Marketing Campaign Results Analysis

Marketing campaign data of 2,240 customers of Maven Marketing; including customer profiles, product preferences, campaign successes/failures, and channel performance.

The efficacy of marketing campaigns holds a pivotal role in determining an organization's success.

The scope and methods of marketing have undergone significant transformations, necessitating a comprehensive analysis of campaign results.

Therefore, this project embarks on an exploration of marketing campaign effectiveness, aiming to decipher the intricate relationship between different campaign strategies and their outcomes.

1. Dataset Introduction

The dataset consists of **1 table**, **28 columns** and **2240 rows**.

The dataset can be found in Kaggle in the following link: Marketing Campaign | Kaggle

Customer Profile columns 1-9

	ID	Year_Birth	Education	Marital_Status	Income	Kidhome	Teenhome	DateJoined	DaysSinceLastPurchase
1	1826	1970	Graduation	Divorced	84835	0	0	2014-06-16 00:00:00.000	0
2	1	1961	Graduation	Single	57091	0	0	2014-06-15 00:00:00.000	0
3	10476	1958	Graduation	Married	67267	0	1	2014-05-13 00:00:00.000	0
4	1386	1967	Graduation	Together	32474	1	1	2014-05-11 00:00:00.000	0
5	5371	1989	Graduation	Single	21474	1	0	2014-04-08 00:00:00.000	0
6	7348	1958	PhD	Single	71691	0	0	2014-03-17 00:00:00.000	0
7	4073	1954	Master	Married	63564	0	0	2014-01-29 00:00:00.000	0
8	1991	1967	Graduation	Together	44931	0	1	2014-01-18 00:00:00.000	0
9	4047	1954	PhD	Married	65324	0	1	2014-01-11 00:00:00.000	0
10	9477	1954	PhD	Married	65324	0	1	2014-01-11 00:00:00.000	0
11	2079	1947	Master	Married	81044	0	0	2013-12-27 00:00:00.000	0
12	5642	1979	Master	Together	62499	1	0	2013-12-09 00:00:00.000	0
13	10530	1959	PhD	Widow	67786	0	0	2013-12-07 00:00:00.000	0
14	2964	1981	Graduation	Married	26872	0	0	2013-10-16 00:00:00.000	0
15	10311	1969	Graduation	Married	4428	0	1	2013-10-05 00:00:00.000	0

Products Preference columns 10-20

AmountWines	AmountFruits	AmountMeats	AmountFish	AmountSweets	AmountGold	NumDealsPurchases	NumWebPurchases	NumCatalogPurchases	NumStorePurchases	NumWebVisitsMonth
189	104	379	111	189	218	1	4	4	6	1
464	5	64	7	0	37	1	7	3	7	5
134	11	59	15	2	30	1	3	2	5	2
10	0	1	0	0	0	1	1	0	2	7
6	16	24	11	0	34	2	3	1	2	7
336	130	411	240	32	43	1	4	7	5	2
769	80	252	15	34	65	1	10	10	7	6
78	0	11	0	0	7	1	2	1	3	5
384	0	102	21	32	5	3	6	2	9	4
384	0	102	21	32	5	3	6	2	9	4
450	26	535	73	98	26	1	5	6	10	1
140	4	61	0	13	4	2	3	1	6	4
431	82	441	80	20	102	1	3	6	6	1
3	10	8	3	16	32	1	1	1	2	6
16	4	12	2	4	321	0	25	0	0	1

Campaign Performance columns 21-28

AcceptedCampign3	AcceptedCampign4	AcceptedCampign5	AcceptedCampign1	AcceptedCampign2	AcceptedLastCampign	ComplainLast2Years	Country
0	0	0	0	0	1	0	Spain
0	0	0	0	1	1	0	Canada
0	0	0	0	0	0	0	USA
0	0	0	0	0	0	0	Australia
1	0	0	0	0	1	0	Spain
0	0	0	0	0	1	0	Spain
1	0	0	0	0	1	0	Germany
0	0	0	0	0	0	0	Spain
0	0	0	0	0	0	0	USA
0	0	0	0	0	0	0	India
0	0	0	0	0	0	0	USA
0	0	0	0	0	0	0	Spain
0	0	0	0	0	1	0	India
0	0	0	0	0	0	0	Canada
0	0	0	0	0	0	0	Spain

2. Project Goal

The goal is to provide a significant boost to the efficiency of the future marketing campaigns by increasing responses accuracy to customers or reducing expenses.

The objective is to predict who will respond to an offer for a product or service, or in other words – **optimization of strategy;** formulating **data-driven recommendations** for optimizing future marketing campaigns by identifying successful strategies and potential areas of improvement; this project aims to guide the development of more impactful and efficient campaigns.

3. EDA (Exploratory data analysis)

Data Validation & Data Cleaning

There are 24 rows with null values in the "income" column**;** I decided to not alter or remove those rows, the income column has little to no effect on the analysis as whole and removing these rows will erase data that can be informative.

	ID	Year_Birth	Education	Marital_Status	Income	Kidhome	Teenhome	DateJoined
1	8996	1957	PhD	Married	NULL	2	1	2012-11-19 00:00:00.000
2	1994	1983	Graduation	Married	NULL	1	0	2013-11-15 00:00:00.000
3	3769	1972	PhD	Together	NULL	1	0	2014-03-02 00:00:00.000
4	5255	1986	Graduation	Single	NULL	1	0	2013-02-20 00:00:00.000
5	8268	1961	PhD	Married	NULL	0	1	2013-07-11 00:00:00.000
6	10629	1973	Master	Married	NULL	1	0	2012-09-14 00:00:00.000
7	10475	1970	Master	Together	NULL	0	1	2013-04-01 00:00:00.000
8	9235	1957	Graduation	Single	NULL	1	1	2014-05-27 00:00:00.000

I changed some columns names to make the data easier to understand.

For example:

'Dt_Customer' > 'DateJoined'

'Recency' > 'DaysSinceLastPurchase'

'AcceptedCmp1' > 'AcceptedCampign1'

Next, I did some simple analysis to get a general idea of what the data looks like, a "snapshot" of the data.

Descriptive Statics:

Statics

Stats	Age	ID	Income	camp1	camp2	camp3	camp4	camp5	catalog	complaint	deals	WebVisits
count	2,240	2,240	2,216	144	30	163	167	163	5,963	21	5,208	11,909
max	130	11,191	666,666	1	1	1	1	1	28	1	15	20
0.75	64	8,429	68,592	0	0	0	0	0	4	0	3	7
mean	53	5,459	51,382	0	0	0	0	0	2	0	2	6
0.5	53	5,459	51,382	0	0	0	0	0	2	0	2	6
0.25	46	2,827	35,265	0	0	0	0	0	0	0	1	3
min	27	0	1,730	0	0	0	0	0	0	0	0	0
std	12	3,246	25,167	0	0	0	0	0	3	0	2	2

Statics

Stats	complaint	fish	fruits	teen	kids	lastpurchased..	lstcamp	meat	sweets	gold	store
count	21	1,856	1,840	1,082	947	2,240	334	2,239	1,821	2,179	12,970
max	1	259	199	2	2	99	1	1,725	263	362	13
0.75	0	50	33	1	1	74	0	232	33	56	8
mean	0	12	8	0	0	49	0	67	8	24	5
0.5	0	12	8	0	0	49	0	67	8	24	5
0.25	0	3	1	0	0	24	0	16	1	9	3
min	0	0	0	0	0	0	0	0	0	0	0
std	0	55	40	1	1	29	0	226	41	52	3

Countries Statics

Measure Names
- Number of Customers
- Purchases Per Custom..
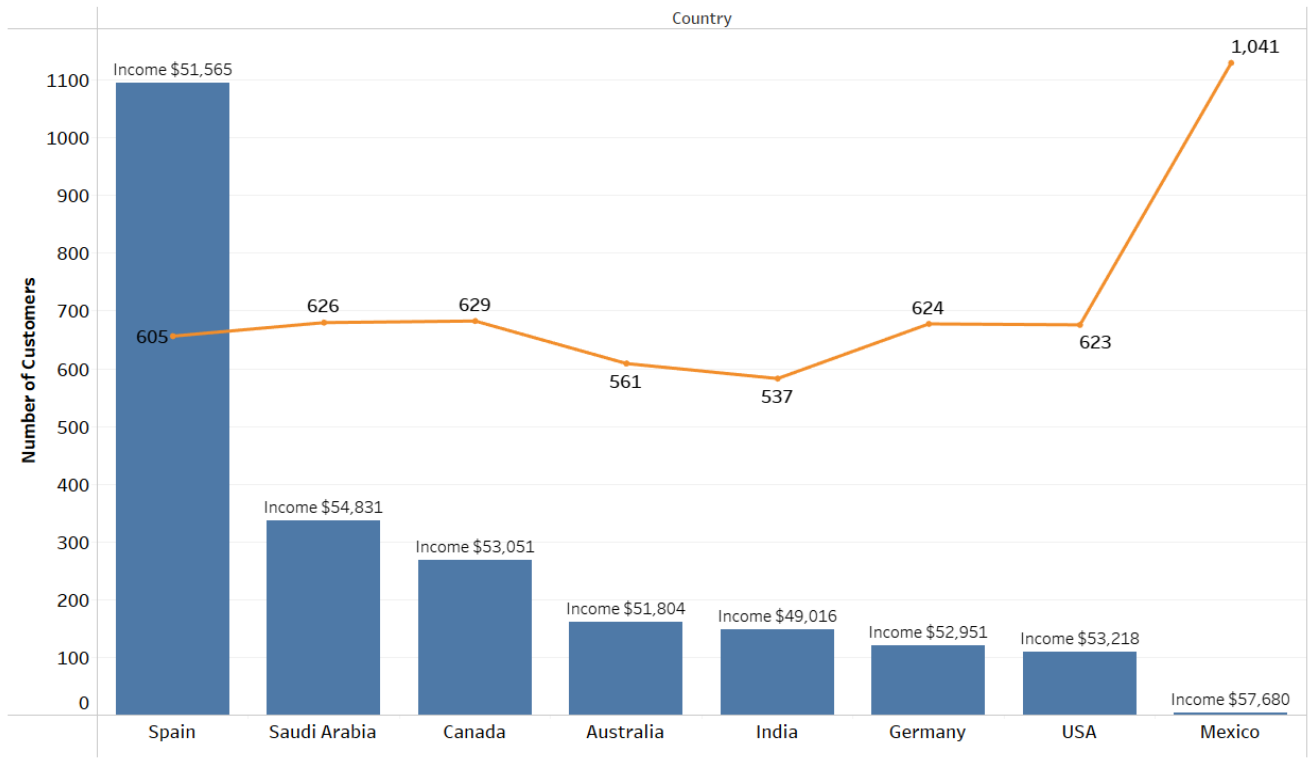
Products Acceptance/Demand

Campaigns Performance

Measure Names

🖊 ▾

■ Change
■ TotalAccepted
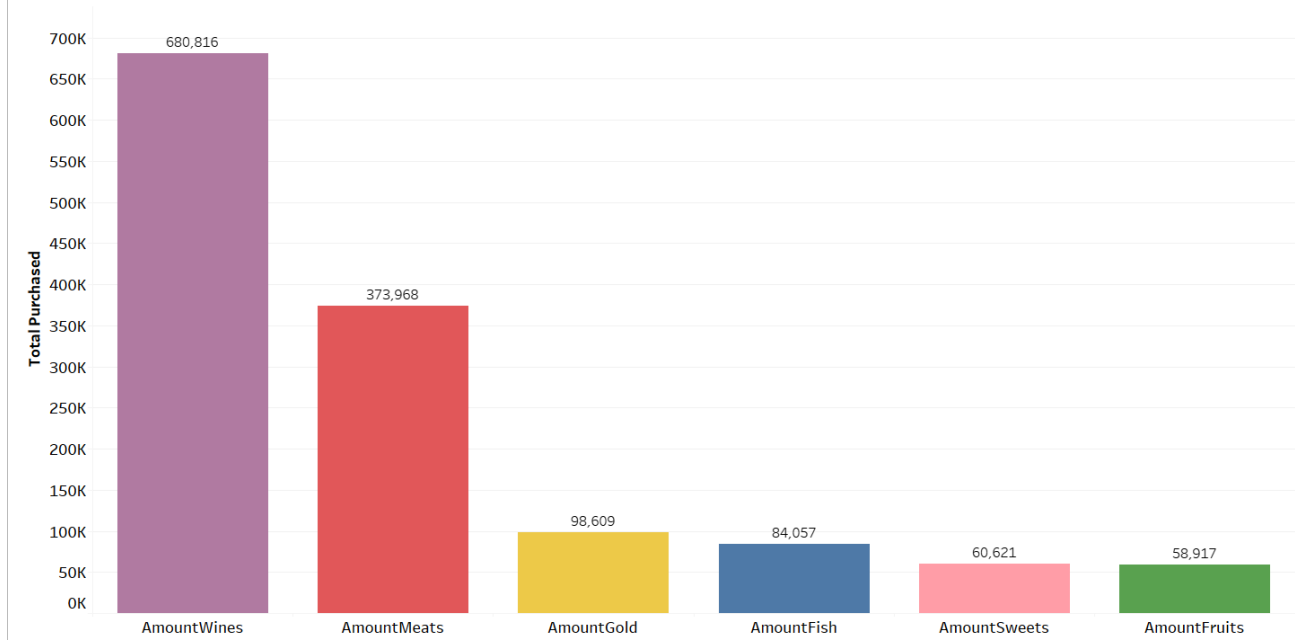
Campaign Perfomence
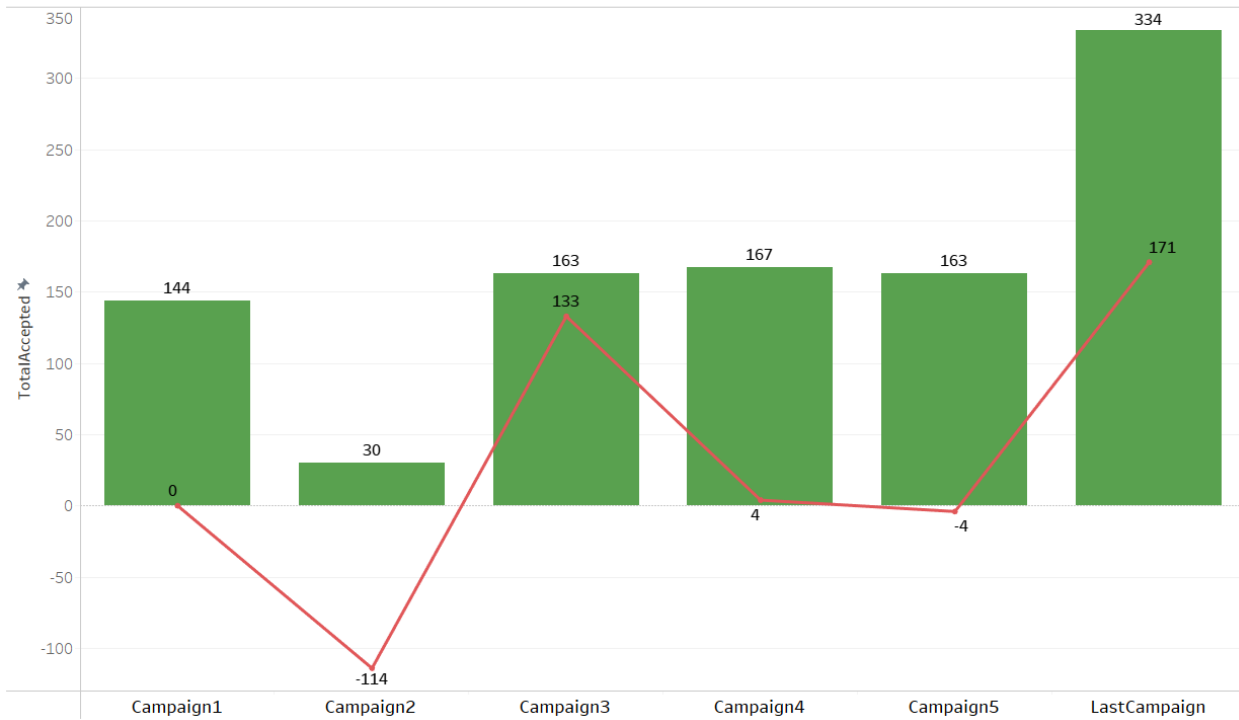
Correlation Between Average Income & Total Purchases

There is correlation coefficient of 0.67 - moderate positive correlation, a correlation coefficient of 0.67 indicates a moderately strong positive linear relationship between two variables.

