Client Segmentation by Spending Patterns

We analyzed consumer behaviors through their annual spending patterns across 2 different channels (Hotels & Restaurants and Retail) in Portugal, specifically focusing on the 2 largest cities (Lisbon & Oporto). The aim of this analysis is to help XYZ tailor their strategies to satisfy customers' demand.

Uncovering Three Major Categories Customer Segments:

38% Established Customers   28% High Potential Customers   34% Other Small-Scale Customers

Through their spending patterns, we were able to identify 3 distinct categories of customers that could potentially help XYZ understand their customers and tailor their strategies -

1. *Established customers* - Representing 38% of the total, these customers seem to get most of their supplies from XYZ and form a loyal customer base, with an average annual spending of 54k. They contribute to 63% of the company's revenue.
   a. *Fresh & Frozen shoppers* - A common trend across 52% of this category, these customers spend nearly 70% on Fresh and Frozen products, which is 2.2 times the average. They are almost entirely out of the Hotel & Restaurants channel.
   b. *Everyday shoppers* - These customers, comprising the rest 48% of this category, spend 77% on Milk, Grocery and Detergent products, spending 3 times more than the average. A majority of them belong to the Retail channel.

2. *High Potential customers* - Representing 28% of the total, these customers buy more than the average customer in specific categories and contribute to 23% of the total revenue. They are either small scale businesses or perhaps have multiple sources of supplies. We believe that they have a great potential to join the established bucket with right growth initiatives.
   a. *High Potential Fresh shoppers* - While these customers don't spend as much as the regular Fresh & Frozen shoppers, their spending on Fresh products is 33% higher than the average. A slight change in strategy can help push these customers to the established category.
   b. *High Potential Everyday shoppers* - With a 10% higher than average spending on Grocery and Detergent products, these customers have the potential to convert into long-term loyal customer base with the right push.

3. *Other small-scale customers* - These customers constitute 34% of the total and in general, buy much lower than the average customer in all categories.

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On comparing the individual clusters,

Segments	Average Spend By Category						Number of Clients
	Fresh	Milk	Grocery	Frozen	Detergents_Paper	Delicatessen	
Fresh & Frozen shoppers	27,283	5,489	5,818	6,701	1,033	2,304	88
Everyday shoppers	8,270	14,560	22,237	2,848	10,302	2,269	81
HIgh Potential Everyday shoppers	7,920	5,752	8,465	1,335	3,284	1,505	79
High Potential Fresh shoppers	16,843	1,606	2,410	1,972	438	818	46
Other small-scale customers	5,540	2,464	2,779	2,295	431	876	146

Here's what we recommend -
1. Convert High potential customers to Established customer base -
    a. Incentivize High Potential Everyday shoppers through targeted discounts and cross-selling products (Potential impact of up to 16% revenue growth).
    b. Initiate campaigns on Frozen products to High Potential Fresh shoppers to help in cross-selling (Potential impact of up to 5% revenue growth).
2. Increase penetration into Oporto's Hotels & Restaurants channel through Fresh & Frozen category (Potential impact of up to 10% revenue growth)

1a) Opportunity to increase XYZ revenue through grocery in retail channel (Potential impact of 2.3M):
To unlock growth for XYZ, it is essential to focus on the High Potential customer segment as they comprise 28% of the client composition. We arrived at this segment through further cluster analysis on customers with low average spending. Within this segment, we identified high potential Everyday shoppers.
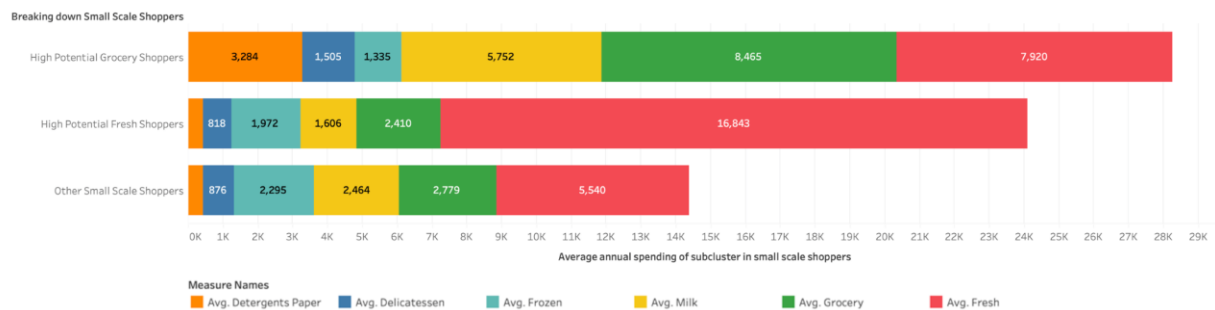
Average Annual Spending of Sub clusters in High potential Shopper Segment

