

Power BI Project

Market Campaign Effectiveness

The marketing team runs campaigns across Email, Social Media, TV, and Search Ads. Although marketing spend is increasing, management is unsure whether campaigns are delivering a good return on investment (ROI).

The leadership team wants to know:

- Which channels generate the highest revenue
- Which campaigns underperform
- How efficiently marketing money is spent

You are responsible for building a campaign performance analytics solution to support smarter marketing investments.

Q1) Identify missing or inconsistent marketing data.

Missing values and inconsistent entries (such as zero spend with positive revenue) were identified using Power Query filters. Data cleaning techniques were applied to remove inconsistencies and ensure accurate and reliable analysis.

10 COLUMNS, 400 ROWS Column profiling based on top 1000 rows

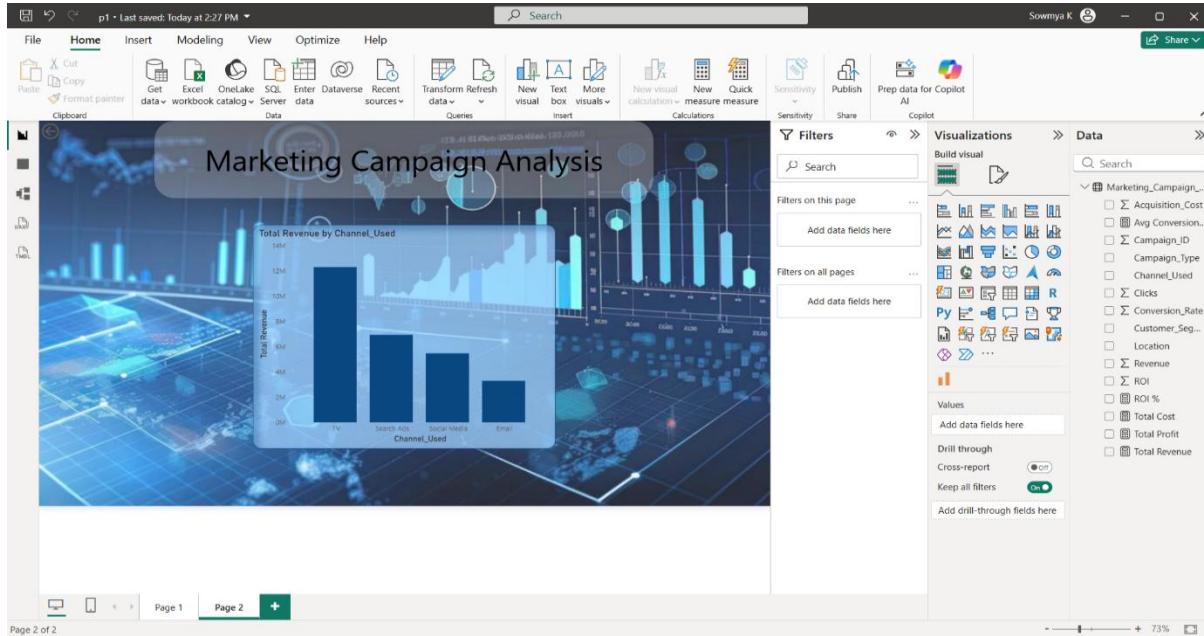
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Q2) Which marketing channels generate the highest revenue?

Search Ads generate the highest revenue among all marketing channels.

TV Ads generate the second-highest revenue, followed by Email and Social Media.

This indicates that Search Ads contribute the most to overall revenue performance.



Q3) Calculate ROI for each campaign using DAX.