* Positive correlation suggests that as one variable increases, the other variable tends to increase as well, and the relationship between the two variables is relatively strong in this case.

However, it's important to note that correlation does not imply causation. Just because two variables are correlated does not mean that changes in one variable are causing changes in the other variable – there could be other factors at play.

Graph

Measure Names
■ Number of Customers
■ Purchase Per Customer
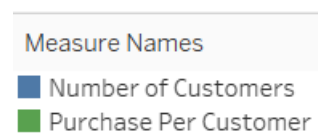
* I splitted the customers in the data into 5 groups based on their income.

Income Range & Purchase per Customer
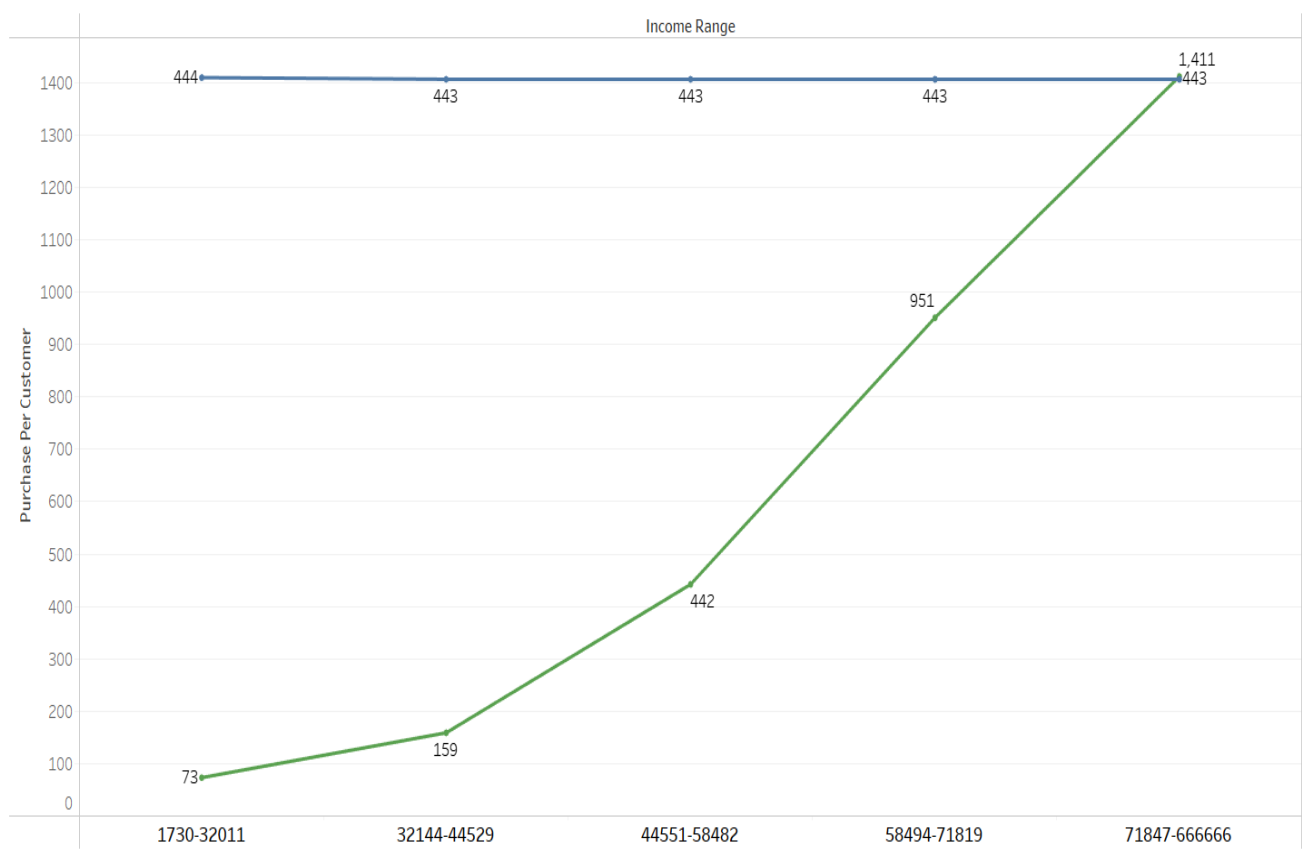
Customers Profile

Cutstomers Marital Status - Pie Chart

- 3% Widow
- 10% Divorced
- 39% Married
- 22% Single
- 26% Together
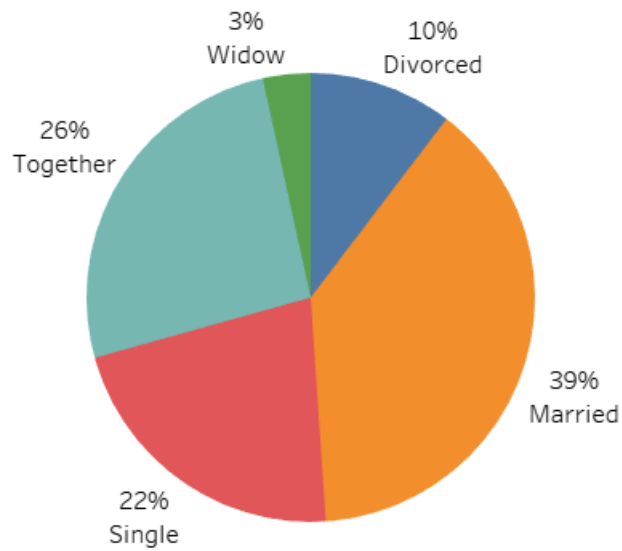
Customers Education Level - Pie Chart

- Basic 2%
- PhD 22%
- Graduation 50%
- Master 26%

9
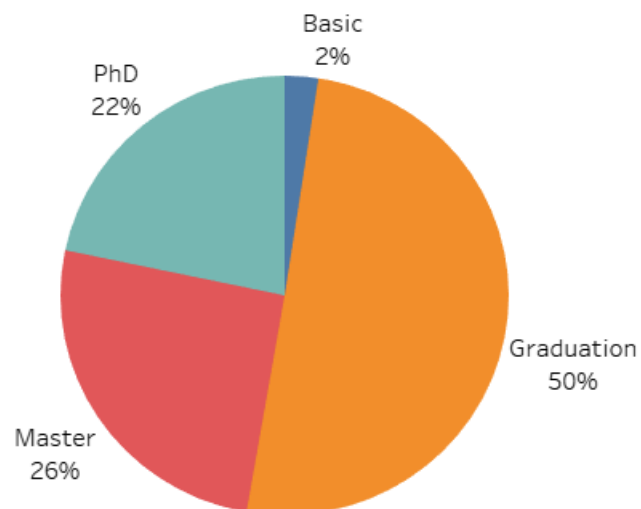
Platforms Pie Chart

Purchases By Platform

5,963
CatalogPurchases

9,150
WebPurchases

12,970
StorePurchases

Platforms Pie Chart
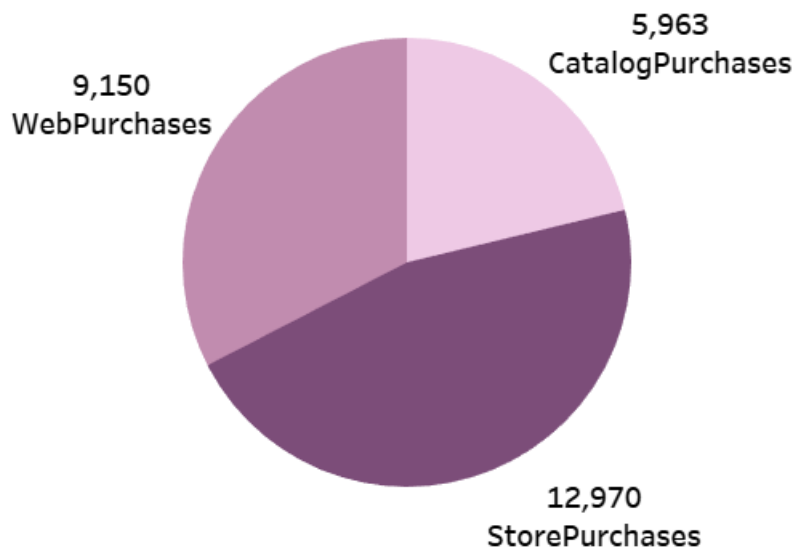
4. Analysis Conclusions

I decided to present the conclusions section before the deep analysis section and add reference to each statement written here that will present how & why I got to that conclusion, since the deep analysis is long and through.

Customer Profile

What attributes in the customer profile effect higher number of products purchased according to the data?

1. **Higher Income –** there is moderate positive correlation between Income of customer & the number of products that customer purchased.
Reference – Here

2. **Not Basic Education Level** – customers with basic education have by far lower average number of products in their purchases.
Reference – Here

3. **Less Children** – moderate negative correlation between number of children customer has and total number of products purchased.
Reference – Here

What attributes in the customer profile effect campaign acceptance?

1. **Customers with PhD** Level of Education have **higher acceptance rate for the last campaign.**

Reference – Here

2. Customers with Marital Status Married or Together have lower acceptance rate for the last campaign

Reference – Here

What attributes in the customer profile effect their purchasing behavior?

1. **Customers with PhD Level of Education Purchase More Wine**.
Reference – Here

2. **Family Composition –** increase in number of customers that purchase "deals" as number of children the customer has increase.
Reference – Here

Countries

Is it worth focusing some countries over the other?

The Pareto chart shows that the percentage of customers from every country and the percentage of products purchased from every country is almost identical, **no significant difference for different countries when it comes total number of products sold per customer.**
for example – 12% of the customers comes from Canada, and 12% of the products are sold to customers from Canada.

3 countries out of 7 (there are only 3 customers from Mexico so I did not count it) which are 43% of all countries (3/7) are responsible for 77% of the total products sold, so the **pareto principle does not apply to countries**.
Reference – Here

* The data does not include the cost / selling price of different products, therefore there is no notable difference between the countries according to the data.

Despite the fact that there is not a huge difference between customer from different countries, if there is a need to choose between countries - India & USA are the worst performing countries, Spain, Saudi Arabia and Canada are the best performing countries.
Reference – Here

Campaigns

What does the data say about the different campaign/s performance/s

An increasing trend in total products sold per campaign after campaign 2 (for customers that accepted the campaign/s). The last campaign was the most successful in term of total products sold.
Reference – Here

* There is a decrease in average number of products purchased per customer for the last campaign but the fact that more customers accepted it covers it up and the total products sold in the last campaign is greater than that of campaign 5.

Is there a difference in campaign/s performance for different countries?

Almost no difference.
Reference – Here

Does customers that accepted different campaign/s use different platforms?

Small change for customers that accepted campaign 3 (lower percentage of customers that purchased through the store) and customer the **accepted campaign 4** (lower percentage of customers that purchased through the catalog)
Reference – Here

Platforms

Do customers from different countries use different platforms?

No meaningful difference in platform usage for customers from different countries.
Reference – Here

Are there any customer profile attributes that effect platforms usage?

There is a moderate positive linear correlation between number of website visits & number of "deals" purchases.

Perhaps it's worth highlighting deals on the website.
Reference – Here

Does customers that accepted different campaign/s use different platforms?

5. Recommendation based on conclusions

According to the data and the analysis these are my recommendations:

Customer Profile Worth Targeting -

I recommend a "rating" system given to each customer based on the customer following profile attributes:

Higher income = higher rating

Lower number of children at home = higher rating

Education level is not basic level = higher rating

Customers with higher rating based on this system is a customer that will have on average higher number of products purchased according to the data; **This kind of rating system can give a data driven recommendation about how much each customer is worth targeting.**

Country Worth Targeting -

No meaningful difference between the countries in the data.

Campaign Worth Repeating -

The last campaign was the best performing campaign, and there is no visible reason to not continue with it or make new campaign/s based on it as it was the campaign with highest acceptance rate for every customer segment and in every country.

Platform Suggestions –

Customers that visit the website have higher purchase rates of "deals", therefore it might be worth highlighting deals on the website and or create a system that will send notifications about new deals for customers that tend to visit the website through email or another channel.

Customer that has higher number of children at home tends to purchase more "deals" therefore it might be worth trying to convince customers with children at home to subscribe to the "deals" notifications as well.

Products Suggestions -

The best-selling products are wine & meat.

Content Marketing: Create content that highlights the pairing of wine and meat, such as recipes, cooking tips, and wine pairing guides. Share this content through your marketing channels to educate and engage your audience.

Bundle: Given that wine and meat are popular items among the customers it could be wise to create a bundle of wine & meat or alternatively bundle of wine/meat with the least popular products to boost sells of those products.

The worst-selling products were sweets & fruits.

Customer Research: Conduct customer surveys or gather feedback to understand why sweets and fruits are less popular. Are there specific types of sweets or fruits that are unpopular, or is it a broader issue? Identify the reasons behind this low popularity, such as **taste preferences**, **pricing**, or **packaging**.

6. Deep Analysis

6.1 Customer Segments

I decided to group the customers to segments based on their marital status and education level.

The rational is to observe if there is different purchasing habits or campaign acceptance for different segments of customers.

Customer segments based on marital status + education level;

Rational:

1.Which segments are the most populated?
2.Which segments have the highest average income?
3.Which segments are populated and has high average income?

Customer Segments
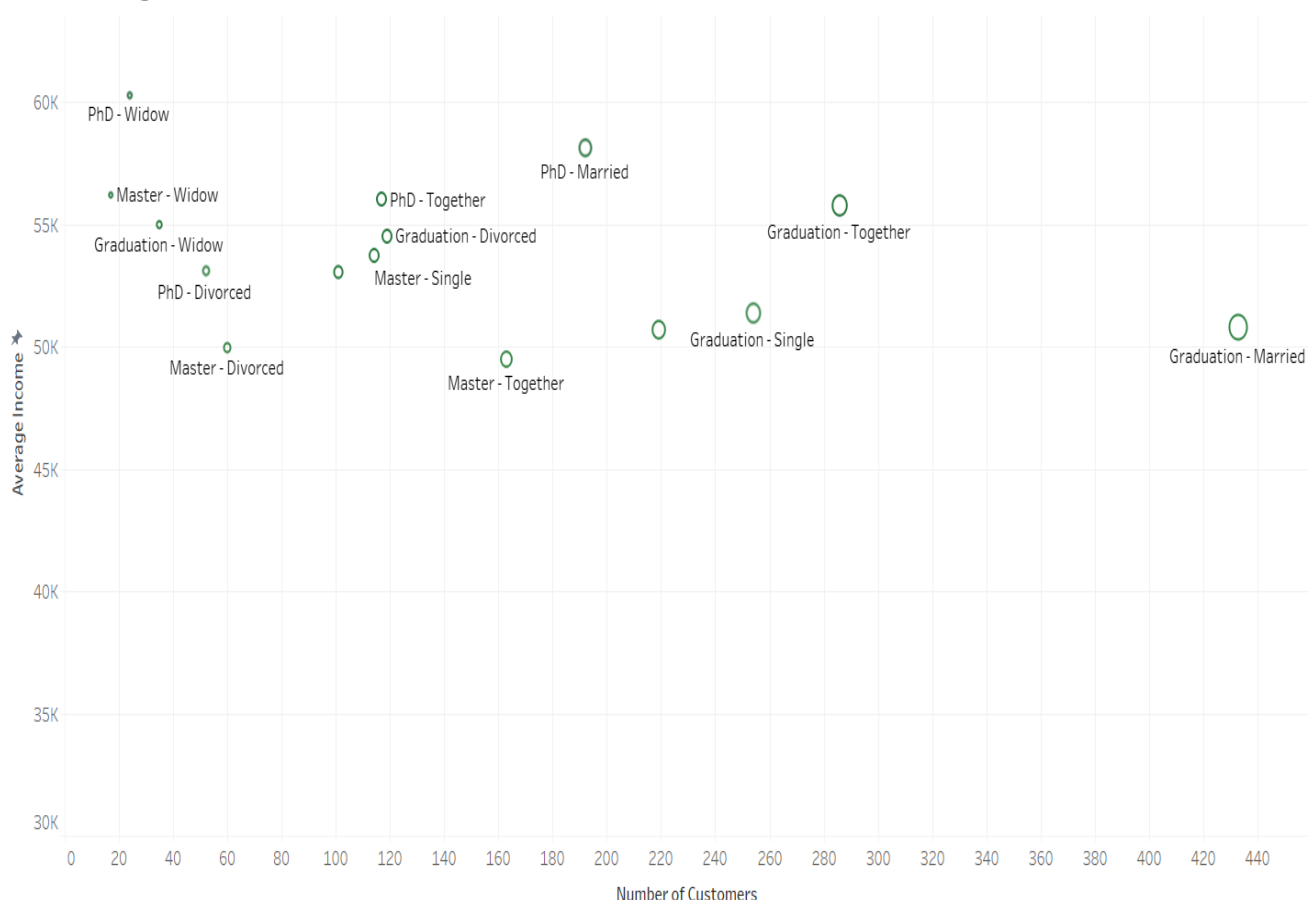
Average purchase & number of customer for each segment;

Rational:

1.Which segments has the highest number of average purchases?

