Data-Driven Catalog Cross-Selling

Exeter Inc

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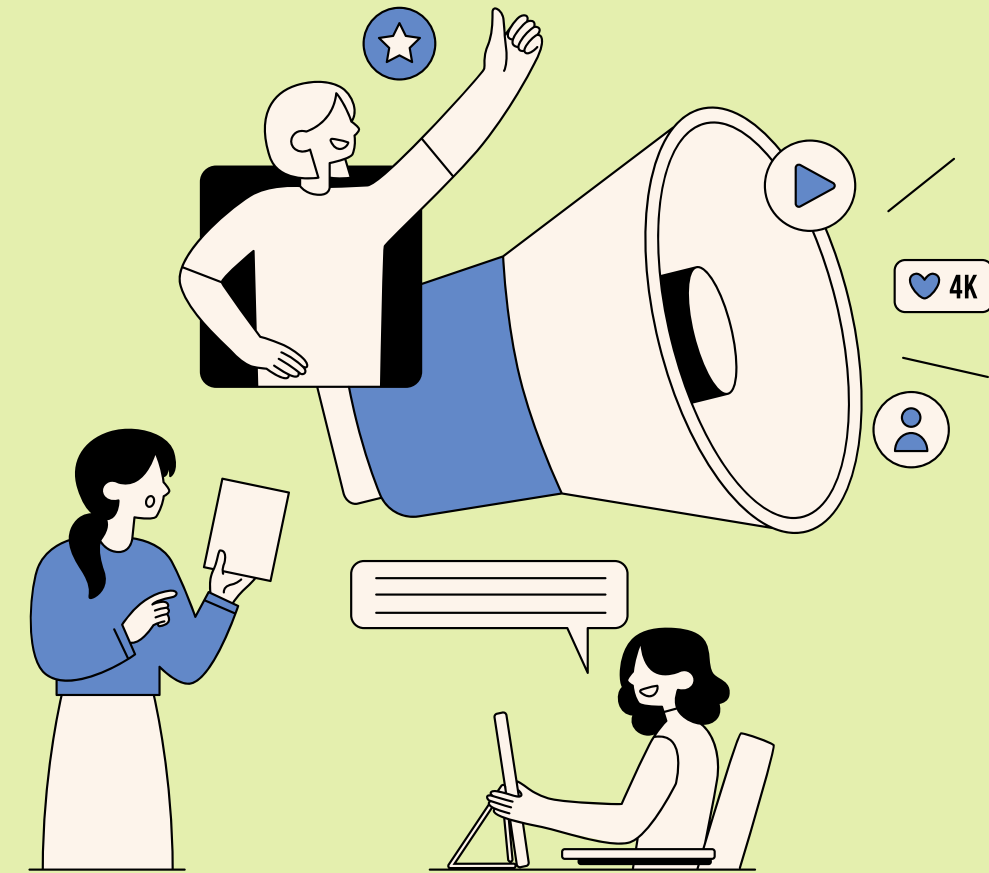SAI BADAM
SAI
SIDDHANT BERRY
HARIRAM

Exeter Inc

Exeter, Inc. is a catalog firm that sells products in a number of different catalogs that it owns. The catalogs number in the dozens, but fall into nine basic categories:

1. Clothing
2. Housewares
3. Health
4. Automotive
5. Personal electronics
6. Computers
7. Garden
8. Novelty gift
9. Jewelry

Agenda

We will present:

