

Problem Statement: To analyse the customer personas within the company and study the spending patterns of customers.

AcceptedCmp1 - 1 if customer accepted the offer in the 1st campaign, 0 otherwise
AcceptedCmp2 - 1 if customer accepted the offer in the 2nd campaign, 0 otherwise
AcceptedCmp3 - 1 if customer accepted the offer in the 3rd campaign, 0 otherwise
AcceptedCmp4 - 1 if customer accepted the offer in the 4th campaign, 0 otherwise
AcceptedCmp5 - 1 if customer accepted the offer in the 5th campaign, 0 otherwise
Complain - 1 if customer complained in the last 2 years
DtCustomer - date of customer's enrolment with the company
Education - customer's level of education
Marital - customer's marital status
Kidhome - number of small children in customer's household
Teenhome - number of teenagers in customer's household
Income - customer's yearly household income
MntFishProducts - amount spent on fish products in the last 2 years
MntMeatProducts - amount spent on meat products in the last 2 years
MntFruits - amount spent on fruits products in the last 2 years
MntSweetProducts - amount spent on sweet products in the last 2 years
MntWines - amount spent on wine products in the last 2 years
MntGoldProds - amount spent on gold products in the last 2 years
NumDealsPurchases - number of purchases made with discount
NumCatalogPurchases - number of purchases made using catalogue
NumStorePurchases - number of purchases made directly in stores
NumWebPurchases - number of purchases made through company's web site
NumWebVisitsMonth - number of visits to company's web site in the last month
Recency - number of days since the last purchase

Dimensions:

AcceptedCmp1
AcceptedCmp2
AcceptedCmp3
AcceptedCmp4
AcceptedCmp5

Complain

Marital

Education

DtCustomer

Teenhome

Measures:

MntFishProducts
MntMeatProducts
MntFruits
MntSweetProducts
MntWines
MntGoldProds
NumDealsPurchases
NumCatalogPurchases
NumStorePurchases

NumWebPurchases - number of purchases made through company's web site
NumWebVisitsMonth - number of visits to company's web site in the last month

Income

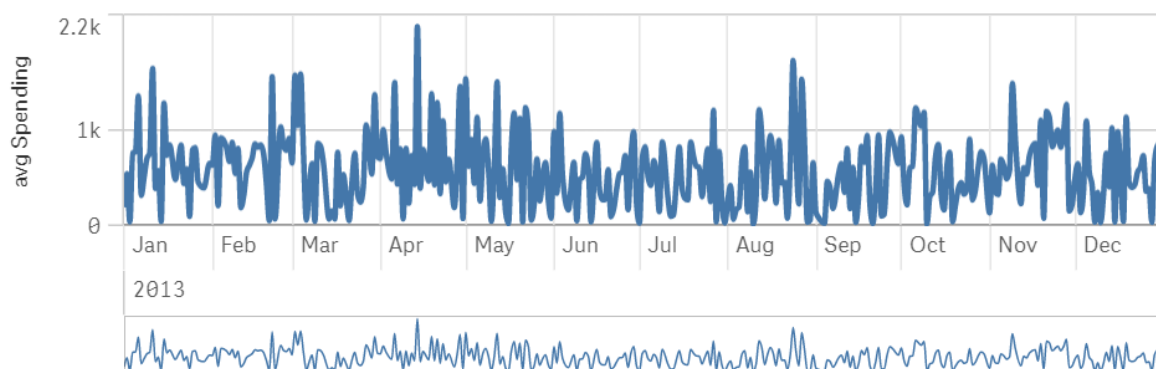
Recency

Questions:

