Consumer Demographics and Behaviour in the Luxury Shopping Sector

By Oliver Liles and Salim Nader

Introduction and Research Aims

- The luxury market is discreet, exclusive, and driven by multiple factors, such as **“conspicuous consumption”**
- Existing literature viewed **age** and **gender** as the main potential influencers, but drew varied conclusions and often had a limited scope
- Our research aimed to answer:

    a. ***What are the main attitudes and opinions shaping consumers’ likelihood to purchase luxury goods and how do they vary across luxury product categories and demographics?***

    b. ***How does luxury expenditure vary across luxury product categories and demographics?***

- We focused our study to **watches, jewellery, cosmetics and personal care, and fashion and accessories**

Data and Methodology

- Our dataset was four identical surveys (**UK, Italy, Germany, and France**) from *Statista* (June 2021) of adults (18+) who purchased luxury items in the past two years.
    - Our data was aggregated (no individual response data) and only segmented by **sex, age, and income**.
- We transformed our data by converting it into **three-way contingency tables** of *Demographic* × *Response* × *Country* for each question
- To model our data, we used **Negative Binomial** (due to overdispersion in the count data) **Generalised Linear Models** (GLMs). We focused our analysis on *Response* × *Demographic*.

$$\log(E[y_{ijk}]) = \lambda + \lambda_i^{Response} + \lambda_j^{Group} + \lambda_k^{Country} + \lambda_{ij}^{Response \times \text{Group}} + \lambda_{ik}^{Response \times \text{Country}} + \lambda_{jk}^{Group \times \text{Counry}} + \lambda_{ijk}^{Response \times \text{Group} \times \text{Country}}$$

- For our analysis, we conducted **Likelihood Ratio Tests** (LRTs) to examine the significance of any interactions, and we evaluated **dummy variable interaction coefficients** for further insights

H_0: There is no interaction between response and group.

H_1: There is an interaction between response and group.

Results: Purchase Frequency and Decision Making

- **LRT** Results:
  - Across our data there were no statistically significant interactions between *demographics* and responses for *purchase frequency* or *decision making* (research before purchase)
  - All our p-values were high (*with the smallest being 0.8533*) which suggests *demographics* didn't cause a strong effect (if any) on *luxury shopping behaviours* in our dataset
- **Dummy Variable Interactions** Results:
  - **Age ~ Decision Time:** *Younger* participants had positive interaction estimates for *longer time spent researching*, contrary to our literature review and more general stereotypes of 'youthful impulsivity' (+1.93 for "*Over a year*" for *fashion* products)
  - **Income ~ Decisiveness:** *Higher income* respondents were less likely to respond "*Don't know*" regarding decision times, which may mean they are more decisive about what they want
  - **Age ~ Purchase Frequency:**
    - *Younger* individuals are less likely to regularly purchase luxury *cosmetics*
    - This trend is reversed for *fashion and accessories* (both online and in-store)

Results: Spending Habits and Demographics

- **LRT Results** (*Expenditure only*):
  - **Willingness-to-pay ~ Age, Gender**: p values also insignificant for *willingness-to-pay* questions
  - **Willingness-to-pay ~ Income:** Still insignificant but substantially lower (0.1265 for **watches**, 0.1722 for **jewellery**), so there is possibly a correlation but from our data, this is inconclusive
- **Dummy Variable Interactions** (*Expenditure only*):
  - **Spending (Cosmetics) ~ Age:** *Younger* and *middle-aged* respondents were more likely to select the top *expenditure* brackets (+1.35 for *younger* and +1.24 for *middle aged*); they also had higher values for "*Don't know*" and so this means they could be more aspirationally purchasing ("*pecuniary emulation*")
  - **Willingness-to-pay ~ Income:** Substantial positive interactions coefficients for *high-income* individuals to be *willing to pay* the higher price brackets across *all product categories* (+3.21 for *watches $10,000+*)
- **Effect of Gender:**
  - Generally quite small, but *men* did show higher estimates for *willingness-to-pay* in the higher price brackets for watches (+1.55 for *watches $10,000+*) and smaller estimates for *cosmetics and personal care*
  - Overall, not a significant factor affecting luxury consumption in our data

Limitations of our Research and Analysis

- **Data type and Modelling:**
  - Using aggregate data and so being unable to do individual level analysis
  - Models show associations in the data but don't reveal any causation
  - Unobserved variables such as lifestyle, personality or culture may influence results
- **Sample Data:**
  - *Geographic:* Data only includes Western European countries
  - Online survey may not be answered by higher-net-worth individuals (only ~1% claimed to have incomes over £123,600)
- **Data Structure:**
  - Differences in question format, phrasing, or local brand familiarity across countries may also have introduced additional noise
  - We excluded multi-pick questions to preserve count independence, even single-pick formats may have potentially carried implicit dependencies that were not accounted for in the model
- **Statistical Approach:**
  - Due to our methods, our results cannot generalise past our data without further evidence

Conclusion and Further Implications

- **Attitudes and Behaviours (*Research Aim 1*):**
  - Surprisingly, there was very little significant statistical evidence that *demographics* affect consumers *decision making* or *luxury purchasing*
  - There were some more subtle trends, such as *younger* respondents spending longer *planning for purchases* and preferring *fashion* over *cosmetics*
- **Luxury Expenditure (*Research Aim 2*):**
  - *Income* is, as would be expected, a significant factor across product categories
  - *Age* and *gender* had very subtle effects on *spending*
- **Further Implications for Luxury Brands:**
  - *Demographic* targeting may be less effective for *age* or *gender* than expected, apart from some product type preferences
  - Marketing should be aimed at *income tiers*, and potentially at *younger* consumers for the more a*ccessible luxury* items, especially *fashion*, without losing the exclusivity that inspires the '*aspirational appeal*'
- **Future Research:**
  - A wider variety of nations sampled, individual data, and an inclusion of *lifestyle*, *personality* and *culture* type variables