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The Evolution of Luxury Fashion: A Journey since 1823

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Key concepts: Globalisation; Sustainability; Market Equilibrium; Elasticity; OLS; Data Analysis.

Luxury fashion has undergone a remarkable transformation since its origins in the early 19th century. Following the anniversary of the first Macintosh raincoat sold in 1823, this case study traces the evolution of luxury fashion from 1823 to the present day, highlighting key historical milestones, changing consumer preferences, technological advancements, and shifting societal values that have shaped this industry over the centuries. At the end we will analyse, using Excel the growth of some of the luxury fashion brands.

The Birth of Couture and Tailoring, Globalization, and Sustainability

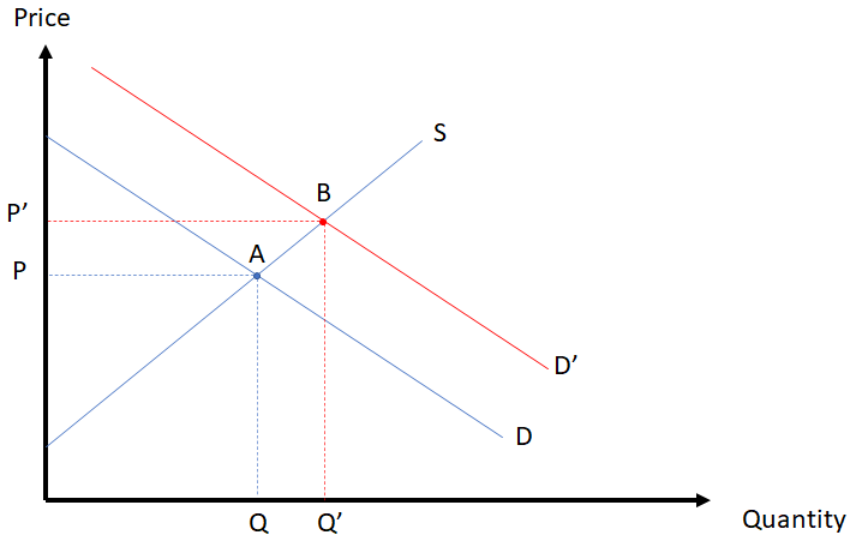
In the 19th century, luxury fashion was defined by bespoke tailoring and craftsmanship. Designers like Charles Frederick Worth established the first haute couture house in Paris, emphasizing intricate handwork, opulent fabrics, and personalized designs for the elite. Luxury fashion was primarily reserved for European aristocracy and royalty[1]. Initially, this was a good reserved for a very particular market, not everyone could afford this luxury good, from a consumer perspective it had a high-end tag associated with its consumption. If we think about luxury fashion in terms of elasticity, the income elasticity of demand, which shows the percentage change in quantity demanded in response to a change in income,

[1] Did you know? Charles Frederick Worth's creation of exquisite garments for Empress Eugénie marked the beginning of luxury fashion's close association with royalty and the upper class.

must have been positive, classifying it as a normal good, but higher than 1, meaning that demand rises more than proportionate to a change in income.

