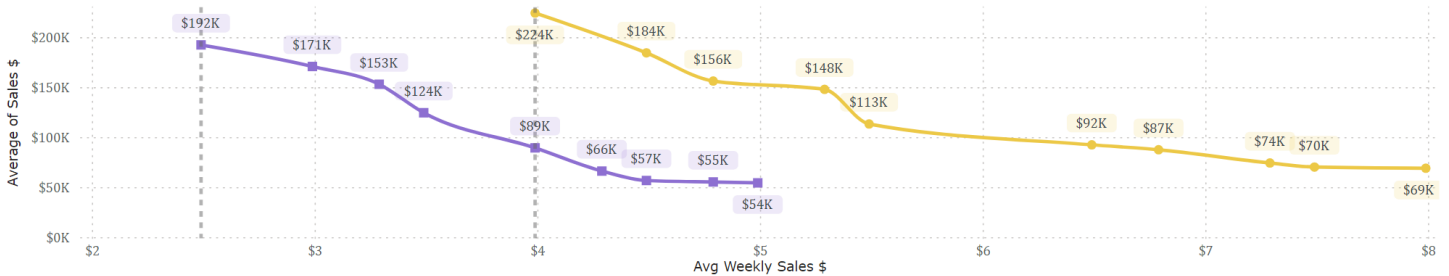


Shoppers Shampoo Promotional Effectiveness Case Study Q1 - Q2

Question 1: Most Effective Price Point at Max Sales

Most Effective Price: Aussie (\$2.49); Pantene (\$3.99)

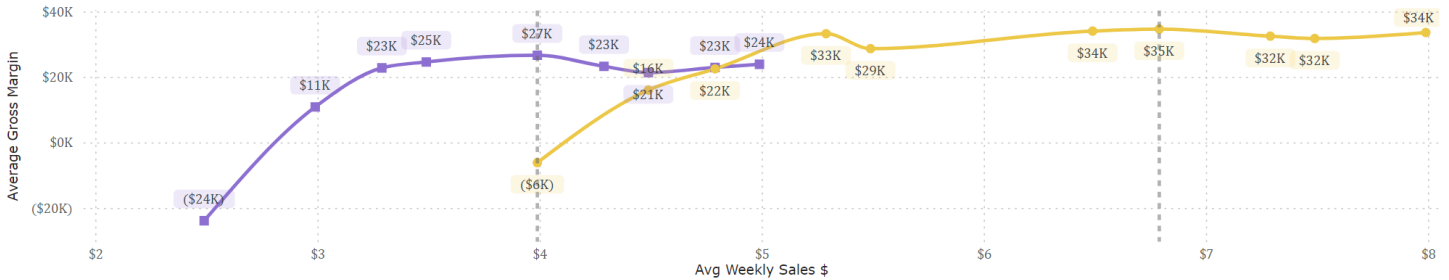
Aussie Pantene



Question 2: Most Effective Price Point at Max Gross Margin

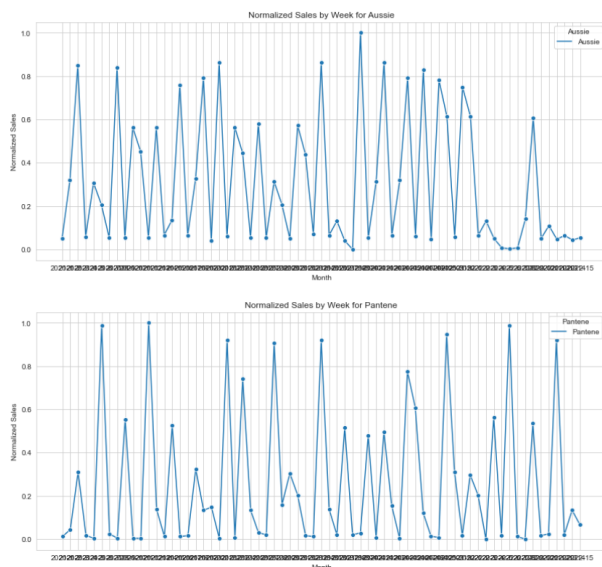
Most Effective Price: Aussie (\$3.99); Pantene (\$6.79)

Aussie Pantene



Shoppers Shampoo Promotional Effectiveness Case Study Q3 - Q4

Q3 Both Aussie & Pantene are NOT Seasonal



- The above two graphs show the normalization of sales after we remove the discount and on flyer columns that may impact of products seasonality, **there is NO clearly pattern shows that products influenced by seasonal**, therefore we will run statistics testing to see the results
- The results for ANOVA test for Pantene and Aussie show the p-value large than the confident interval so we reject the hypothesis, which means there is **NO seasonality for both products**