2.Is there major difference in the number of average purchases for different segments?

Measure Names
■ AVG Product Amount
■ NumberOfCustomers
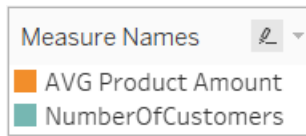
Average Amount of Products in Purchase & Number of Customers for Each Customer Segments
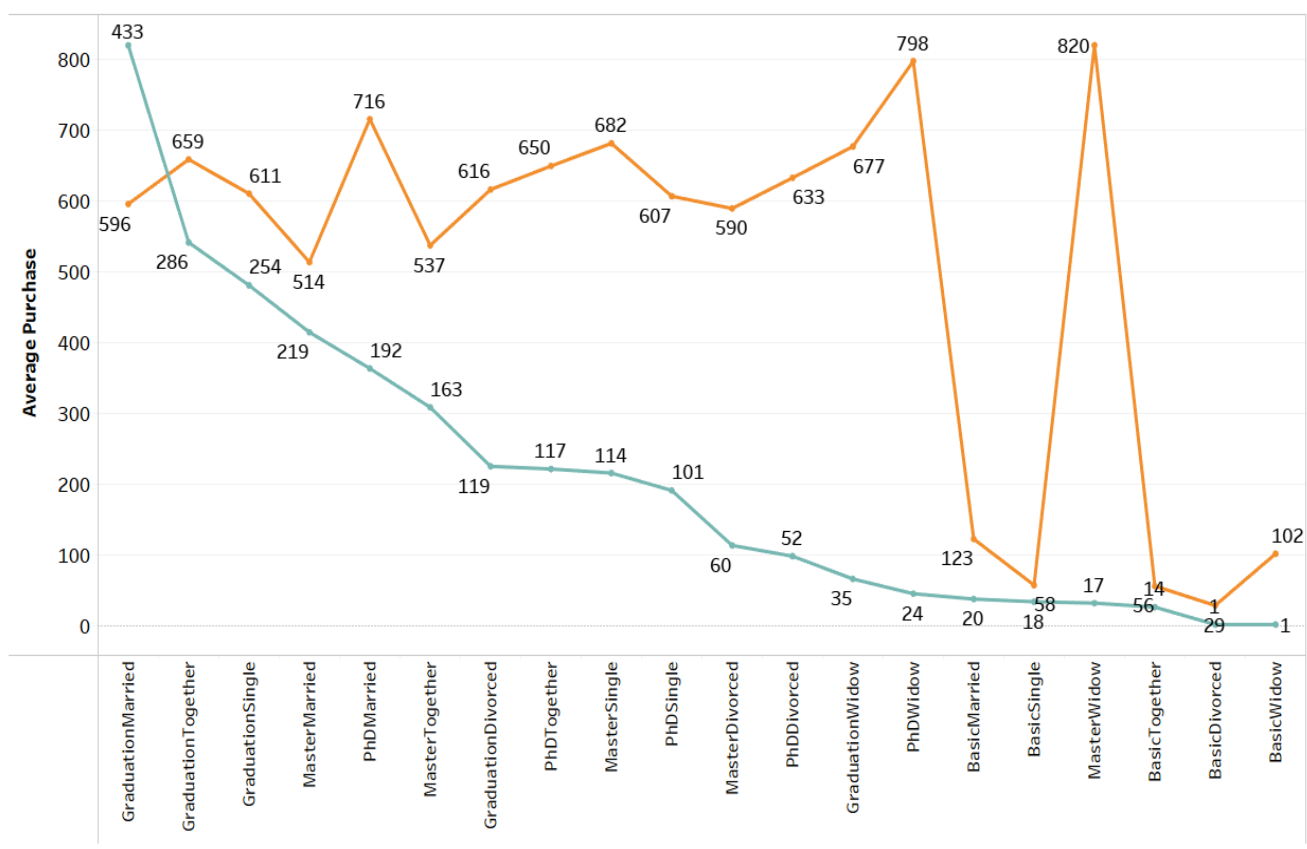
Average Purchase of Different Products for Each Customer Segments;

Rational:

1. Do different customer segements have particular product/s preference?

2. Is there noteworthy variance in prefence of products?
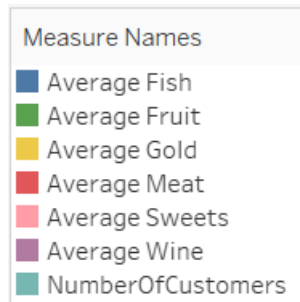
Average Purchase of Different Products for Each Customer Segments
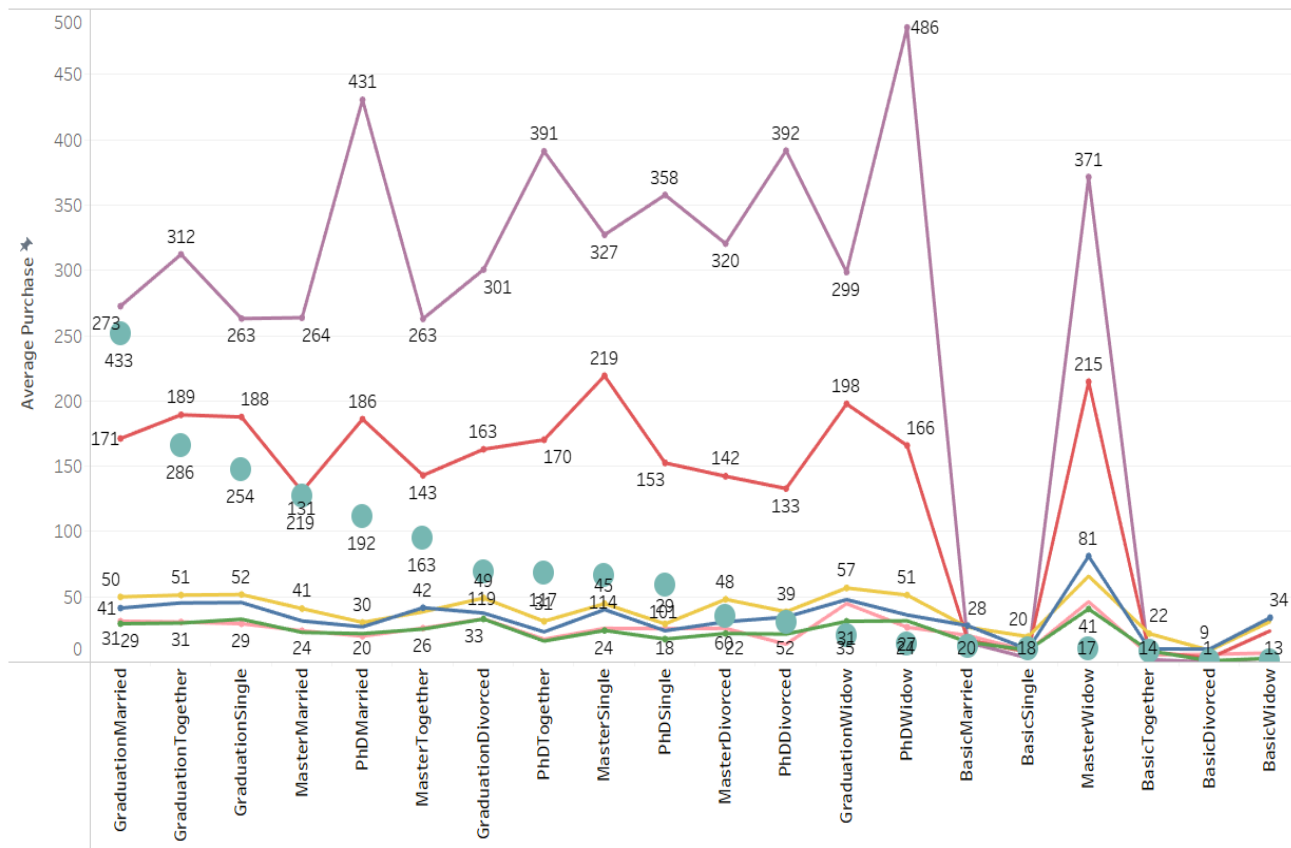
Average Purchase from Each Platform for Each Segement;

Rational:

1.Do customer segments different from each other in the platform they use?

2. Is there considerable variance in platform for different segments?
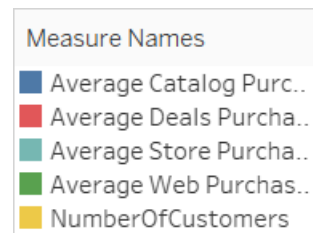
Average Purchases from each Platform for Each Segments
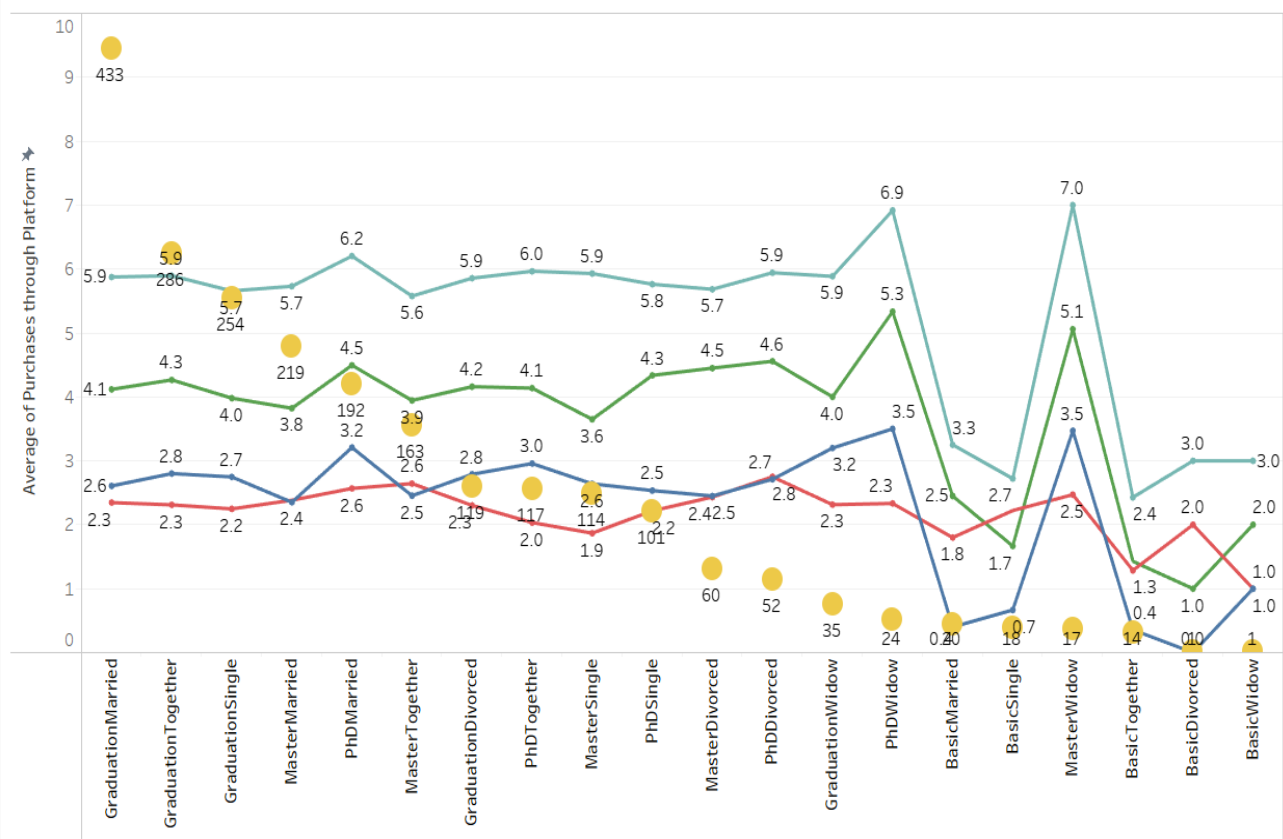
Campigans Performance for Each Segement;

Rational:

1. Are there campaigns that significantly had better/worse success for different customer segments?

2. Is there big variance in the performance of different campaigns for different customer segments?
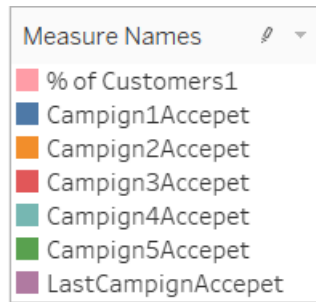
Campaign Performance for Different Segments
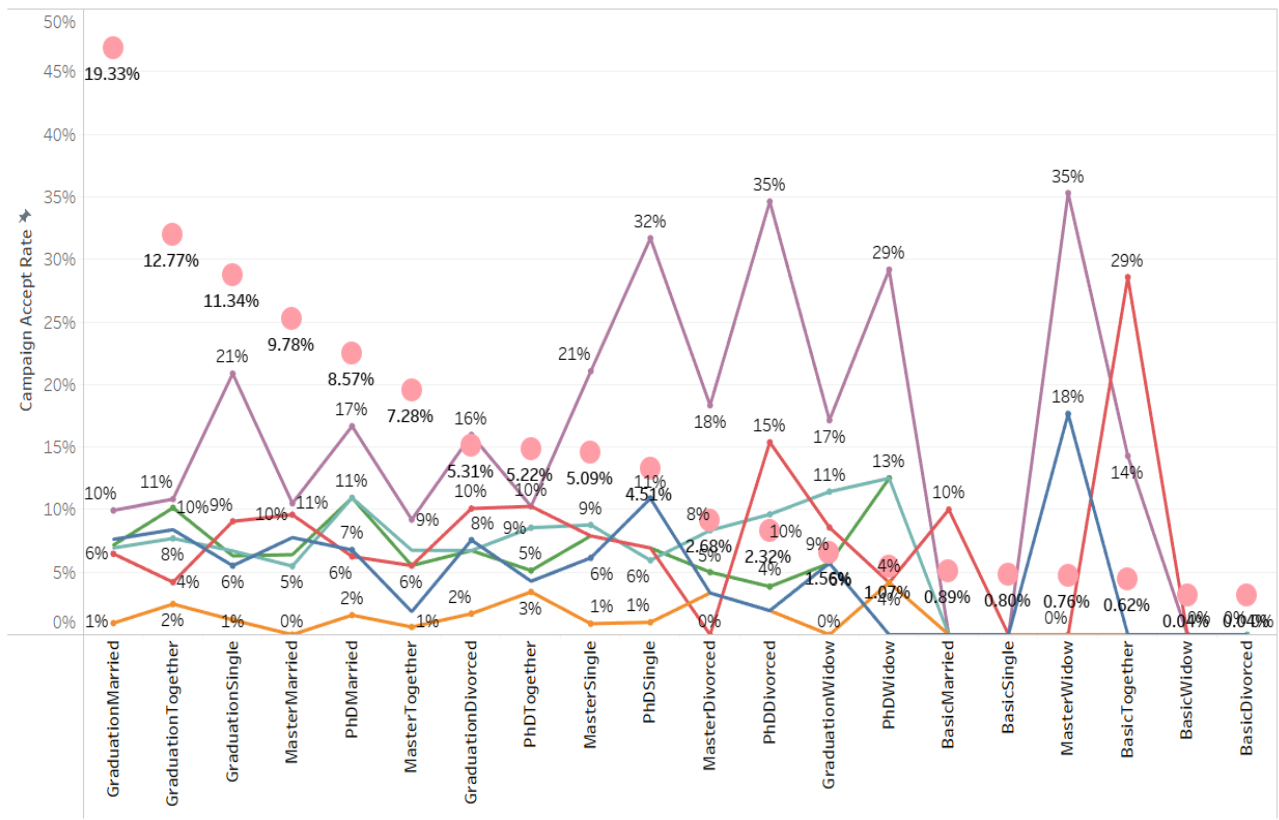
Campigan Acceptence & Education Level

