

Sales Analysis Case Study – By Lazio Ramphekwa

Sales Analysis - Trading Overview

Total Revenue
186.91M

Total Cost of Sale
194.03M

Total Units Sold
5M

Daily Sales/Unit
39.04K

Daily Cost /Unit
39.22K

Daily Avg Unit Sales
39.04K

Number of Sales

1053

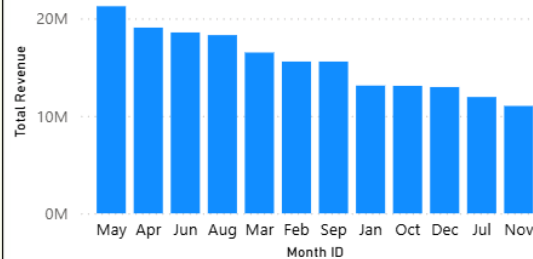
Daily % GP per Unit

-0.87

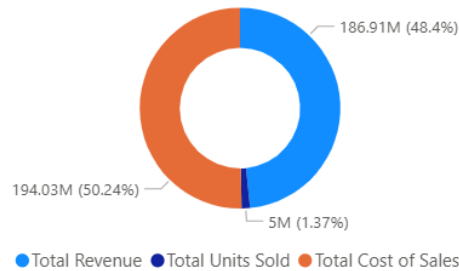
Daily % Gross Profit

-0.87

Total Revenue by Month



Total Revenue, Units Sold and Cost of Sales



Date of Sales



Month of Sales

All

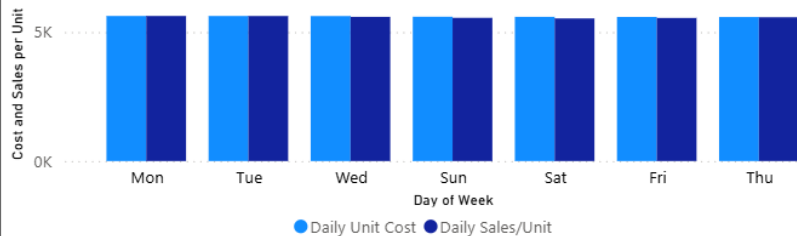
Day of Sales

All

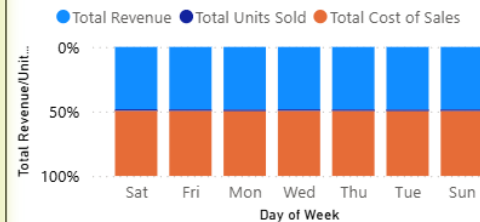
Date of Sales



Daily Unit Cost and Daily Sales/Unit by Day of Week



Total Revenue - Units Sold - Cost of Sales per day



New Sales Analysis table with answers to question 1 to 4:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	date_of_sales	day_of_week	month_id	year_of_sales	total_revenue	total_cost_of_sales	total_units_sold	number_of_sales	cost_of_sales	units_sold	daily_sales/unit	daily_unit_cost	avg_unit_sales	daily_%_gross_profit	daily_%_GP/unit
2	12/30/2013	Mon	Dec	2013	R 223,937.97	R 230,079.62	6827	1	R 230,079.62	6827	R 32.80	R 33.70	R 32.80	-274%	-274%
3	12/31/2013	Tue	Dec	2013	R 300,345.48	R 306,986.12	9268	1	R 306,986.12	9268	R 32.41	R 33.12	R 32.41	-221%	-221%
4	1/1/2014	Wed	Jan	2014	R 86,782.47	R 87,986.32	2678	1	R 87,986.32	2678	R 32.41	R 32.86	R 32.41	-139%	-139%
5	1/2/2014	Thu	Jan	2014	R 200,173.12	R 202,881.18	6175	1	R 202,881.18	6175	R 32.42	R 32.86	R 32.42	-135%	-135%
6	1/3/2014	Fri	Jan	2014	R 326,906.07	R 333,806.29	10084	1	R 333,806.29	10084	R 32.42	R 33.10	R 32.42	-211%	-211%
7	1/4/2014	Sat	Jan	2014	R 307,043.94	R 313,652.35	9470	1	R 313,652.35	9470	R 32.42	R 33.12	R 32.42	-215%	-215%
8	1/5/2014	Sun	Jan	2014	R 179,188.88	R 183,083.29	5524	1	R 183,083.29	5524	R 32.44	R 33.14	R 32.44	-217%	-217%
9	1/6/2014	Mon	Jan	2014	R 306,351.95	R 313,446.07	9448	1	R 313,446.07	9448	R 32.43	R 33.18	R 32.43	-232%	-232%
10	1/7/2014	Tue	Jan	2014	R 224,020.41	R 229,533.97	6911	1	R 229,533.97	6911	R 32.42	R 33.21	R 32.42	-246%	-246%
11	1/8/2014	Wed	Jan	2014	R 101,836.40	R 99,381.97	2990	1	R 99,381.97	2990	R 34.06	R 33.24	R 34.06	241%	241%
12	1/9/2014	Thu	Jan	2014	R 107,804.30	R 104,816.46	3159	1	R 104,816.46	3159	R 34.13	R 33.18	R 34.13	277%	277%
13	1/10/2014	Fri	Jan	2014	R 144,829.96	R 141,334.00	4246	1	R 141,334.00	4246	R 34.11	R 33.29	R 34.11	241%	241%
14	1/11/2014	Sat	Jan	2014	R 146,571.48	R 143,179.67	4297	1	R 143,179.67	4297	R 34.11	R 33.32	R 34.11	231%	231%
