



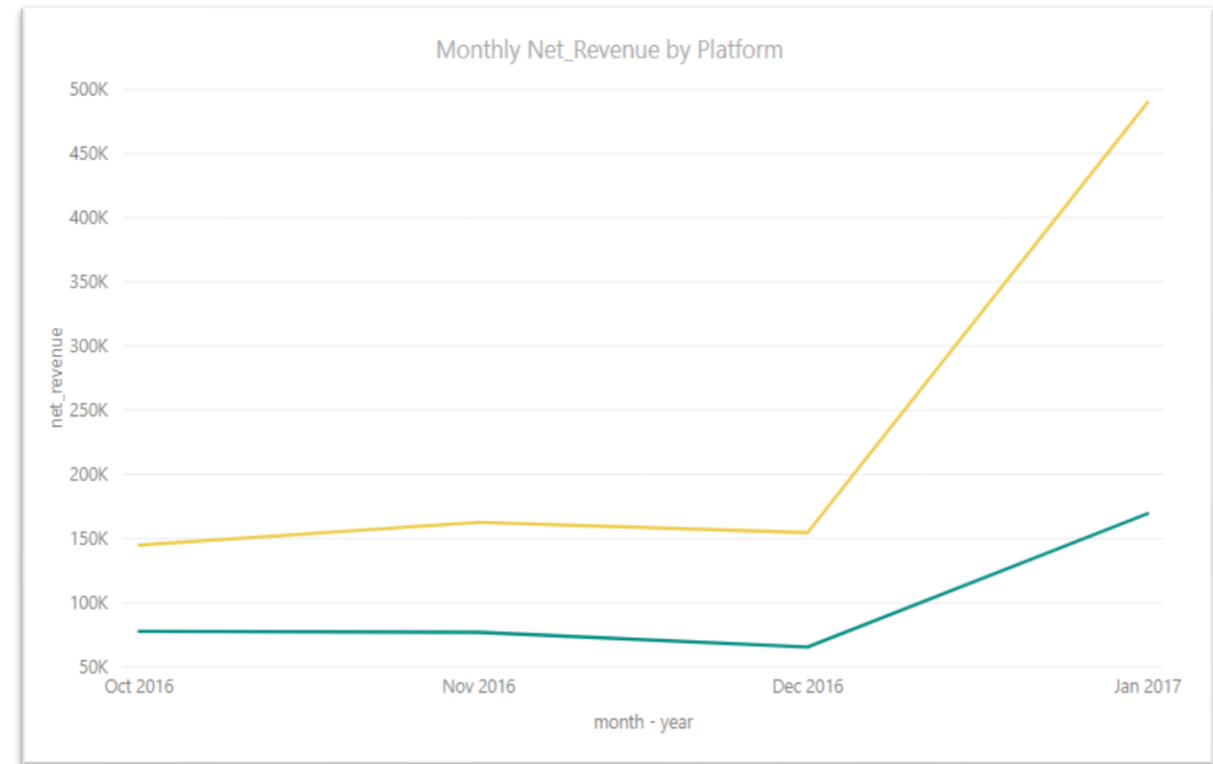
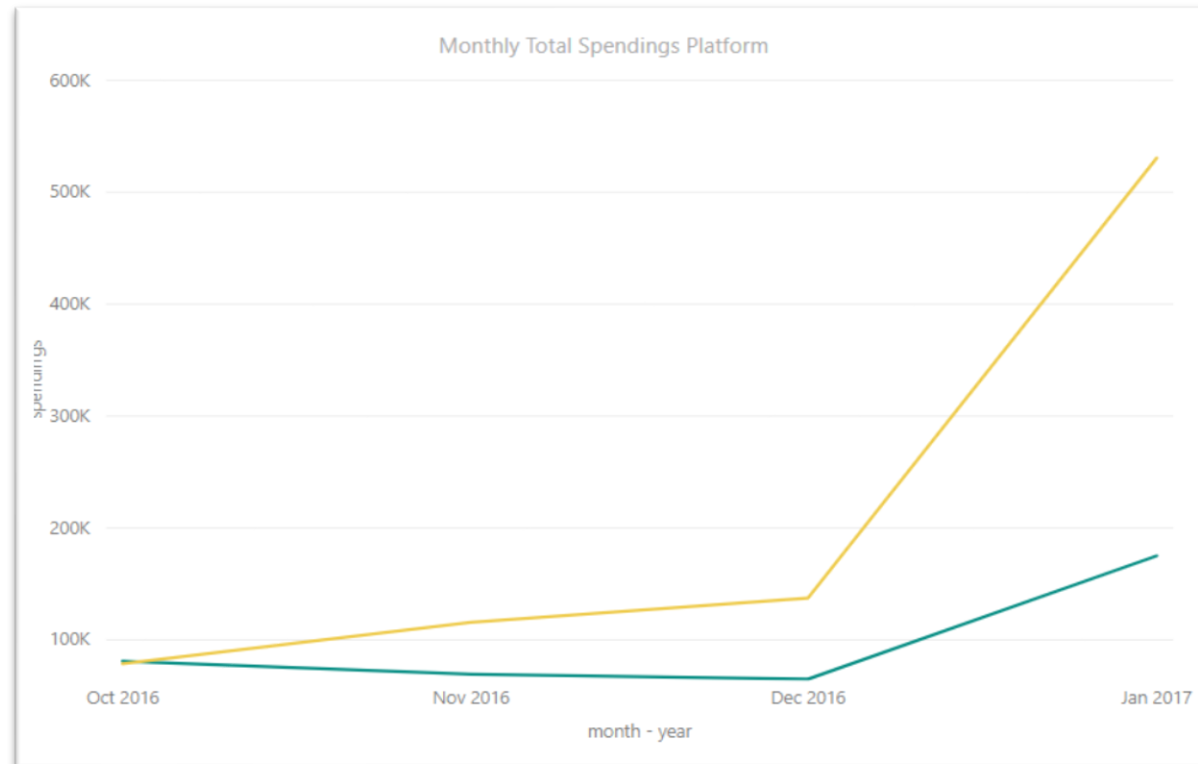
DATA ANALYSTS CASE