Education

Graduation — Master — PhD
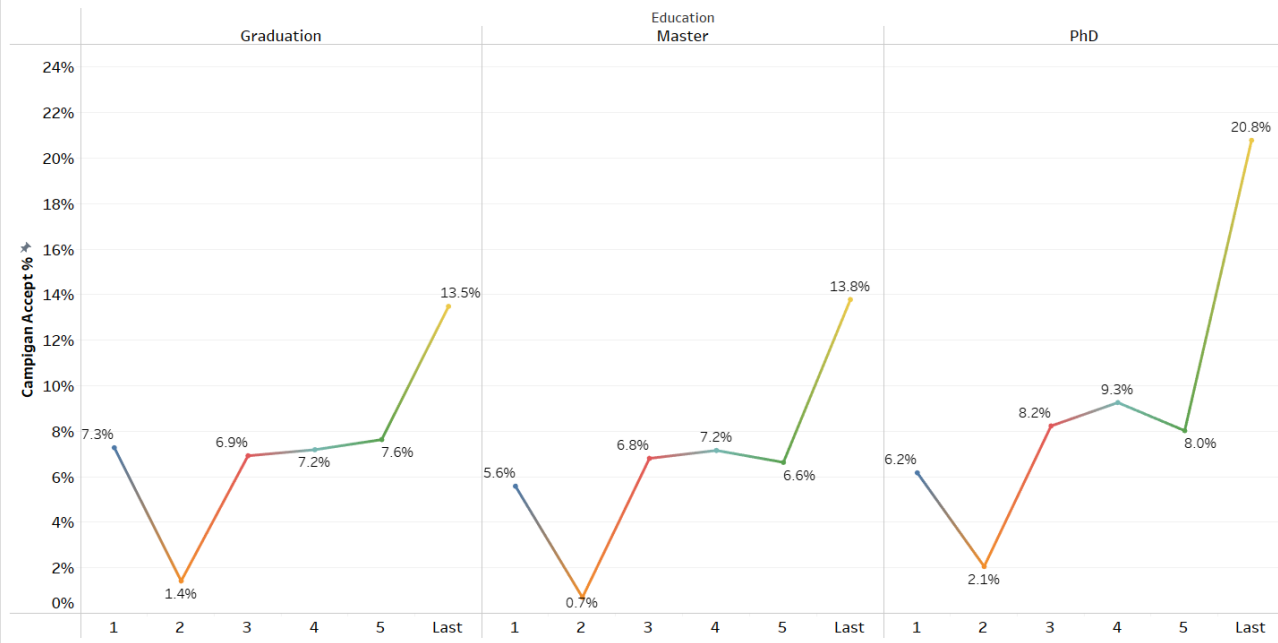
Campaign Acceptance & Marital Status

Marital_Status

Divorced — Married — Single — Together — Widow
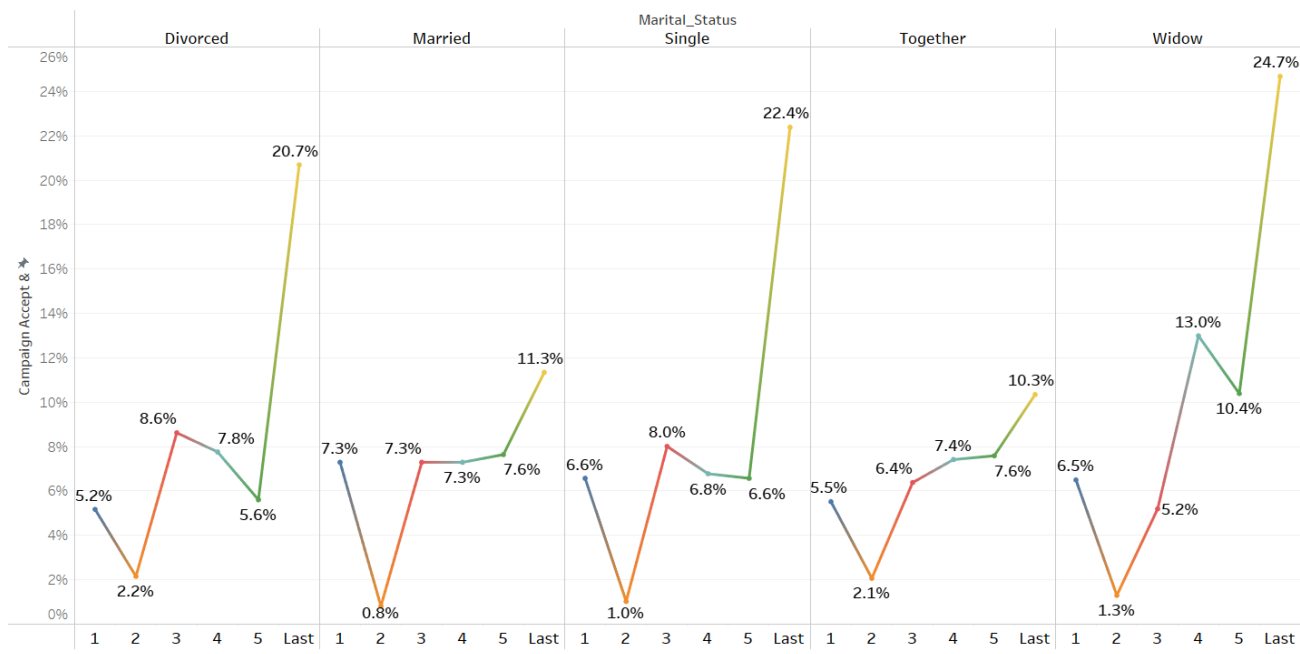
Pareto chart for customers segments;

The Pareto principle states that for many outcomes, roughly 80% of consequences come from 20% of causes.

For example - 80% of the purchases are made by 20% of the customers.

Rational:

Does the Pareto priniciple apply to customer segments ?
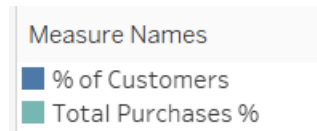
Heat map for customer segments & countries;

Rational:

1. In which countries different customer segments are more populated?

Denisty of Customer Segments Across Different Countries

Country	BasicDi..	BasicM..	BasicSi..	BasicTo..	BasicW..	Gradua..	Gradua..	Gradua..	Gradua..	Gradua..	Master..	Master..	Master..	Master..	Master..	PhDDiv..	PhDMa..	PhDSin..	PhDTog..	PhDWi..
Australia		0.04%		0.09%	0.04%	0.36%	1.61%	0.71%	0.98%	0.13%	0.27%	0.80%	0.22%	0.49%	0.04%	0.27%	0.54%	0.22%	0.27%	0.04%
Canada	0.04%	0.13%	0.09%	0.04%		0.54%	2.50%	1.38%	1.38%	0.13%	0.40%	1.07%	0.80%	0.89%	0.09%	0.22%	1.03%	0.54%	0.63%	0.04%
Germany		0.09%				0.22%	1.07%	0.58%	0.63%	0.13%	0.04%	1.03%	0.22%	0.45%	0.04%		0.40%	0.04%	0.40%	
India		0.04%	0.04%	0.09%		0.22%	1.29%	0.80%	1.03%	0.04%	0.22%	0.71%	0.54%	0.40%			0.49%	0.31%	0.22%	0.13%
Mexico								0.04%					0.04%					0.04%		
Saudi Arabia		0.09%	0.09%	0.09%		1.21%	2.32%	1.52%	1.92%	0.22%	0.49%	0.94%	0.71%	1.52%	0.13%	0.40%	1.38%	0.80%	1.03%	0.18%
Spain		0.40%	0.58%	0.27%		2.41%	9.51%	5.40%	6.29%	0.85%	1.07%	5.00%	2.32%	3.17%	0.40%	1.25%	4.46%	2.32%	2.50%	0.67%
USA		0.09%		0.04%		0.36%	1.03%	0.89%	0.54%	0.04%	0.18%	0.22%	0.27%	0.31%	0.04%	0.18%	0.27%	0.22%	0.18%	

Correlation between Education Level & Purchases Amount of Different Products (Basic=1 Graduation=2 Master=3 PhD=4)

Rational:

1. Does higher/lower education level effect purchases behavior?

Corrleation-Education-Wines	Corrleation-Education-Fruits	Corrleation-Education-Meats	Corrleation-Education-Fish
0.162894486	-0.086108021	0.008169203	-0.091287634

Corrleation-Education-Sweets	Corrleation-Education-Gold	Corrleation-Education-Total
-0.084539317	-0.113154939	0.064540024

Conclusions - Costumer Segments

Pareto chart -

There is almost no difference between purchase rate for different customer segments, meaning -
there is no segment that has higher purchases rate;
for example, if customer segment "A" has ratio of 2 purchases per customer so does customer segment "B" has approximately 2 purchases per customer.

therefore, there is no specific segment/s that is worth targeting over other, according to the data.

Costumer Segments & Product Type Preference –

Noteworthy from observing the graph is a big <u>variance</u> in the average amount of purchases for wine and meat products for different segments.

Other than that, there is no other notable variance for other products.

Correlation coefficient between education level & purchasing different products is too low to draw far reaching conclusions, having said that its noticeable the **customers with PhD level of education purchase more wine** than other customers.

Customer Segments & Purchase Platforms -

There is **no noteworthy variance** in the platforms used for different customer segments with more than 20 costumers.

Customer Segments & Campaign Performance –

Noticeable **<u>variance</u> in the performance of the last campaign for different customer segments.**

apart from that campaign no other campaign has noteworthy campaign performance variance for different costumer segments.

6.2 Products Acceptance/Demand

Next, I would like to analyze how different products performed.

Average amount of products in orders;
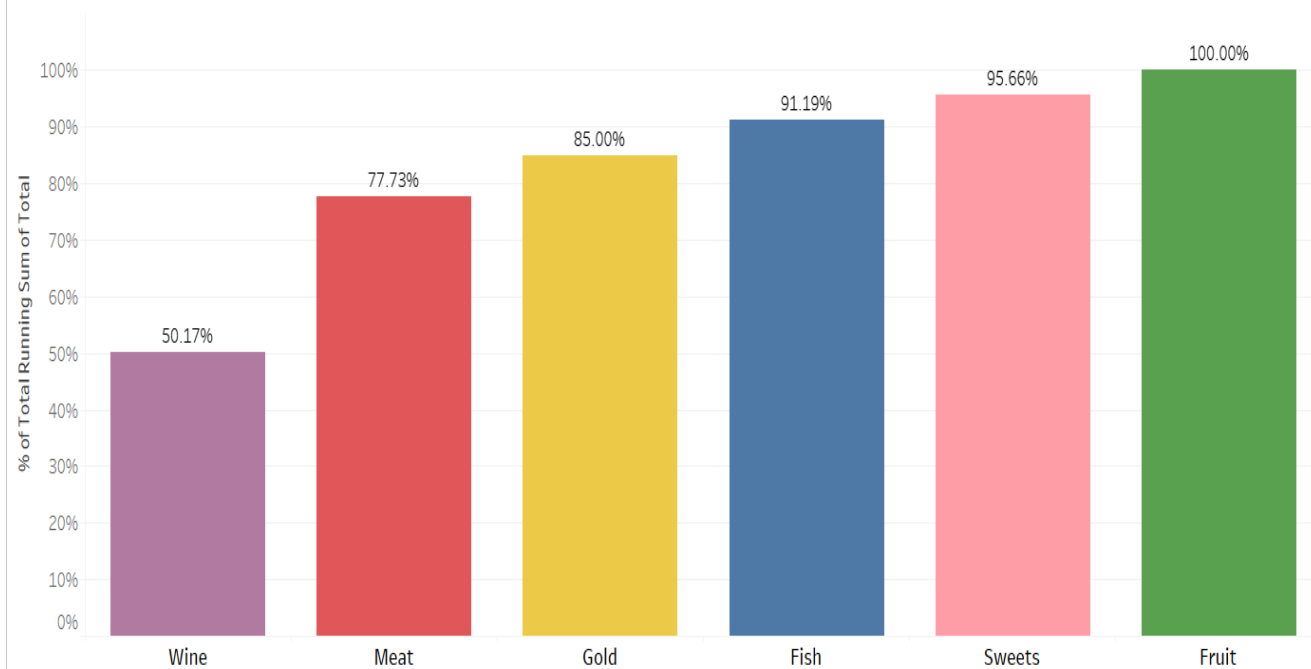
Rational:

1. Popularity/demand of products

Average Amount of Product in Orders

	Average Amount of Product
Avg Amount of Wines	304
Avg Amount of Meats	167
Avg Amount of Gold	44
Avg Amount of Fish	38
Avg Amount of Sweets	27
Avg Amount of Fruits	26
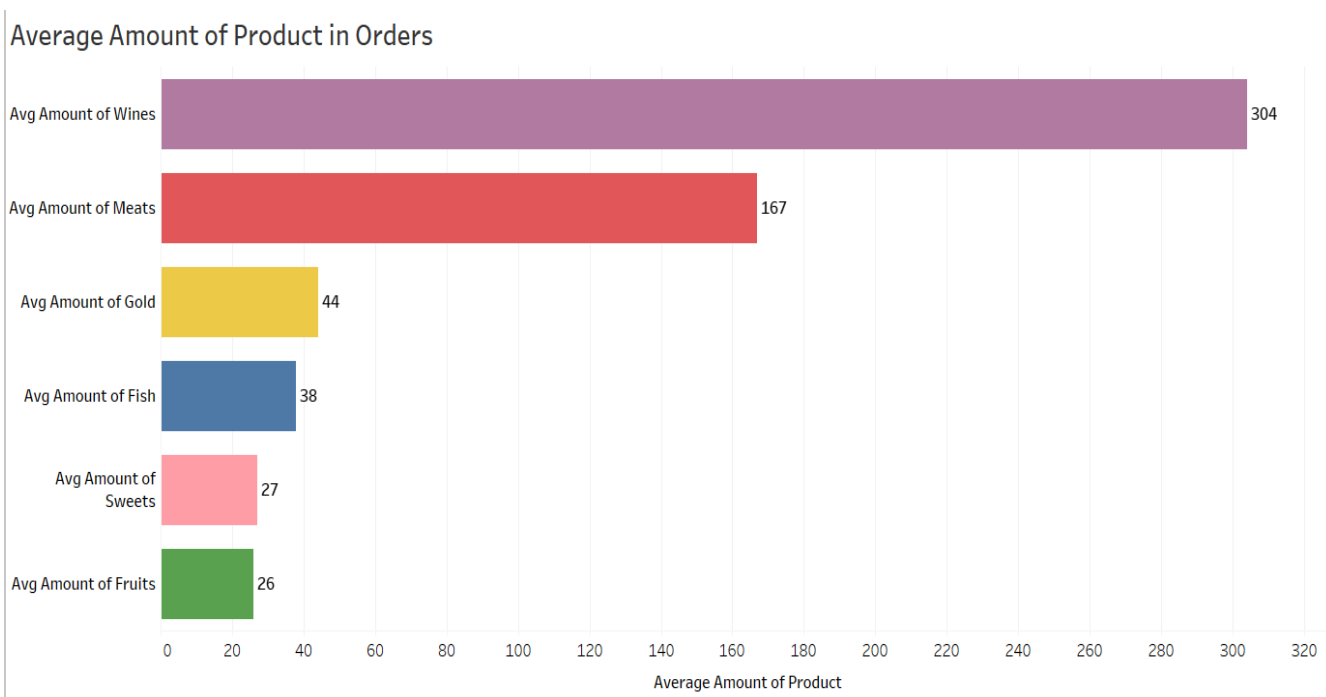
Pareto chart for Products;

Rational:

1. Does the Pareto principle apply to products?

Pareto Chart for Products (running total % of total sales)