Question 4: cost per unit of each product

Cost per Unit \$: Aussie (\$2.80); Pantene (\$4.10)

Price	Product	Total Units	Total Sales \$	Total Gross Margin \$	Cost per Unit \$
\$2.49	Aussie	77,200	\$192,228.00	(\$23,932.00)	\$2.80
\$2.99	Aussie	342,560	\$1,024,254.40	\$65,086.40	\$2.80
\$3.29	Aussie	325,414	\$1,070,612.06	\$159,452.86	\$2.80
\$3.49	Aussie	320,846	\$1,119,752.54	\$221,383.74	\$2.80
\$3.99	Aussie	179,182	\$714,936.18	\$213,226.58	\$2.80
\$4.29	Aussie	77,185	\$331,123.65	\$116,320.70	\$2.78
\$4.49	Aussie	12,630	\$56,708.70	\$21,339.95	\$2.80
\$4.79	Aussie	11,529	\$55,223.91	\$22,942.71	\$2.80
\$4.99	Aussie	316,371	\$1,578,691.29	\$692,852.49	\$2.80
\$3.99	Pantene	449,367	\$1,792,974.33	(\$49,430.37)	\$4.10
\$4.49	Pantene	123,169	\$553,028.81	\$48,035.91	\$4.10
\$4.79	Pantene	163,023	\$780,880.17	\$112,485.87	\$4.10
\$5.29	Pantene	55,884	\$295,626.36	\$66,501.96	\$4.10
\$5.49	Pantene	144,336	\$792,404.64	\$200,627.04	\$4.10
\$6.49	Pantene	42,716	\$277,226.84	\$102,091.24	\$4.10
\$6.79	Pantene	90,178	\$612,308.62	\$242,578.82	\$4.10
\$7.29	Pantene	10,183	\$74,234.07	\$32,483.77	\$4.10
\$7.49	Pantene	28,113	\$210,566.37	\$95,303.07	\$4.10
\$7.99	Pantene	241,814	\$1,932,093.86	\$940,656.46	\$4.10

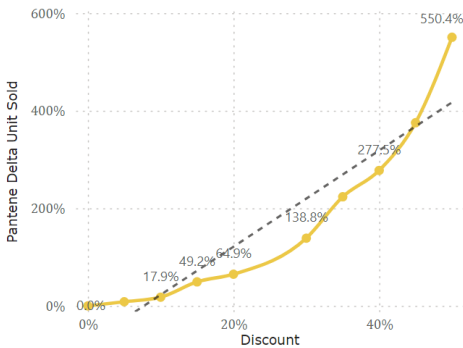
Shoppers Shampoo Promotional Effectiveness Case Study Q5 - Q6

Question 5 - 6: Pantene Performance for Discount (Delta with 0% Discount)

Discount	Price	Average Units Sold	Average Sales	Average Gross Margin	Pantene Delta Unit Sold	Pantene Delta Sales \$	Pantene Delta Gross Margin \$
0%	\$7.99	8,636	\$69,003.35	\$33,594.87	0.0%	0.0%	0.0%
5%	\$7.49	9,371	\$70,188.79	\$31,767.69	8.5%	1.7%	-5.4%
10%	\$7.29	10,183	\$74,234.07	\$32,483.77	17.9%	7.6%	-3.3%
15%	\$6.79	12,883	\$87,472.66	\$34,654.12	49.2%	26.8%	3.2%
20%	\$6.49	14,239	\$92,408.95	\$34,030.41	64.9%	33.9%	1.3%
30%	\$5.49	20,619	\$113,200.66	\$28,661.01	138.8%	64.1%	-14.7%
35%	\$5.29	27,942	\$147,813.18	\$33,250.98	223.6%	114.2%	-1.0%
40%	\$4.79	32,605	\$156,176.03	\$22,497.17	277.5%	126.3%	-33.0%
45%	\$4.49	41,056	\$184,342.94	\$16,011.97	375.4%	167.2%	-52.3%
50%	\$3.99	56,171	\$224,121.79	(\$6,178.80)	550.4%	224.8%	-118.4%