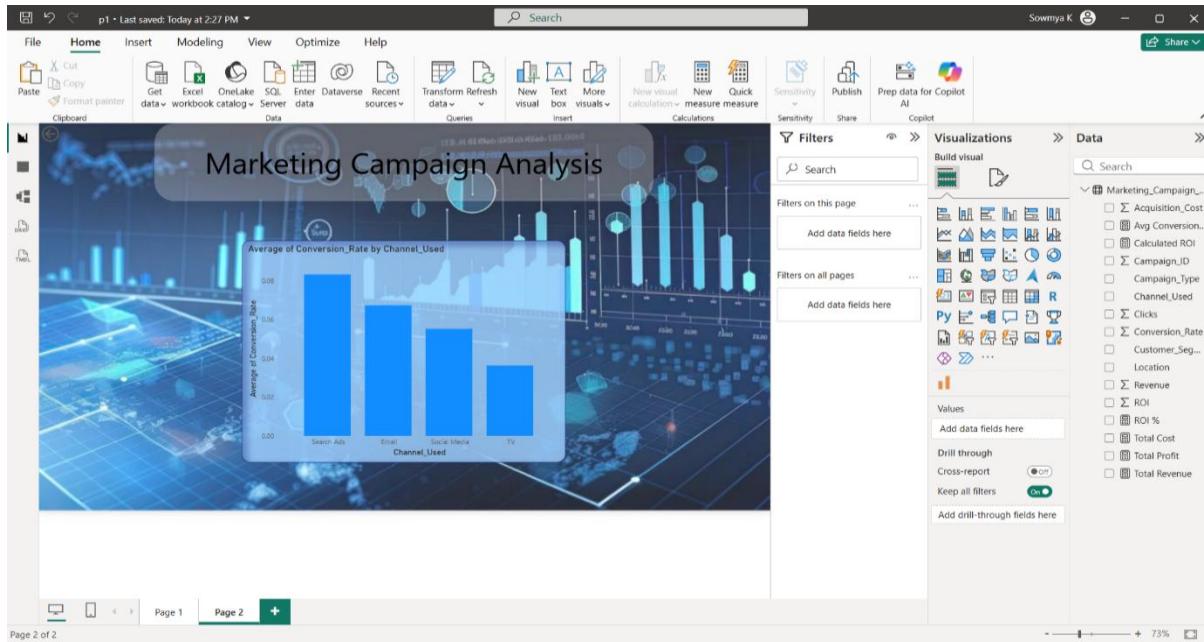
ROI was calculated using DAX to measure campaign profitability. Campaigns with low or negative ROI indicate inefficient spending, while campaigns with higher ROI demonstrate better marketing effectiveness and return on investment.

The screenshot shows the Power BI "Measure tools" tab. A DAX formula for "Calculated ROI" is being defined: $=\text{DIVIDE}(\text{SUM}(\text{Marketing_Campaign_Performance_Project_Dataset}[Revenue]), \text{SUM}(\text{Marketing_Campaign_Performance_Project_Dataset}[Acquisition_Cost]), \text{SUM}(\text{Marketing_Campaign_Performance_Project_Dataset}[Acquisition_Cost]))$. The formula uses the SUM function on the Revenue and Acquisition_Cost columns from the Marketing_Campaign_Performance_Project_Dataset table. The result is a new measure named "Calculated ROI". The table below shows sample data for various campaigns across different channels, types, and locations.

Campaign_ID	Channel_Used	Campaign_Type	Location	Customer_Segment	Acquisition_Cost	Clicks	Conversion_Rate	Revenue	ROI
1	Email	Lead Generation	West	Adults	31962	9322	0.09	35487.16	0.11
4	Social Media	Product Launch	South	Adults	40658	3047	0.05	50662.81	0.25
8	Email	Lead Generation	South	Adults	13152	4943	0.05	19434.46	0.48
9	Social Media	Lead Generation	South	Adults	55757	7873	0.05	73871.17	0.32
16	Search Ads	Product Launch	South	Adults	76537	7938	0.07	104194.90	0.36
18	Social Media	Lead Generation	North	Adults	48827	4157	0.05	75205.00	0.54
19	TV	Lead Generation	East	Adults	52693	4627	0.03	68935.88	0.31
26	TV	Brand Awareness	West	Adults	148506	9958	0.03	222992.14	0.50
33	TV	Lead Generation	East	Adults	62874	6539	0.05	97409.25	0.55
36	Social Media	Lead Generation	South	Adults	19555	4446	0.06	23995.39	0.23
41	Email	Lead Generation	West	Adults	11816	7709	0.06	17109.74	0.45
43	Search Ads	Lead Generation	East	Adults	60328	8343	0.10	83036.06	0.38
46	Social Media	Lead Generation	East	Adults	28121	1853	0.05	35547.09	0.26
48	Social Media	Lead Generation	North	Adults	34508	1004	0.05	45848.45	0.33
51	Email	Brand Awareness	East	Adults	11150	2664	0.05	13231.12	0.19
54	Email	Brand Awareness	West	Adults	31572	3141	0.05	48233.50	0.53
55	Search Ads	Product Launch	South	Adults	75636	8421	0.05	99607.00	0.32
61	Search Ads	Lead Generation	North	Adults	29817	9306	0.07	37000.73	0.24
62	TV	Brand Awareness	West	Adults	50412	1728	0.02	75705.74	0.50
66	Email	Brand Awareness	East	Adults	23923	8400	0.04	36448.40	0.52
68	TV	Brand Awareness	North	Adults	137508	2167	0.04	205548.21	0.49
69	Search Ads	Product Launch	East	Adults	42925	8330	0.09	66269.85	0.54
70	Search Ads	Lead Generation	East	Adults	68136	3539	0.10	104482.08	0.53
76	Email	Brand Awareness	West	Adults	26517	7376	0.09	29740.94	0.12
78	Search Ads	Product Launch	West	Adults	64597	3703	0.09	94863.95	0.47
79	Search Ads	Lead Generation	West	Adults	41447	8575	0.08	58443.02	0.41