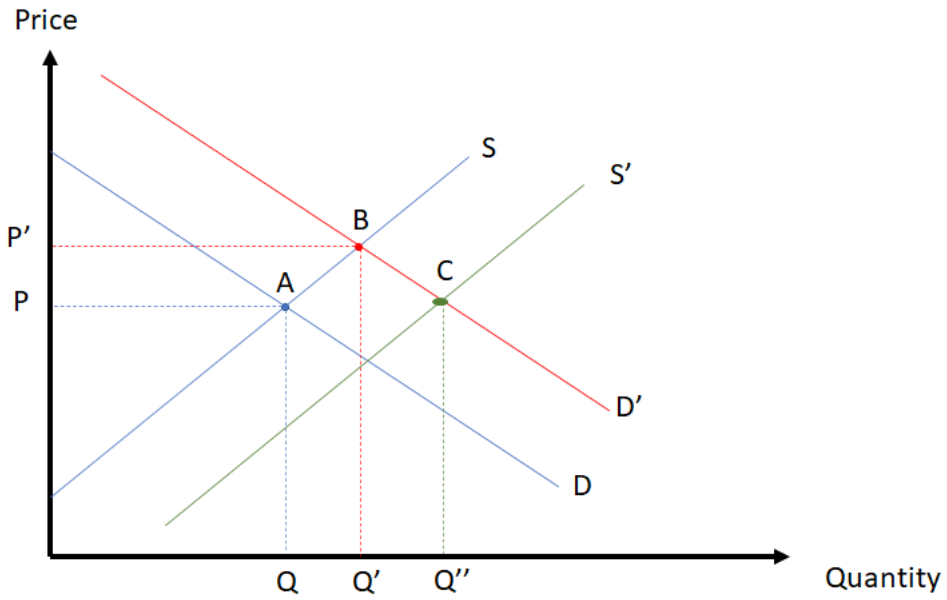
The mid-20th century saw luxury fashion expand its reach through the influence of Hollywood stars like Audrey Hepburn and Grace Kelly, who became fashion icons. To reach a broader audience suppliers started to use a form of what we today know as influencers, Hollywood stars are known for having an influential voice in many aspects, such as politics or fashion. Nowadays influencers have a significant impact on consumers' decisions, in a study published by Forbes in February 2022, 72% of consumers manifested their trust in influencers, 66% said their purchasing decisions are often driven by influencers, and 64% said influencers help them to discover new brands. By the mid-20th century the influencers effect would have been at a smaller scale, and as it remained at expensive goods it would still have a limited market, but overall, we could look at this effect as a shock to the right of the demand curve. At the same level of prices, the demand for the good would increase. Graphically we can show this effect in a simplified case, assuming the initial equilibrium for luxury clothes if at point A, and the initial supply and demand curve are S and D respectively, the effect of influencers, will shift the demand curve to the right (D’). Arriving to a new market equilibrium (B) where, both, quantity (Q) and price (P), are higher from Q to Q’ and from P to P’ respectively.

Figure 1: the effect of influencers on the luxury clothes market



In this period of time, new influential houses emerged into the market, Christian Dior and Coco Chanel, which set new standards for elegance and sophistication, shifting the supply curve as at the same level of prices there were more suppliers. If we then consider both changes in demand (coming from the new elite influencers) and supply (coming from the new entrants in the market) we can make a simplified version of the new equilibrium as in Figure 2. The new equilibrium C, which considers both effects in supply and demand, will show and increase in demand (Q’’) and an uncertain change in price, which will depend on the effect of the new entrants (where this is a large or small positive shock to the supply curve).

Figure 2: new houses emerged into the market.



The 1970s marked a shift towards ready-to-wear collections, making luxury fashion more accessible to a broader audience. Luxury brands began to expand internationally, tapping into emerging markets. The rise of brands like Gucci and Louis Vuitton represented the globalization of luxury fashion. We again see a positive shock to the demand and the supply curve. As luxury fashion expands to new markets there will be more consumers at the same level of prices, however, two new effects could help us to argue that the new equilibrium (in a similar representation to Figure 2) will happen with a higher level of demand at a lower price. On the one hand, there are new suppliers emerging shifting the supply further

to the right, but on the other, the market shifts towards ready-to-wear collections, making luxury clothes still an exclusive good but appealing to a broader range of consumers (even though we could argue these consumers will not buy this item in a regular basis). Following this reasoning, we could say that both the shock to the demand and supply will be large, arriving to a new equilibrium in which the overall demand is higher (as shown in Figure 2), but the price is lower[2].

The 21st century has brought digital transformation to luxury fashion. E-commerce, social media, and influencer marketing have reshaped the industry, making luxury more accessible and interactive. Brands are also embracing sustainability, responding to increasing consumer demand for ethical and environmentally conscious products. What do you think the future of luxury fashion looks like in terms of changes to demand and supply?

