CUSTOMER SEGMENTATION

Unsupervised Clustering Modelling

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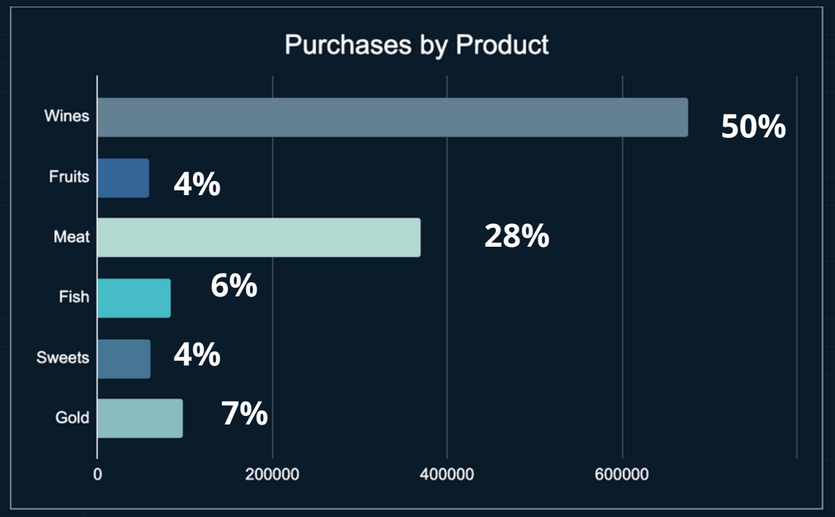
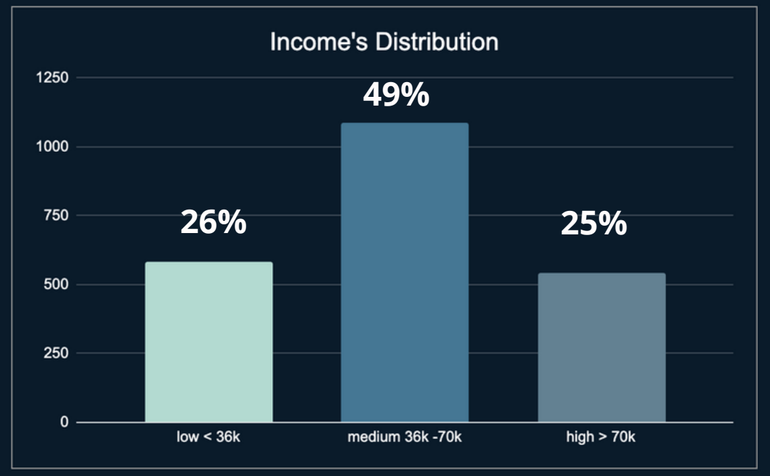
N° of Customers
2,212