INTERVIEW CASE ANALYSIS FOR 8FIT

BY

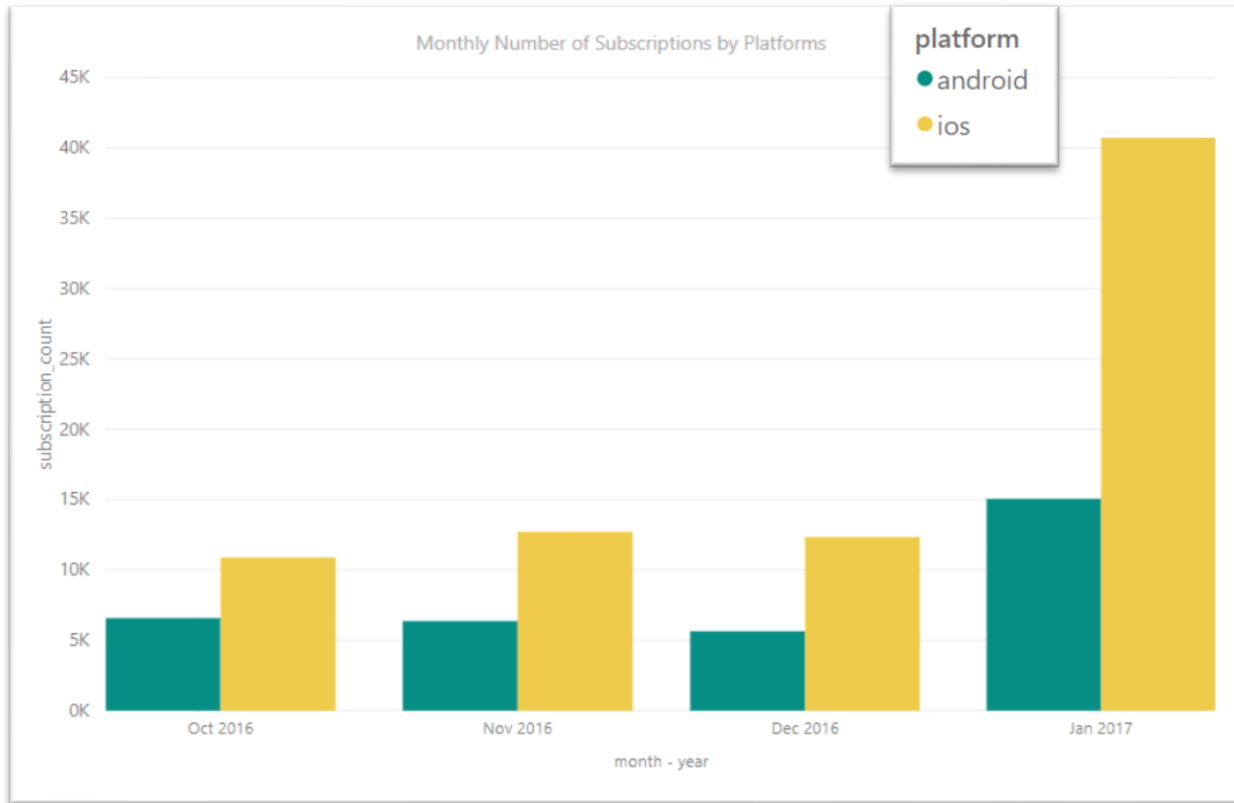
SAMUEL ATSEM

1. I need to understand where to invest more money. I'm curious if you can help me make a decision based on your findings. Do you think it's ios or android?

