# **Predicting Consumer Tastes with Big Data at Gap**

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#### Introduction:

GAP faces a problem of declining sales for the past two years. The CEO wants to eliminate creative directors and eliminate them with a decentralised data driven approach.

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We must take into consideration several factors before going about our analysis. First and foremost, there was an industry wise decline in sales and not just in GAP. Millennials were spending less on retail. GAP was offering heavy discounting and had a longer product to market cycle time. GAP coming out with different products was confusing customers and alienating its existing customers. There was heavy competition from other e-commerce brands and other fast fashion brands such as H&M and Zara.

### **Data Driven Analysis:**

For the data driven analysis, we focused on Reviews, SEO, and Financial Data.

#### **Reviews:**

- Reviews can be bucketed into two Offline store reviews and online reviews. For
  offline reviews we used the store locations of those brands and used browser
  automation to complete the scraping of reviews and ratings and time.
- For the online reviews we looked at the external review websites like pissed consumer and scraped the reviews from there. Many of these didn't have ratings, so we did a sentiment analysis using the Azure APIs. As these were mostly negative reviews, we used the negative confidence score.

#### **Stock Price Comparison:**

- The chart compares the stock prices of various clothing industry companies from 2010 to 2020.
- Brands compared include GPS (GAP), KSS, M, AEO, URBN, ANF, and DDS.
- GPS experienced a significant peak around 2015, like its 20-year chart.
- Most brands show some parallel movements, especially notable declines around 2015-2016 and again around 2018-2019. This suggests industry-wide trends or events affecting all these brands.
- AEO and URBN appear to have slightly steadier growth in the latter part of the decade, while brands like ANF and DDS show more pronounced volatility.
- By 2020, most brands seem to converge in their stock prices, indicating potentially similar market valuations or industry conditions.

In summary, while GAP has seen highs and lows over the past two decades, it seems to follow some industry trends, as evidenced by the stock price movements of its competitors. However, individual strategies, brand perceptions, and external factors would contribute to the unique trajectories of each company.

## SEO and SERP Analysis:

- A higher online presence can potentially lead to increased sales.
- Websites were evaluated based on SEO metrics such as Domain authority, Page authority, Spam score, and Ranking keywords.

## **SERP Analysis** specific to the apparel industry:

- Analysis was done on competitive keywords.
- The top-ranking brands for each keyword were identified.
- This information was utilized to assess GAP's brand presence and sales.

Once we had all this data, we built a regression model to check how effective these factors are. We see a very high R-squared, but then the significance for the coefficients is less.

### Big Data Approach for All

Each brand under GAP has a unique brand identity and target customer. Banana Republic is a fashion forward and customers would want unique products, hence a data driven approach would not work here. Old navy is having a broad customer demographic and is family oriented, replicating and predicting trends would work and hence big data approach would be the best approach here. GAP is a budget but fashion friendly brand, the big data approach can used here with caution.

#### **Art Vs Science**

#### Art:

- Involves art, creativity, storytelling and emotions.
- Builds a deeper connection with customers and builds strong brand loyalty.
- Products will cohesively align with brand vision and identity.
- Stand out from competition.

#### Science:

- Understand consumer behavior, help optimize campaigns, reduce ad spend.
- Works for companies with significant historical data
- Increase efficiency, ROI.
- No one size fits all solutions, companies need a unique blend of science and art that fits their brand identity and target audience.
- Use art build unique brand identity, brand loyalty, emotional messaging, human connection, unique products.
- Use science roll out more products quickly to meet customer demand, optimize ad campaigns, increase efficiency in basic products.

## **Benefits of Data-Driven Approach:**

- Predicting Consumer Demands: Data-driven analysis enables GAP to anticipate and respond to customer preferences and trends, ensuring that they offer products that are in high demand.
- Building Online Presence: Utilizing data allows GAP to strengthen its online presence, which is vital in today's digital age, as many consumers shop online.
- Identifying Target Audience: Data analytics helps GAP identify and understand its target audience, enabling more effective marketing strategies.
- Efficient Targeting Strategies: GAP can create more efficient targeting strategies, including personalized ads, customized coupons, and retargeting campaigns, increasing the likelihood of conversion.
- Scalability: The data-driven approach supports scalability, allowing GAP to expand and meet the increasing demands of its customer base.

### **Caution in Data-Driven Approach:**

- Balancing Predictive Analytics: While predictive analytics can be powerful, GAP should be cautious not to overly rely on it. Hyper-focusing on predictive analytics alone might lead to product offerings that don't align with customer needs.
- Avoiding Generality: Overusing data-driven insights can potentially result in products becoming too generic. GAP must avoid losing its unique value proposition and emotional connection with customers.

#### Recommendations:

The recommendation for GAP is to strike a balance:

- Data-Driven Marketing: Continue using data-driven insights for targeted marketing, optimizing advertising spend, and predicting future trends. This helps GAP remain competitive in the market.
- Creativity and Uniqueness: Simultaneously, GAP should emphasize creativity and innovation in product design and marketing to maintain a unique and emotionally appealing brand identity.
- Customer Connection: Building emotional connections with customers is crucial. It's not just about data; it's about the brand's ability to resonate with customers on a personal level.
- Stand Out: GAP should aim to stand out from competitors by offering distinctive products and experiences that go beyond what raw data can provide.
- Data as an Input: Data-driven insights should serve as valuable input sources for designers and decision-makers. They should be used thoughtfully and in conjunction with creative thinking to create a winning strategy.