The future of luxury fashion promises continued evolution. Innovations in 3D printing, artificial intelligence, and augmented reality will shape the design, production, and retail processes. Brands will also emphasize inclusivity and diversity, reflecting changing societal values. Circular fashion and sustainable practices will become integral to luxury brands' operations.

Luxury fashion has come a long way since the 19th century, evolving in response to changing consumer preferences, technological advancements, and societal shifts. Above we have briefly shown the industry's remarkable journey, from the exclusivity of couture houses to the democratization of luxury through digitalization and sustainability initiatives. As luxury fashion continues to adapt and innovate, it remains a dynamic and influential force in the global fashion landscape.

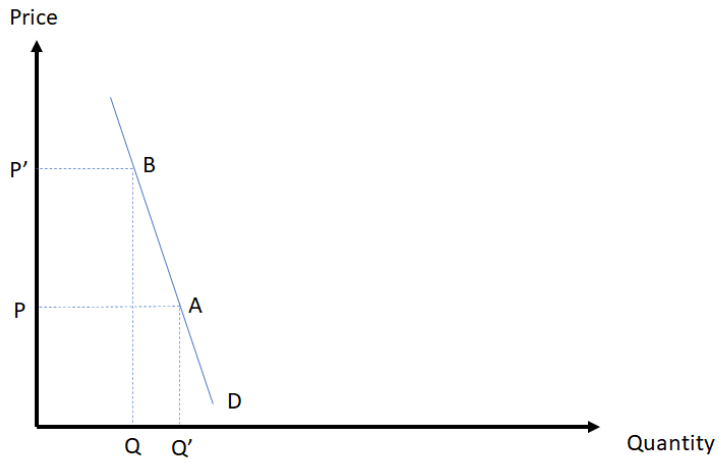
Case Study: Macintosh Raincoat. A Timeless Luxury Fashion Icon

Charles Macintosh revolutionized rainwear by developing a patented method for waterproofing fabric using rubberized coatings. Initially used for practical purposes, Macintosh raincoats gained popularity among outdoor workers and military personnel in the 19th century. Raincoats, initially found its market, meeting the

[2] You can try to represent this new equilibrium following figure 2 and enlarging the shocks for the demand and supply, reflecting this decrease in prices.

necessities of workers who worked outdoors on a regular basis, making their jobs more comfortable. Do you think that, in the mid-term raincoats could have become a necessity good for outdoor workers? If we consider the case of Glasgow, where Charles Macintosh was from, the current rainfall in Glasgow is over 1,100mm in a typical year, spread over approximately 170 rainy days per year. This ranks Glasgow around the 3rd/4th rainiest city in Europe (depending on the year). Assuming this numbers were similar in the 19th century; we can then argue that raincoats in Glasgow was a good that may the working life of outdoor workers more comfortable and with time it may have become a necessity good for this specific sector. A necessity good is a type of normal good, however, in this case, if a good becomes a necessity we will expect consumers buying it regardless of changes in their income levels. But furthermore, in the 19th century, there would be a lack of substitutes for the Macintosh raincoat, so the demand for this particular good will become more inelastic[3], i.e. the response of the quantity demanded to changes in prices is small. In figure 3, we can see that if price increase from A to B, the quantity demanded changes (from Q to Q') in a smaller amount relative to the change in price (from P to P'), this is the case of an inelastic demand.

