

XYZ Ads Airing Report Analysis

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Project Description:

The project is based on a dataset of TV Ad Airings for some brands in the Automobile category. The aim of the project is to analyze the data and answer the given questions. The dataset includes various features like the network through which Ads are airing, the type of network like Cable/Broadcast, show name on which Ads got aired, Dayparts, Time zone, the time & date at which Ads got aired, Pod Position, duration for which Ads aired on screen, equivalent sales &, total amount spent on Ads aired. We will be analyzing this data to understand the different brands' share in TV airings, the change in brand share from Q1 to Q4 in 2021, conducting competitive analysis for the brands, and suggesting advertisement strategies for the brands.

Approach:

The approach to this project is to first clean the data and check for missing values. I then explored the dataset to understand the variables and their distribution. After that, I answered the given questions using different statistical techniques and visualizations. For example, I used descriptive statistics to analyze the variables and their relationship with each other. We will also use visualization techniques like bar graphs, pie charts, scatter plots, and heat maps to present our findings.

Tech-Stack Used:

The analysis was performed using Microsoft Excel. We used different Excel functions, such as COUNT, COUNTIFS, SUM, UNIQUE and AVERAGE to perform the analysis. We also used PIVOT TABLE, SLICER in Pivot Table, CHARTS and GRAPHS to visualize the data.

Insights:

Some of the insights we gained from the data are:

Based on available data, It seems that Maruti Suzuki is the most showed brand in TV airings followed by Mahindra & Mahindra and Honda. The least is Toyota. I would suggest that Toyota, Hyundai and Tata should increase their TV airing numbers.

The share of various brands in TV airings changed from Q1 to Q4 in 2021. Tata Motors increased its share, while brands like Maruti, Honda and Toyota decreased their share.

Based on available data, It seems that brand Honda spends the least for sales of a car on average..

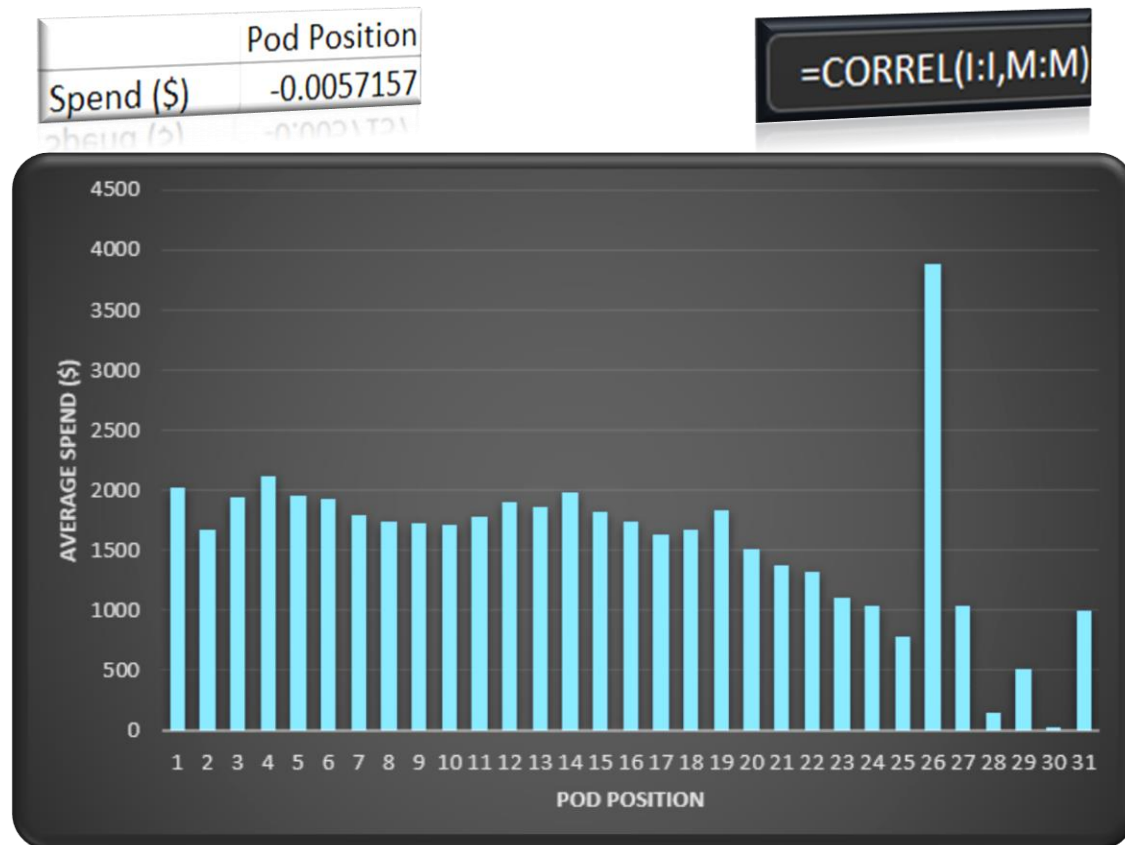
Based on the available data, Mahindra New Thar seems to be the most popular car in sales. Therefore, I would suggest Mahindra and Mahindra to focus on Mahindra New Thar in the digital ad campaign as well.