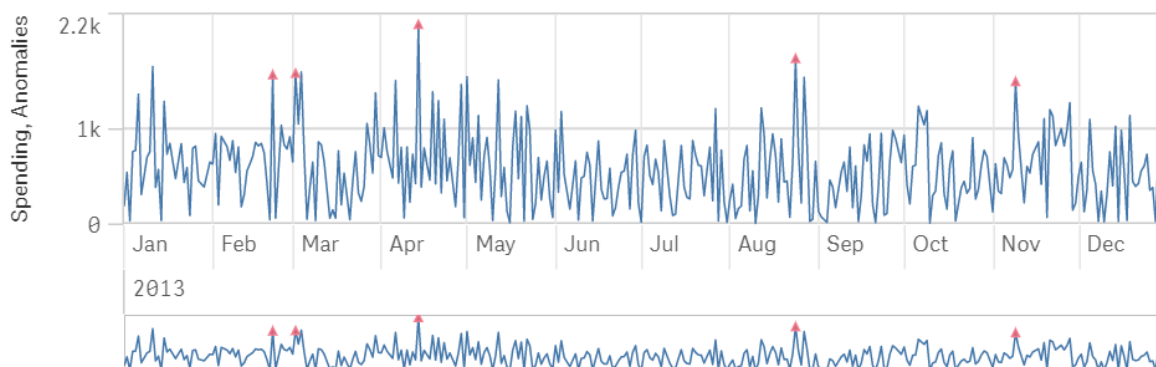
Customers enrolled in which month Spent the most amount of money?

Customers enrolled in April and August generated anomalies with respect to spending.

avg Spending over Dt_Customer



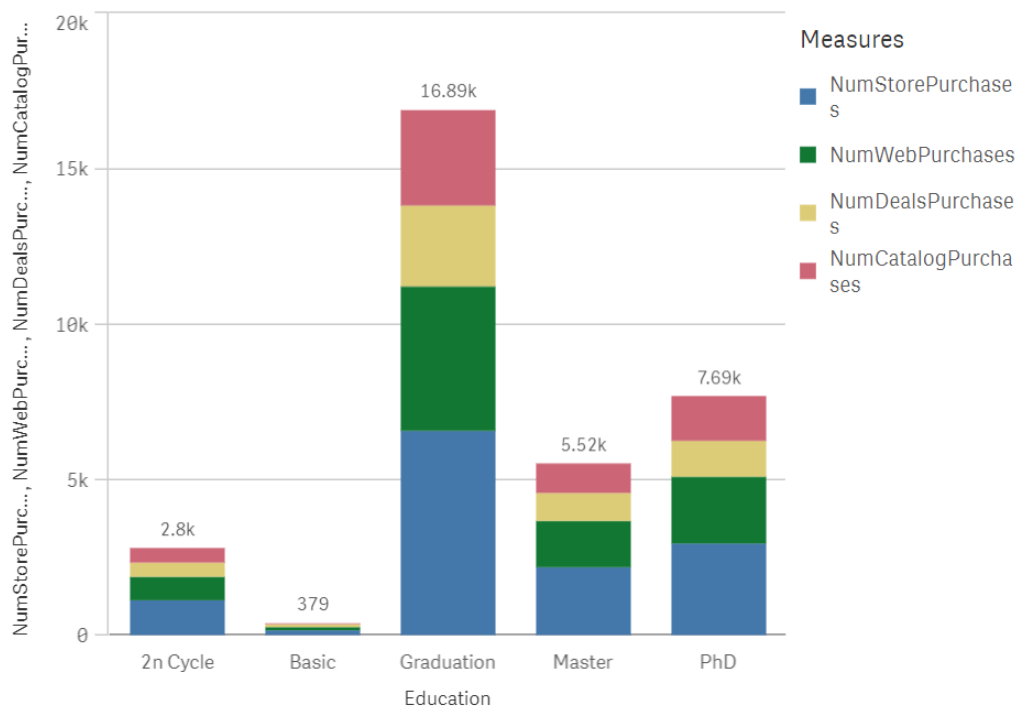
Spikes detected for avg Spending values over Dt_Customer



Which Education Level Spends is interested in what type of point of sale?

PHD and graduation customers tend to spend on other avenues rather than stores as the number of web purchases is comparatively high. Because of the lack of time they order online more. The most number of purchases are made by graduation students.