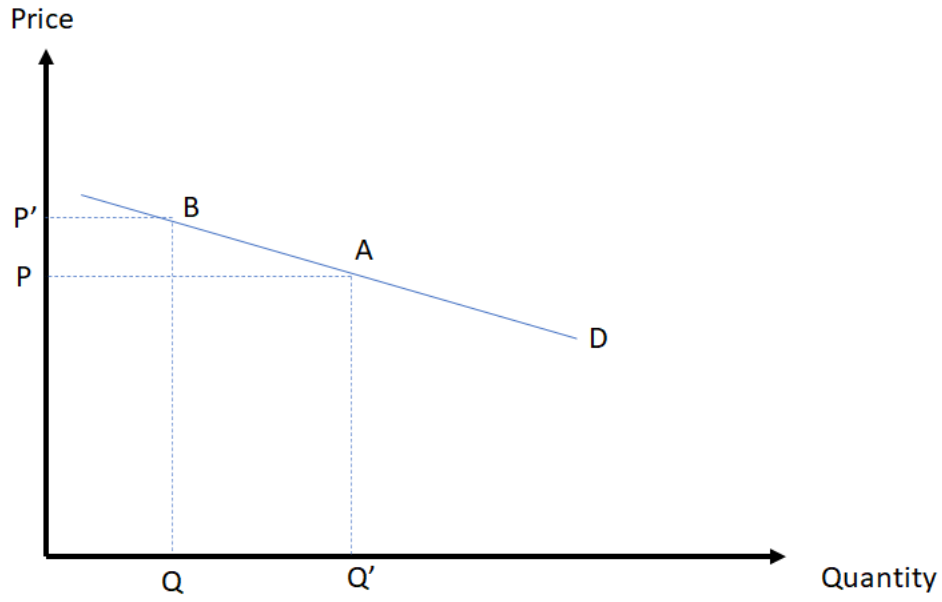
Figure 3: Inelastic Demand



[3] Indeed, it was the necessity of to keep soldiers and warm, and the increasing demand of waterproof clothing from other outdoor professions that made Macintosh and Hancock (a competitor in the market) to pair to improve the permeability of the original raincoat. In 1879, Burberry, and new entrant in the market and still a major competitor of Macintosh, patented the gabardine, a breathable, weatherproof, and tearproof fabric first used in coats for British officers during the Boer war and by the outbreak of World War 1.

During the early 20th century, the Macintosh raincoat made its transition into luxury fashion. By then there were other competitors in the market such as Burberry or Barbour & Sons. Macintosh got recognition by high-end brands because of its durability, and they began incorporating it into their collections, cementing its status as a luxury item. Contrary, to the concept of a necessity good which we have represented in Figure 3, a luxury good will show a more elastic demand, reflecting a higher sensitivity of the quantity demanded to price changes, think about it in this way, if a good is very expensive to get and there is price drop, then the demand increases as it becomes more affordable to people who were unable to purchase it before. Figure 4, shows graphically an elastic demand and how the quantity demanded largely reacts (from Q to Q’) to small changes in prices (from P to P’).

Figure 4: Elastic Demand



As there were more competitors now, and so more affordable raincoats whether the raincoat remained a necessity for a particular market doesn’t contradict that the specific brand of Macintosh now shows an elastic demand as that raincoat brand now was considered a luxury good. What are the effects of brands in consumers? Why some consumers are willing to pay higher price points?

Macintosh raincoats are positioned as premium luxury items, commanding high price points. This pricing strategy helps maintain exclusivity and reflects the

craftsmanship, quality materials, and durability associated with the brand. To appeal to a broader market and create buzz, Macintosh periodically releases limited-edition collections and collaborates with renowned designers and fashion houses. These collaborations often feature unique designs, attracting fashion enthusiasts willing to pay a premium.

As other luxury and non-luxury brands Macintosh has also evolved with time. The brand emphasizes sustainable practices by sourcing high-quality materials and prioritizing environmentally friendly manufacturing techniques. This commitment aligns with the growing demand for eco-conscious luxury fashion.

The Macintosh raincoat's journey from a practical invention to a luxury fashion icon illustrates the dynamic nature of the fashion industry and the importance of adaptability and brand positioning. Through premium pricing, limited editions, sustainable practices, and a rich heritage, Macintosh has successfully maintained its status as a symbol of luxury, ensuring its continued relevance in the world of fashion.