Purchasing Behaviour for Customer from Different Countries;

Rational:

1. Do products have difference popularity/demand in different countries?

2. Is there noteworthy variance in preference of various products in different countries?

Measure Names
- Fish
- Fruits
- Gold
- Meats
- Sweets
- Wines

Purchasing Behaviour for Customer from Different Countries
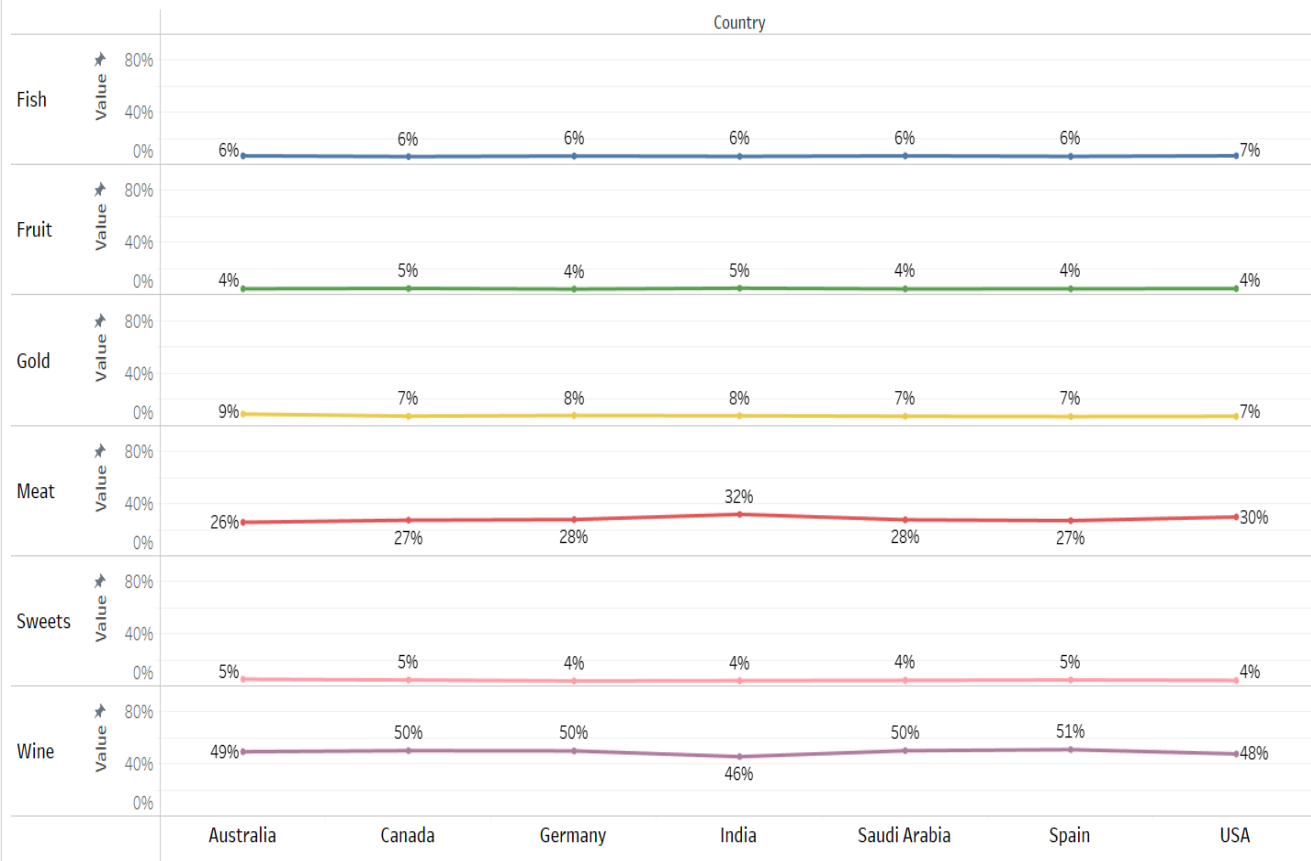
Conclusions - Products Acceptance/Demand

Pareto Chart -

77.7% of the amounts of products sold were **wine** & **meat**, 2 different products out of 6 possible different products.

2/6 is 33%, meaning 33% of the products types are responsible for 77.7% of total products sold. **Pareto principle does apply to products types**.

*The profit per product/sale is not in the data, but without a doubt these are the best performing products.

It might be worth considering a bundle of wine/meat and other products to boost sells.

Products & Countries

No significant difference of preference for different products in different countries.

6.3 Campaign Performance

I wanted to analyze the performance of the different campaigns.

Different Campigans Perofermence in Different Countries;

Rational:

1. Did certain campaign/s perform better in different countries?

2. Is there any remarkable difference in the campaign/s success in different countries?

Measure Names
- AcceptedCampaign1
- AcceptedCampaign2
- AcceptedCampaign3
- AcceptedCampaign4
- AcceptedCampaign5
- AcceptedLastCampaig..

Campaign Performance & Countries
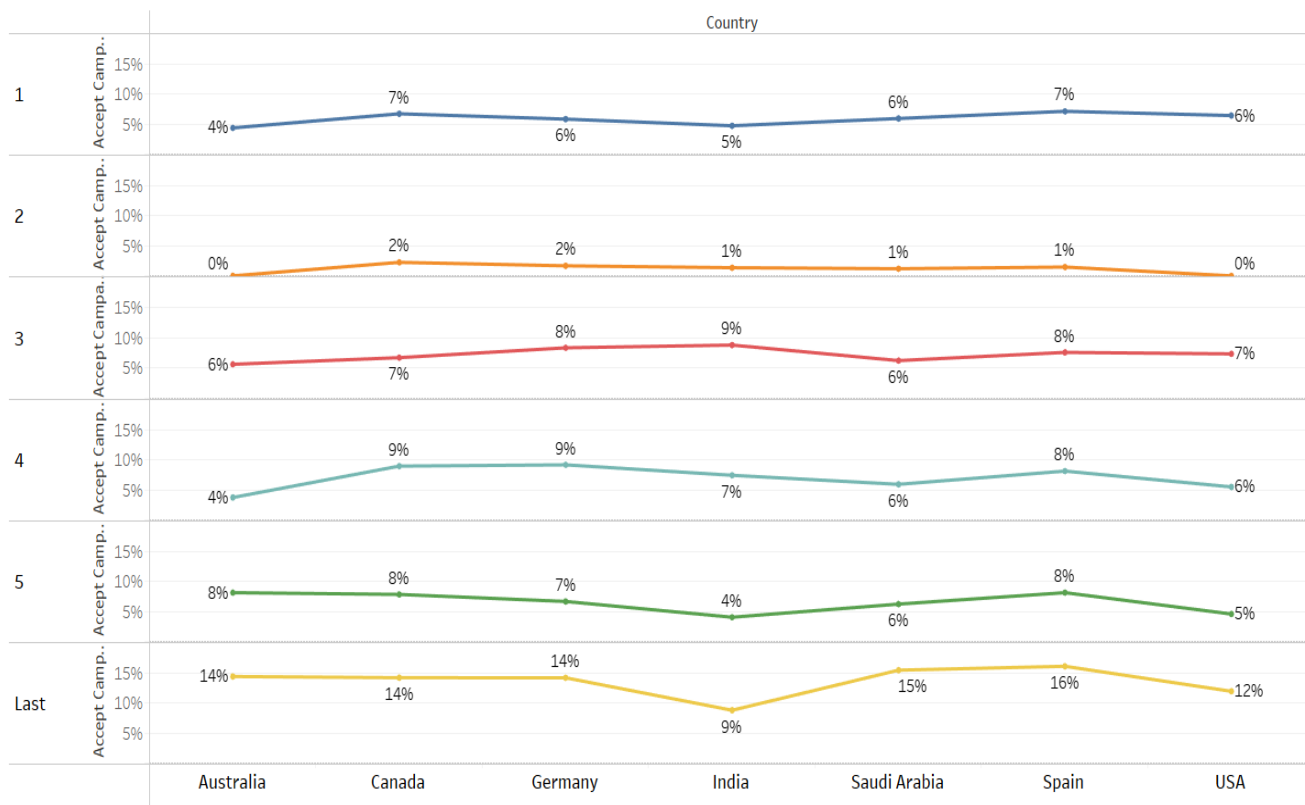
Different Campigans & Products Purchased;

Rational:

1. Does customers that accepted different campigan/s have different products preference ?
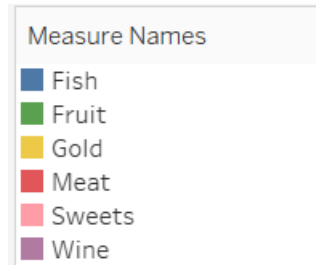
Percentage of Products Purchased for Customers That Accepted Campaign
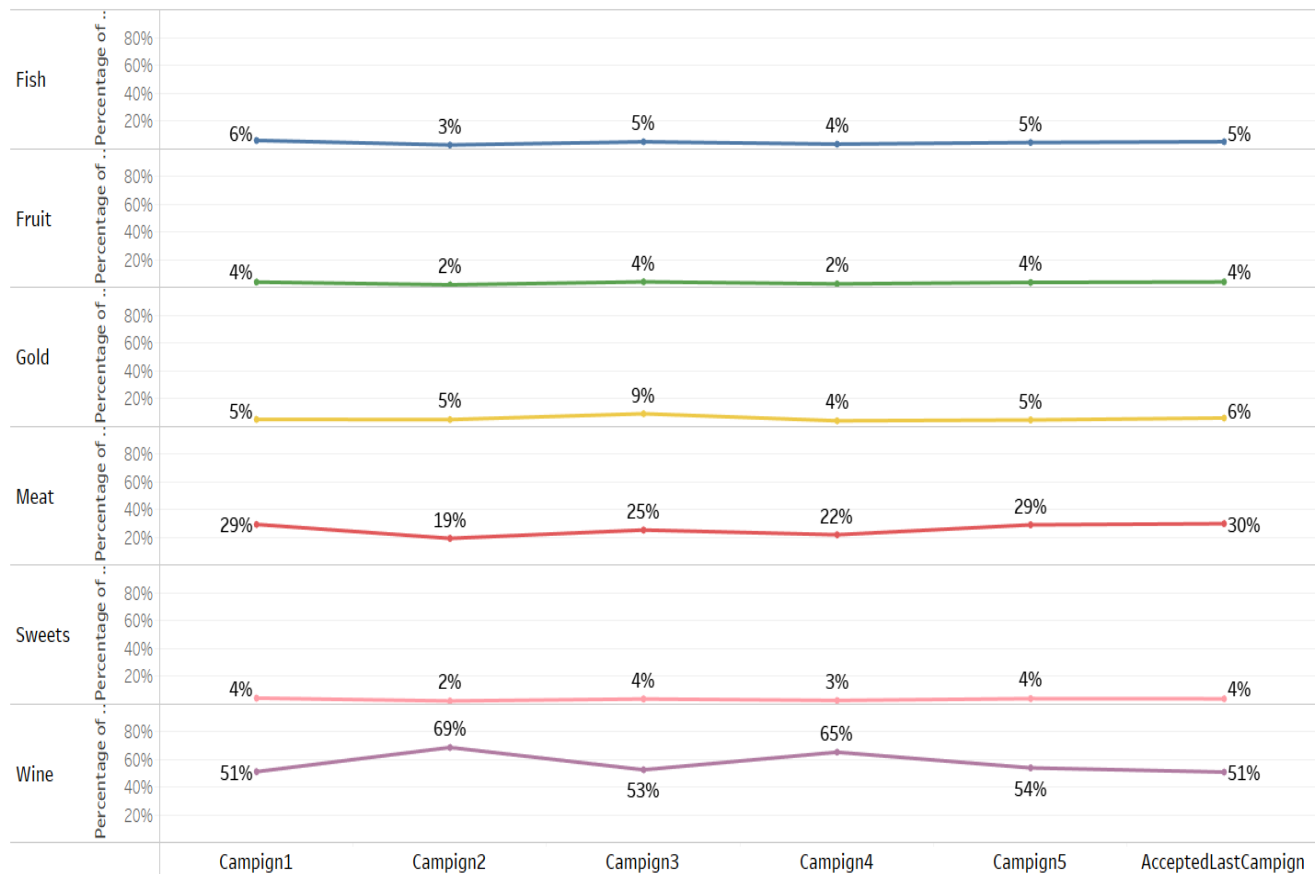
Accepting Campigan/s & Various Actions;

Rational:

1. Does accepting campaign/s (or specific campaign) has positive or negative effect on accepting other/future campaigns?

2. Is there relationship between accepting campigan/s and number of complaints?

3. Does accepting more campigans has postive/negative effect on number of products purchased?

Correlation - Accepting Campaign 3 & Accepting The Campaigns Afterwards
0.1434

Correlation - Accepting Campaigns & Number of Complaints
-0.01761

Correlation Total Purchases & Number of Complaints
-0.03706

Accepting Campigan/s & Various Actions;

Accepting Campigan/s & Platform Used to Purchase;

Rational:

1. What platforms customers that accepted campigan/s use?

2. Is there noticeable difference in accepting different campigan/s and using different platforms?
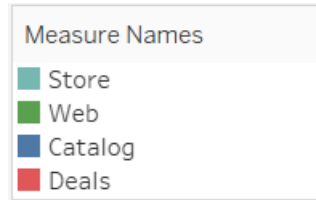
Campigan Accepted & Platform Purchased
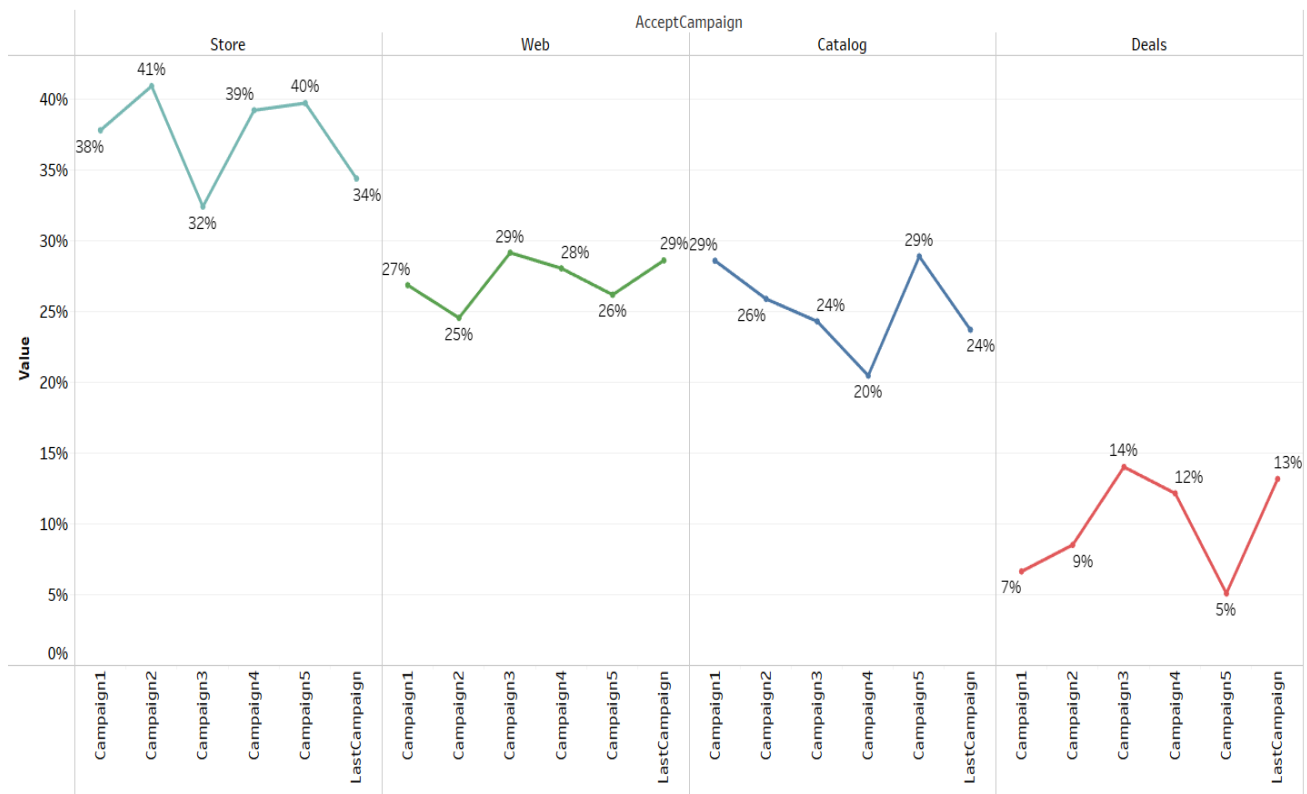
Campaign & Total Products Sold for Customers that Accepted It