These high potential everyday shoppers, on average, spend 3 times of the other small-scale customers in categories like milk, groceries and detergents. Targeting these high potential grocery shoppers presents a significant opportunity for growth.

Based on this rationale, we *recommend* incentivizing the clients from this cluster so that XYZ can potentially accelerate high potential shopper's spending average. If these highly promising grocery shoppers can perhaps match the average spending patterns of regular everyday shoppers, either through initiating dedicated incentive programs or by cross-selling products like Milk (which has a strong correlation with groceries 92%), these customers can become established customers, resulting in an overall revenue growth of **16%** for XYZ.

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1b) Opportunity to increase XYZ revenue in Frozen sections of Hotels & Restaurants (Potential impact of 0.7M):

In our further analysis of customers with low average spending, we have also identified a subgroup called "High potential fresh shoppers". This subgroup demonstrates a 2.2x higher expenditure on fresh products compared to other small-scale customers. Moreover, we have noticed that Channel 1, which comprises Restaurants and Hotels, contributes greatly (99%) to this segment.

Based on this rationale, we *recommend* that XYZ leverage this segment analysis to focus on targeted growth initiatives. Specifically, we suggest initiating advertising or marketing campaigns for frozen products aimed at these high potential fresh only shoppers.

If we encourage these high potential frozen shoppers to match the average spending of our established "fresh and frozen shoppers", we can expect a **5%** overall revenue increase for XYZ. This presents a promising opportunity for revenue growth by tapping into the preferences and potential of this particular segment.

2) Regional distribution -

The majority of Portugal, including Lisbon, its capital city, follows a similar spending pattern and has a comparable distribution across the mentioned categories. However, there is an exception with Oporto, the second largest city in Portugal. Oporto is experiencing rapid growth as a European tourism destination and its economy is primarily focused on fine wine and dining. Approximately 60% of customers from this region come from the Hotels and Restaurants sector.

Although the average spending on Fresh & Frozen products is considerable, the number of established customers in this category is less than 15%. It is important to note that Fresh and Frozen categories are significant contributors to the Restaurants and cafes industry. The lower percentage of established customers in Oporto suggests a potential lack of penetration into a highly lucrative market with great potential. Tapping into this market can potentially improve revenue by up to 10%.

Appendix -

Oporto customer segmentation -

Correlation plot between different categories -
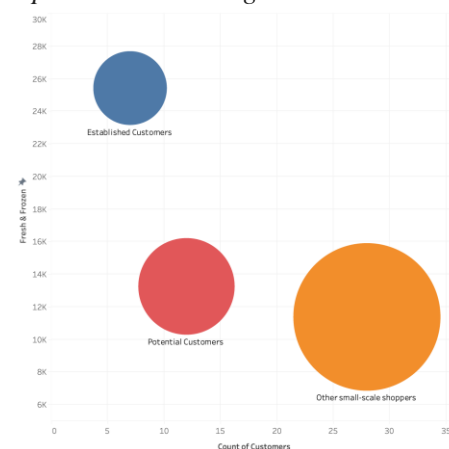
Key:
- Size of the bubble indicates the Number of Customers.
- Y-axis indicates the average of fresh & frozen products combined.

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