Analysis: Global fashion brand (for this section you are required to have a understanding of basic econometrics)

Using data from Mendeley database[4] we can observe the evolution from 2001 to 2021 for brand equity, ranking, and growth rate for 30 different brands, marketed as luxury and non-luxury. We also have information for the country and continent of the brand origin. Brand equity refers to the commercial value that derives from consumer perception of a particular product, rather than from the product itself. It is calculated as the value premium that a company generates from a product with a recognisable name when compared to a generic equivalent. Brands with high levels of brand equity will have costumers with higher willingness to pay, but also will be more likely to attract new consumer due to prestige.

The ranking refers to the financial brand value based on the annual brand value ranking, the dataset contains data for brands ranked among the top 100 worldwide.

[4] Siddiqui, Kamran (2021), “Dataset Global Fashion Brands - Brand Equity, Ranking, Growth Rate, COO (2001-2021)”, Mendeley Data, V1, doi: 10.17632/7fg8835b4g.1

The growth rate refers to the average growth rate of a company, calculated as the difference between the current period value in terms of profits and the previous period value, over the previous period value; the growth rate is expressed as a percentage. Table 1 shows the descriptive statistics for luxury and non-luxury brands in the dataset.

Table 1: Descriptive Statistics

Non-luxury brands			
	rank	*equity*	*growth rate*
Mean	55.82	9,205.57	2.70
Minimum	11.00	1,002.00	- 100.00
Maximum	100.00	42,538.00	23.70
Count	151.00	150.00	136.00
Luxury brands			
	rank	*equity*	*growth rate*
Mean	65.84	7,849.12	6.39
Minimum	13.00	1,004.00	- 14.47
Maximum	100.00	36,766.00	143.52
Count	178.00	178.00	158.00

Note: Mean refers to the central or typical in the set of data. The minimum and maximum refer to the top and bottom numbers of a particular variable in the dataset. Count refers to the total number of observations of that variable over the number of years.

From Table 1 we can observe that the average rank and growth rate of luxury brands is higher than for non-luxury brands. However, the mean of equity for luxury brands in this case is lower than the equity for non-luxury brands, initially this is an unexpected result if we think of the definition of brand equity as the value premium associated with the brand. If we look at how the brand equity of luxury brands has evolved over the years compared to the brand equity of non-luxury brands (Figure 5)

