Brookshire & Norum, 2011; Sun, 2018). The purpose of this study is to empirically examine U.S. retailers' merchandising strategy for sustainable cotton apparel, focusing on their product assortment and pricing practices. The findings of this study will fulfill a critical research gap and significantly enhance our understanding of U.S. apparel retailers' business strategy for sustainability. The findings of the study can also provide valuable inputs for fashion companies interested in exploring the promising, competitive, and dynamic sustainable cotton apparel market in the U.S. (Han, 2019).

Reviewing the existing literature shows that three factors are related to fashion brands and retailers' choice of merchandising strategy for sustainable cotton apparel. The first factor is product appearance, including patterns and color. For example, studies show that fashion brands tend to adopt plain patterns for sustainable apparel items to make them look longer lasting and more durable (Joy et al., 2012). Retailers also prefer using natural colors, such as white, green, and neutral, for sustainable apparel (Khatri & White, 2015). These colors are "perceived" as using more environmental-friendly dyeing material with fewer pollutants than darker colors (Kadolph & Marcketti, 2016). The second factor is pricing. Numerous studies have indicated that consumers who shop for sustainable apparel typically care less about price and are willing to pay a premium for "sustainability" (Tey, Brindal, & Dibba, 2018). In other words, price discount may not be an effective tool in driving sales for sustainable cotton apparel products than regular cotton items (Tong & Su, 2018). Additionally, some studies suggest that female consumers could be the preferred target market for sustainable apparel as they shop more often than males and demonstrate more consciousness about sustainability (Shen, 2014). With that, this study proposes *H1*: Regarding product assortment, sustainable cotton apparel tend to use more plain patterns and natural colors than regular cotton apparel items. *H2*: Regarding pricing strategy, sustainable cotton apparel are priced higher and sold with fewer discounts than regular cotton apparel items. *H3*: Regarding gender, sustainable cotton apparel tend to focus more on womenswear than menswear.

For the research purpose, we collected data from EDITED, a database and business analytics tool which tracks real-time pricing, assortment and inventory information of over 90,000 fashion retailers and 300,000,000 apparel items at the stock-keeping-unit (SKU) level around the world (EDITED, 2020). To make the samples representative of the population, we randomly selected 4,000 sustainable cotton apparel (i.e., cotton apparel items that explicitly mentioned the keywords “sustainable”, “organic”, “eco-friendly” or “environmental-friendly” in their product description) and another 4,000 regular cotton apparel (i.e., cotton apparel items that do not mention any of the sustainability-related keywords mentioned earlier). All the samples were at the SKU level and sold in the U.S. retail market between January 1 and December 31, 2019. For each sample, we collected their full product assortment and pricing information from EDITED.

Logistic regression was performed to explore retailers’ specific merchandising strategy for sustainable cotton apparel in comparison with regular cotton apparel items. The logit model uses *Type* (sustainable cotton apparel =1 and regular cotton apparel =0) as the binary dependent variable and includes five independent variables that measure different aspects of retailers’ product assortment and pricing practices, namely:

- *pattern* (plain pattern =1 and otherwise=0)
- *color* (natural color¹ =1 and otherwise =0)
- *price* (if the full selling price is at least 20% higher than the average selling price of the same product category² in the U.S. retail market during the examined period=1; otherwise=0)
- *discount* (the item was ever sold at a discounted price during the examined period=1; otherwise=0)
- *gender* (womenswear=1; menswear=0)

The regression was statistically significant (likelihood ratio (LR) statistics =166.3, $p=0.00$).

The results show that, first, regarding product assortment, sustainable cotton apparel are 41.3% more likely to use plain patterns (Wald $X^2=134$, $p=0.00$) than regular cotton apparel when holding other variables constant. However, no evidence shows that sustainable cotton apparel statistically are more likely to use natural color (Wald $X^2=0.06$, $p=0.94>0.05$). $H1$ is partially supported. Second, regarding pricing practices, sustainable cotton apparel are 165.7% more likely to be priced at least 20% higher than the average selling price of the same product category in the U.S. retail market (Wald $X^2=27$, $p=0.00$) and 51.7% less likely to be sold at a discounted price during the examined period (Wald $X^2=4.37$, $p=0.03<0.05$) than regular cotton apparel items. This result supports $H2$. However, interesting enough, the result also suggests that sustainable cotton apparel are 24.3% more likely to be menswear than womenswear when

¹ Natural colors include white, green and neutral (Kadolph, & Marcketti, 2016).

² These product categories include dresses, tops, bottoms (such as skirts, jeans and trousers), outerwear, all in ones (such as playsuits and dungarees), underwear, hosiery, nightwear, swimwear and suits sets as categorized by EDITED (EDITED, 2020).

holding other variables constant (Wald $X^2=197.45$, $p=0.00$). The specific reasons can be explored further.

The findings of the study concur with the view that retailers are adopting unique product assortment and pricing strategies for sustainable cotton apparel compared with regular cotton apparel items in the U.S. retail market (Han, 2019). However, retailers' detailed merchandising strategy for sustainable cotton apparel appears to be more sophisticated than what previous studies had suggested. Particularly, the results imply that apparel retailers and consumers may have a different perception of sustainable cotton apparel. Future studies can continue to investigate how retailers manage sustainable cotton apparel in aspects such as stock availability, inventory turnover, and the depth and breadth of product assortment. It will also be interesting to explore further if retailers in different segments of the retail market (such as luxury, mass and value markets) may adopt any unique merchandising strategies for sustainable cotton apparel.

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