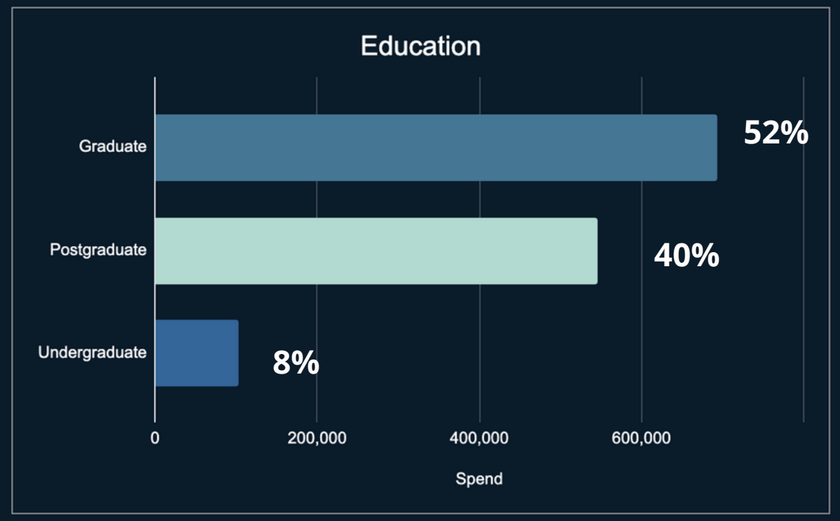
N° of Purchases
27,798

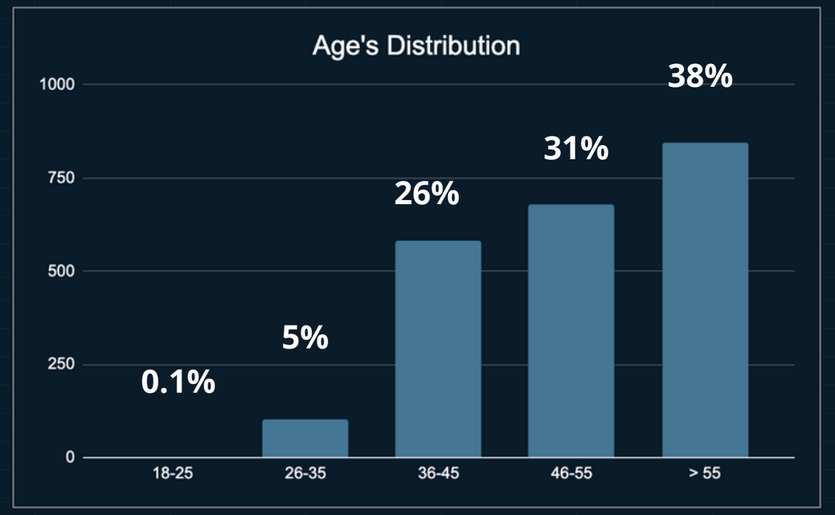
Total Spent
€1,343,200

Avg. Spend: €607
Avg. Age: 52 years
Avg. Income: 52K

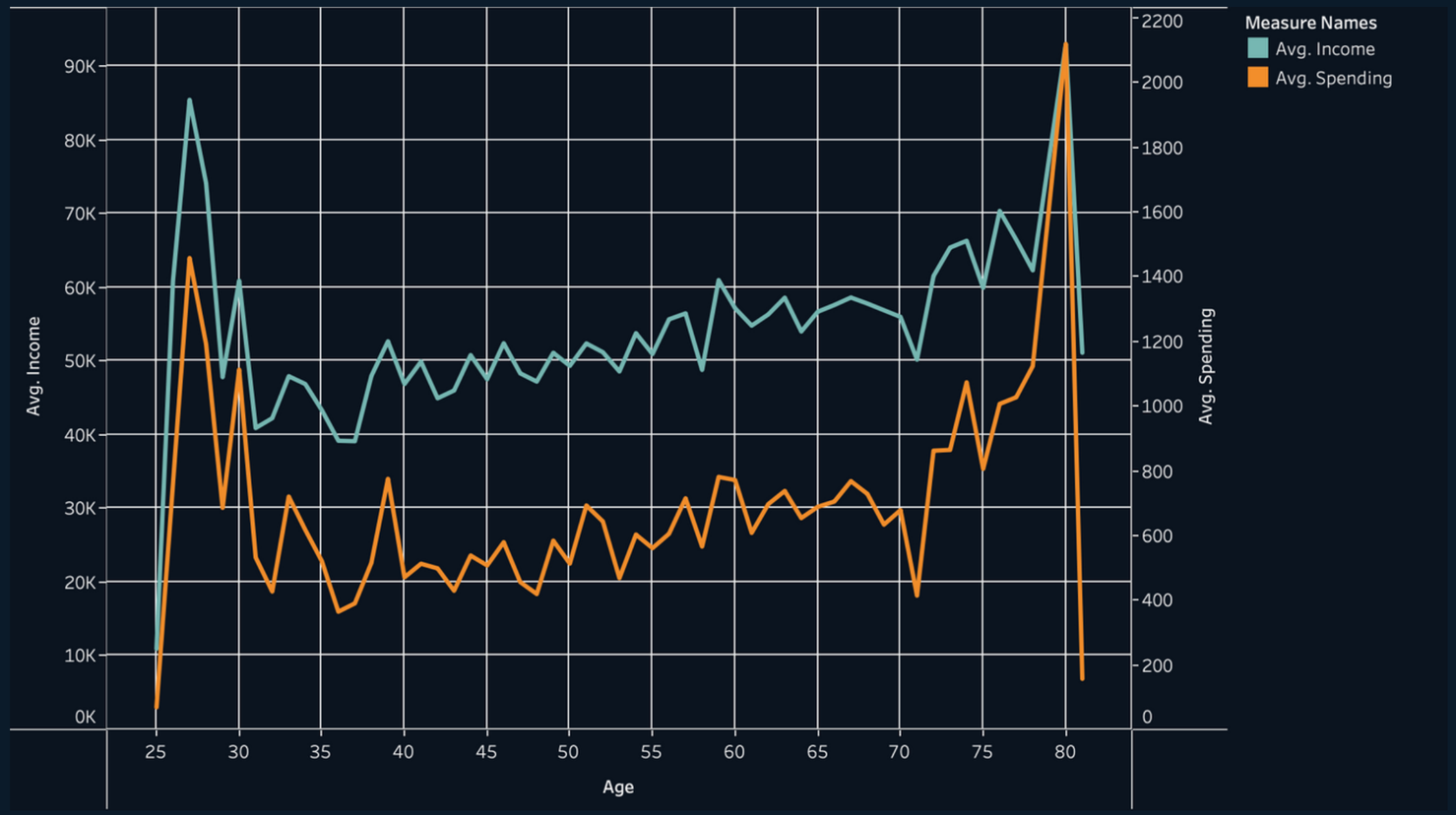