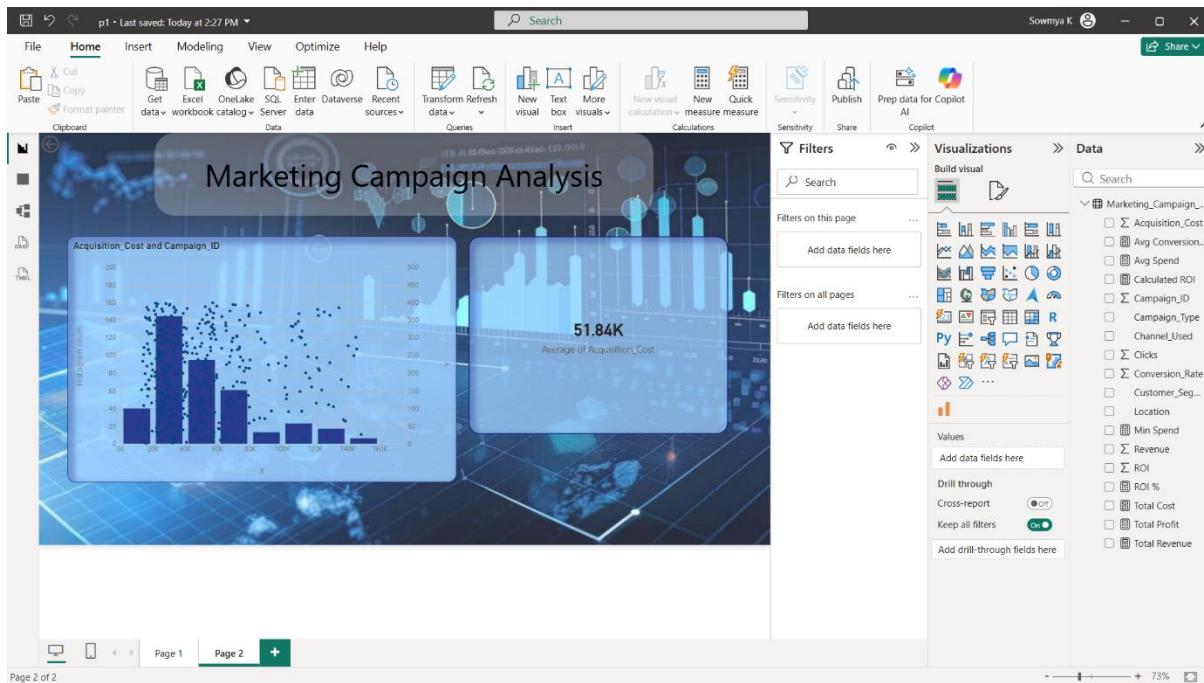
Q4) Analyze conversion rates across channels.