- Challenges faced
- Opportunity
- Objective
- Analysis
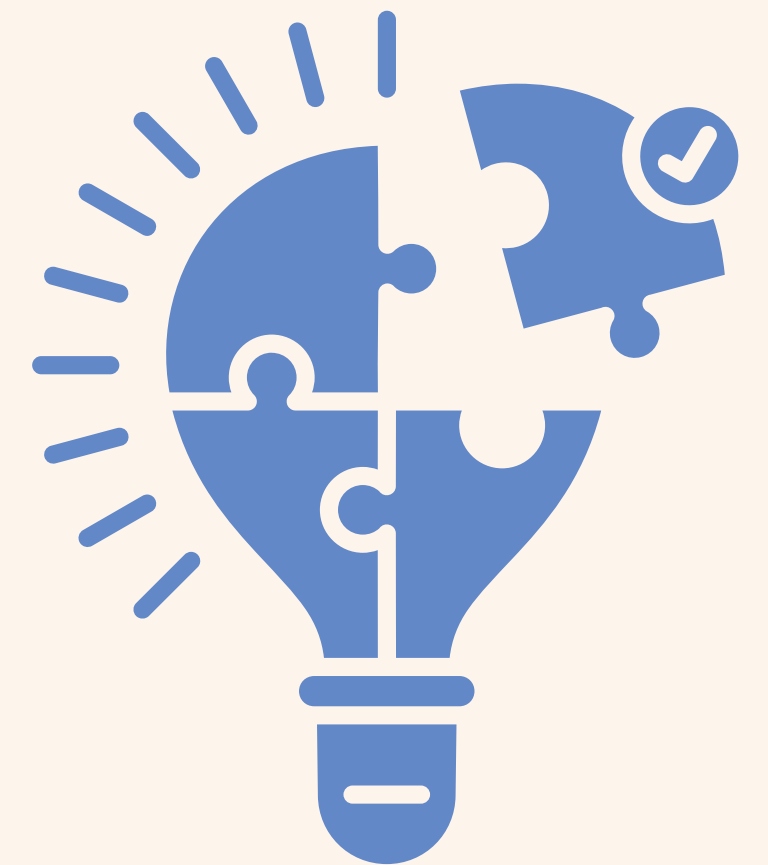- Recommendation
- Executive Summary

OPPORTUNITY

We can leverage the power of data to optimize Exeter's cross-selling strategy. By analyzing customer purchase data, we can identify patterns and recommend relevant catalogs to target specific customer segments. This can lead to:

Increased Sales: By promoting products customers are more likely to buy.
Reduced Costs: By focusing marketing efforts on potential buyers.
**Enhanced Customer Experience**: By offering personalized recommendations.

Objective

·**Data-Driven Approach:** Utilize existing customer purchase data and association rule analysis model to identify complementary products for cross-selling campaigns.

·**Personalized Recommendations:** Recommend relevant catalogs to customers based on their purchase history, leading to targeted cross-selling.

Executive Summary

The analysis revealed 627 associations with confidence levels ranging from 50% to 100%. Significant values for support and lift metrics, aligning with industry standards, were observed. Notably, strong associations between project decisions and product divisions were identified, offering valuable insights for tailored recommendations moving forward.