Figure 5: Brand equity over the years for luxury and non-luxury brands

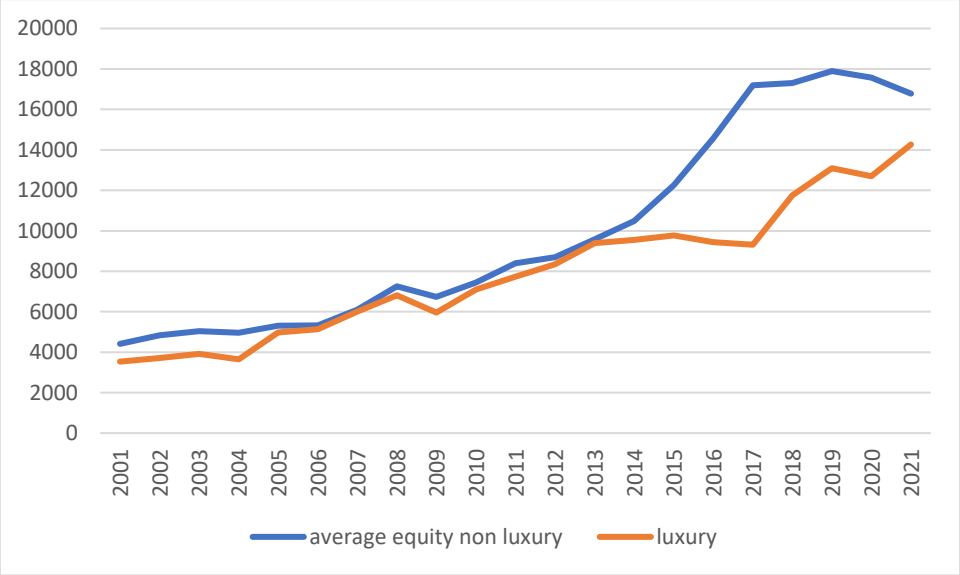


Figure 5 shows that brand equity was very similar for luxury and non-luxury brands until 2015, when luxury categories declined in value, after 2014 showing a slight rising. This is consistent with the BrandZ findings in its 2015 report and it was mainly attributed to struggles adapting to evolving consumer (and in particular millennials) attitudes towards a more sustainable way of living. Although, we could also find other causes around that time such as the economic slowdown in China, Brazil, and Russia[5].

Xi et al. (2022)[6] offer valuable insights into the factors that influence brand identity in the context of luxury brands. It highlights several key points that can be used to explain why the brand equity of luxury brands may be lower than that of non-luxury brands. Overall, the findings of this paper suggest that the brand equity of luxury brands may be lower than that of non-luxury brands due to the unique and complex nature of luxury brand identity. Luxury brands must simultaneously address social and personal identity needs, maintain high-quality information, and balance multiple dimensions of perceived value. In contrast, non-luxury brands may have a simpler

[5] https://luxurysociety.com/en/articles/2015/06/what-the-2015-brandztm-top-100-means-for-luxury

[6] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9521331/

task, focusing on functional and emotional value without the need to cater to the prestige and status associated with luxury.

Using the dataset from Mendeley data, analyse the effect that rank and growth rate may have in the consumer perception value of a brand (brand equity). We estimate equation (1) using OLS[7].

$$\log\left(Brand\ equity\right)_{ij} = \alpha_0 + \beta_1 * rank_{ij} + \beta_2 * growth\ rate_{ij} + \beta_3 * \delta_{ij} + \varepsilon_{ij} \quad (1)$$

Where $Brand\ equity_{ij}$ refers the consumer perceived value for firm i in year j. $rank_{ij}$ represents the rank of firm i in year j. $growth\ rate_{ij}$ refers to the growth rate of firm i in year j. δ_i is a set of dummy variables[8] which control for brand origin, whether the brand is classify as luxury (luxury equals 1 and 0 otherwise), and year. $\beta_{1,2}$ are the coefficients of the independent variables (rank and growth rate) representing the change in brand equity for a one unit change in the independent variable. α_0 is the intercept of the linear model, representing the value of brand equity when the independent variables are 0. ε_{ij} represents the error term, which accounts for the variability in brand equity which the module can’t explain. Table 2 shows the results for equation (1).

[7] OLS (ordinary least squares) is a commonly used statistical method in data analysis that helps find the best-fitting straight line (regression line) through a set of data points. It works by minimizing the vertical distances between the data points and the line, aiming to make these errors as small as possible. This method is often used to understand and quantify the relationship between two variables, resulting in a regression equation that can be used for prediction and analysis.

[8] A dummy variable, also known as an indicator variable or binary variable, is a variable in statistics that takes on only two values, typically 0 or 1. It is often used to represent categorical data or groupings that have no inherent order. For example, it can be used to code categories like "yes" (1) or "no" (0), or "red" (1), "green" (0), "blue" (0). Dummy variables are employed in regression analysis and other statistical models to include categorical factors in the analysis, making it possible to incorporate them into mathematical equations for prediction and interpretation.

Table 1: OLS results

Regression Statistics	
Multiple R	0.966
R Square	0.933
Adjusted R Square	0.929
Standard Error	0.178
Observations	291

	Coefficients	*Standard Error*	*P-value*
Intercept	9.983	0.061	0.000
Rank	-0.022	0.001	0.000
Growth rate	0.003	0.001	0.005
Financial crisis (dummy variable)	-0.031	0.041	0.449
Sustainability (dummy variable)	0.450	0.026	0.000
Luxury (dummy variable)	0.018	0.033	0.584
Brand origin (dummy variables)		YES	

