MSG FRESH FOODS DASHBOARD

1. BACKGROUND

Data is based on MSG Fresh Market since its establishment in Q3of 2012 until Q2 of 2014

Despite an increase in sales for the first 2 quarters (Q3 & Q4, 2012), there has been a rapid decrease in sales revenue in the following quarters

We plan to create marketing strategies based on analytics performed on the MSG data to improve sales

2. OBJECTIVE QUESTIONS

What distinct customer clusters do our customers fall into?

Are there any significant trends in customer behavior that could inform our marketing strategies?

Is the data consistent and accurate?

3. OVERVIEW

The major data attributes are classified into customer demographics, product categories and sales channel

Problem: Lower sales due to poor marketing decisions and marketing mix
- ✓ Marketing didn't generate good leads
- ✓ Random catalogs/deals were provided to random potential customers
- ✓ Failures in creating right marketing strategy

4. MOTIVATION

Generating better leads for higher sales based on identified clusters

Improving customer service by adapting products to cluster preferences and usage trends

Ensure the strategy suggested could be relied upon

5. METHODS

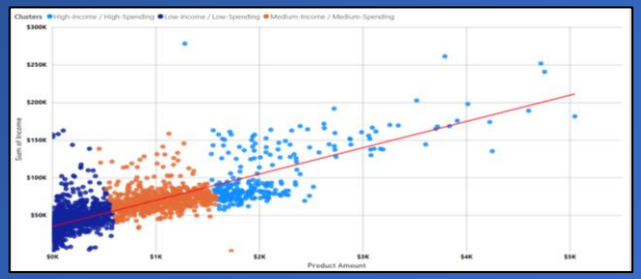
Pearson correlation and K-means clustering

A multivariate correlation analysis was used to determine the variables with the highest relationship: Income and Amount spent. Then, applying K-means with 30 iterations, we obtained 3 clusters:

Pearson correlation

		CHILDREN		AMOUNT SPENT ON						PURCHASE TYPE			
Row Labels	Income	Kidhome	Teenhome	Wines	Fruits	Meats	Fish	Sweet Prods	Gold Prods	Purchases with Discount	Web	Catalog	Store
Income	1.00	-0.51	0.03	0.69	0.51	0.68	0.52	0.52	0.38	-0.11	0.45	0.69	0.63
Kidhome	-0.51	1.00	-0.04	-0.50	-0.37	-0.44	-0.39	-0.37	-0.35	0.22	-0.36	-0.50	-0.50
Teenhome	0.03	-0.04	1.00	0.00	-0.18	-0.26	-0.20	-0.16	-0.02	0.39	0.16	-0.11	0.05
Wines	0.69	-0.50	0.00	1.00	0.39	0.56	0.40	0.39	0.39	0.01	0.54	0.64	0.64
Fruits	0.51	-0.37	-0.18	0.39	1.00	0.54	0.59	0.57	0.39	-0.13	0.30	0.49	0.46
Meats	0.68	-0.44	-0.26	0.56	0.54	1.00	0.57	0.52	0.35	-0.12	0.29	0.72	0.48
Fish	0.52	-0.39	-0.20	0.40	0.59	0.57	1.00	0.58	0.42	-0.14	0.29	0.53	0.46
Sweet Prods	0.52	-0.37	-0.16	0.39	0.57	0.52	0.58	1.00	0.37	-0.12	0.35	0.49	0.45
Gold Prods	0.38	-0.35	-0.02	0.39	0.39	0.35	0.42	0.37	1.00	0.05	0.42	0.44	0.38
Purchases with Discount	-0.11	0.22	0.39	0.01	-0.13	-0.12	-0.14	-0.12	0.05	1.00	0.23	-0.01	0.07
Web	0.45	-0.36	0.16	0.54	0.30	0.29	0.29	0.35	0.42	0.23	1.00	0.38	0.50
Catalog	0.69	-0.50	-0.11	0.64	0.49	0.72	0.53	0.49	0.44	-0.01	0.38	1.00	0.52
Store	0.63	-0.50	0.05	0.64	0.46	0.48	0.46	0.45	0.38	0.07	0.50	0.52	1.00

K-Means



To assess the reliability of the measures used in the dataset, we performed a **Cronbach's alpha test** with a result an alpha < 1.

6. RESULTS & CONCLUSION

Results

- Clusters were obtained for the Income & Amount Spent variables, which have the strongest correlation.
- Demographic analysis: The higher their level of education, the higher the income of the customers.
- For the price & promotion strategies, we found that the Low-Income Cluster tends to buy more through discounts and the High-Income Cluster buys more through Catalogs.
- For cross-selling strategies, there is a relation of spending on wine and meat products in the 3 clusters.

Suggestions

- Web purchases: Suggest products that are correlated to products that users have kept at cart for purchasing.
- Catalog: Implement product combinations discounts in flyers and catalogs.
- Store: For any multiple products that are correlated, place them together for more user-friendly journey at the store.
- Deals: Deals such as bundling items online or offline can be used in order to sell multiple products.

Conclusion

- Clustering method has been useful to perform customer segmentation in order to make an effective marketing strategy to obtain a better profitability.
- Analyzing the Clusters with demographic and behavioral variables allow us to better focus on the tactical actions of the marketing plan.

Charts