Cluster 0 includes a mix of Housewares, Health Products, Automotive, Personal Electronics, Garden, and Jewelry divisions. Cluster 1 is dominated by the Health Products division, with some representation from Housewares, Personal Electronics, Computers, and Jewelry. Cluster 2 mainly consists of Clothing, Housewares, and Computers divisions, with some representation from Personal Electronics, Garden, and Novelty Gift. Insights: Distinct combinations of product divisions are evident in each cluster. The Health Products division notably influences clustering patterns. Further investigation is required for features with NaN values.
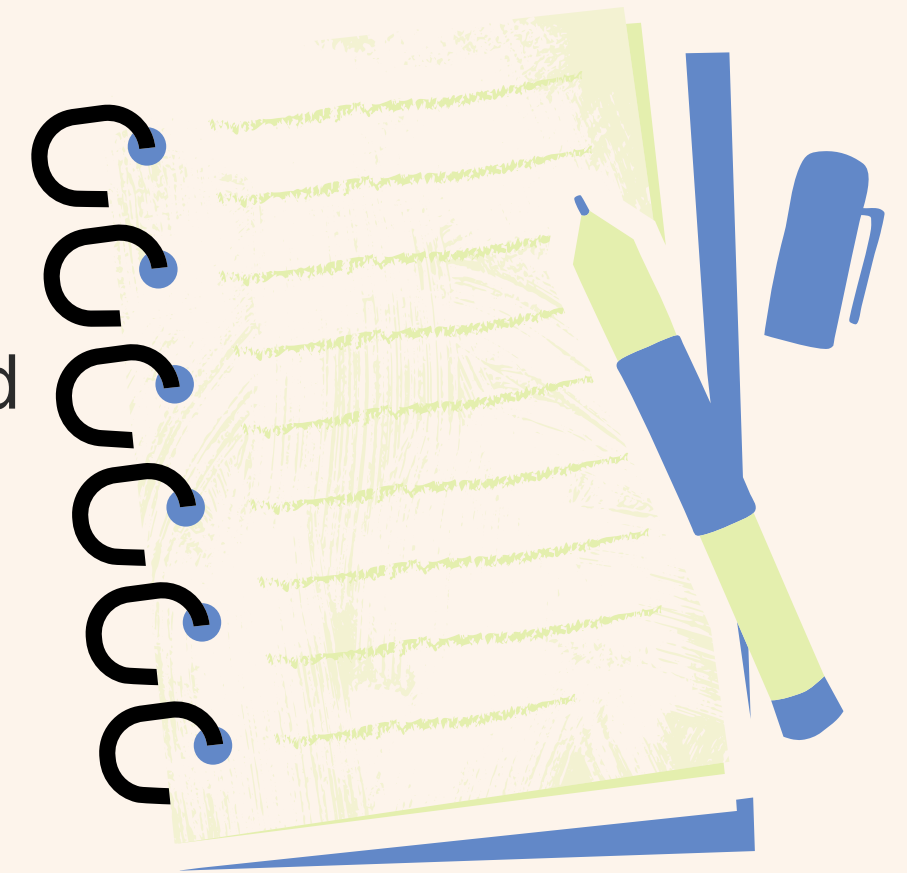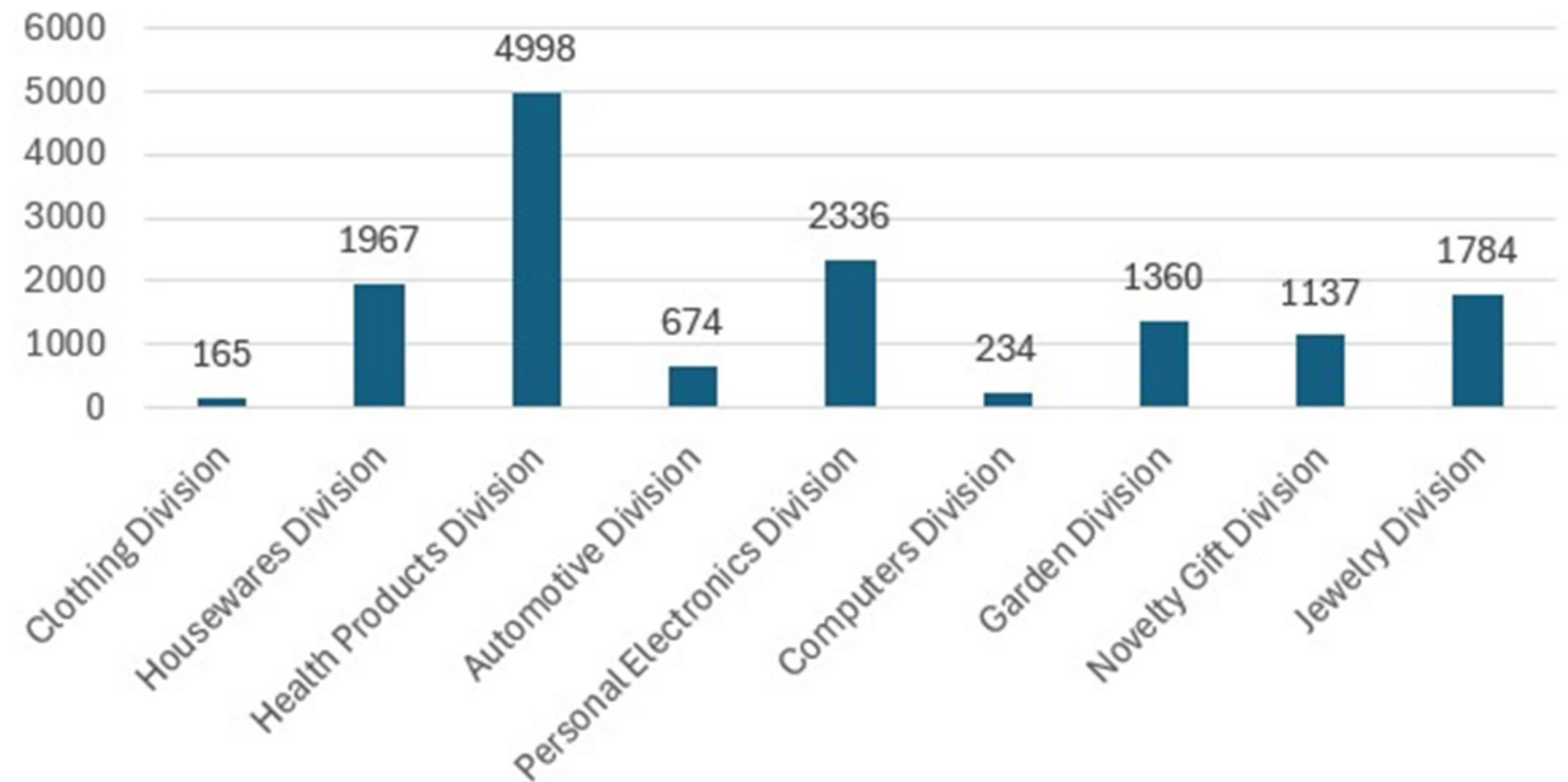
Analysis