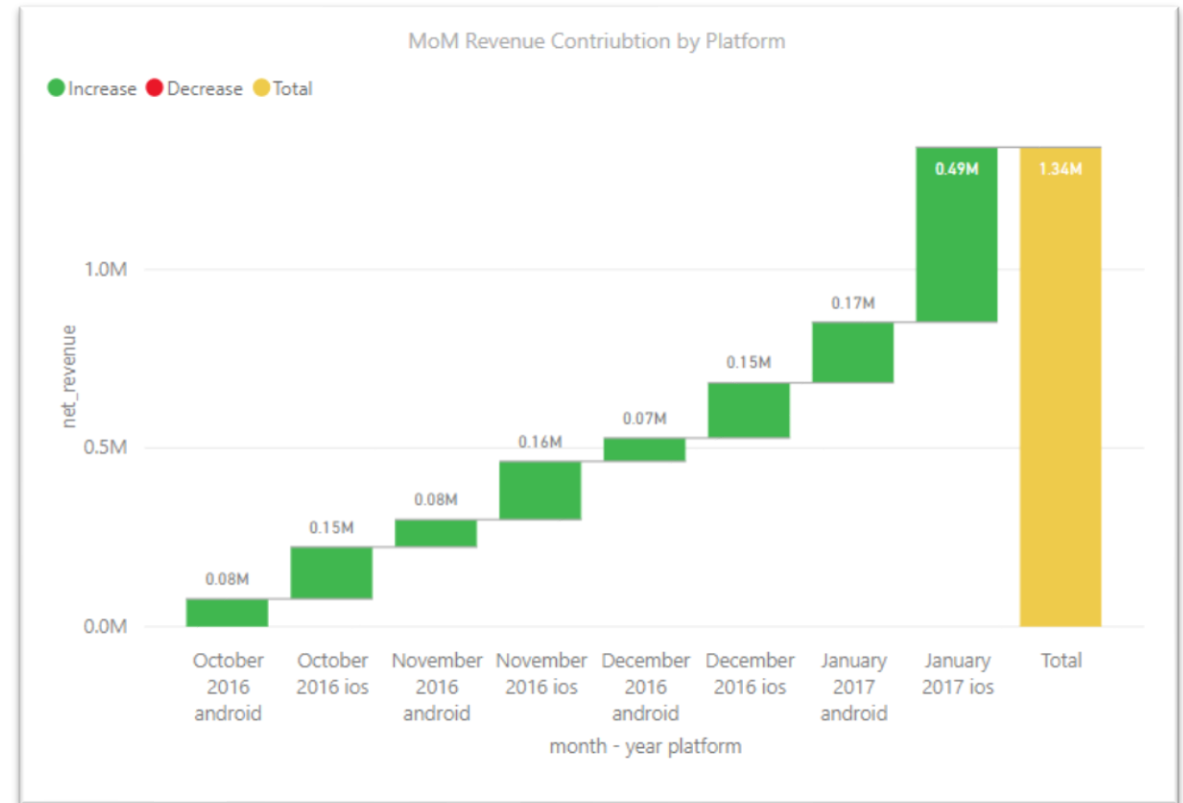


It's clear that an increase in spendings will result to an increase in revenue as seen from Oct – Dec 2016. However, the result for Jan 2017 shows a slight loss in revenue against the amount spent.

1. I need to understand where to invest more money. I'm curious if you can help me make a decision based on your findings. Do you think it's ios or android?



We also see a consistent increase in number of subscriptions coming from the IOS platform MoM. With the increased spend in Jan 2017 resulting to a spike also in number of subscriptions.