Note: The dependent variable is the natural logarithm of brand equity. A p-value, is a statistical measure used in hypothesis testing to determine the strength of evidence against a null hypothesis. The null hypothesis is a statement that there is no significant effect or difference in the population from which a sample is drawn. In other words, it represents the status quo or the idea that there is no real effect. In simpler terms, it assesses the likelihood that the observed data could have occurred by random chance alone. In practical terms, a smaller p-value suggests stronger evidence against the null hypothesis. If the p-value is very small (typically less than 0.05), it is often interpreted as evidence to reject the null hypothesis in favour of an alternative hypothesis, indicating that the observed effect is likely not due to random chance. However, it's important to note that a low p-value does simply indicates that the data is inconsistent with the null hypothesis. Therefore, when discussing p-values, it's crucial to consider other factors, such as the effect size, sample size, and the context of the study, to draw meaningful conclusions. Researchers typically set a significance level (alpha) before conducting a study, such as 0.01, 0.05, and 0.1, to determine the threshold below which they will reject the null hypothesis.

From Table 1 we can observe that both the rank and growth rate are statistically significant[9]. The coefficient for Rank is negative, indicating that an increase of one position in the brand ranking decreases the consumer’s brand perception by 2.2%, can think why this maybe the case? A possible explanation and following the results mentioned above from Xi et al (2022), as the expectations of consumer for one brand increases due to have a higher ranking, the result could suggest that brands may not

[9] In statistical analysis, the term "statistically significant" refers to a result or finding that is unlikely to have occurred by random chance. When a result is deemed statistically significant, it suggests that there is a real and meaningful relationship or difference in the data being analyzed. Typically, researchers use a significance level (often denoted as α) to determine whether a result is statistically significant. Common significance levels include 0.05 (5%) or 0.01 (1%). If the p-value associated with a result is less than the chosen significance level, it is considered statistically significant, indicating that the observed effect or relationship is likely not due to random variation in the data. Researchers use statistical tests, such as t-tests or chi-squared tests, to assess the significance of their findings, helping them draw valid conclusions from their data.

adapt quickly to the increase in consumer perception. On the other hand, when growth rate increases, brand equity also increases, this maybe showing the correlation between these two variables as if the perception of consumers for one brand increases, it’s reasonable to think that this will have a positive impact on sales, benefiting growth rate. Think whether causality can be shown in this case[10].

There are two dummy variables which account for external timing shocks, the financial crisis which has a negative statistically significant effect in brand equity, and the consumer change perception regarding sustainability found in the BrandZ report. Can you explain these effects? Could you have considered a different setting to account for time? Both effects are in line with the statistical analysis we presented in Figure 5, although from 2015 the perception of millennials changed in respect to sustainability, brand equity still had an upward tendency, however, this tendency was slower for luxury brands perceived as less sustainable. An interesting result could then be to interact the luxury brand dummy variable and the sustainability dummy variable.

In conclusion, this case study provides a comprehensive overview of the transformation of the luxury fashion industry from its 19th-century origins to the present day. It highlights key historical milestones, shifts in consumer preferences, technological advancements, and societal changes that have shaped the industry over the centuries. The study also delves into the evolution of the Macintosh raincoat from a practical necessity for outdoor workers to a symbol of luxury fashion.

The analysis of brand equity, ranking, and growth rate for luxury and non-luxury brands reveals intriguing insights into consumer perception. The OLS regression analysis suggests that brand ranking and growth rate significantly impact brand equity, with higher rankings leading to a decrease in consumer perception. The financial crisis negatively affects brand equity, while the changing perception regarding sustainability aligns with the industry's challenges after 2015. Further research could explore interactions between luxury and sustainability variables to gain a deeper understanding of their combined effects. As the luxury fashion industry continues to

[10] Causality refers to the relationship between cause and effect, where a change in one variable (the cause) results in a change in another variable (the effect).

adapt and innovate, it remains a dynamic force in the global fashion landscape, influenced by a wide range of factors and variables, both internal and external.