PRODUCT PURCHASED

• Initial analysis gives us insights upon which categories are performing best.

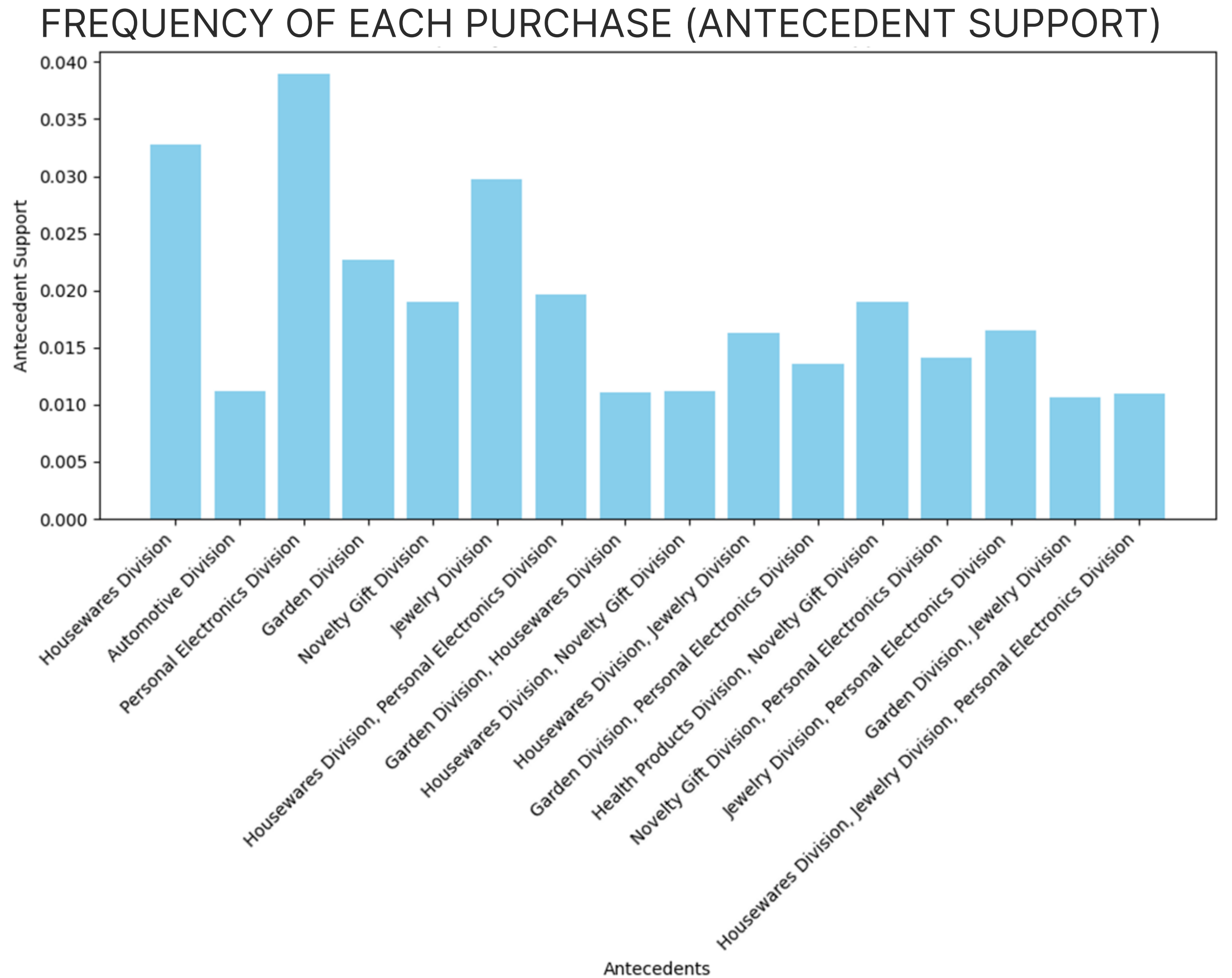