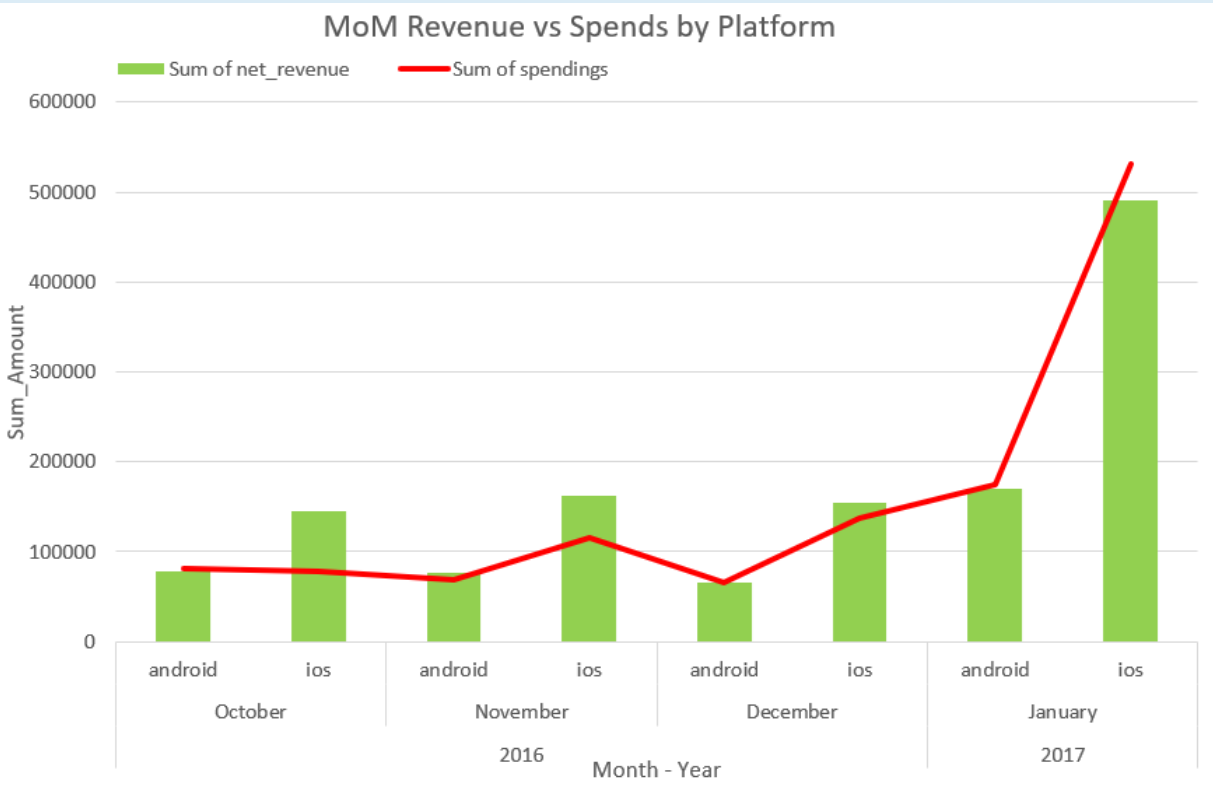
We can see an increase in revenue of IOS from 0.15m in Dec 2016 to 0.49m in Jan 2017 as a result of increased spend. The IOS platform MoM result has recorded a steady growth in revenue.

Recommendation

Based on the results, it can be clearly seen that IOS have the highest number of Subscriptions which are resulting in high volume of revenue as compare to Android platform. Although, the Difference between Net Revenue less Spending is Negative for the Android platform that means there is clearly a Loss.

IOS is profiting so, I will definitely recommend more investment in IOS.

Platform	Sum of Net_Revenue	Sum of Spendings	Diff	Sum of Subscription Count
Android	€ 389,706.25	€ 390,595.84	€ -889.59	33,645.00
IOS	€ 952,509.86	€ 862,532.09	€ 89,977.77	76,655.00
Grand Total	€ 1,342,216.11	€ 1,253,127.93	€ 89,088.18	110,300.00



Other Observation

REVENUE

The cost per revenue is better for IOS. This means, if you want ROI, IOS is a better choice, but not by a lot against the Android platform (0.9 vs 1).

SUBSCRIPTION

For subscriptions, both IOS and Android cost almost the same but IOS edging lower. Cost per subscription is 11.61 for Android and 11.25 in IOS.

Platform	Cost_per_Revenue	Cost_per_Subscription
Android	€ 1.00	€ 11.61
IOS	€ 0.91	€ 11.25

In essence, more spending translate to more revenue and subscription, so, the platform with better ROI is the IOS and should get more investments.

2. Aside from that I'm also curious if there's specific marketing channels we should be aiming for to get better results? I'm currently thinking that the channel with ID 4 looks promising.

marketing_channel_id	subscription_count	net_revenue	spendings	Diff	ROI % - spending	ROI % - subscriptions
2	36567	421,150.34	638,462.97	-217,312.63	-0.34	-0.17
1	35338	487,998.24	0.00	487,998.24	Infinity	0.07
18	12895	125,850.96	2,320.82	123,530.14	53.23	0.10
4	5599	60,664.93	122,432.61	-61,767.68	-0.50	-0.09
6	3281	57,791.19	111,767.21	-53,976.02	-0.48	-0.06
3	2666	28,558.86	94,534.38	-65,975.52	-0.70	-0.04
9	1017	8,896.08	24,784.52	-15,888.44	-0.64	-0.06
13	751	7,328.40	0.00	7,328.40	Infinity	0.10
12	554	5,353.71	0.00	5,353.71	Infinity	0.10
11	293	4,705.66	0.00	4,705.66	Infinity	0.06
10	56	1,509.59	2,641.44	-1,131.85	-0.43	-0.05
7	31	524.86	0.00	524.86	Infinity	0.06
14	24	230.97	0.00	230.97	Infinity	0.10
0	3	41.99	0.00	41.99	Infinity	0.07
16	1	0.00	500.00	-500.00	-1.00	0.00
5			255,914.95	-255,914.95	-1.00	
8			330.89	-330.89	-1.00	
Total	110502	1,347,427.64	1,253,689.79	93,737.85	0.07	1.18