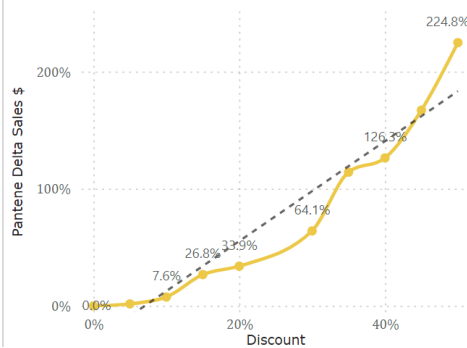
Pantene Delta Unit Sold by Discount

Q5: Units 25% is 16,907 & Q6 Units 60% is 75,491



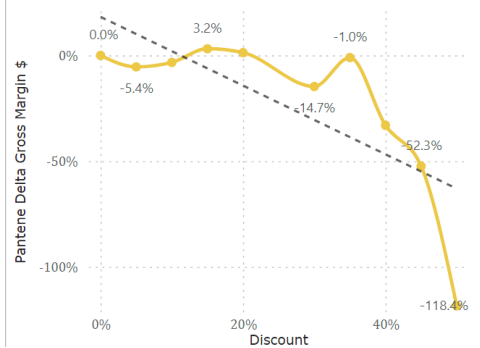
Pantene Delta Sales \$ by Discount

Q5: Sales 25% is \$104,065 & Q6 Sales 60% is \$286,553



Pantene Delta Gross Margin \$ by Discount

Q5: Margin 25% is \$34,746 & Q6 Margin 60% is (\$22,963)



Shoppers Shampoo Promotional Effectiveness Case Study Q7

Aussie Avg Performance with Flyer (Same Discount Group)

Product	Price	Discount	On Flyer?	Average Units Sold	Average Sales	Average Gross Margin
Aussie	\$3.99	20%	No	19,408	\$77,437.92	\$23,095.52
Aussie	\$3.99	20%	Yes	23,394	\$93,343.39	\$27,839.26
Aussie	\$3.49	30%	No	32,042	\$111,825.42	\$22,108.75
Aussie	\$3.49	30%	Yes	37,454	\$130,712.72	\$25,842.92
Aussie	\$3.29	35%	No	41,458	\$136,395.18	\$20,314.17
Aussie	\$3.29	35%	Yes	48,500	\$159,564.34	\$23,764.90

Pantene Avg Performance with Flyer (Same Discount Group)

Product	Price	Discount	On Flyer?	Average Units Sold	Average Sales	Average Gross Margin
Pantene	\$6.79	15%	No	11,477	\$77,928.83	\$30,873.13
Pantene	\$6.79	15%	Yes	13,117	\$89,063.30	\$35,284.28
Pantene	\$5.49	30%	No	18,339	\$100,678.37	\$25,490.52
Pantene	\$5.49	30%	Yes	21,532	\$118,209.58	\$29,929.20
Pantene	\$4.49	45%	No	37,355	\$167,723.95	\$14,568.45
Pantene	\$4.49	45%	Yes	42,907	\$192,652.43	\$16,733.73

Q7 What Impact Does Being "On Flyer" Have On Performance? -- For Aussie

- Including Aussie on a flyer with a 20% discount rate leads to an average increase in units sold by 3,986 units, sales by \$15,905.47, and gross margin by \$4,743.74.
- With a 30% discount rate on the flyer, there is an average increase in units sold by 5,412 units, sales by \$18,887.30, and gross margin by \$3,734.17.
- When Aussie is featured on a flyer with a 35% discount rate, the average increase in units sold is 7,042 units, sales increase by \$30,211.16, and gross margin increases by \$3,450.73.

Conclusion: Featuring Aussie on a flyer has a **positive impact** on its performance metrics. The higher the discount rate on the flyer, the greater the increase in units sold and sales revenue. Although there is some variation in the impact on gross margin growth rates.

Q7 What Impact Does Being "On Flyer" Have On Performance? -- For Pantene

- On flyer, featuring Pantene with a 15% discount rate leads to an average increase in units sold by 1,640 units, sales by \$11,134.47, and gross margin by \$4,411.15.
- With a 30% discount rate, including Pantene on a flyer results in an average increase in units sold by 3,193 units, sales by \$17,531.21, and gross margin by \$4,438.68.
- When Pantene is featured on a flyer with a 45% discount rate, there is an average increase in units sold by 5,552 units, sales by \$24,928.48, and gross margin by \$2,165.28.

Conclusion: Featuring Pantene on a flyer **positively impacts** its performance across different discount rates. The higher the discount rate on the flyer, the greater the increase in units sold, sales revenue, and to some extent, gross margin.