Rational:

1. How the difference campaigns performed in term of total amount of products sold to costumer that accepted that campaign?
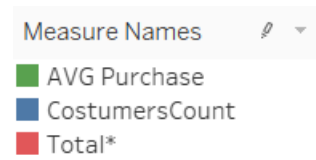
Campaign & Total Products Sold for Customers that Accepted It
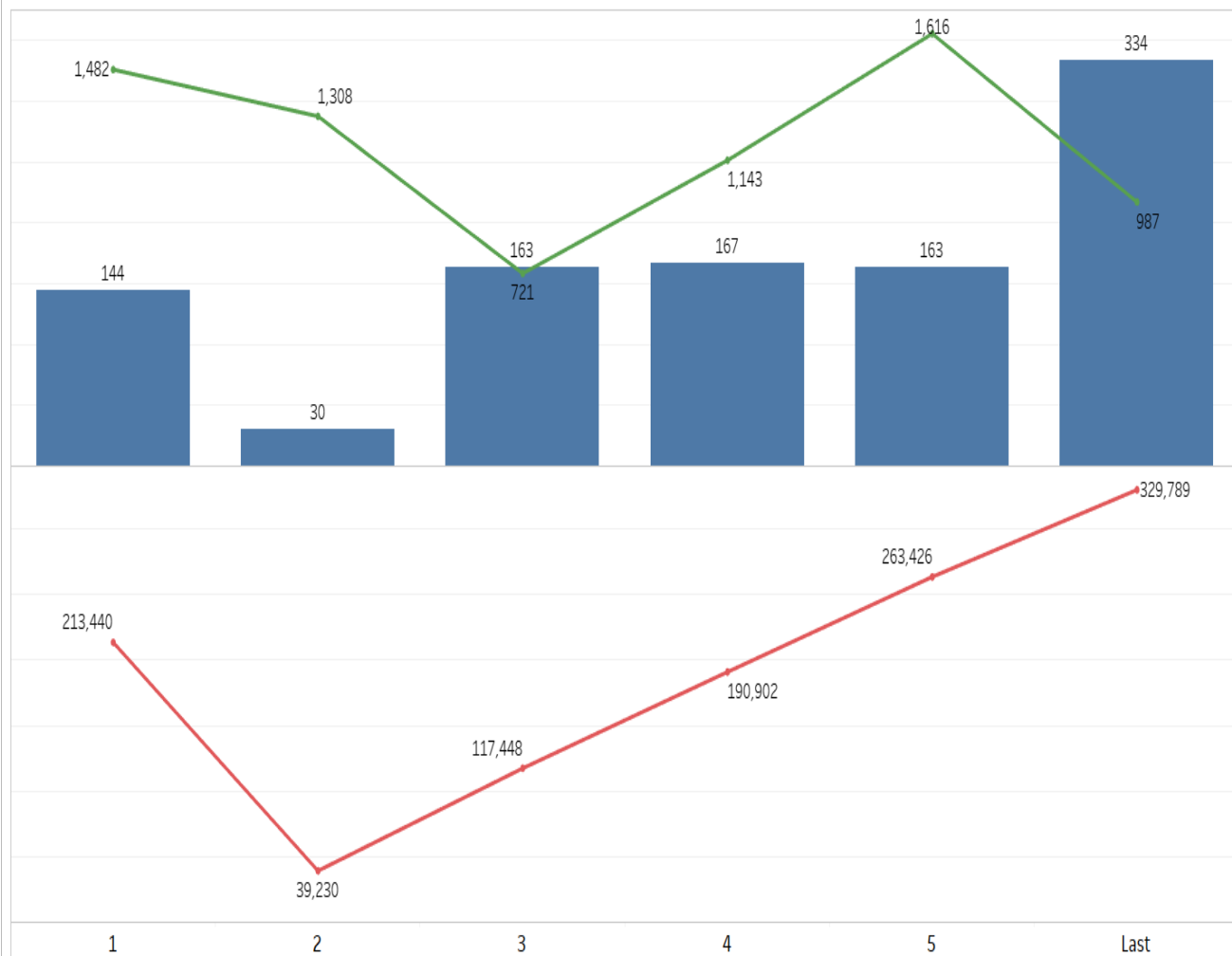
Conclusions – Campaigns Performance

Campaign Performance for Different Countries -

There was only **slight difference for Australia, USA and India.**

Accepting Campaign/s & Products Purchased -

Very minor different in products preference for costumer that accepted **campaign 3**

Accepting Campaign/s & Platform Used -

Slight change in percentage of customers that used **Catalog & Store** and accepted campaigns 3 and/or 4.

Accepting Campaign/s & Various Actions -

Correlation coefficient between accepting campaign 3 and accepting later campaigns is 0.13, meaning slight positive relation.

Having said that, while the coefficient indicates positive linear positive relationship, **coefficient value of 0.13 is too trivial to draw far-reaching conclusions** about the effect of accepting campaign 3 & accepting one or more of later campaign/s.

Other correlations calculated coefficients were between -0.05 & 0.05 which indicates little to no correlation.

Campaign & Total Products Sold for Customers that Accepted It

There in an increase in total products sold with every campaign after campaign 2.

Noteworthy, in the last campaign there was a decrease in average products sold per customer, but the raise in number of customers that accepted that campaign covered it up and the trend continued for the last campaign too.

6.4 Family Composition of Costumers
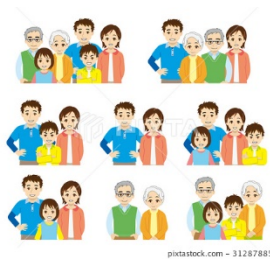
Next, I wanted to analyze if and how family composition of costumers effects their purchasing behaviors.
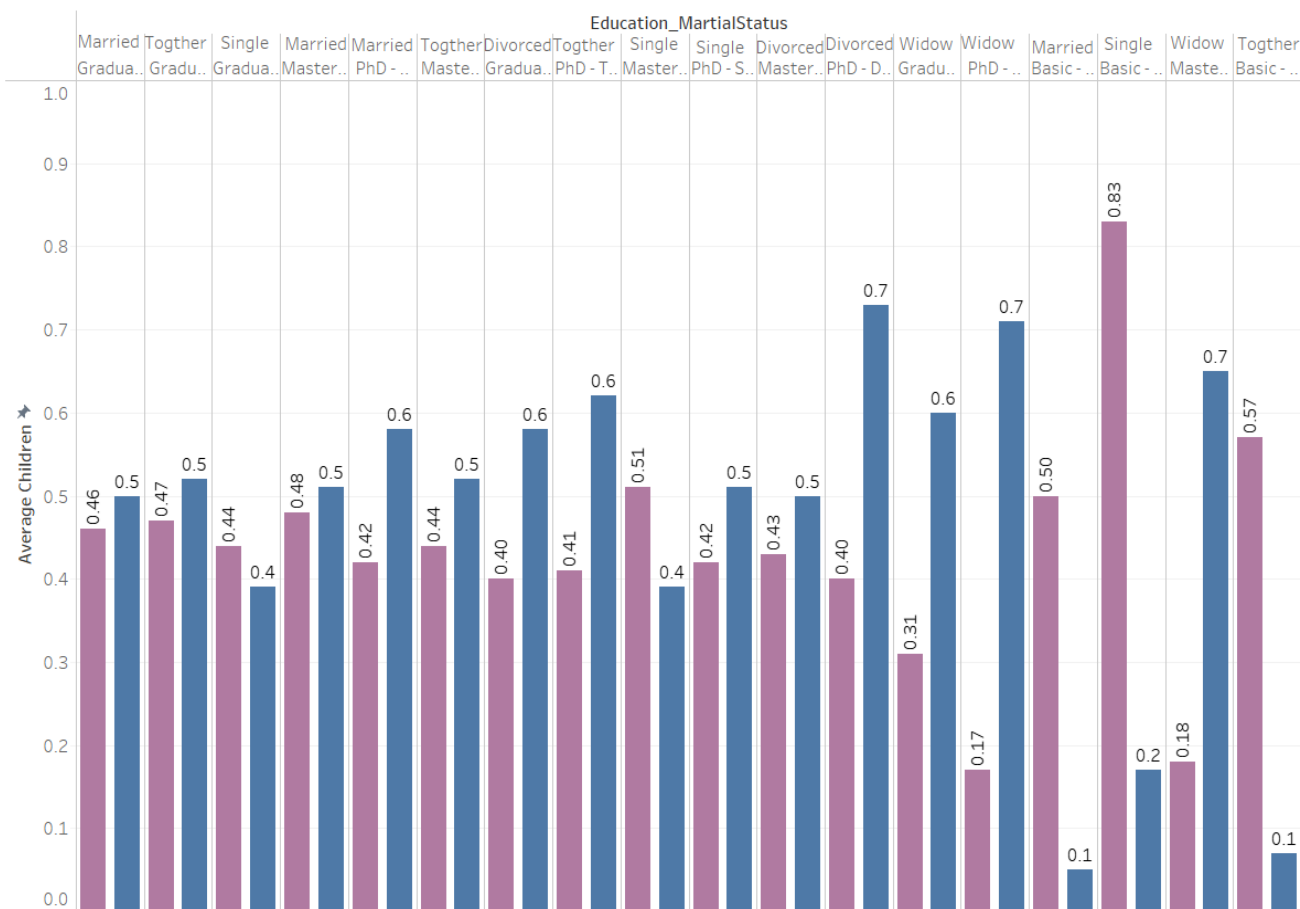
Family Composition & Costumer Segments

Rational:

1. Is there big variance in family composition for different customers segments?

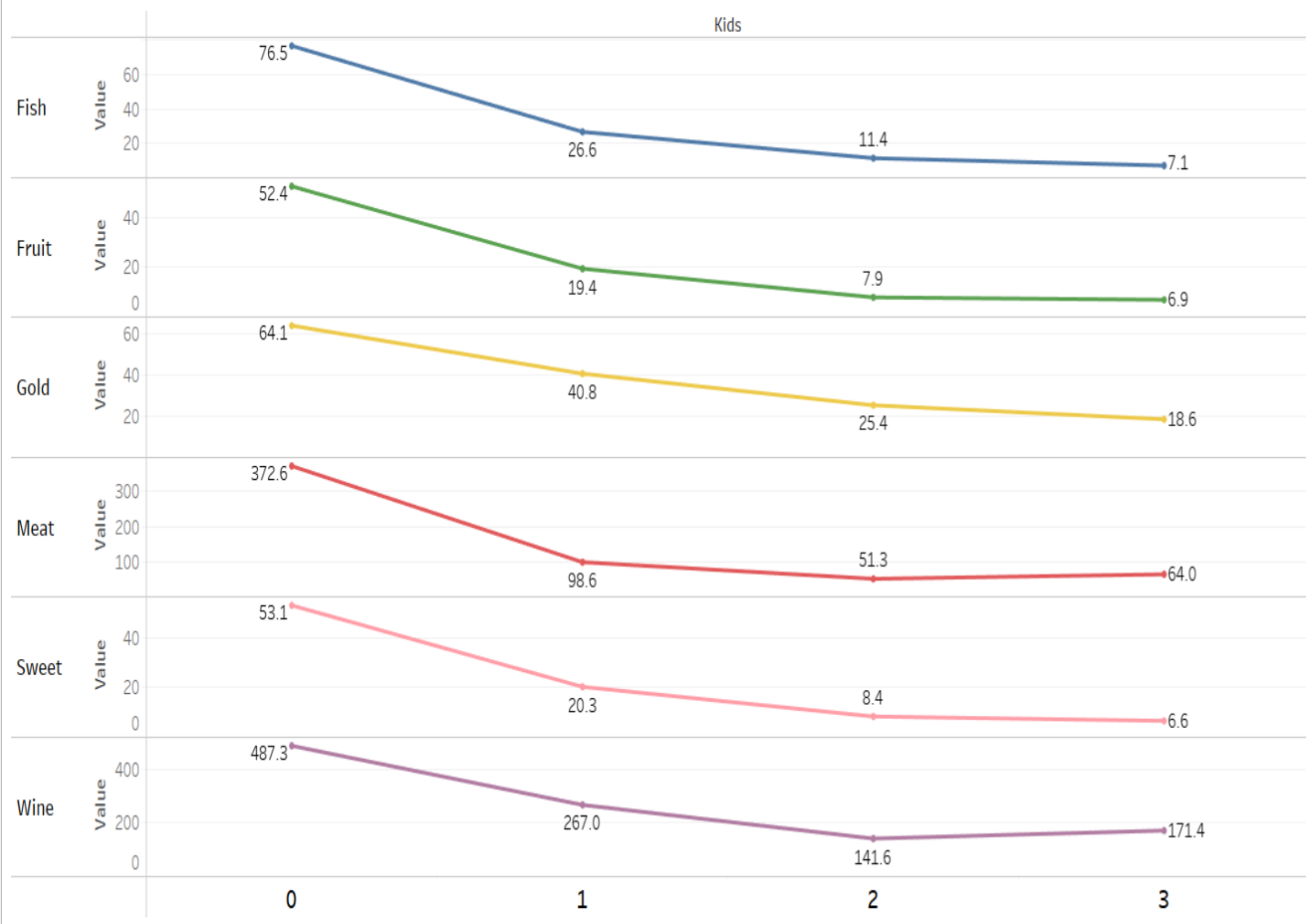### Segments & Childern

Family Composition & Purchasing Behavior

Rational:

1. Does family composition effect purchasing behaviour?

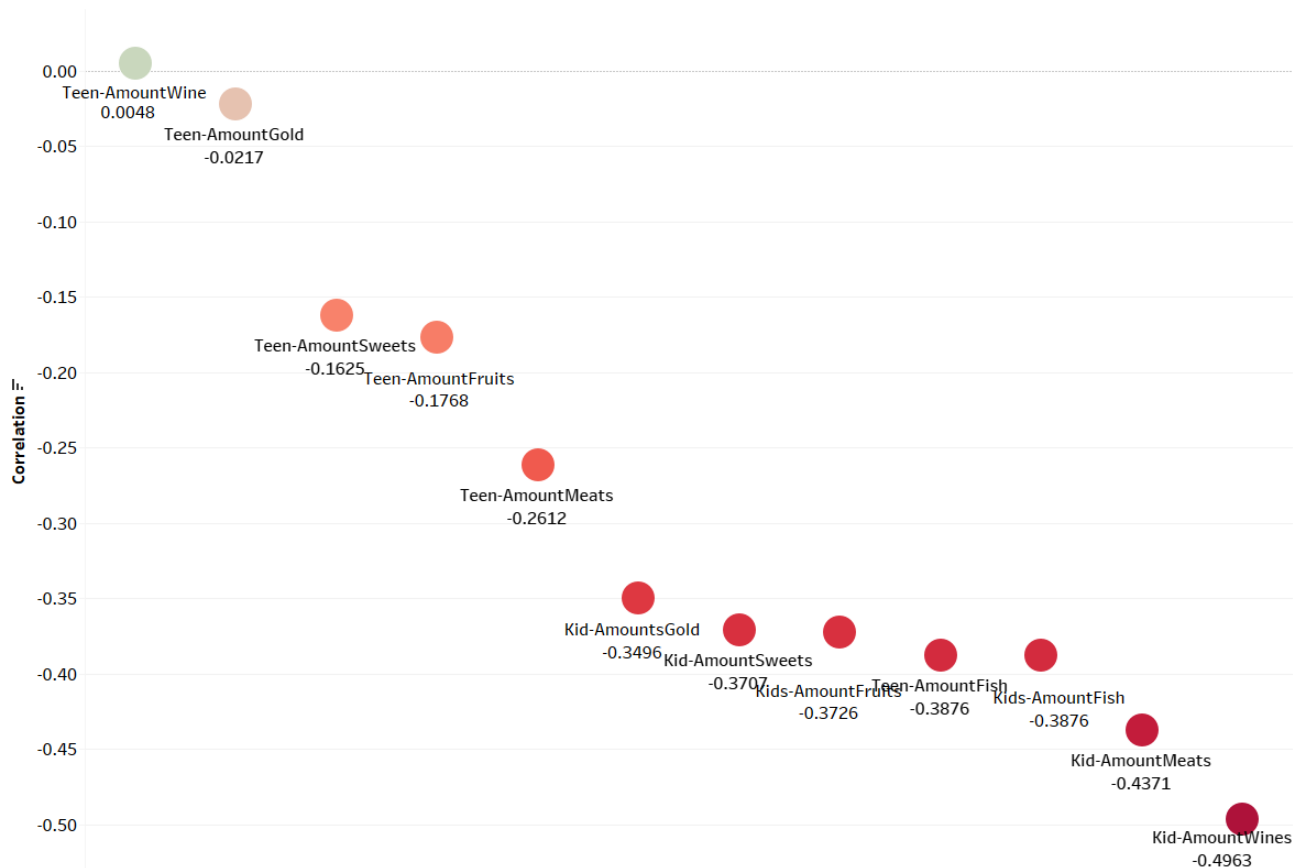2. Is there noticeable variance in purchasing behaviour for customer with different family composition?