TV Ads show the highest conversion rate among all channels. Conversion rate measures how effectively each marketing channel converts clicks into customer actions. Comparing channels helps identify which platforms generate stronger engagement and sales performance.



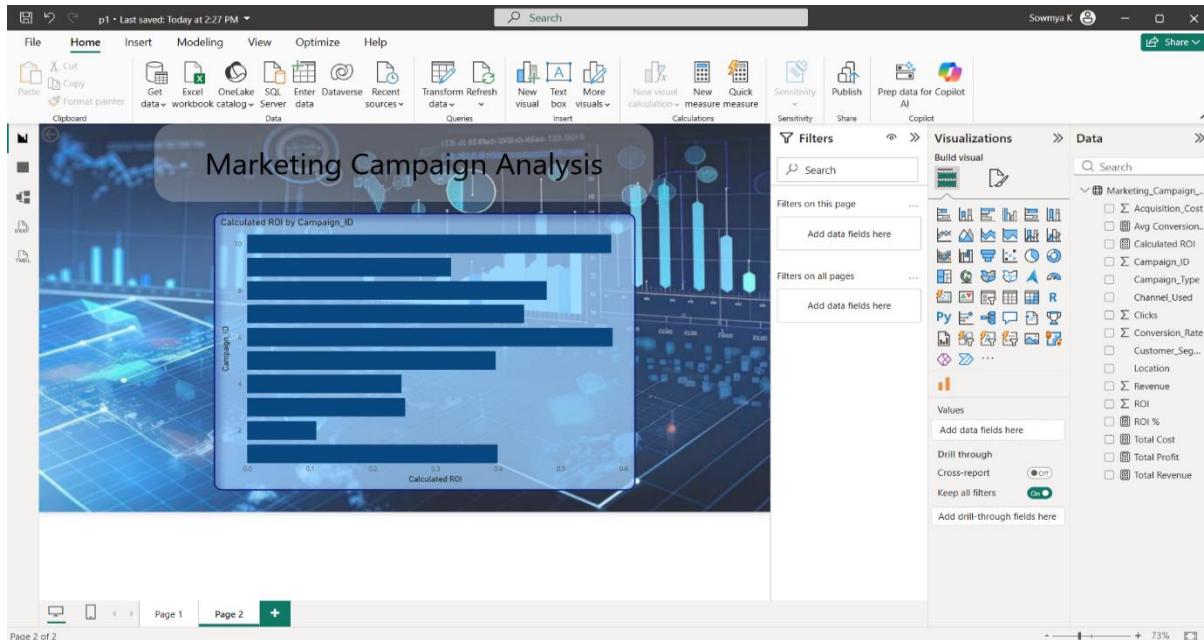
Q5) Perform univariate analysis on campaign spend.

Univariate analysis was conducted to examine campaign spend distribution. By analyzing total, average, minimum, and maximum spend values, spending patterns and budget concentration across campaigns were identified. This helps understand how marketing funds are allocated.