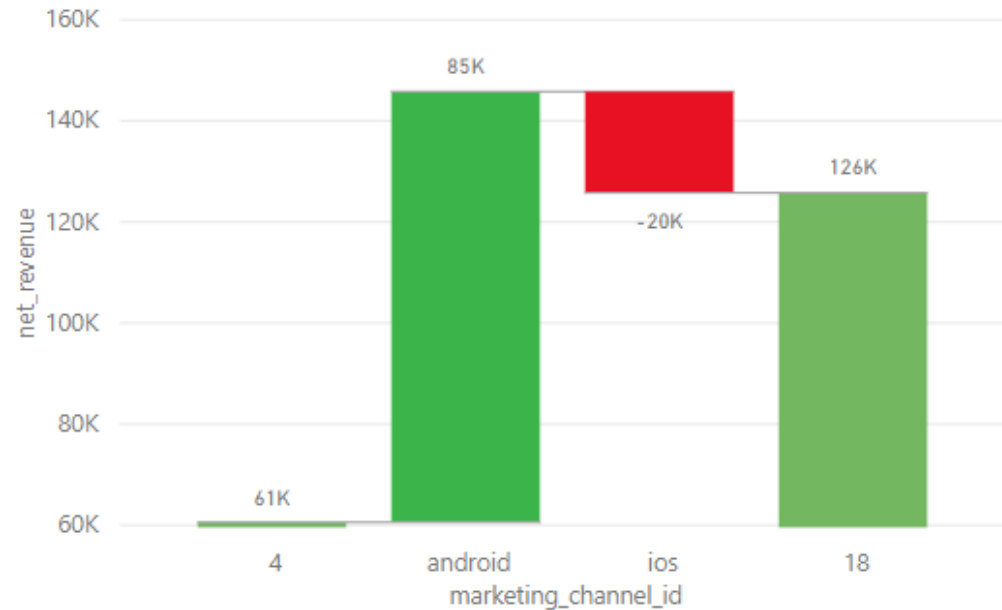
Based on the result, there's a disagreement that the marketing channel ID 4 will be promising. ID 4 records a low number of subscriptions resulting in low revenue compared to other IDs considering it is the third highest spending channel.

If we cross compare revenue with spending we can clearly see that there are more spending than the revenue returned from ID 4 and ROI for revenue and subscription is -50% and -9% respectively. As per the data this channel is not promising.

