

Udacity

Marketing Analytics

Nanodegree Program
Project: Craft a Report

Objective Results

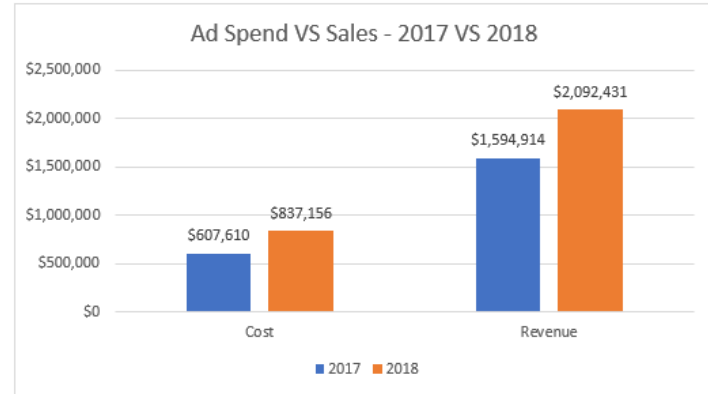
The objective of increasing sales by 30% on Black Friday 2018 against 2017 was met, since it attained an increase of 31%.

The objective of decreasing ad spend by 30% from Black Friday 2017 against 2017 was not met, as a value of 38% increase was the reported value.

The growth formulas are:

$\text{Cost}_{2018} / \text{Cost}_{2017} - 1$

$\text{Revenue}_{2018} / \text{Revenue}_{2017} - 1$

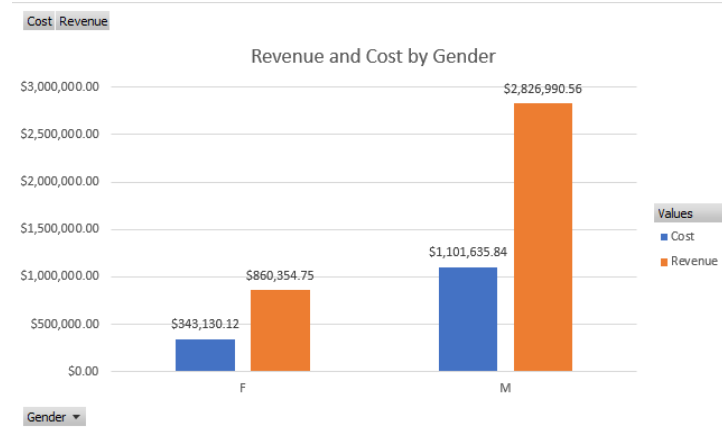


Year	Cost	Revenue
2017	\$607,610	\$1,594,914
2018	\$837,156	\$2,092,431
Evolution	38%	31%
Grand Total	\$1,444,766	\$3,687,345

Evaluate the Audience

Question: Which gender generated most sales and cost?

The male gender generated 76.25% and 76.67% of the Cost (1,101,636\$) and Revenue (2,826,991\$), respectively, more than women on both aspects.



Gender	Cost	Cost %	Revenue	Revenue %
F	\$343,130.12	23.75%	\$860,354.75	23.33%
M	\$1,101,635.84	76.25%	\$2,826,990.56	76.67%
Grand Total	\$1,444,765.96	100.00%	\$3,687,345.31	100.00%

Evaluate the Audience

Question: Who spend and contributed more to revenue by Gender and Age group?

The age range from 26 to 35 was the biggest, with revenue from men of 1,149,658\$.

The next best performers are the 18-25 year olds.