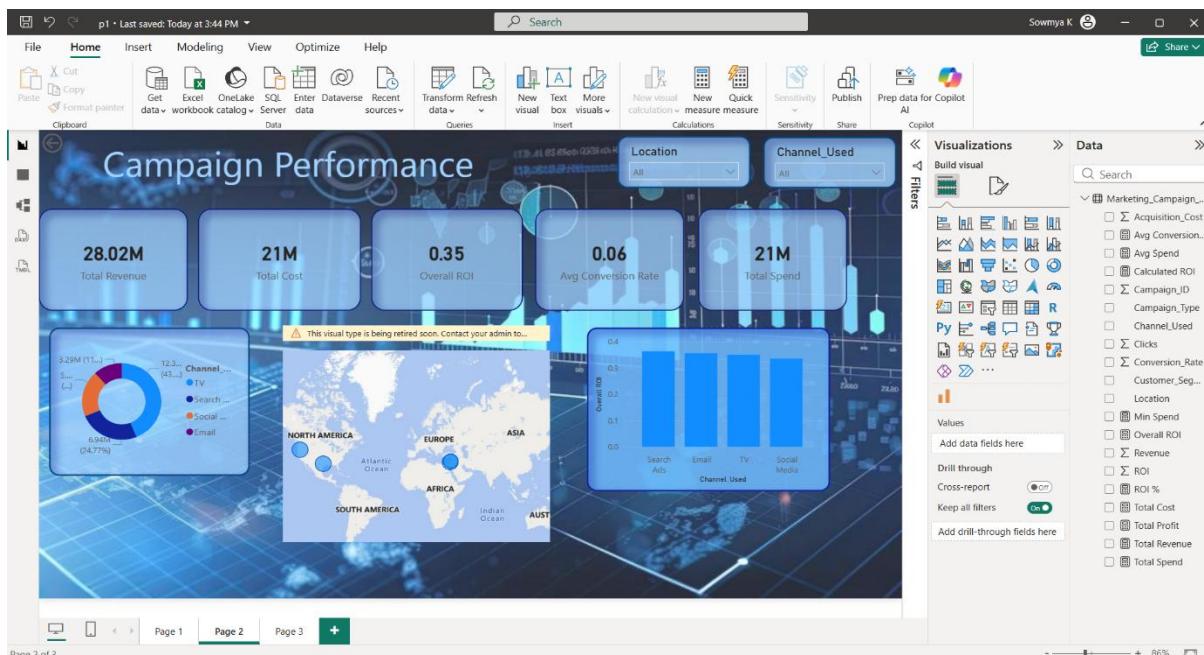
Q6) Identify underperforming campaigns.

Campaigns with low or negative ROI were identified as underperforming. These campaigns consume marketing budget without generating proportional returns, indicating the need for optimization or budget reallocation.



Q7) Design a campaign performance dashboard.

The campaign performance dashboard combines key metrics such as Revenue, Spend, ROI, and Conversion Rate in a single interactive view. Visualization such as column charts, scatter plots, KPI cards, and tables allow quick comparison of channel and campaign performance. This dashboard supports data-driven decision-making and enables efficient performance monitoring.