15	1/12/2014	Sun	Jan	2014	R 95,422.37	R 93,126.15	2796	1	R 93,126.15	2796	R 34.13	R 33.31	R 34.13	241%	241%
16	1/13/2014	Mon	Jan	2014	R 114,883.17	R 112,186.31	3369	1	R 112,186.31	3369	R 34.10	R 33.30	R 34.10	235%	235%
17	1/14/2014	Tue	Jan	2014	R 80,090.80	R 78,096.76	2348	1	R 78,096.76	2348	R 34.11	R 33.26	R 34.11	249%	249%
18	1/15/2014	Wed	Jan	2014	R 98,945.37	R 97,159.00	2903	1	R 97,159.00	2903	R 34.08	R 33.47	R 34.08	181%	181%
19	1/16/2014	Thu	Jan	2014	R 84,904.90	R 83,350.43	2491	1	R 83,350.43	2491	R 34.08	R 33.46	R 34.08	183%	183%
20	1/17/2014	Fri	Jan	2014	R 135,460.62	R 132,703.34	3968	1	R 132,703.34	3968	R 34.14	R 33.44	R 34.14	204%	204%
21	1/18/2014	Sat	Jan	2014	R 149,925.75	R 146,928.41	4393	1	R 146,928.41	4393	R 34.13	R 33.45	R 34.13	200%	200%
22	1/19/2014	Sun	Jan	2014	R 74,297.31	R 72,782.28	2176	1	R 72,782.28	2176	R 34.14	R 33.45	R 34.14	204%	204%
23	1/20/2014	Mon	Jan	2014	R 83,356.42	R 81,789.14	2443	1	R 81,789.14	2443	R 34.12	R 33.48	R 34.12	188%	188%
24	1/21/2014	Tue	Jan	2014	R 89,922.01	R 88,388.92	2638	1	R 88,388.92	2638	R 34.09	R 33.51	R 34.09	170%	170%
25	1/22/2014	Wed	Jan	2014	R 57,806.30	R 57,157.28	1704	1	R 57,157.28	1704	R 33.92	R 33.54	R 33.92	112%	112%
26	1/23/2014	Thu	Jan	2014	R 63,977.75	R 62,863.99	1872	1	R 62,863.99	1872	R 34.18	R 33.58	R 34.18	174%	174%
27	1/24/2014	Fri	Jan	2014	R 116,958.80	R 114,823.80	3423	1	R 114,823.80	3423	R 34.17	R 33.54	R 34.17	183%	183%
28	1/25/2014	Sat	Jan	2014	R 155,272.82	R 152,636.28	4544	1	R 152,636.28	4544	R 34.17	R 33.59	R 34.17	170%	170%
29	1/26/2014	Sun	Jan	2014	R 82,885.22	R 81,583.17	2426	1	R 81,583.17	2426	R 34.17	R 33.63	R 34.17	157%	157%
30	1/27/2014	Mon	Jan	2014	R 72,353.43	R 71,377.16	2117	1	R 71,377.16	2117	R 34.18	R 33.72	R 34.18	135%	135%
31	1/28/2014	Tue	Jan	2014	R 50,415.90	R 49,769.10	1476	1	R 49,769.10	1476	R 34.16	R 33.72	R 34.16	128%	128%
32	1/29/2014	Wed	Jan	2014	R 67,458.30	R 66,529.44	1974	1	R 66,529.44	1974	R 34.17	R 33.70	R 34.17	138%	138%
33	1/30/2014	Thu	Jan	2014	R 64,640.37	R 63,757.84	1892	1	R 63,757.84	1892	R 34.17	R 33.70	R 34.17	137%	137%
34	1/31/2014	Fri	Jan	2014	R 137,693.87	R 135,609.51	4030	1	R 135,609.51	4030	R 34.17	R 33.65	R 34.17	151%	151%
35	2/1/2014	Sat	Feb	2014	R 181,209.13	R 178,435.72	5304	1	R 178,435.72	5304	R 34.16	R 33.64	R 34.16	153%	153%
36	2/2/2014	Sun	Feb	2014	R 113,433.58	R 111,466.52	3320	1	R 111,466.52	3320	R 34.17	R 33.57	R 34.17	173%	173%
37	2/3/2014	Mon	Feb	2014	R 143,192.53	R 140,505.63	4191	1	R 140,505.63	4191	R 34.17	R 33.53	R 34.17	188%	188%
<	>	Sales_Analysis	PED -Feb 2014	PED -Oct 2015	PED -Jul 2016	+									