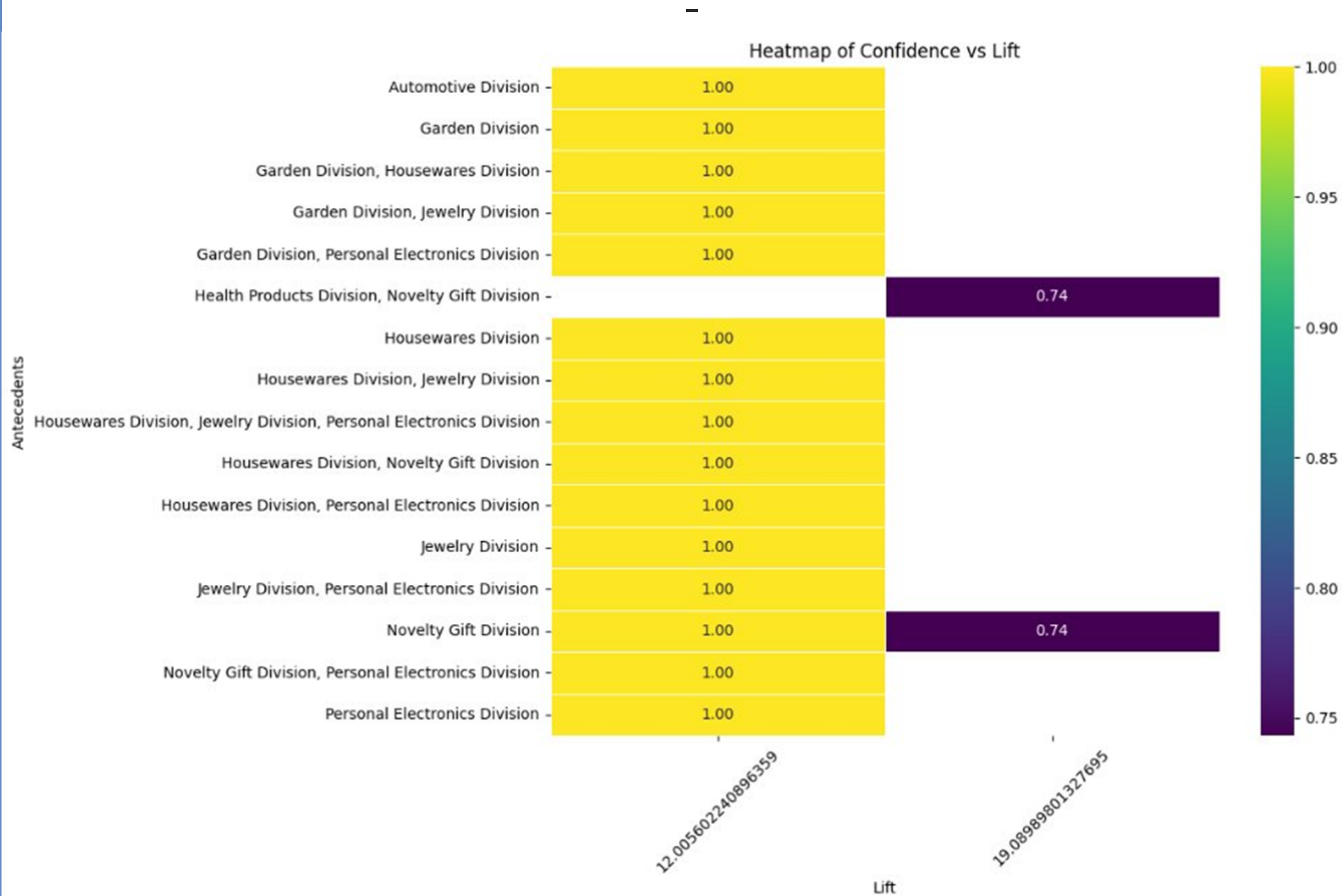• Health Product catalogue are best-sellers among their customers.