Income and Spending compared to Age

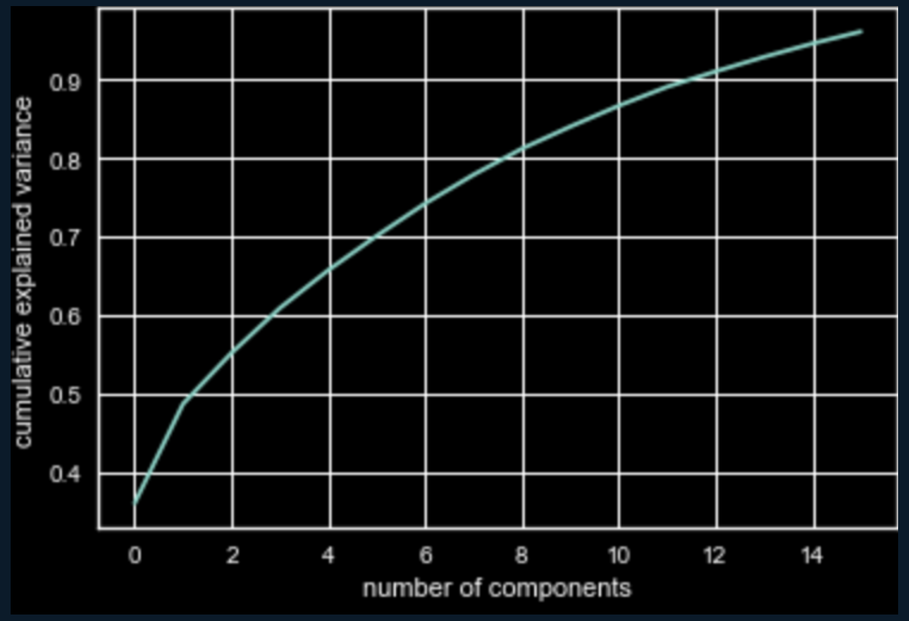


Avg. Age
25 years old
Avg Income
52k
Avg. Spend
€607

- There is high relation between income and spending
- The income is growing together with the age.