Analytics – ID 4 vs ID 18

net_revenue by marketing_channel_id and platform

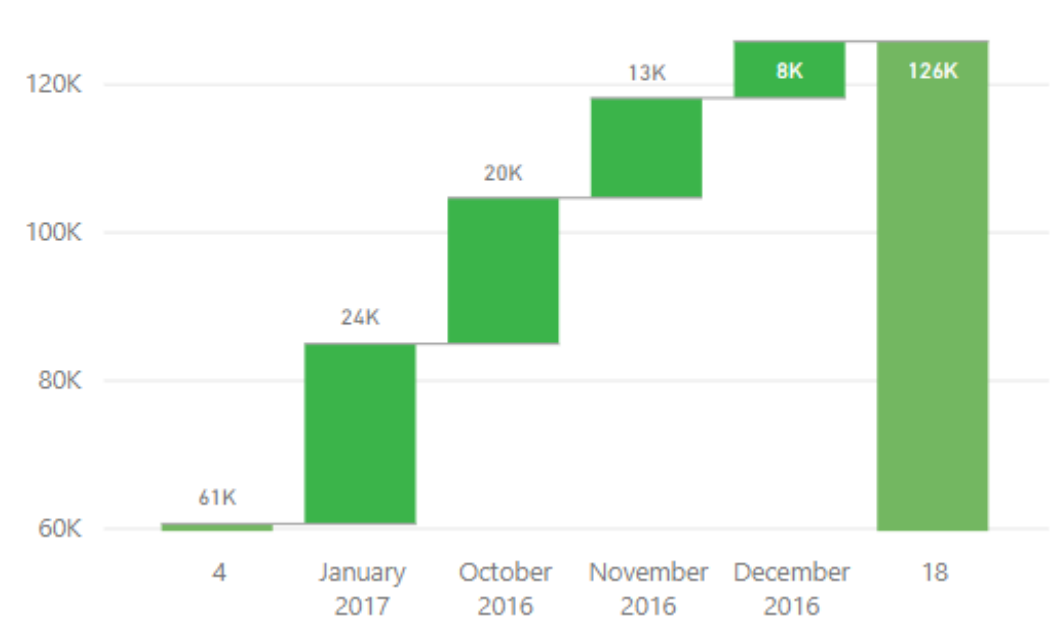
● Increase ● Decrease ● Total ● Other



IOS platform accounted for the majority of the decrease among platform, offsetting the increase of Android. The relative contribution made by IOS changed the most.

net_revenue by marketing_channel_id and month - year

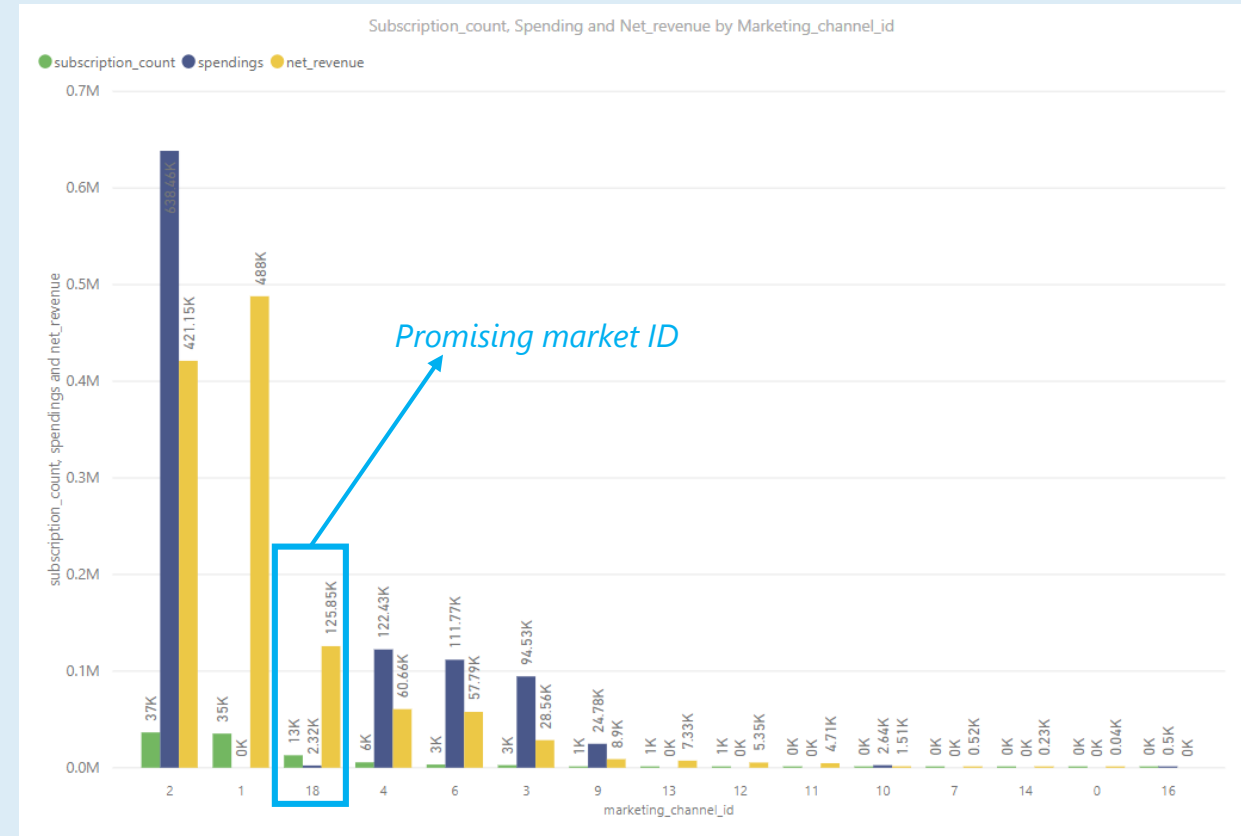
● Increase ● Decrease ● Total ● Other



Oct 2016 and Jan 2016 accounted for majority of the decrease among month -year. The relative contribution made by Oct & Jan affected the growth and has not shown a consistent promising data.

Recommendation

The marketing ID 2 channel has brought the highest number of subscriptions irrespective of Revenue and Spending figures, however, Channel ID 1 also have the second highest subscription and the highest revenue but there are no spending, which may be a data error or simply organic users.



So the Best option to go with is marketing ID18, it has good number of subscriptions along with positive output / Profit between revenue and spending net off.