Age Range	Gender	Cost	Cost %	Revenue	Revenue %
18-25	F	\$76,529.54	5.30%	\$185,475.02	5.03%
	M	\$223,382.60	15.46%	\$581,659.79	15.77%
18-25 Total		\$299,912.14	20.76%	\$767,134.81	20.80%
26-35	F	\$126,378.70	8.75%	\$315,386.93	8.55%
	M	\$450,805.41	31.20%	\$1,149,658.40	31.18%
26-35 Total		\$577,184.11	39.95%	\$1,465,045.33	39.73%
36-45	F	\$64,954.64	4.50%	\$176,861.98	4.80%
	M	\$223,387.39	15.46%	\$564,809.24	15.32%
36-45 Total		\$288,342.04	19.96%	\$741,671.22	20.11%
46-50	F	\$39,881.84	2.76%	\$83,948.80	2.28%
	M	\$88,984.38	6.16%	\$218,190.41	5.92%
46-50 Total		\$128,866.22	8.92%	\$302,139.21	8.19%
51-55	F	\$27,941.57	1.93%	\$65,577.95	1.78%
	M	\$86,966.62	6.02%	\$199,603.17	5.41%
51-55 Total		\$114,908.18	7.95%	\$265,181.12	7.19%
55+	F	\$7,443.83	0.52%	\$33,104.07	0.90%
	M	\$28,109.45	1.95%	\$113,069.55	3.07%
55+ Total		\$35,553.27	2.46%	\$146,173.62	3.96%
Grand Total		\$1,444,765.96	100.00%	\$3,687,345.31	100.00%

Evaluate the Marketing

Question: Were our Marketing efforts were successful, ROI is a useful metric, calculated as:

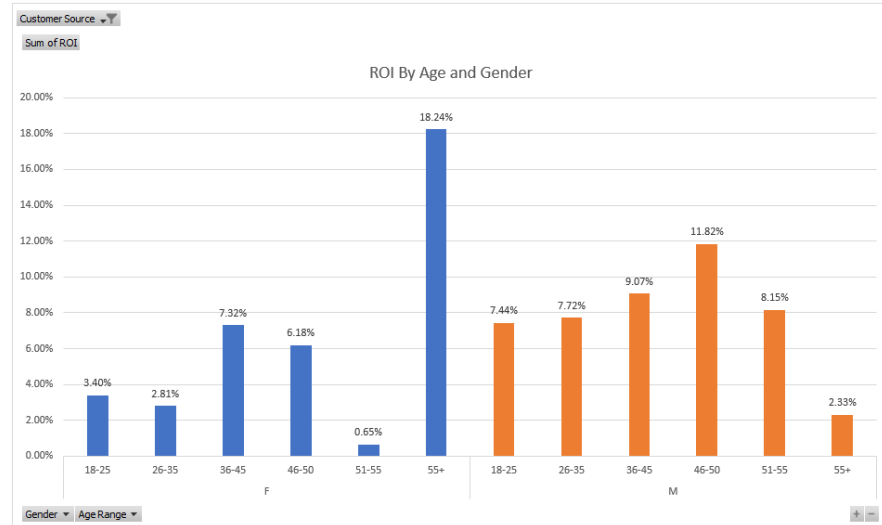
$(\text{Revenue} - \text{Cost}) / \text{Cost}$

It is 7.26%, which is positive for the paid channel, which is positive.

From the bar charts, it's possible to see that the highest ROI by age group and gender, were a little far way from the rest, which was 55+ for Females (18.24%), followed by 46-50 for males (11.82%).

Customer Source Paid

Cost	Revenue	Sum of ROI
\$1,444,765.96	\$1,549,620.54	7.26%

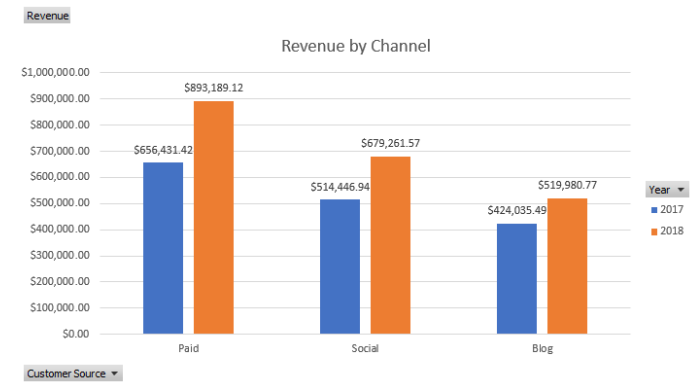


Evaluate the Marketing

Question: Which channel contributed most to sales?