Cluster Model

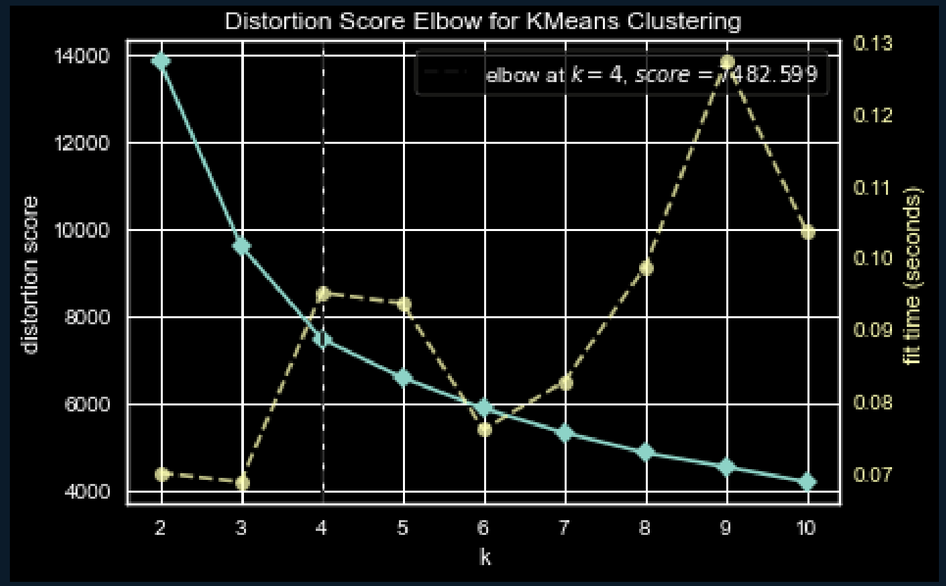
Principal Component Analysis and variance



Three Principal Components make 54% of variance:

	variance_ratio
0	0.360057
1	0.126608
2	0.064891

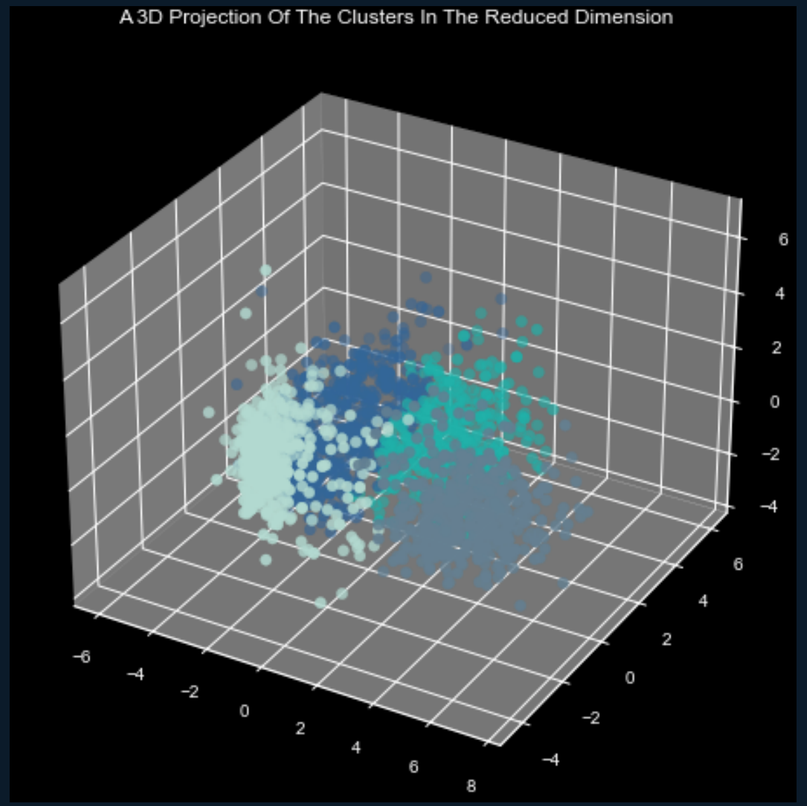
Distortion Score Elbow for KMeans Clustering