In terms of ad placement, the most effective pod position for the TV ads is 1. Therefore, I would suggest targeting this pod position for the digital ad campaign as well.

Result:

Through this project, we were able to gain insights into the advertising industry and how different brands advertise their products. We were also able to answer the given questions and provide recommendations for Mahindra and Mahindra's digital ad campaign. The project helped us understand the importance of data analysis and how it can help businesses make better decisions.

A. What is Pod Position? Does the Pod position number affect the amount spent on Ads for a specific period of time by a company?



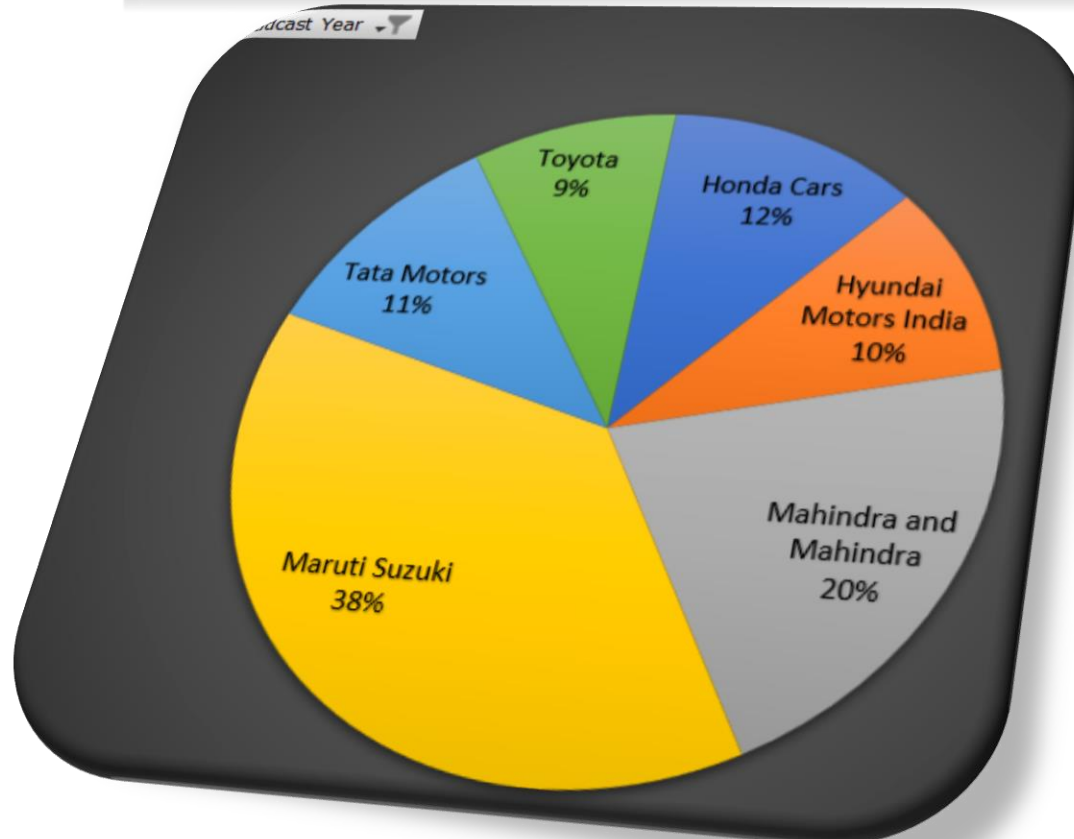
With the help of correlation, here we can see that correlation between Pod Position and Amount Spend is very less so, we can say that pod position doesn't effect the spend amount on Ads.

Also with the help of adjacent bar graph we can say that there isn't any correlation between Average Spend and Pod Position. Although there is some trend in later parts, it seems decreasing but the value on 26 pod position is very high.