We find that paid was the largest driver for both years, followed by Social and Blog.

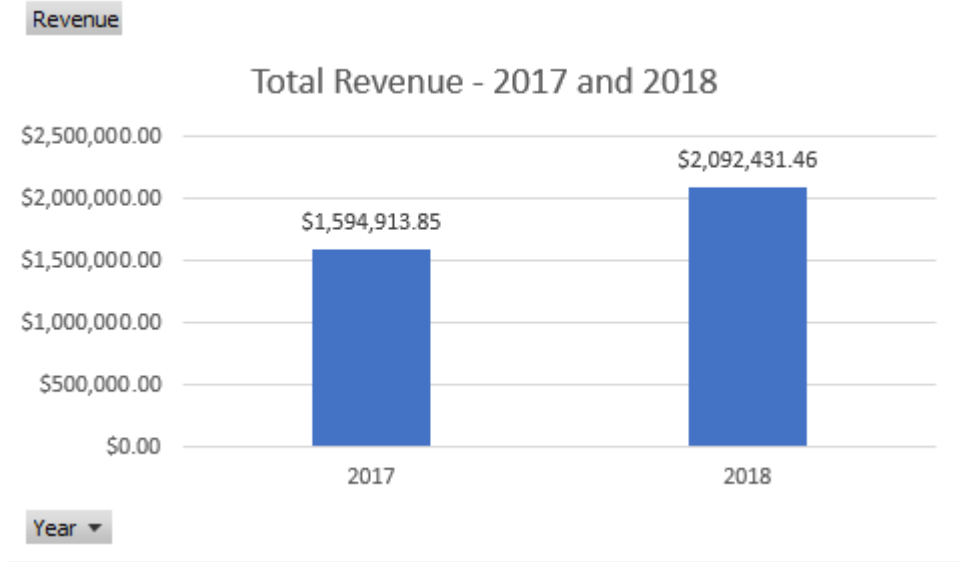
The trends remained stable for both years.



Evaluate the Sales

Question: How much revenue was generated over time?

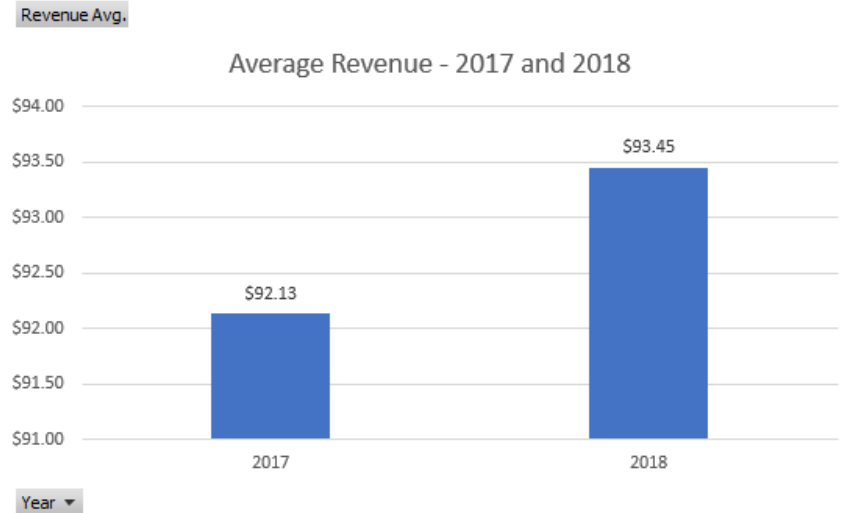
A revenue of 1,594,913.85\$ and 2,092,431.46\$ were reported for 2017 and 2018, respectively.



Evaluate the Sales

Question: What was the average revenue over time?