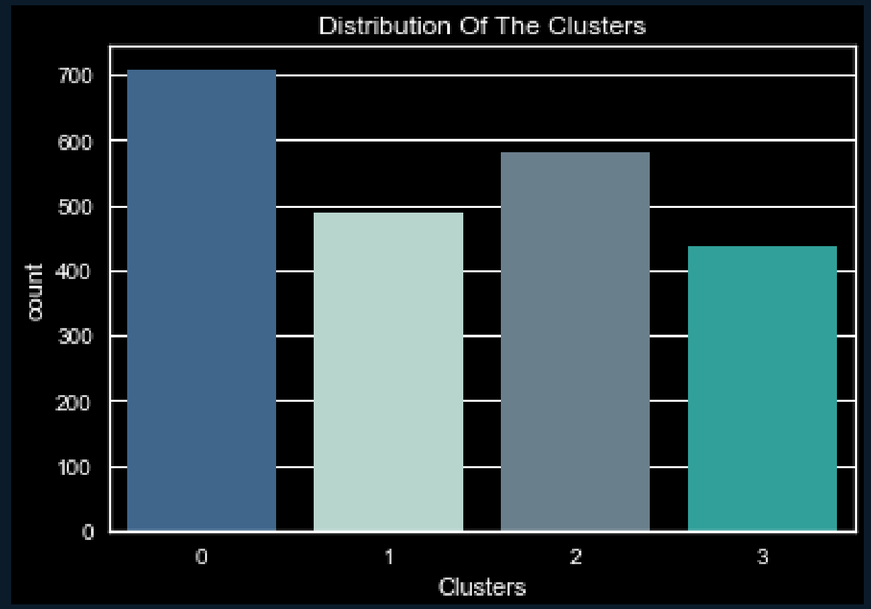
Model Evaluation

Distribution of the clusters after Principal Component Analysis & Unsupervised Clustering

Using PCA for dimension reduction



- Applying Elbow/ Silhouette Method to decide for 4 clusters
- Using the three principal components for predicting the clusters



Cluster 0 : 708
Cluster 1 : 487
Cluster 2 : 580
Cluster 3 : 437

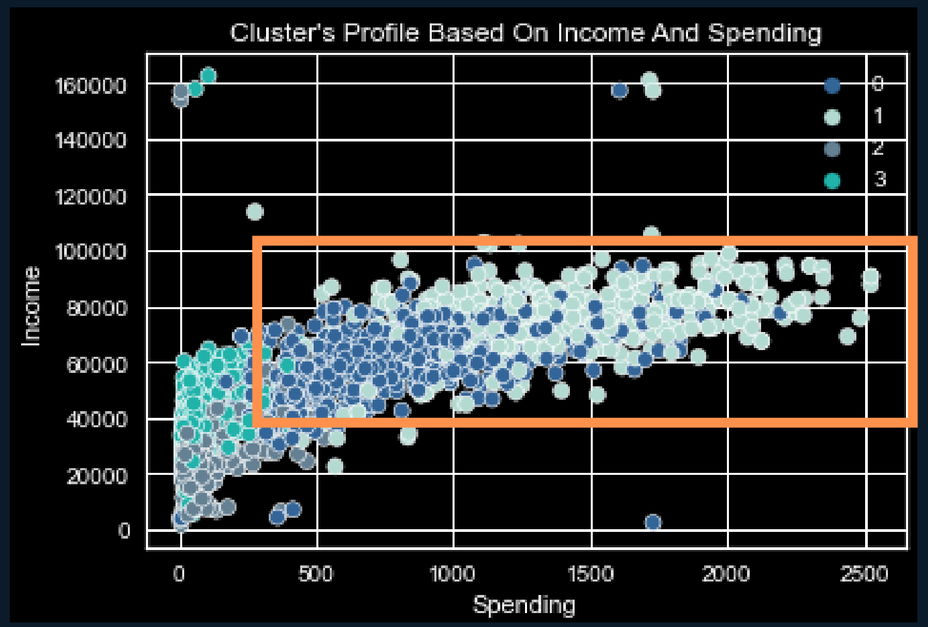
5 Main considerations to segment customers