Purchasing Behaviour for Different Family Composition

Correlation Between Number of Kids/Teens and Amount Purchased for Different Products

Correlation Between Number of Children (kids&teens) and Total Amount of Purchases

Rational:

1. What is the relationship between number of kids and total number of products purchased.

Correlation coefficient of -0.4988;

a correlation coefficient of -0.4988 suggests a moderate negative linear relationship between the two variables being analyzed. This means that when one variable increases, the other tends to decrease, but the relationship is not extremely strong.
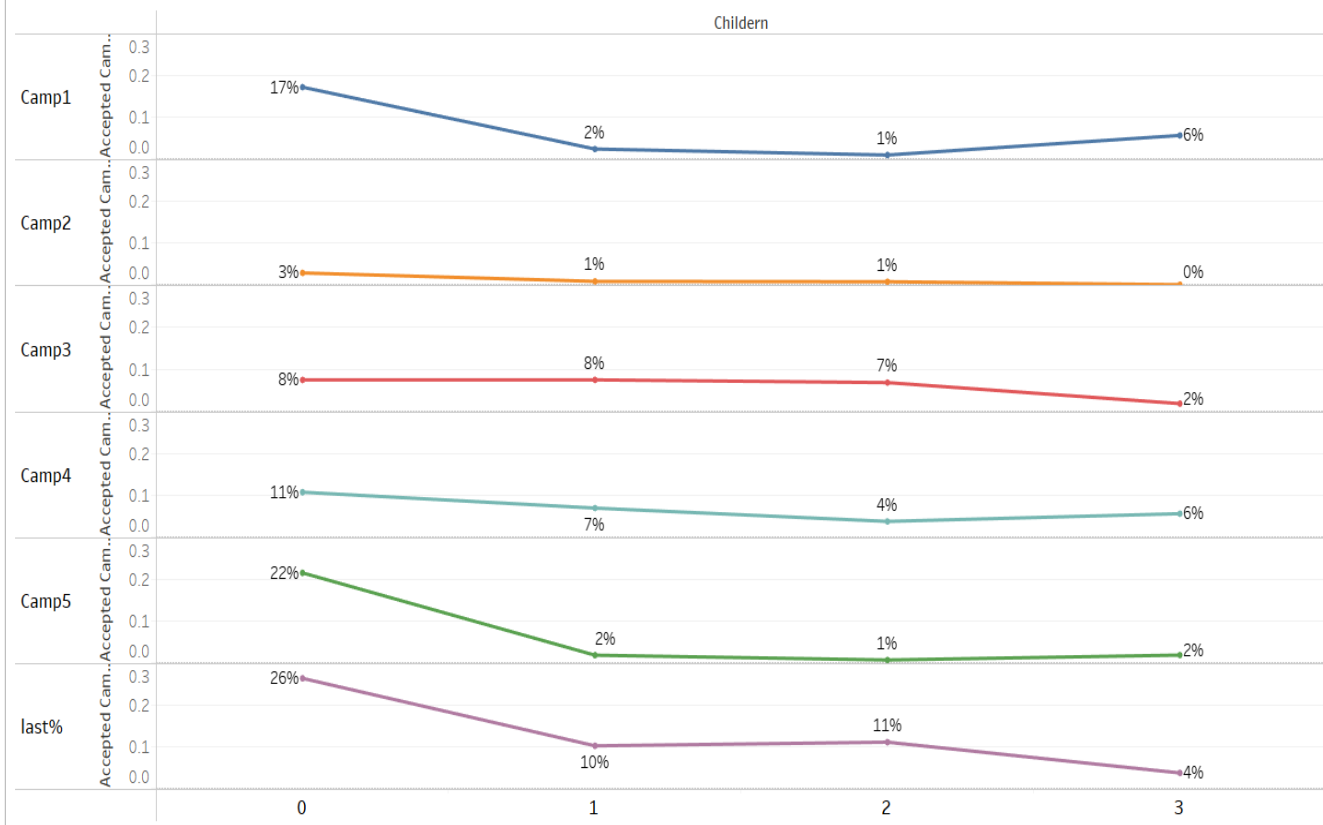
Family Composition & Campaign Acceptance

Rational:

1. Does family composition effect campaign acceptance?

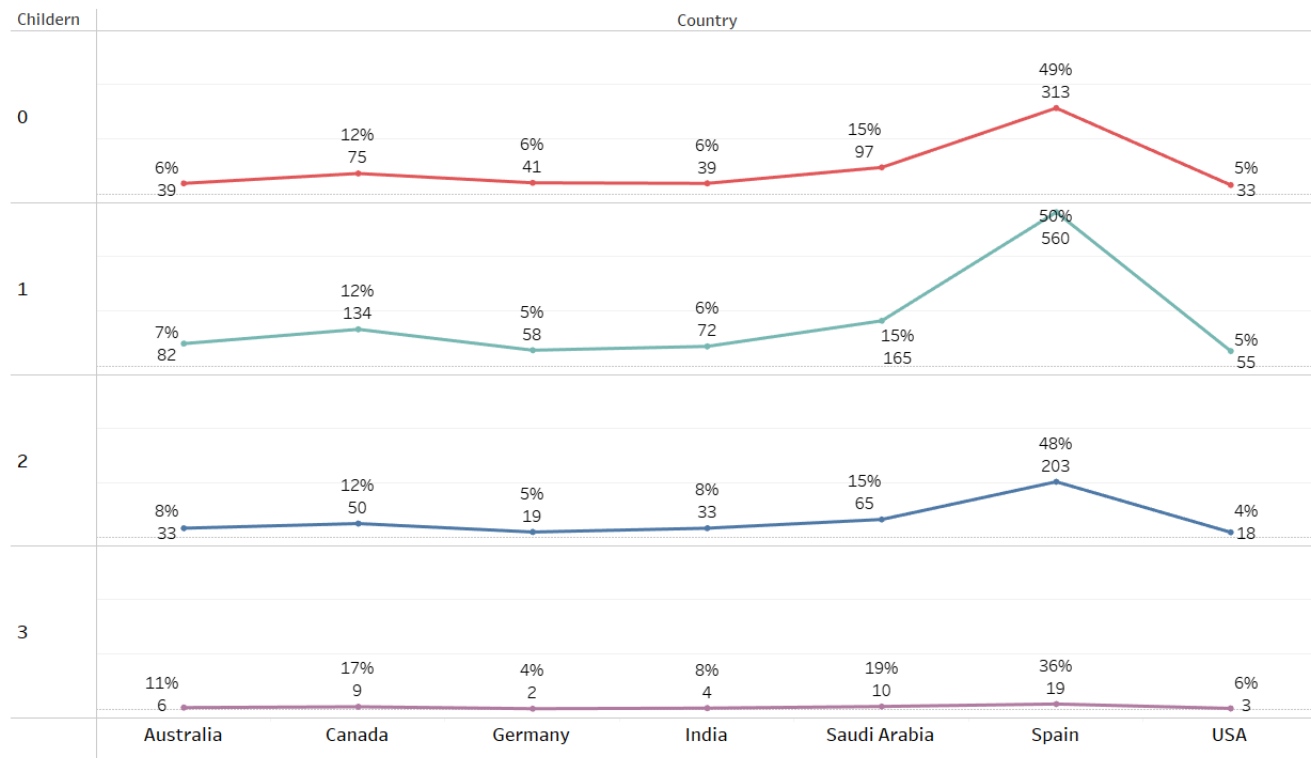2. How different family composition effect different campaign acceptance?
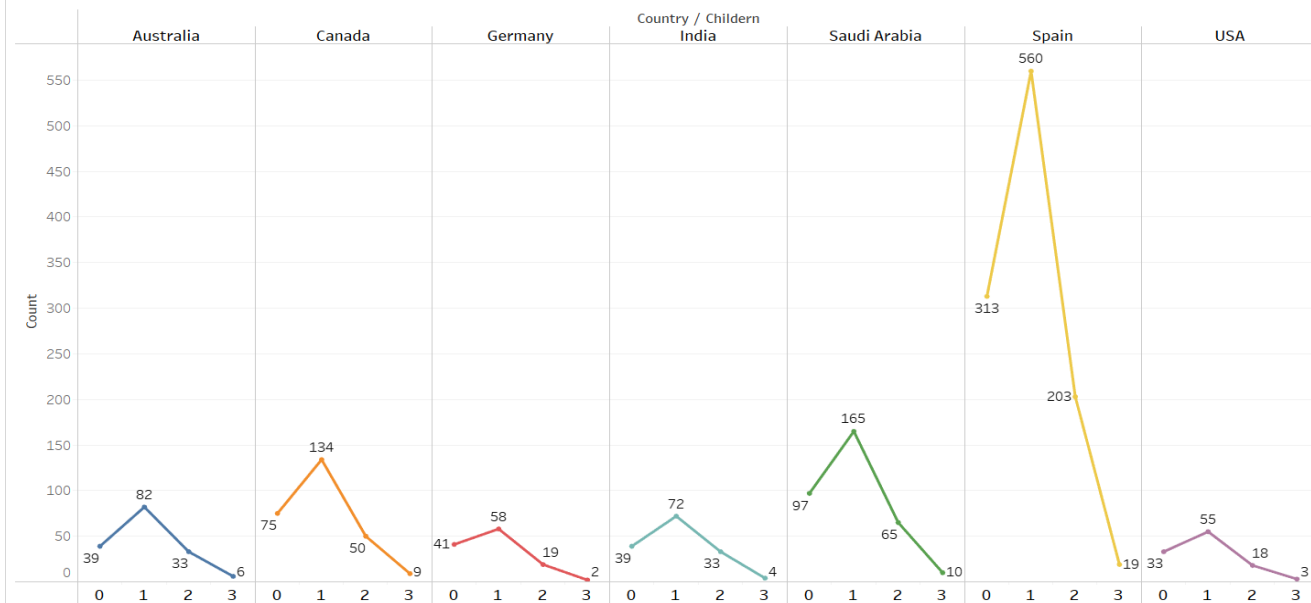
Family Composition & Countries

Rational:

1. What is percentage of different family composition for customers from different countries?

2. In which countries there is higher quantity of different family composition?

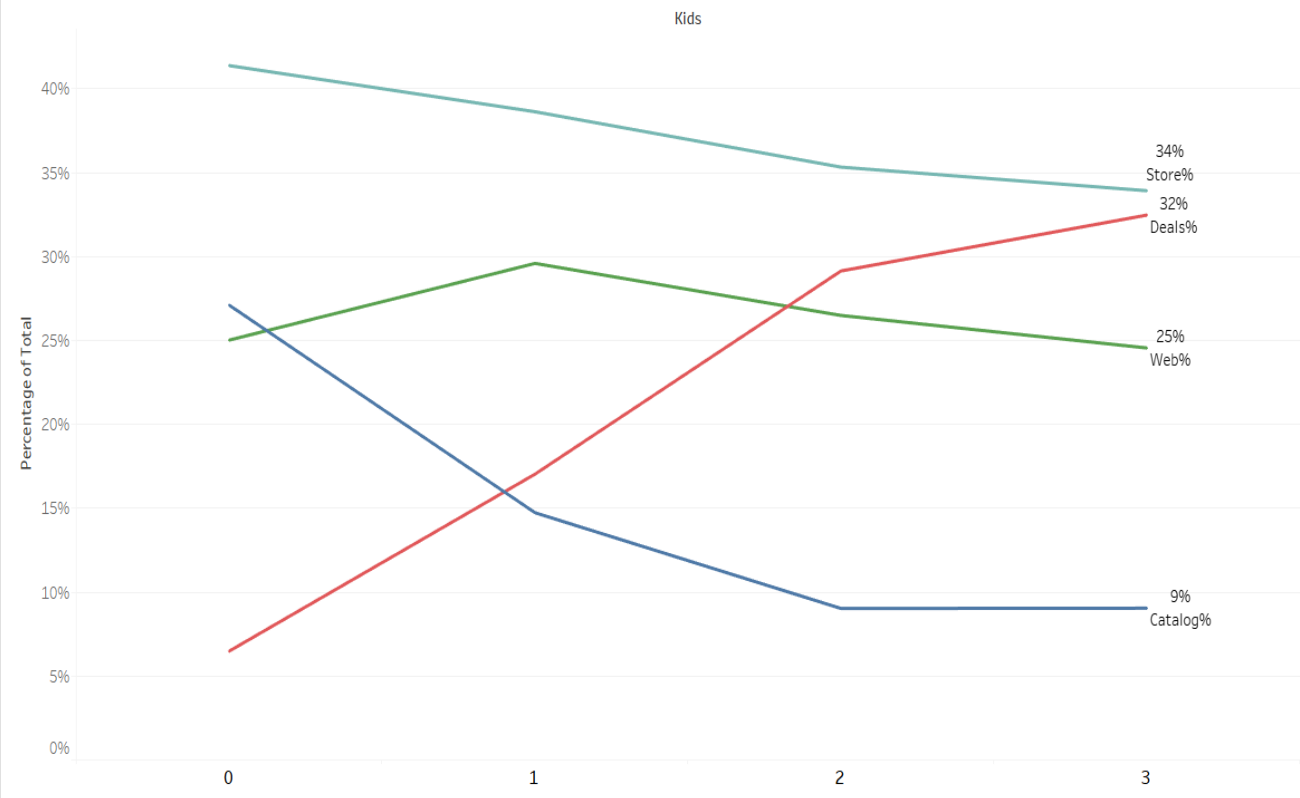### Children & Countries

Children & Countries

Family Composition & Platforms

Rational:

1. Is there a difference in platform customers with different family composition use?

Conclusions – Family Composition

Family Composition & Customer Segments

No meaningful variance in family composition for different costumer segments, expect the least populated costumer segments (right side of graph)

Family Composition & Purchasing Behavior

Considerable decrease in purchase of all products as number of kids the customer has increase.

Family Composition & Campaign Acceptance

Noticeable decline in campaign acceptance as number of children a customer has increase;

campaigns number 1 & 4 had slightly more acceptance for customers with 3 children against the curve trend.

Family Composition & Countries

Most of the countries have the same curve, increase from number of customers that has 0 children and number of customers that has 1 child and then a decrease in the number of customers as the number of children increases.

Noteworthy is Spain that has approximately 50% of the customers that has 1 or 2 children.

Family Composition & Platforms

Noticeable variance in platforms used by customer that has different family composition.