Comparison of NumStorePurchases, NumWebPurchases, NumDealsPurchases, and ...

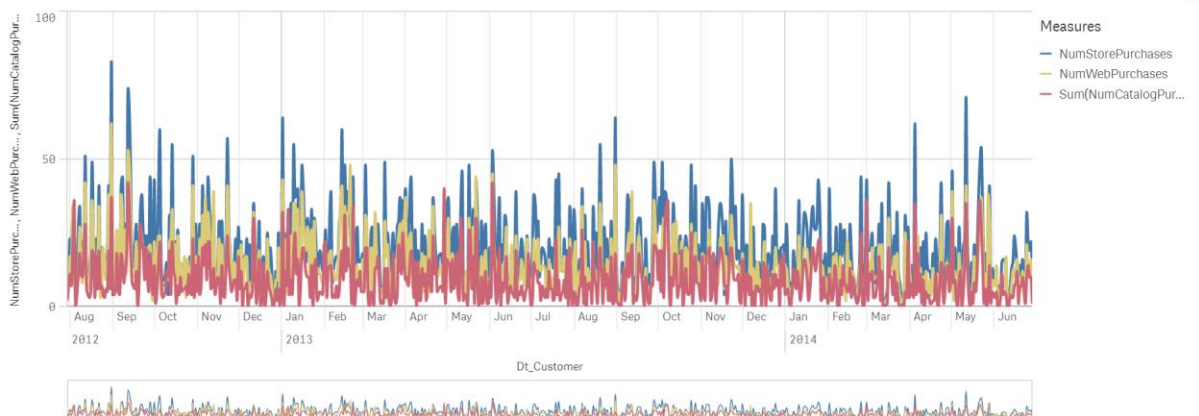


Compare the different point of sales.

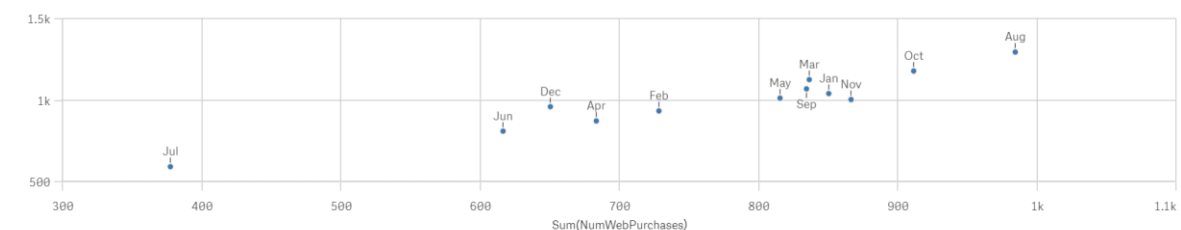
All sales are generally higher during the August and September of year 2012 with store purchases producing a record figure. All in all, the gap between store purchases and other point of sales is decreasing as time passes by and in the recent years.

My new sheet (2)