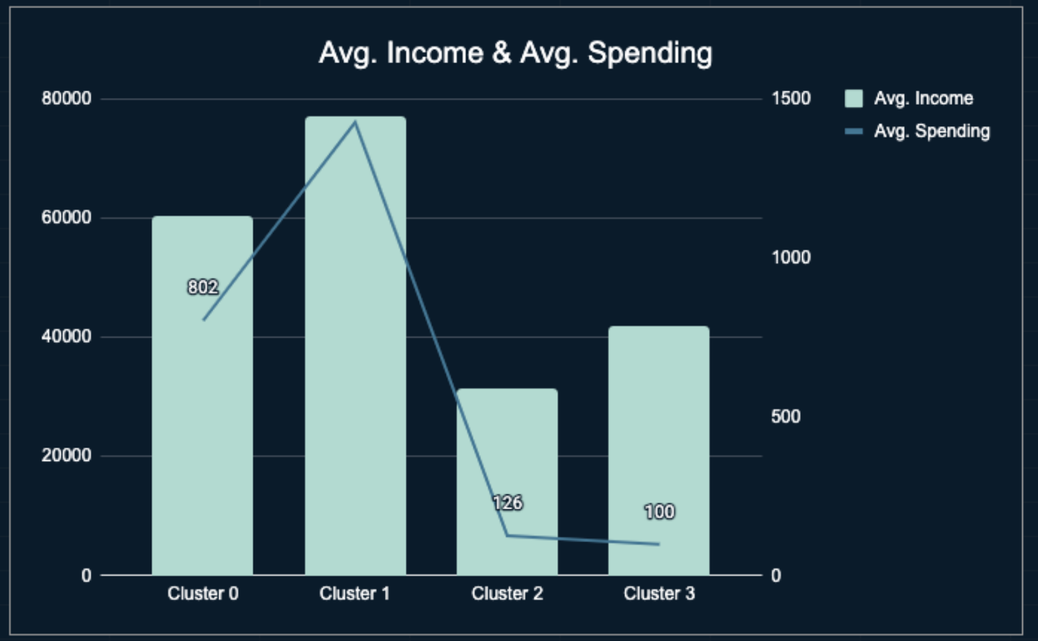
1. Income
2. Spending
3. Family Size & Children
4. Products purchased by Customers
5. Channel used by Customers

Income and Spending

Clusters 1 and 0 are the most important clusters to target

- **Cluster 1** has the highest spending, followed by **cluster 0**.
- **Cluster 1-0** also with higher income
- **Cluster 0-2** with the higher number of customers