B. What is the share of various brands in TV airings and how has it changed from Q1 to Q4 in 2021?

Part-1

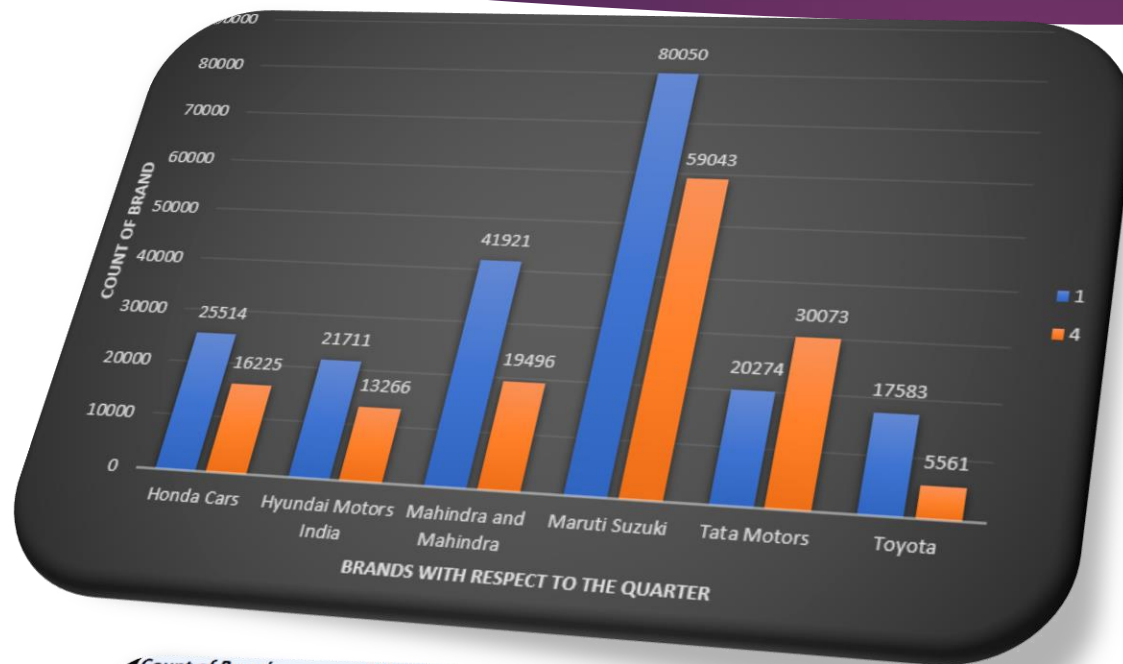
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=IF(OR(O2=$U$2,O2=$U$3,O2=$U$4), 1, IF(OR(O2=$U$5,O2=$U$6,O2=$U$7),2, IF(OR(O2=$U$8,O2=$U$9,O2=$U$10),3,4)))
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Based on available data, It seems that Maruti Suzuki is the most showed brand in TV airings followed by Mahindra & Mahindra and Honda. The least is Toyota. I would suggest that Toyota, Hyundai and Tata should increase their TV airing numbers.

B. What is the share of various brands in TV airings and how has it changed from Q1 to Q4 in 2021?

Part-2



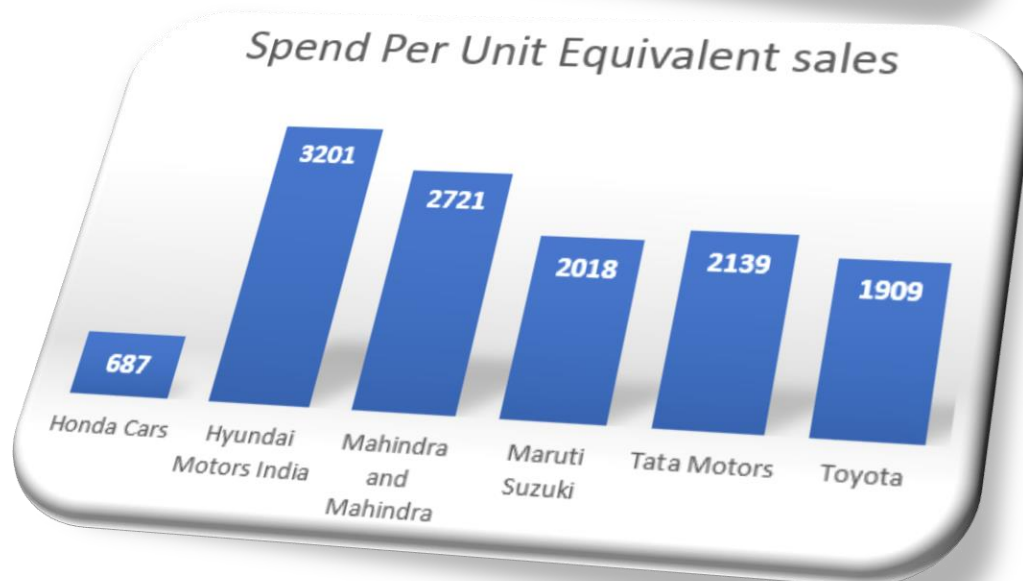
The share of various brands in TV airings changed from Q1 to Q4 in 2021. Tata Motors increased its share, while brands like Maruti, Honda and Toyota decreased their share.