NumWebVisitsMonth, NumStorePurchases, and NumWebPurchases by Dt_Customer

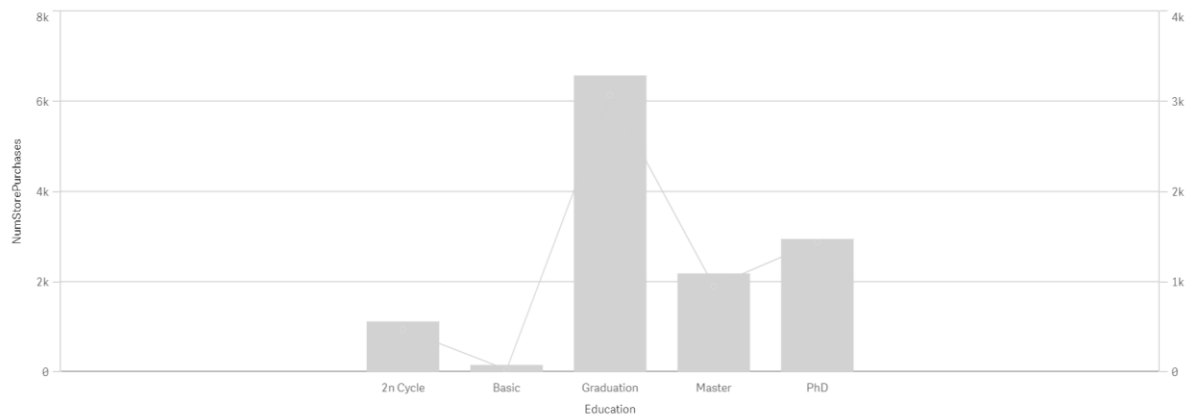


Positive relation between web visits and web purchases



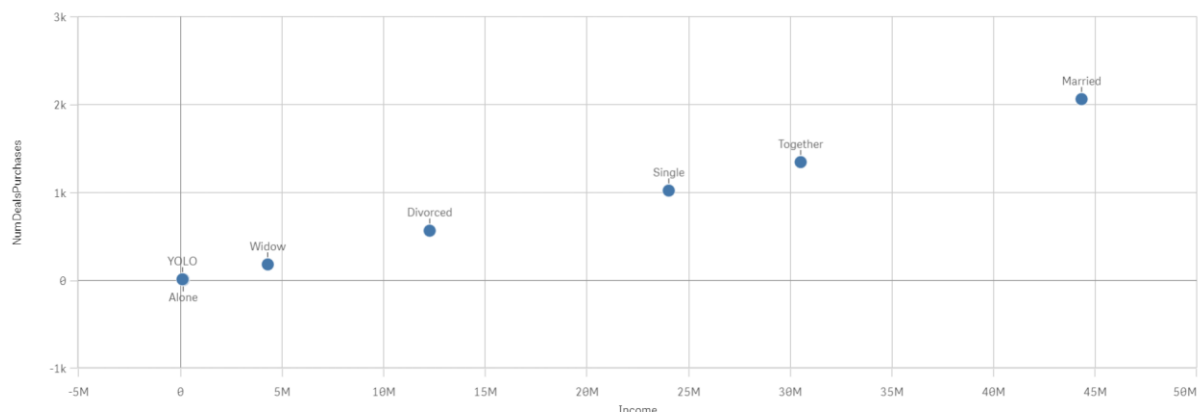
Trend for Store and catalogue Purchases remains the same

Comparison of NumStorePurchases and NumCatalogPurchases for Education

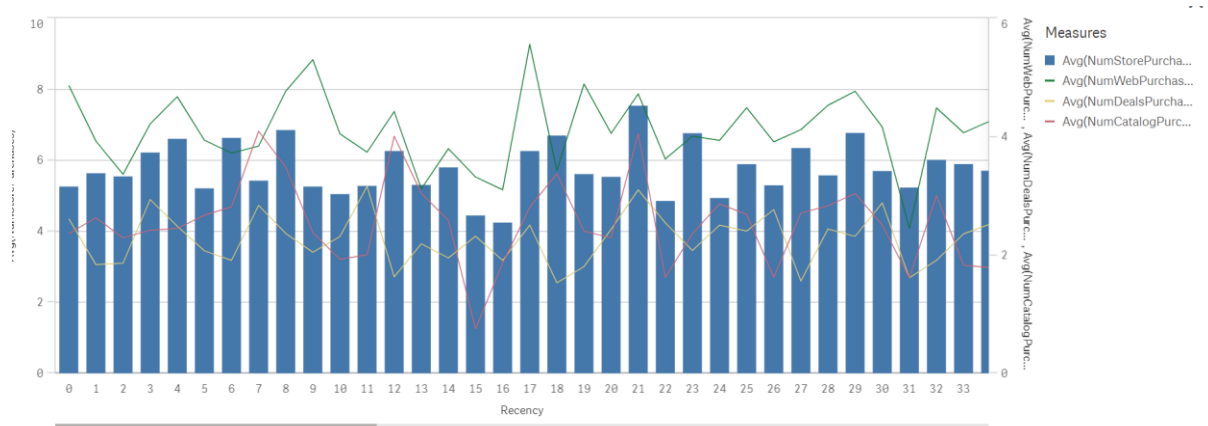


Married People had the most income and purchased the most deals. There is a positive correlation between income and deals purchased