Customers with higher number of children purchase more "deals".
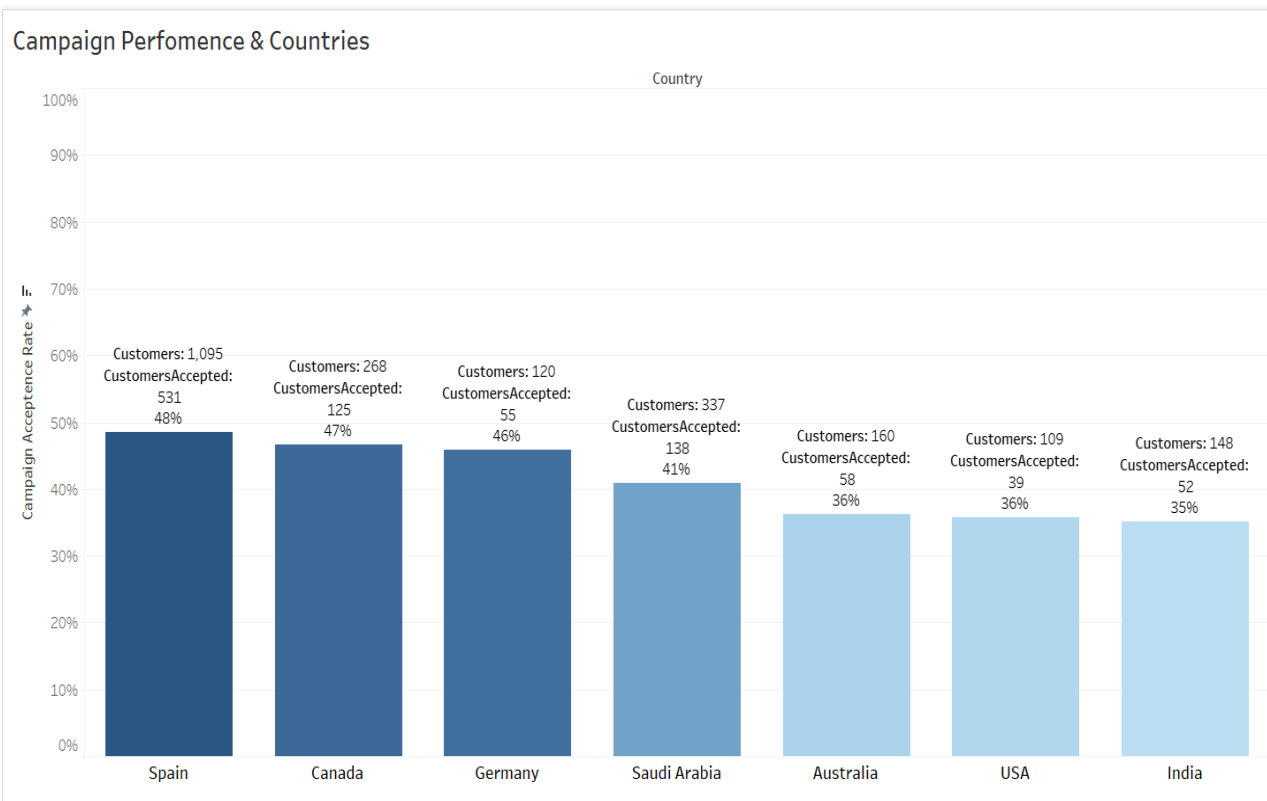
6.5 Countries

Campigans Perofermence in Different Countries
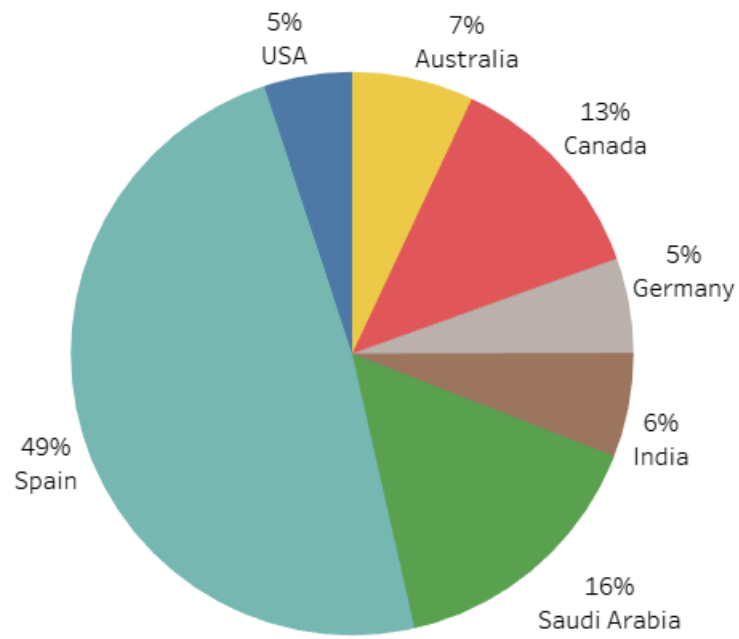
Rational:

1. How the marketing campigans performed in different countries.

2. Is there a considerable difference for different countries in campaigns acceptance?

Campaign Perfomence & Countries

Country

Campaign Acceptence Rate

Customers: 1,095
CustomersAccepted: 531
48%

Customers: 268
CustomersAccepted: 125
47%

Customers: 120
CustomersAccepted: 55
46%

Customers: 337
CustomersAccepted: 138
41%

Customers: 160
CustomersAccepted: 58
36%

Customers: 109
CustomersAccepted: 39
36%

Customers: 148
CustomersAccepted: 52
35%

Spain | Canada | Germany | Saudi Arabia | Australia | USA | India

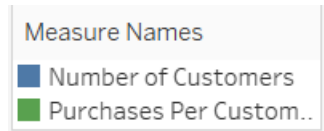## Total Purchases by Countries Pie Chart

42

Rational:

1. What is percentage of all amount of products sold for each country?
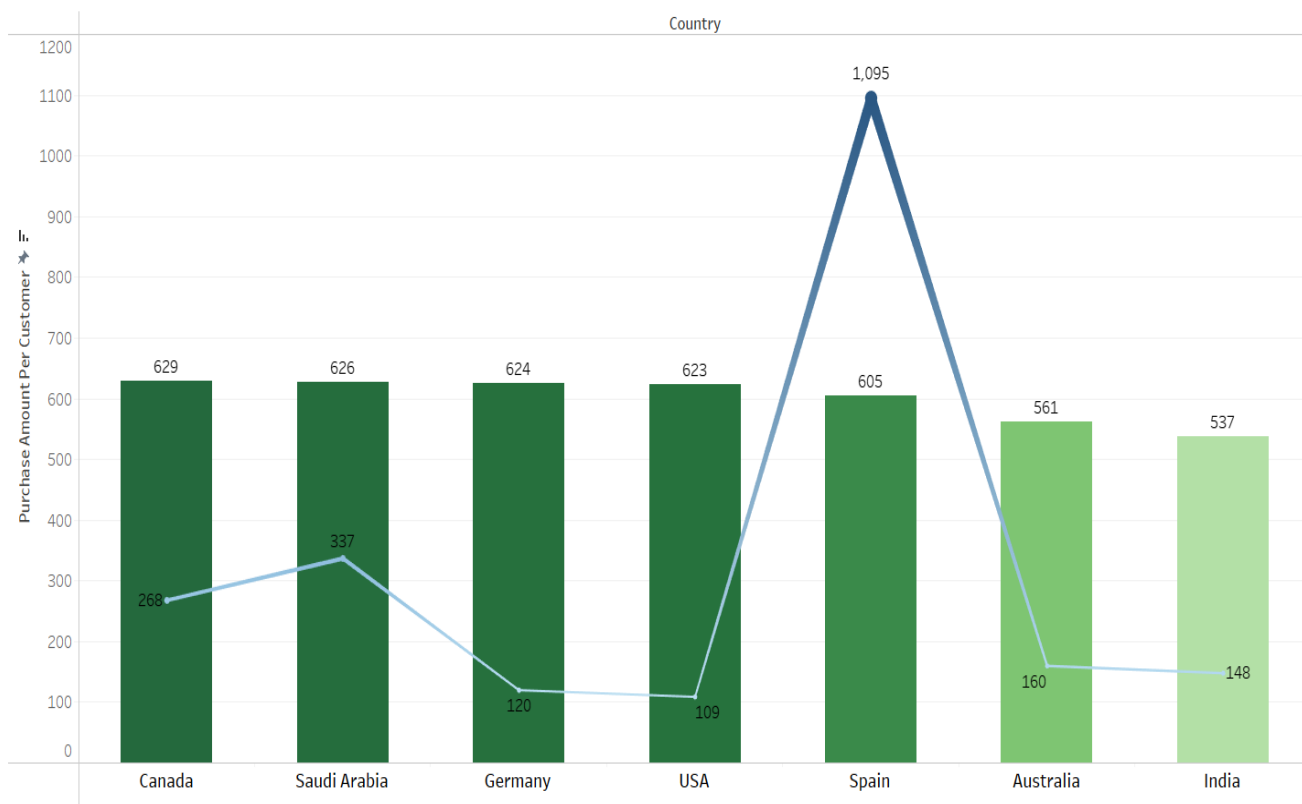
Number of Customer Compared to AVG Amount of Products Purchased by Costumer for Every Country

Rational:
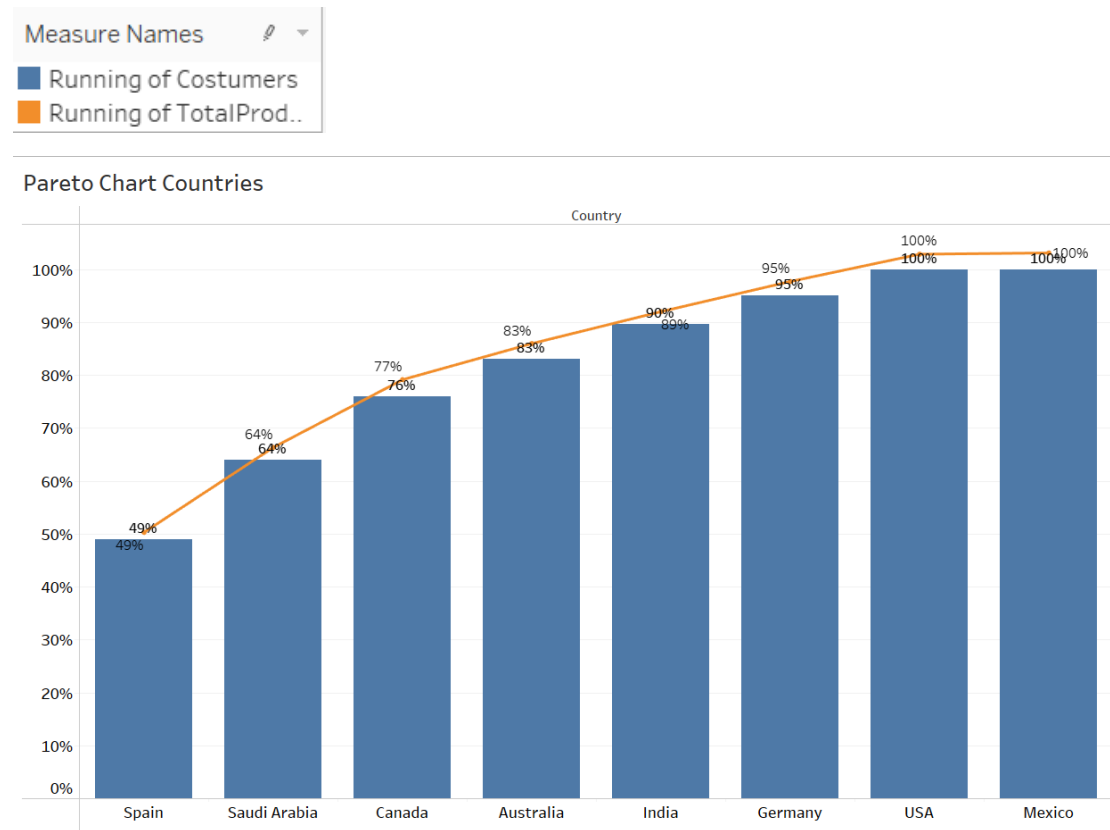
1. Customer statics for each country.

Measure Names
- Number of Customers
- Purchases Per Custom..

Countries & Purchase Per Customer x Total Costumers

Pareto Chart – Countries

Rational:

1. Does the pareto principle apply to countries?

Measure Names
- Running of Costumers
- Running of TotalProd..

Pareto Chart Countries

Conclusions – Countries

Pareto chart – countries

The Pareto chart shows that the percentage of customers from every country and the percentage of products purchased from every country is almost identical, **no significant difference for different countries when it comes total number of products sold per customer.**
for example – 12% of the customers comes from Canada, and 12% of the products are sold to customers from Canada.

3 countries out of 7 (there are only 3 customers from Mexico so I did not count it) which is 43% (3/7) are responsible for 77% of the total number of products sold, so **pareto principle does not apply to countries**.

Number of Customer Compared to AVG Number of Products Purchased by Costumer for Every Country

There is small variance in the average number of products per customer for different countries.

Campaigns Performance in Different Countries

13% difference between the country that had the **highest** campaigns acceptance (Spain) and the country that had the **lowest** campaign acceptance (India)

6.6 Platforms
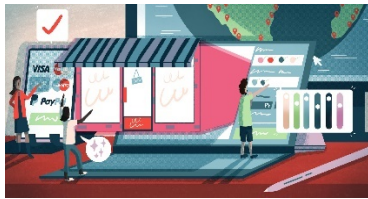
I would like to analyze the different platforms customers can use to make purchases.

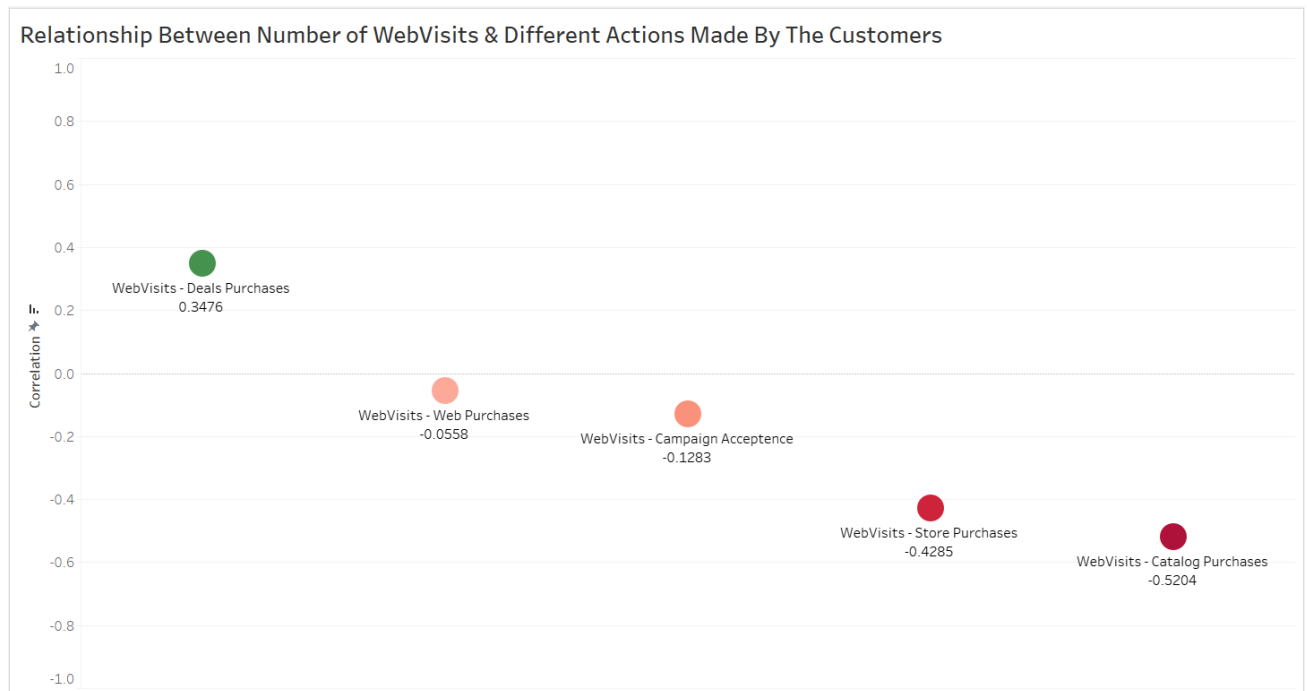### Countries & Platforms

Rational:

1. Do customers from different countries use different platforms to make purchases?

Website Visits Effects

Rational:

1. How does the number of times a customer visits the website effects his purchasing behavior?

Relationship Between Number of WebVisits & Different Actions Made By The Customers

Conclusions – Countries

Website Visits Effects

Moderate positive linear correlation between number of website visits & number of "deals" purchases;

Moderate negative linear correlation between number of website visits & number of "store"/"catalog" purchases

According to the data customer that use the website will likely make more "deals" purchases, perhaps it worth highlighting deals at the website.

Countries & Platforms

No meaningful difference in platform usage for customer from different countries.