OTHER CHANNELS THAT LOOK MORE PROMISING

Channel ID

18

- Has a very high return rate of 5,324% in revenue and 10% in number of subscription.
- Considering it's the third lowest spending channel it has the bigger growth impact.

Channel ID

1

- This channel contributed the largest amount in revenue without spend.
- This channel has 35,338 number of subscription hence and with zero spending.
- It also has a 7% ROI on subscription.

Channel ID

13

- Revenue of 7,328.
- This channel has a 751 number of subscription hence and with zero spending.
- It also has a 10% ROI on subscription.

Channel ID

12

- Revenue of 5,353.
- This channel has a 554 number of subscription hence and with zero spending.
- It also has a 10% ROI on subscription.

Based on the data this marketing channel is highly promising and looks promising.

I consider these channel organic as no spending was done yet there was very high revenue generation and number of subscriptions.

3. What are your thoughts? Looking further into the data at hand it looks like UK (United Kingdom) would be a good investment. Do you agree?

Countries	Total Net Revenue	Total Spending	Diff	Total Subscriptions	Subscription %
US	€ 545,540.67	€ 555,926.04	€ -10,385.37	43,965	50.06%
CA	€ 102,881.40	€ 117,898.81	€ -15,017.41	8,548	9.73%
CH	€ 73,090.17	€ 58,369.37	€ 14,720.80	4,237	4.82%
AU	€ 70,181.21	€ 60,105.35	€ 10,075.86	5,065	5.77%
FR	€ 63,039.66	€ 43,175.97	€ 19,863.69	4,874	5.55%
ES	€ 56,683.65	€ 60,487.75	€ -3,804.10	5,770	6.57%
GB	€ 48,695.75	€ 38,620.10	€ 10,075.65	5,418	6.17%
MX	€ 45,117.76	€ 44,408.28	€ 709.48	5,131	5.84%
AR	€ 40,262.13	€ 21,296.31	€ 18,965.82	2,693	3.07%
CL	€ 32,504.93	€ 19,529.41	€ 12,975.52	2,117	2.41%
Grand Total	€ 1,077,997.34	€ 1,019,817.39	€ 58,179.95	87,818	100.00%

This Data Table is Showing Top 10 Countries with Highest Revenue. As per the Data GB (UK) is a good investment Zone that holds 6.17% Share of Subscriptions in the Top 10 Group and Difference is showing a positive out put / Profit. But, France (FR) would be the good idea to go with, because by holding only 5.55 % Subscriptions of the group 0.62% less then GB is generating the highest profit in the group. So it will be a good idea to go with FR instead of GB.