Comparison of Income and NumDealsPurchases for Marital_Status

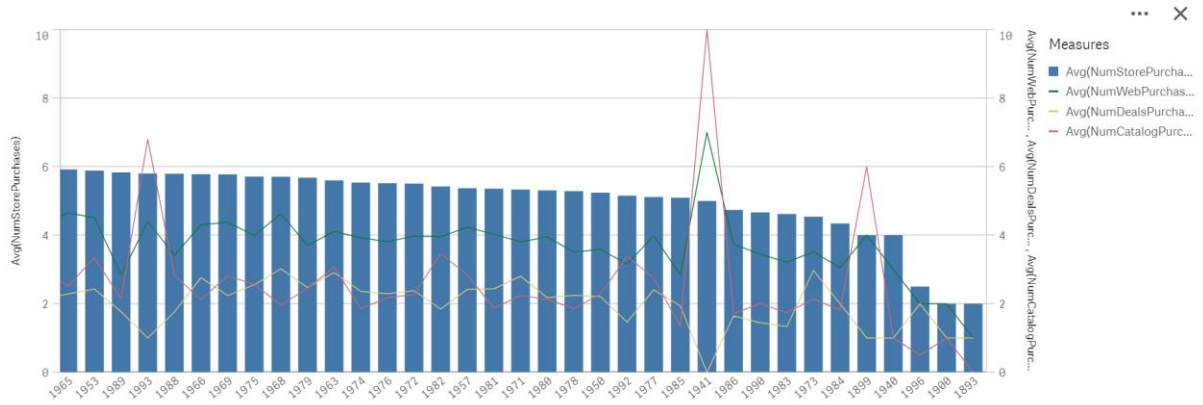


Recency does not have an effect on spending. Web purchases have been on the top.



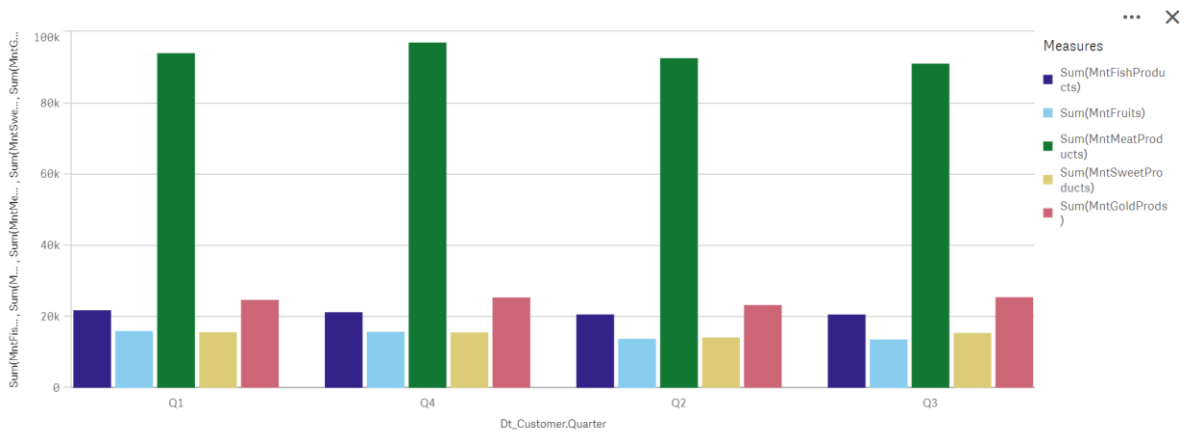
People born in 1941 made a lot of purchases from catalogue

My new sheet (4)



