

Designer Bag Resale Prices

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Hypothesis

As fashion sustainability becomes a more pressing concern, the second-hand market has been brought to the forefront of consumers' attention. As the resale market grows more saturated, determining the optimal pricing of items becomes a subject of interest, especially in regards to trending items like designer bags. This project aims to analyze the intersecting influence of various factors—brand popularity, construction material, and consumer demand for certain types of bags—on designer bag resale prices.

Data

We scraped data from seven designer bag brands—Staud, Valentino, Bottega Veneta, Chloe, Miu Miu, Prada—to collect information on retail prices. Next, we scraped data from The Real Real—a large online marketplace for resale luxury goods—to collect resale price data. We got data on brand popularity from Pinterest trends to compute each brand's popularity growth. We added a column for whether there was an item “pair”—that is, whether a specific product had information on both its retail and resale price. This was useful because many resale items were no longer found on brand websites so had no associated retail price.

Findings

Claim #1: A brand's popularity growth rate is not a strong predictor of resale value.

Support for Claim #1:

The resulting values (T-statistic: -0.9467, P-value: 0.3441) from our analysis indicate that there is no statistically significant difference in the percentage resale values between brands with high and lower popularity growth rates. This leads us to conclude that brands with higher popularity growth rates do not necessarily have relatively higher percentage resale values.

Claim #2: Leather bags do not maintain a higher resale price than non leather bags.

Support for Claim #2: Our analysis resulted in a t-statistic of -9.386 and a p-value of $8.37e-20$. These results indicate a statistically significant difference in the resale prices of leather versus non-leather bags, with leather bags having a lower average resale price contrary to initial expectations. Based on these results, we can conclude that leather bags do not retain higher resale values than non-leather bags.

Claim #3: The description have an influence on a bag's resale value.

Support for Claim #k: The T-statistic was 11.1883, and the P-value was $1.859e-24$, meaning that there is a statistically significant difference between the resale prices of bags in two of our clusters (specifically Cluster 1 and 3, the clusters with the highest and lowest average resale price). Since Cluster 3 has higher resale prices, this signifies that it has more valuable keywords compared to Cluster 1. We therefore conclude that keywords in the bag descriptions influence resale prices.

Socio-historical Context and Impact Report

Socio-historical context

Looking at the socio-historical context of our project, the most significant social factor likely affecting our data and hypotheses is the wasteful nature of the fashion industry, and disposability of clothing. As a result, more sustainable purchasing habits have increasingly become popular—particularly resale shopping— which has led to different bag brands and resale items per brand to become more popular (Ellen Macarthur Foundation). In relation to our data specifically, certain resale prices may accordingly be lower given the rising popularity of the resale market. Apart from the fashion industry, the current economic recession and its impact on user spending habits may also be another factor having an effect on prices. Given that resale is generally more budget friendly, this likely may lead to an effect on the volume of resale transactions, as well as prices. Lastly, the sharp increase in e-commerce following the COVID-19 pandemic has made luxury items much more accessible, as well as affordable, which may be another factor as to why we were able to find so many resale items, as well as bags with a matching resale item.

The major stakeholders of our project are resale consumers shopping on sites such as the Real Real— women belonging to a middle-income bracket, between the ages of 20 and 45, who are seeking sustainable purchasing options, as well as purchase luxury bags at a lower price. We hope to provide them with valuable insights into what factors impact the prices of some of the resale bags they are looking to purchase, so that they make the most well informed purchasing decisions possible. Overall, our findings can influence consumer choices— such as the value of choosing between different luxury brands, different materials, and deciding whether or not to purchase an item at resale due to the pricing differences. Aside from resale consumers, some other stakeholders of our project include resale companies, luxury companies, as well as second-hand sellers on resale sites. Given that we are scraping from their sites and items they have listed, some of the data we present may be of interest to them since it may either increase or decrease their sales (and, accordingly, profits).

With respect to findings regarding our topic of sustainable shopping, BCG published a study in 2019 with regards to the rising trend in resale purchasing. In essence, they wrote that resale is an attractive avenue for luxury brands to both boost their image, as well as increase their consumer base. Moreover, it also allows for luxury items to be more accessible, as it allows individuals who otherwise would be unable to afford luxury items purchase them at resale prices. The resale market niche is accordingly expected to grow “from an estimated \$25 billion in revenues in 2018 to around \$36 billion in 2021, increasing by an average of 12% per annum and boosting its share of total personal luxury goods to around 9%, according to the 2019 BCG-Altgamma True-Luxury Global Consumer Insight study” (Ducasse et al.). The article also mentioned that leather goods, a material we studied as a part of our analysis component, particularly leather

handbags, are especially popular amongst second-hand shoppers given that it is of high quality, easy to buy, and not as common on retail sites (Ducasse et al.). Overall, the resale market is incredibly attractive provided that it creates more circularity in the fashion industry, allowing for products to have longer life cycles, as well as decreasing the carbon footprint of the industry.