Question 5.

Three periods during which this product was on promotion/special:

- What was the Price Elasticity of Demand during each of these periods?

Definition: Price elasticity of demand (PED) measures the responsiveness of demand after a change in price.

$$\text{Price Elasticity of Demand (PED)} = \frac{\% \text{ change in Q.D.}}{\% \text{ change in Price}}$$

Three periods picked: February 2014, October 2015 and July 2016

Criteria: used the lowest price in each month as the promotional/special price (new price) and the highest price as the old price. used the quantity supplied during the lowest and highest prices as new and old quantity respectively

1. Period: Feb 2014

date_of_sales	month_id	year_of_sales	total_revenue	total_cost_of_sales	total_units_sold	daily_sales/unit	PED calculations
7/10/2016	Jul	2016	R 39,809.56	R 34,091.57	946	R 42.08	old quantity/price
7/5/2016	Jul	2016	R 219,363.22	R 237,026.35	6577	R 33.35	new quantity/price

% Change in Quantity Demand	292.2511312
(New Quantity-Old Quantity)/Old Quantity *100	

% in Change in Price	-
(New Price-Old Price)/Old Price*100	

PED = % Change in Quantity Demand/% in Change in Price	-42.46475476
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2. Period: Oct 2015

date_of_sales	month_id	year_of_sales	total_revenue	total_cost_of_sales	total_units_sold	daily_sales/unit	
10/21/2015	Oct	2015	R 53,678.18	R 51,999.86	1361	R 39.44	old quantity/price
10/4/2015	Oct	2015	R 202,902.62	R 232,360.33	6085	R 33.34	new quantity/price

% Change in Quantity Demand	347.0977223
(New Quantity-Old Quantity)/Old Quantity *100	

% in Change in Price	-15.4551
(New Price-Old Price)/Old Price*100	

PED = % Change in Quantity Demand/% in Change in Price	-22.45846366
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3. Period: Jul 2016

date_of_sales	month_id	year_of_sales	total_revenue	total_cost_of_sales	total_units_sold	daily_sales/unit	
2/1/2014	Feb	2014	R 181,209.13	R 178,435.72	5304	R 34.16	old quantity/price
2/28/2014	Feb	2014	R 661,876.50	R 686,656.79	20805	R 31.81	new quantity/price

% Change in Quantity Demand	595.243129
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% in Change in Price	-20.74261
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(New Quantity-Old Quantity)/Old Quantity *100

(New Price-Old Price)/Old Price*100

PED = % Change in Quantity Demand/% in Change in Price	-28.69662918
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In your opinion, does this product perform better or worse when sold at a promotional price?

Verdict: Based on the PED values, this product performs **better** with promotional/special price even though the total cost of sale went up meaning no profit.

The consumers are highly price-sensitive.

A small drop in price leads to a massive increase in quantity demanded.

Negative sign: Normal for PED, since quantity demanded typically moves opposite to price.