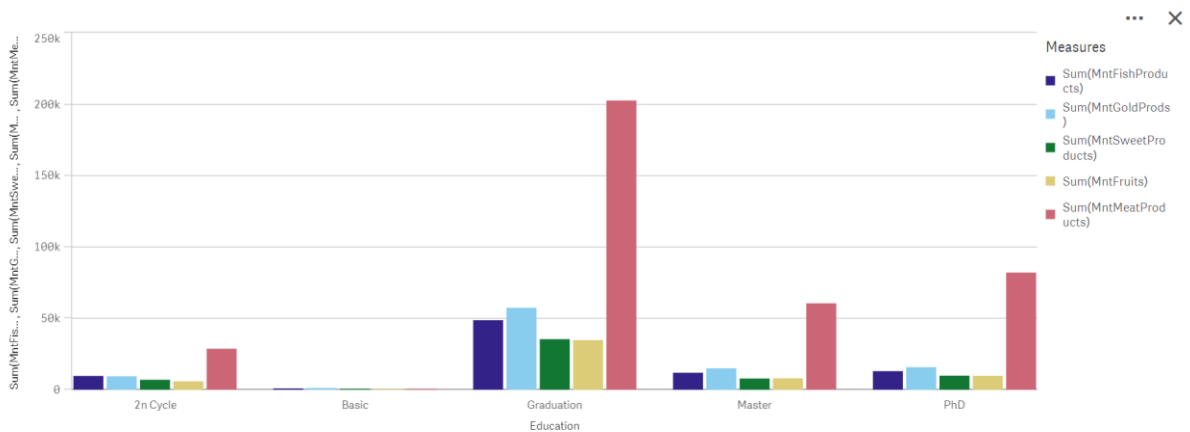
Amount spent on meat products has been the most in all quarters.

my new sheet (4)



Graduation students spent more on meat products than all others.

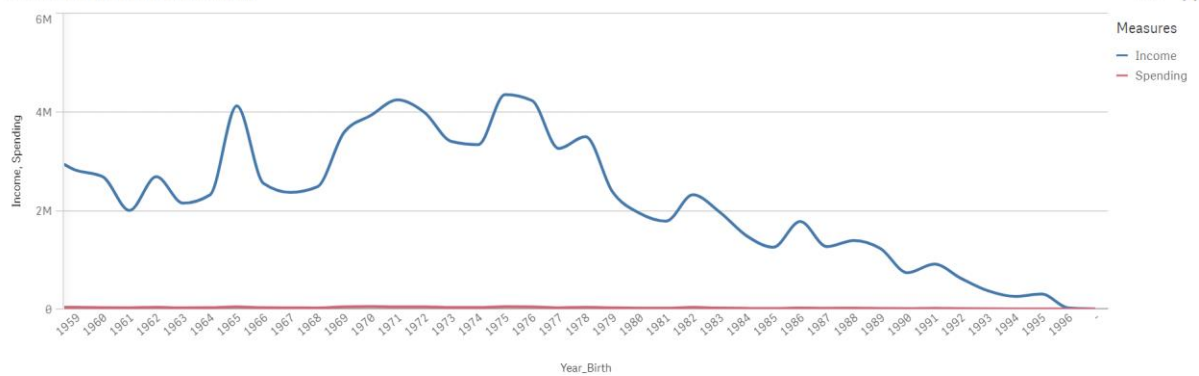
My new sheet (5)



People born recently have experienced an decrease in income levels, however the spending has almost remained the same for people born in almost a decade.

My new sheet (6)

Income and Spending by Year_Birth



Families with no teenagers at home have the highest spending. The pattern remains the same.