Shoppers Shampoo Promotional Effectiveness Case Study Q8

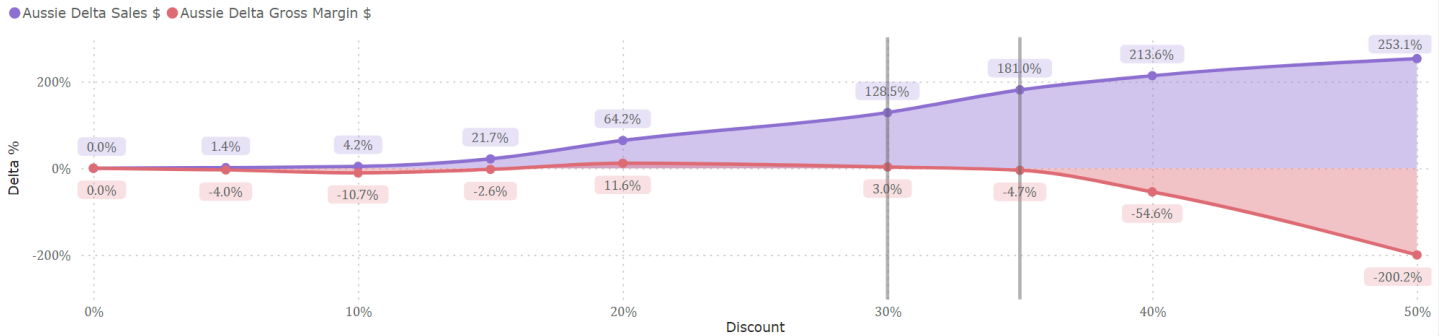
Q8: Aussie Shampoo Promotion Average Performance (Delta with 0% Discount)

Performance Showing the Sales Increase and Margin Changes on Different Price Point

Discount	Price	Average Units Sold	Average Sales	Average Gross Margin	Aussie Delta Sales \$	Aussie Delta Gross Margin \$	Aussie Delta Unit Sold
0%	\$4.99	10,909	\$54,437.63	\$23,891.47	0.00%	0.0%	0.00%
5%	\$4.79	11,529	\$55,223.91	\$22,942.71	1.44%	-4.0%	5.68%
10%	\$4.49	12,630	\$56,708.70	\$21,339.95	4.17%	-10.7%	15.78%
15%	\$4.29	15,437	\$66,224.73	\$23,264.14	21.65%	-2.6%	41.51%
20%	\$3.99	22,398	\$89,367.02	\$26,653.32	64.16%	11.6%	105.32%
30%	\$3.49	35,650	\$124,416.95	\$24,598.19	128.55%	3.0%	226.79%
35%	\$3.29	46,488	\$152,944.58	\$22,778.98	180.95%	-4.7%	326.14%
40%	\$2.99	57,093	\$170,709.07	\$10,847.73	213.59%	-54.6%	423.36%
50%	\$2.49	77,200	\$192,228.00	(\$23,932.00)	253.12%	-200.2%	607.67%

Q8: Aussie Delta Sales \$ and Gross Margin \$ by Discount % (Delta with 0% Discount)

The Recommended Promotion is Between 30% to 35% to Max Sales \$ and Before Margin Started to Drop Significantly



Shoppers Shampoo Promotional Effectiveness Case Study Q9

Aussie \$2.49 Performance & Transactions

Part i: \$2.49 Price is NOT an effective Loss Leader with Minimum Impact on Traffic

YearWeek	Discount	On Flyer?	Price	Average Units Sold	Average Sales	Average Gross Margin	Average Transactions
2021-21	40%	Yes	\$2.99	57,649	\$172,370.51	\$10,953.31	22,608
2021-34	40%	Yes	\$2.99	57,649	\$172,370.51	\$10,953.31	22,608
2021-39	50%	Yes	\$2.49	77,200	\$192,228.00	(\$23,932.00)	22,396
2021-42	40%	Yes	\$2.99	57,655	\$172,388.45	\$10,954.45	22,390
2021-47	40%	Yes	\$2.99	55,987	\$167,401.13	\$10,637.53	22,173

Part ii: What If Analysis (Select Situation)

% of Sales on Customer Pays \$2.99

62%

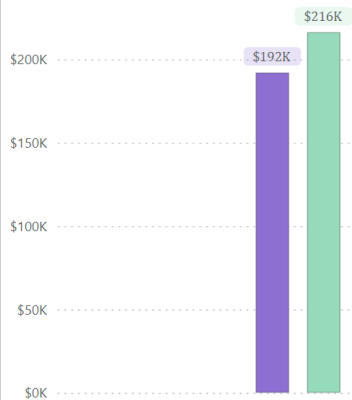
Part ii: Summary Table

Original Price \$	\$2.49
Original Avg Units Sold	77,200
Original Avg Sales \$	\$192,228.00
Original Avg Gross Margin \$	(\$23,932.00)
Cost per Unit \$	\$2.80
% of Sales for \$2.99	62%
Unit Sold for \$2.99	47,864
New Avg Sales \$	\$216,453.36
New Avg Gross Margin \$	\$293.36

Part ii: Weekly Sales \$ Comparison

Original vs New (Based on Selected Sales Comp)

● Avg Sales \$ ● New Avg Sales \$



Part ii: Weekly Gross Margin \$ Comparison

Original vs New (Based on Selected Sales Comp)

● Avg Gross Margin \$ ● New Avg Gross Margin