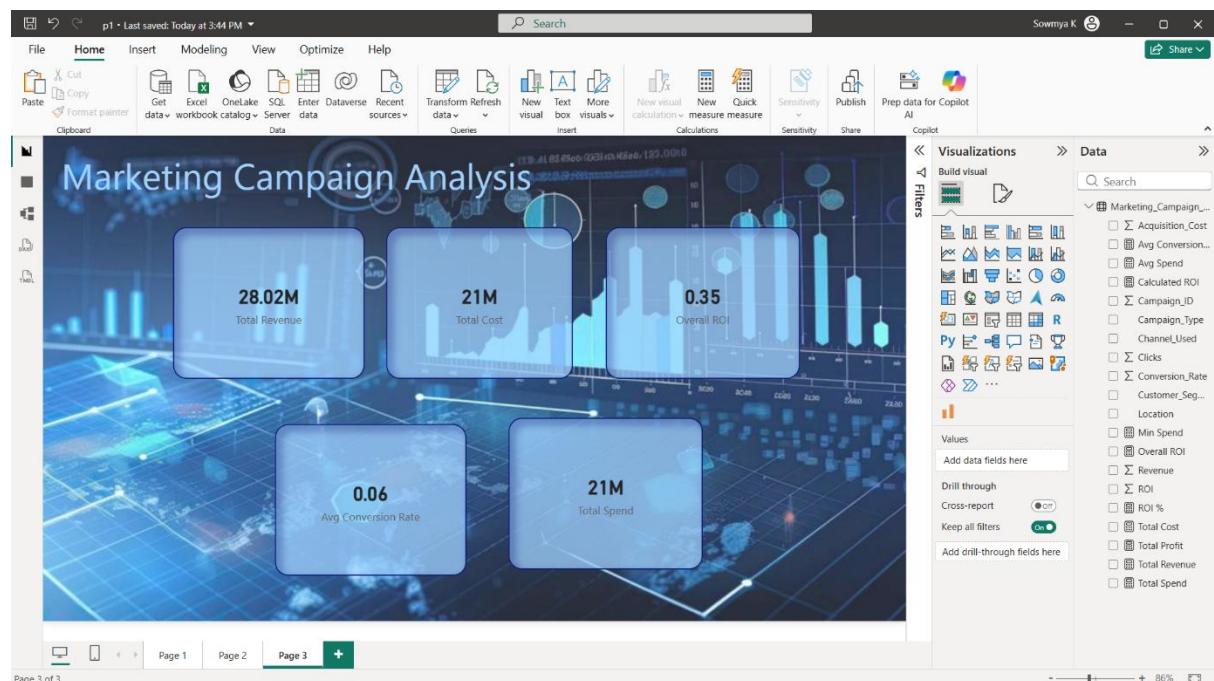
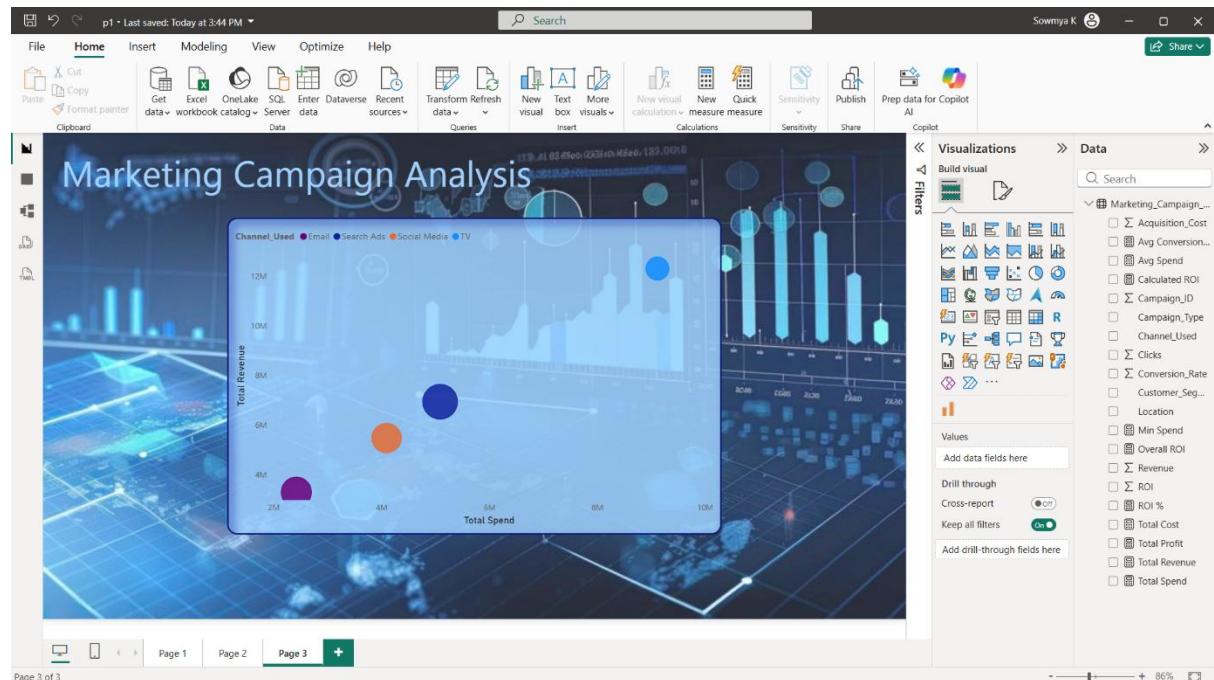


Q8) Which channels should receive increased investment?

Channels with high revenue efficiency and strong conversion rates should receive increased budget allocation.

Search Ads demonstrate the highest revenue generation relative to spend, followed by TV Ads with strong returns.

Email and Social Media show comparatively lower efficiency and may require optimization before increasing investment.



Q9) How can insights improve future marketing strategy?

Insights from campaign performance analysis enable organizations to optimize marketing investments and improve overall business outcomes.

By evaluating revenue, ROI, conversion rates, and campaign efficiency, marketers can identify which channels and campaigns deliver the best results and adjust strategies accordingly.

Key points:

- Focus spending on high-performing channels with strong ROI and conversion rates.
- Reduce or restructure investment in underperforming campaigns.
- Optimize audience targeting and messaging strategies.
- Improve conversion funnel performance to maximize returns.
- Allocate budgets based on data insights rather than assumptions.

Final Dashboard