In a resale report published in 2021 by ThredUp, they projected that the second-hand market is projected to double over the next 5 years, reaching \$77B, with an expected growth of 11x that of the retail sector by 2025 (ThredUp). In regards to sustainability, they also stated that: “an item purchased used vs. new displaces 17.4 lbs of CO2 emissions– reducing its carbon footprint by 82%” (ThredUp). Similarly to BCG, they also stated that the fashion industry needs to become circular in order to become sustainable— particularly because it is responsible for 10% of greenhouse gas emissions (ThredUp).

The most significant impact of our socioeconomic research is that of sustainability. Consumer behavior has shifted towards resale not only because it is more accessible and affordable, but also because it is a more sustainable and environmentally friendly shopping option. We should therefore reframe our question to not only address economic factors, but also environmental sustainability— specifically, how environmentally-consciousness may affect resale prices for bags. This will allow for us to explore both the direct and indirect impacts of consumer choices on the carbon footprint of the fashion industry.

Ethical Considerations

#1) Our data might bias against certain groups divided by socioeconomic status, which may influence the value and demand for certain bags. This can be mitigated by scraping from resale platforms that are more affordable and used amongst different socioeconomic contexts. For instance, we could scrape from Depop, which is both more popular, and allows for users to sign up and sell some of their own items. Collecting data from platforms like The Real Real, as well as Saks, may focus solely on user groups inclined to use those kinds of platforms. Given that they are perceived as ‘higher-end’ compared to resale platforms like Depop, our data is biased towards users of a higher socioeconomic status. As a result, this may affect our data analysis since the prices of resale bags on those sites are more likely to be priced higher, and less affected by price drops.

#2) With respect to biases present in the interpretation of our data, there may be interpretation bias with respect to our current knowledge of the retail luxury market, and price ranges for certain designer bags. To that end, we were likely to perceive certain resale bags that were still

priced moderately high as being ‘cheaper’ given that they were still below the current retail price.

We chose to scrape data solely from the Real Real, and whenever a bag was missing a ‘match’ in either the resale or retail category, we handled that missing data by entering it in our SQL table as -1, and later on, during analysis, replacing that value with the average price of a bag for that brand. However, filling these missing values with averages may introduce bias to our data given that we assume that all bags falling under a certain brand adhere to the same price range. To that end, it might be better to have used predictive price modeling to replace these missing values. Moreover, scraping data only from the Real Real may have had an impact on the data lifecycle because it restricted the resale prices to those adhering to the rates often found on the Real Real. For instance, these prices may be higher than those on Depop.

Our identity and prior knowledge affects our analysis given that we are all familiar with resale platforms such as the Real Real, as well as each of the bag brands we have worked with. Although we do not necessarily consider ourselves target customers of luxury bag companies, this awareness may cause us to be more price insensitive when examining our data and conducting our analysis- when other users may not be.

#5) Our results may be misinterpreted by users such as resale companies to justify inflated prices given that they are still ‘lower’ than their retail counterparts– therefore decreasing the affordability and accessibility of the resale and secondhand market. Moreover, this may lead to other secondhand platforms such as Depop following suit, and aggregating various processing fees in order to increase their margins. A way to prevent this would be by being as transparent as possible when presenting our findings, make it clear we only scraped from a very specific resale site - and that these findings should therefore not be generalized to all resale platforms- as well as attempt to begin being more inclusive with all user groups by expanding our analysis to other secondhand and resale platforms featuring bags from the brands we are analyzing.

#6) A final ethical and societal issue that we were seeking to analyze was that of sustainability in fashion, and how a culture of consumerism and materialism reinforces the negative environmental impacts of the fashion industry. Our project may therefore exacerbate these effects by maintaining consumer focus on the value of the luxury ‘brand’ vs other premium brands. For future iterations of our project, we can attempt to mitigate this by potentially introducing a comparative study on the resale prices of more affordable, as well as sustainable, bags such that we may be able to promote a more environmentally and socially sustainable purchasing mindset amongst consumers.

Works Cited

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