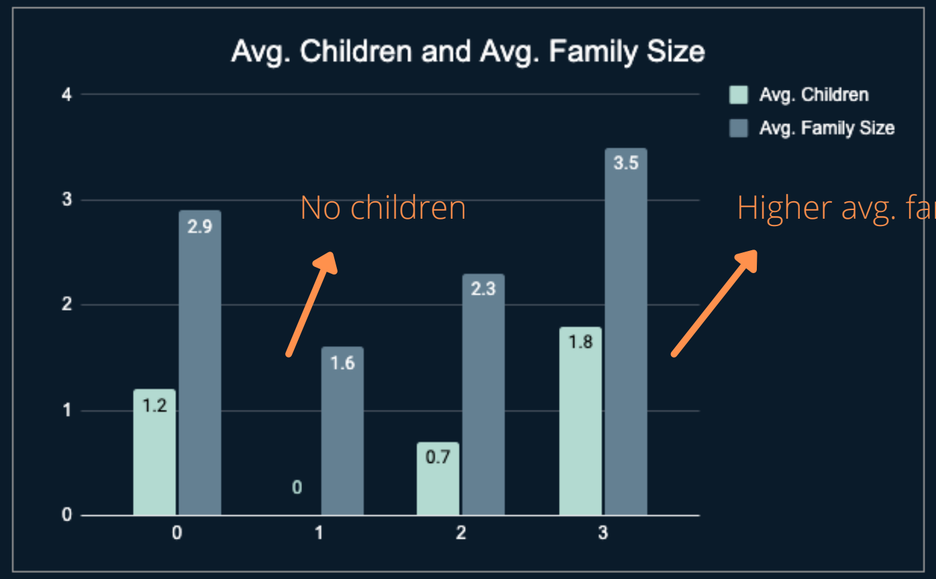




	Cluster 0	Cluster 1	Cluster 2	Cluster 3
Spending	42%	49%	6%	3%
Income	37%	31%	16%	16%
N° of customers	32%	21%	27%	20%

Children , Family Size & Type of Products

Almost 80% of the purchases are wine and meat



	Cluster 0	Cluster 1	Cluster 2	Cluster 3
Wine	59%	45%	35%	55%
Meat	21%	34%	27%	21%
Others	21%	21%	38%	24%

- **Cluster 0** with higher spend in wine, higher % having kids, mostly teens (61%)
- **Cluster 1** they are not parents. They have the higher % of spend in meat.
- **Cluster 2** are the ones with higher spend in "others". They have the higher % of kids at home.
- **Cluster 3** is the one with the higher avg. family size.

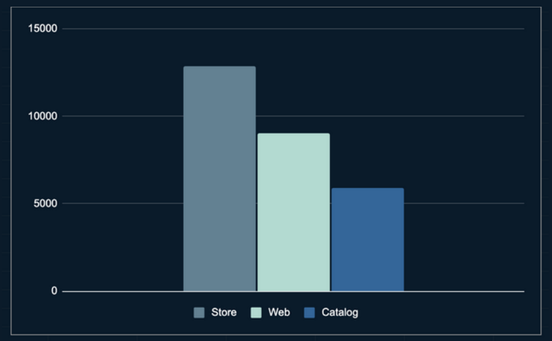
	Cluster 0	Cluster 1	Cluster 2	Cluster 3
Children	42%	0%	21%	37%
Kids	20%	0%	43%	37%
Teen	61%	0%	2%	38%
Avg. family size	2.9	0.0	2.3	3.5