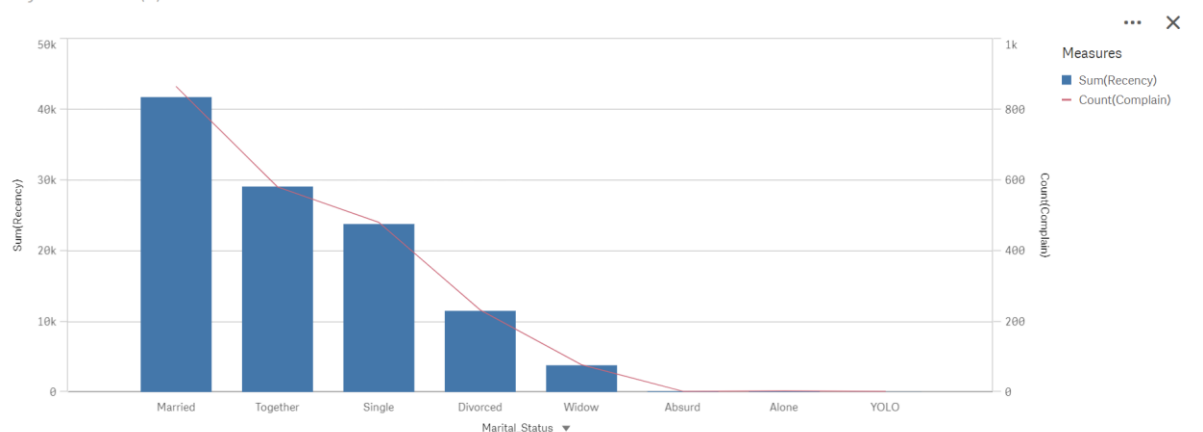
my new sheet (8)

Comparison of MntMeatProducts, MntFruits, MntWines, and MntSweetProducts for Teenhome



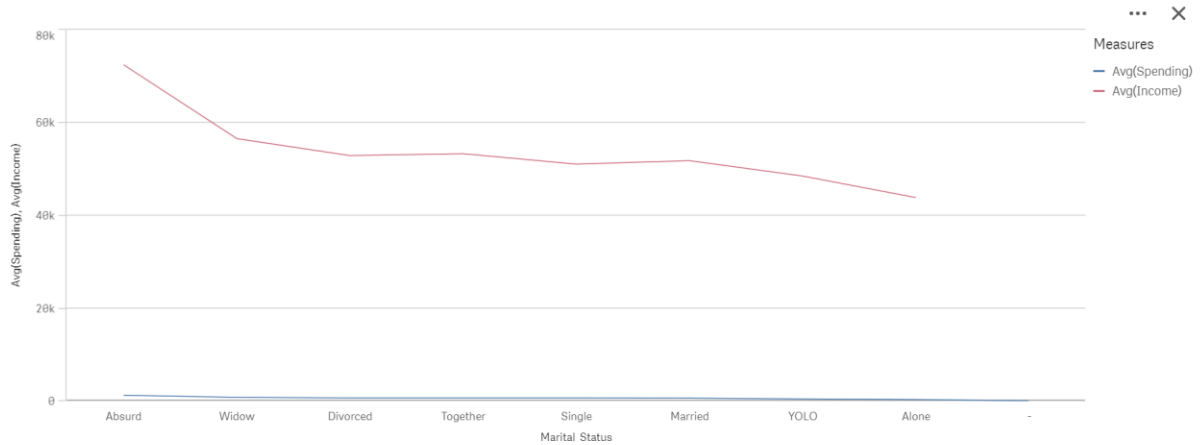
There is a positive correlation between the recency and complaints.

My new sheet (8)