Model Analysis

- Antecedent is the original purchase, independent of any other factors.

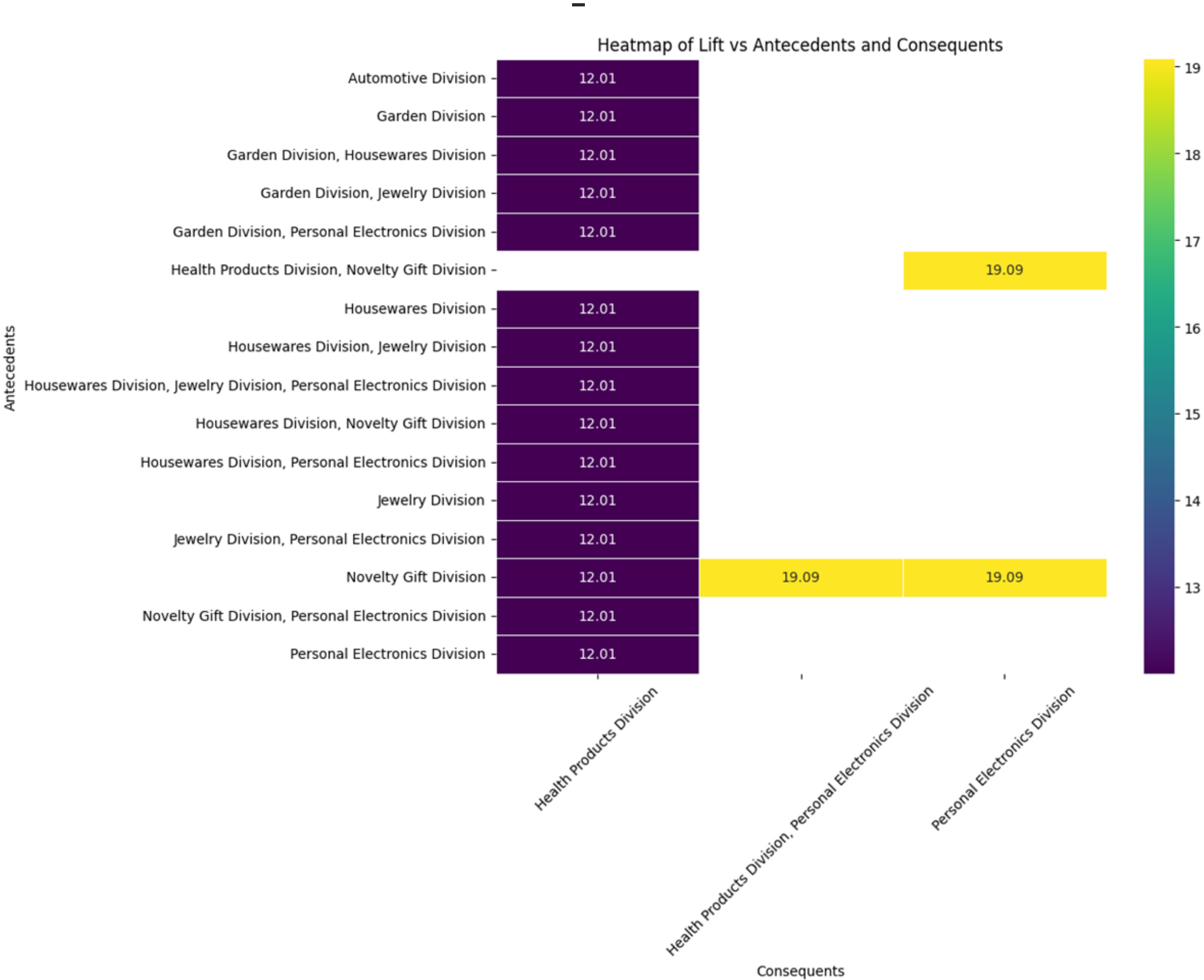- 6 catalogues are bought individually

- 10 catalogues are bought in pairs.

FREQUENCY OF EACH PURCHASE (ANTECEDENT SUPPORT)

Model Analysis

Sid

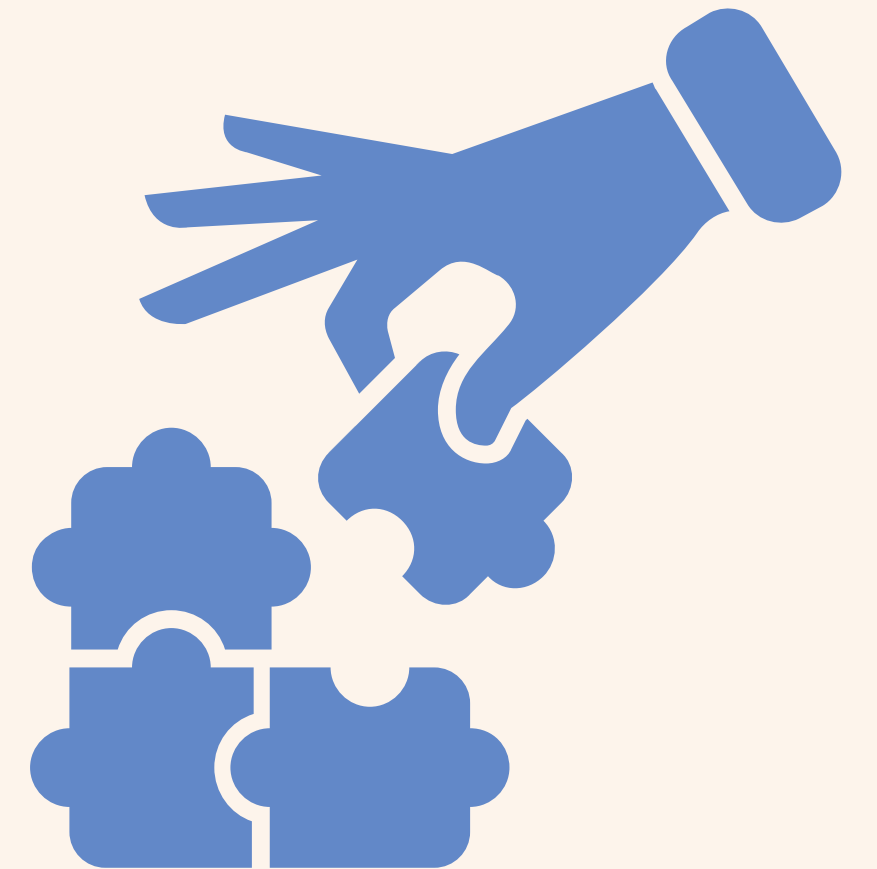Heatmap of Lift vs Antecedents and Consequents

Reccomendations
For Managers

- Customer Segmentation:
- Personalized Recommendations
- Email Marketing
- Bundle Offers
- Social Media Campaigns
- In-Store Promotions:

Reccomendations
Campaigns

- **In-store Merchandising:** Healthcare Catalogues available in drug stores can be bundled with Novelty and Personal Electronic Catalogues.
- **Email Campaigns**: Follow-up recommendations can be mailed to existing customers according to bundles found most profitable with regards to the analysis performed.
- **Incentives** such as discount coupons on products displayed in the catalogues or bundled deals is a profitable cross-selling opportunity .

Thank You