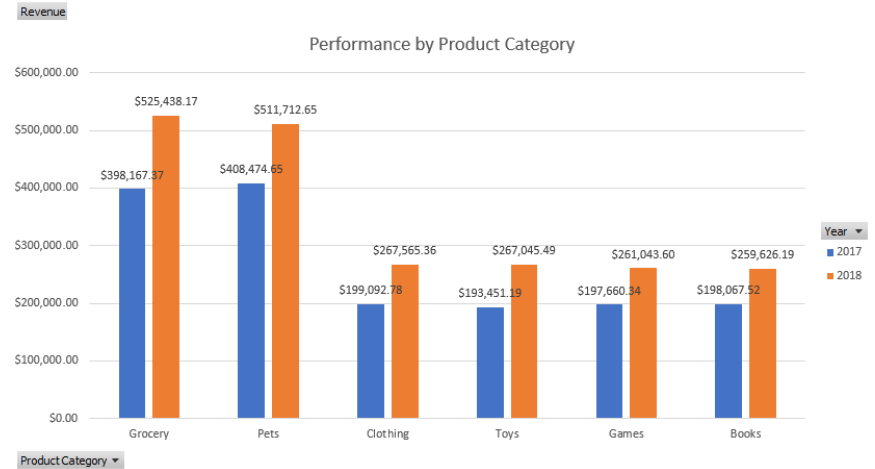
The average revenue was 92.13\$ and 93.45\$ in 2017 and 2018, respectively.



Evaluate the Product Categories

Question: Which were the most popular categories for both years?

The top revenue category for 2017 was Pets, while in 2018 it was surpassed by Grocery.



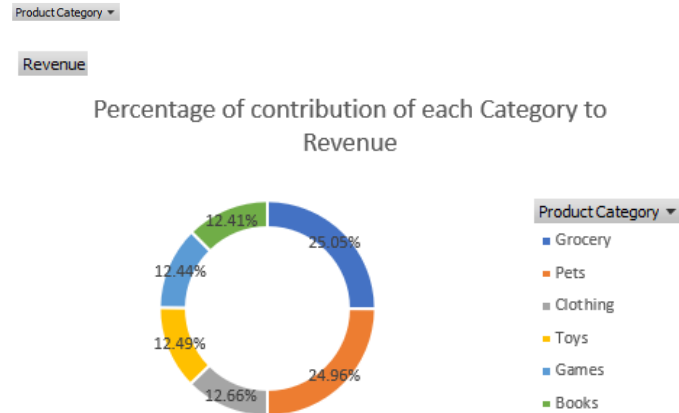
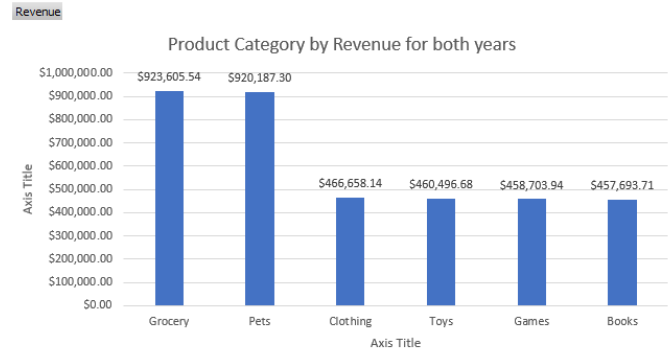
Evaluate the Product Categories

Question: What is the distribution of revenue by product category and its % of the total?

From the charts we can see that Grocery was the largest contributor (923,605.54\$, 25.05%), followed by Pets (920,605.54\$, 24.96%).

We can see that both these categories are very close in revenue generated.

The four remaining categories are approximately 12% of the total.



Everything Else

The dataset was merged in Excel to provide these findings in an easier way.

Further analysis can be conducted to extract insights from Cities and Newsletter subscriptions.

Sources:

<https://www.laptopmag.com/articles/excel-2013-pivot-table-from-multiples>