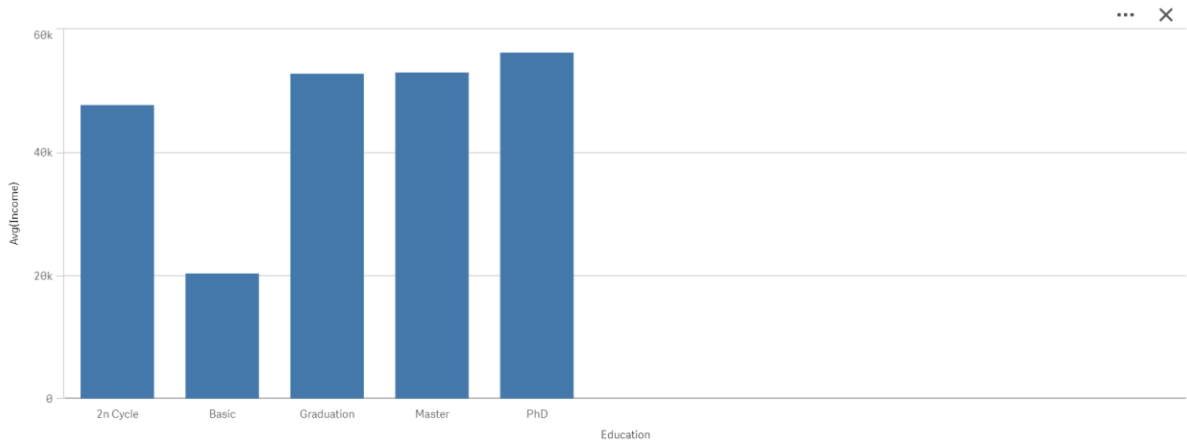
Absurd people have the highest income followed by widowed and divorce. Spending has been almost the same for every type hence income does not effect spending.

My new sheet



PHD Customers have the highest income.

My new sheet



The customers who have not accepted any camaigns spend the highest amount followed by the ones who accepted campaign 4. Campaign 4 was the most successful and most of the orders have come without campaigns.

AcceptedCmp5	Q	Sum(Spending)	AcceptedCmp2	Q	AcceptedCmp3	Q	AcceptedCmp4	Q	AcceptedCmp1	Q
Totals		1356988								
	0	849060		0		0		0		0
	0	69853		0		0		1		0
	0	68352		0		0		0		1
	0	64928		0		1		0		0
	0	16489		0		0		1		1
	0	12154		0		1		0		1
	0	9301		1		0		1		0
	0	2756		1		0		1		1
	0	577		1		0		0		0
	0	92		1		1		0		0
	1	95784		0		0		0		0
	1	39730		0		0		1		1
	1	34865		0		0		0		1
	1	34466		0		0		1		0
	1	22576		0		1		0		1
	1	12080		1		0		1		1
	1	9501		0		1		0		0

Wines have the highest spending followed by meat. The more the campaigns people accept, the least likely they are to spend more. There is a negative correlation between spending and number of campaigns accepted.

Sum(MntFish...	Sum(MntF...	Sum(MntMeat...	Sum(Mnt...	Sum(MntGo...	Sum(MntSwe...	Accepted...	Q	Accepted...	Q	Accepted...	Q	Accepted...	Q	Accepted...	Q	Sum(Spen...
84057	58917	373968	680816	98609	60621											1356988
211	56	1085	4374	441	60	0		1		0		1		1		6227
300	310	2579	5327	601	384	0		0		1		0		1		9501
848	639	7567	23668	1125	619	0		0		0		1		1		34466
2186	1568	13081	48543	2959	1516	0		0		0		1		0		69853
3395	2436	13878	35617	7517	2085	0		0		1		0		0		64928
5070	3753	31730	46193	4740	4298	0		0		0		0		1		95784
58550	41961	239432	397792	69239	42086	0		0		0		0		0		849060
80	89	1722	2296	203	48	1		1		1		0		1		4438
153	55	348	2089	53	58	1		1		0		1		0		2756
449	337	2182	8138	415	559	1		1		0		1		1		12080
881	517	3714	9836	869	672	1		0		0		1		0		16489
1074	616	4323	4729	808	604	1		0		1		0		0		12154
1182	1103	6116	11493	1425	1257	1		0		1		0		1		22576
1915	1385	12454	20681	1687	1608	1		0		0		1		1		39730
2307	1535	9865	17729	1687	1742	1		0		0		0		1		34865
5187	2405	21720	32248	3960	2832	1		0		0		0		0		68352
0	0	0	0	0	0	-		-		-		-		-		0