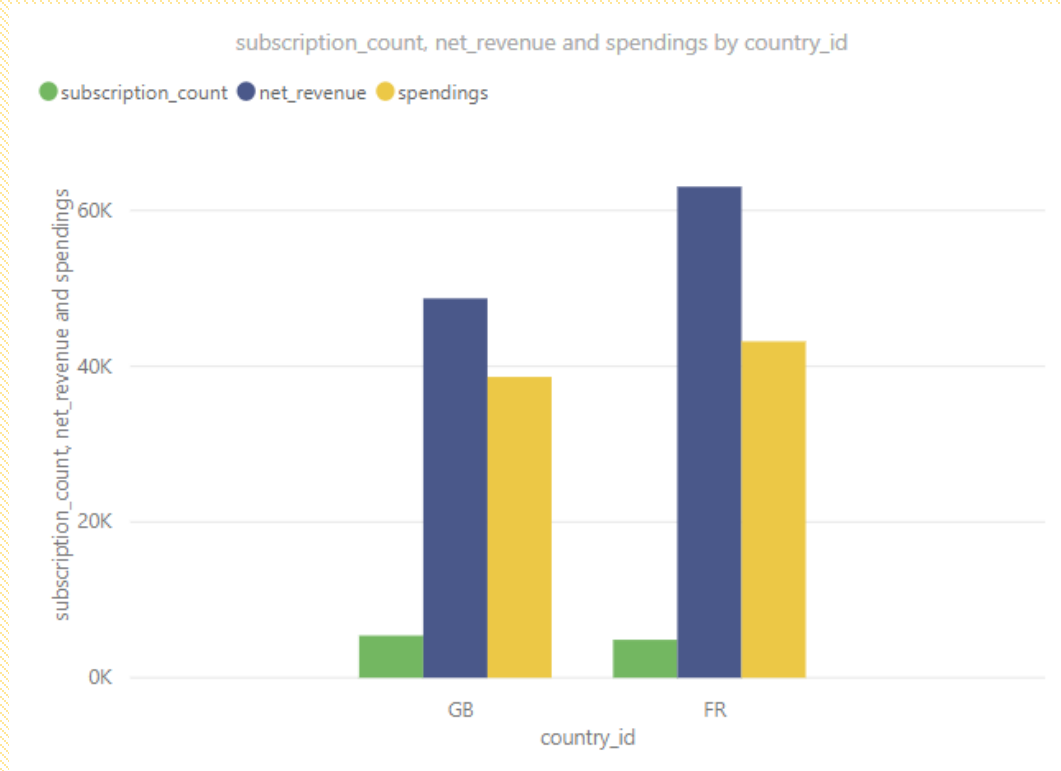


US does have the highest revenue, but its not profiting and 50% of the Subscription share showing the tough competition with big market. So, France is the Best Option to go with, but GB is the second best there is no harm as long as the situation is profiting.

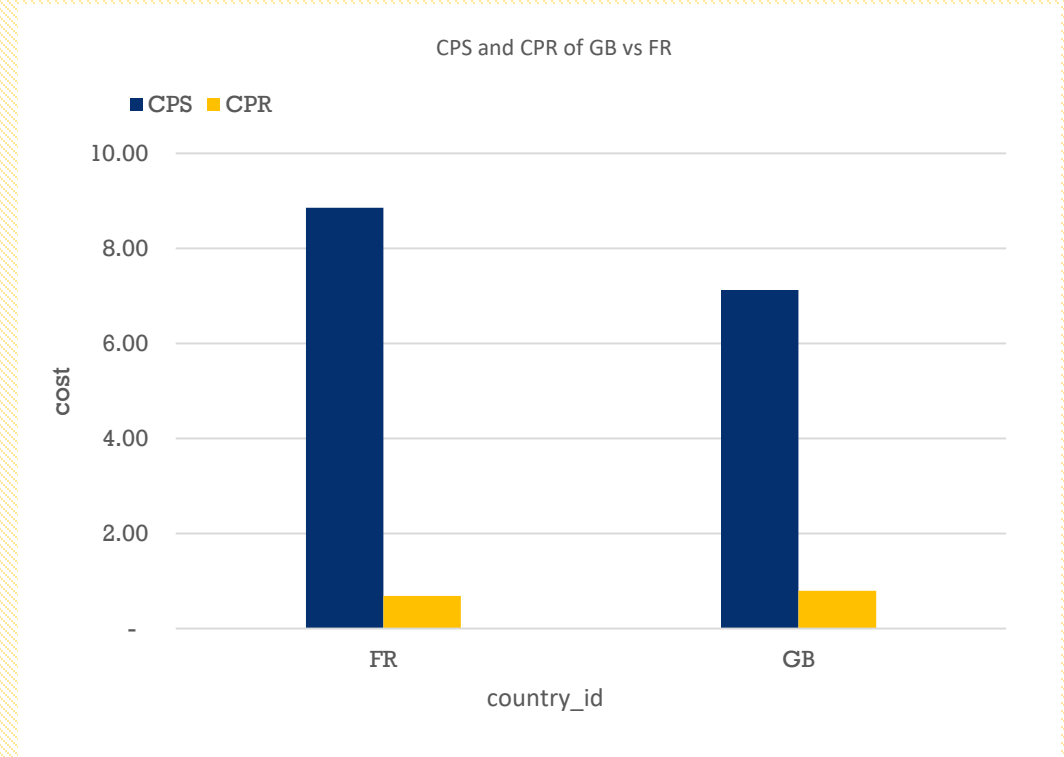


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Analytics – GB vs FR



The two countries have a profitable and good for investment. However, FR has more revenue even with a less number of subscriptions as against GB with a higher subscriptions and less revenue.



This shows clearly that FR has a lower Cost Per Revenue of 0.68 against GB 0.78 which clearly shows the prospect of a good investment. While FR Cost per Subscription is at 8.86 against GB which is lower at 7.13, this shows why GB has more subscriptions.

3. What are your thoughts? Looking further into the data at hand it looks like UK (United Kingdom) would be a good investment. Do you agree?

subscription_count, net_revenue and spendings by country_id



Though the data shows GB as a good location for investment but FR has a better supporting data to show it is better for investment.

Other Data Explorations and Challenges

The data shows that more spends equals more revenue and would always figure out the cause when there is a downward slope on the curve.

Could use gender to decide what kind of marketing campaign attracts more male or female.

I also observe that locations without revenue per day could be either as a result of promotional service/coupon.

Would be good to look out for effect on CA, US, CH as the record a high loss in Jan 2017 with high spending.

The data lacked a unique identifier (key) to link both subscription and spendings table.

I also notice a number of abnormalities between the two tables like marketing_channel_id, report_date, subscription_date as there were no unique identifier to match these dates.

A number of null fields and incomplete fields which in could be error in some cases.



THANK YOU