Purchases by Channel

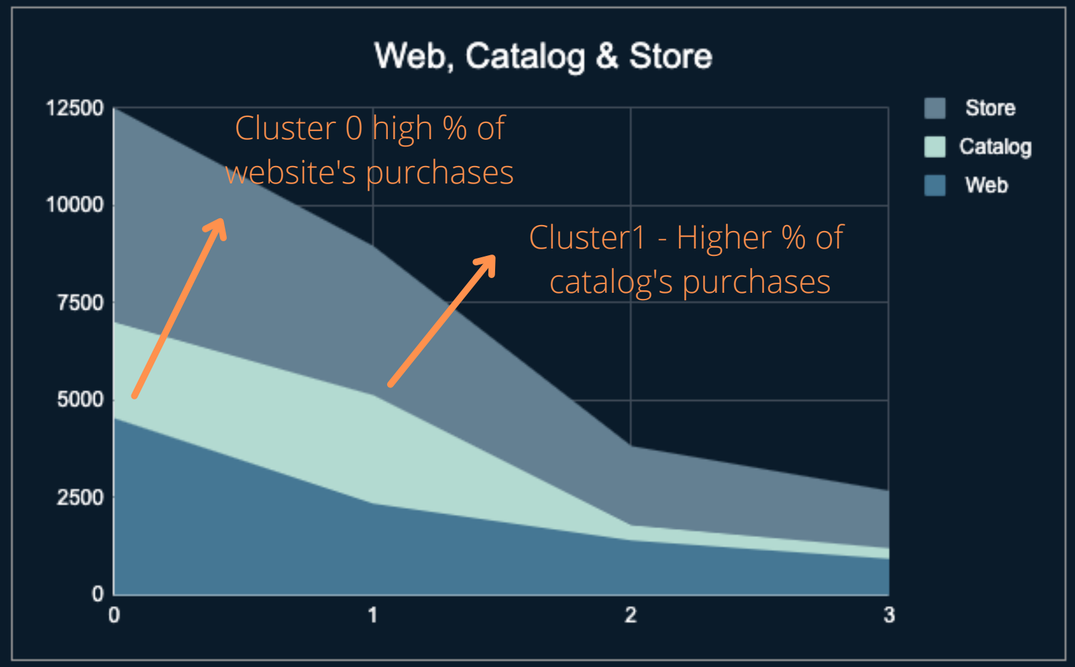
Store is the most important channel (46%), followed by web (33%)

Purchases per Channel

Store	Catalog	Web
12,844	5,911	9,043
46% ←	21% ←	33% ←



Purchases per Channel & Cluster



- **Cluster 1** with higher % of purchases from the catalog.
- **Clusters 2 and 3** just 10% of purchases through catalog.
- **Cluster 0 and 2** are the ones with higher % of purchases through the website.

	Cluster 0	Cluster 1	Cluster 2	Cluster 3
Web	36%	26%	36%	34%
Catalog	20%	31%	10%	10%
Store	44%	43%	54%	56%

CUSTOMER SEGMENTATION

CUSTOMER CLUSTER 0

0

- INCOME: Average to high income
- SPEND: Average to high spending
- FAMILY SIZE: Majority are parents with one child, mostly a teen
- TOP PRODUCTS: Wine
- MARKETING CAMPAIGNS: Web/Catalog

CUSTOMER CLUSTER 1

1

- INCOME: High income
- SPEND: High spending
- FAMILY SIZE: Singles or couples without children.
- TOP PRODUCTS: Meat
- MARKETING CAMPAIGNS: Catalog

CUSTOMER CLUSTER 2

2

- INCOME: Low income
- SPEND: Low spending
- FAMILY SIZE: Majority are parents with one child, majority kids.
- TOP PRODUCTS: Others
- MARKETING CAMPAIGN: Store/Web

CUSTOMER CLUSTER 3

3

- INCOME: Low to medium income
- SPEND: Low spending
- FAMILY SIZE: Biggest families with two/three children/teens
- TOP PRODUCTS: Wine
- MARKETING CAMPAIGN: Store /Web

Main Conclusions

- Cluster 1-0 most important clusters to target --> higher spending and higher income
- Cluster 0 is the one with higher number of customers, followed by Cluster 2

- Income and spending are highly correlated
- Family size and spending are almost negative correlated
- Age does not have influence on spending

- Meat is the most bought product by Catalog
- Wine is the most favourite product
- Postgraduate spending more on average and Undergraduate spending less on average.

Main action points

- Target profitable customers from Cluster 0 & Cluster 1
- Focus on products with high number of purchases: wine and meat
- Increase percentage of purchases through the website
- Improve the avg. spending of clusters 2 & 3
- Enlarge the number of purchases by promoting different types of new, attractive products
- Find products and offer special deals which are more interesting for big families to expand avg. spending in cluster 3

Thanks!