Count of Brand		Column Labels					
Row Labels		1	2	3	4	Grand Total	Change in Percentage
Honda Cars	25514	18751	23450	16225		83940	-36.40746257
Hyundai Motors India	21711	18887	16543	13266		70407	-38.89733315
Mahindra and Mahindra	41921	46084	39788	19496		147289	-53.49347582
Maruti Suzuki	80050	71632	65951	59043		276676	-26.24234853
Tata Motors	20274	14633	14499	30073		79479	48.33284009
Toyota	17583	21981	20225	5561		65350	-68.37286011

C. Conduct a competitive analysis for the brands and define advertisement strategy of different brands and how it differs across the brands.

Part-1

Row Labels	Sum of Spend (\$)	Sum of EQ Units	Spend (\$) on a
Honda Cars	48258340	70260.05	687
Hyundai Motors India	180808756	56481	3201
Mahindra and Mahindra	397305655	146036.18	2721
Maruti Suzuki	558646472	276874.46	2018
Tata Motors	94790227	44310.16	2139
Toyota	112653112	59016.87	1909
Grand Total	1392462562	652978.72	2132.477705

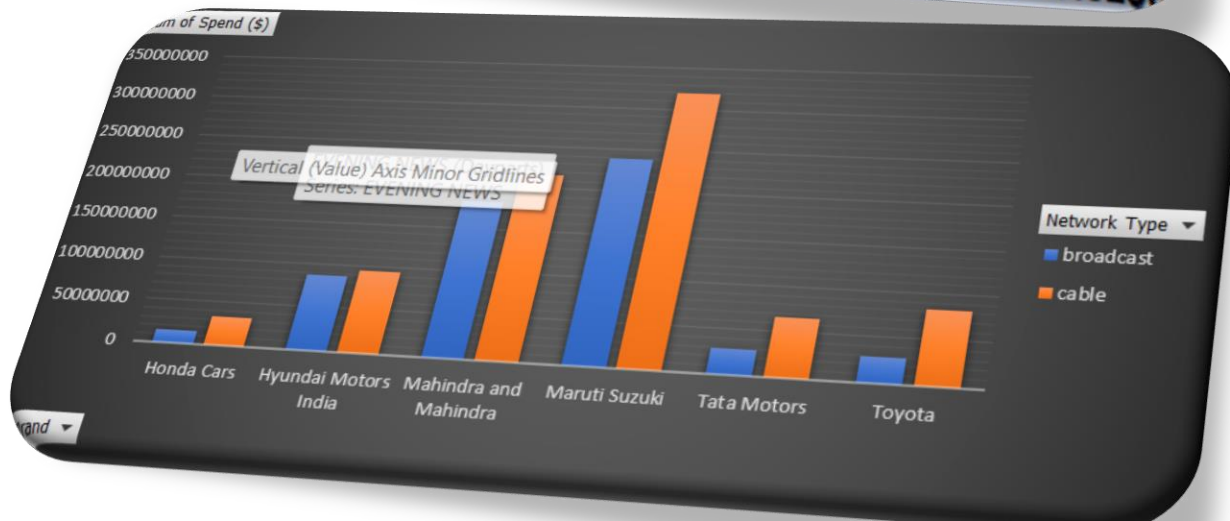


Based on available data, It seems that brand Honda spends the least for sales of a car on average. Hyundai, Mahindra & Mahindra and Tata Motors are the worst performing ad campaign because they spends the most to selling a car. Hyundai, Mahindra & Mahindra and Tata should try different strategy and combination to make it more effective.

C. Conduct a competitive analysis for the brands and define advertisement strategy of different brands and how it differs across the brands.

Part-2

Sum of Spend (\$)		Column Labels	
Row Labels	broadcast	cable	Grand Total
Honda Cars	14835303	33423037	48258340
Hyundai Motors India	86701728	94107028	180808756
Mahindra and Mahindra	181166689	216138966	397305655
Maruti Suzuki	239190273	319456199	558646472
Tata Motors	29303349	65486878	94790227
Toyota	29330783	83322329	112653112
Grand Total	580528125	811934437	1392462562

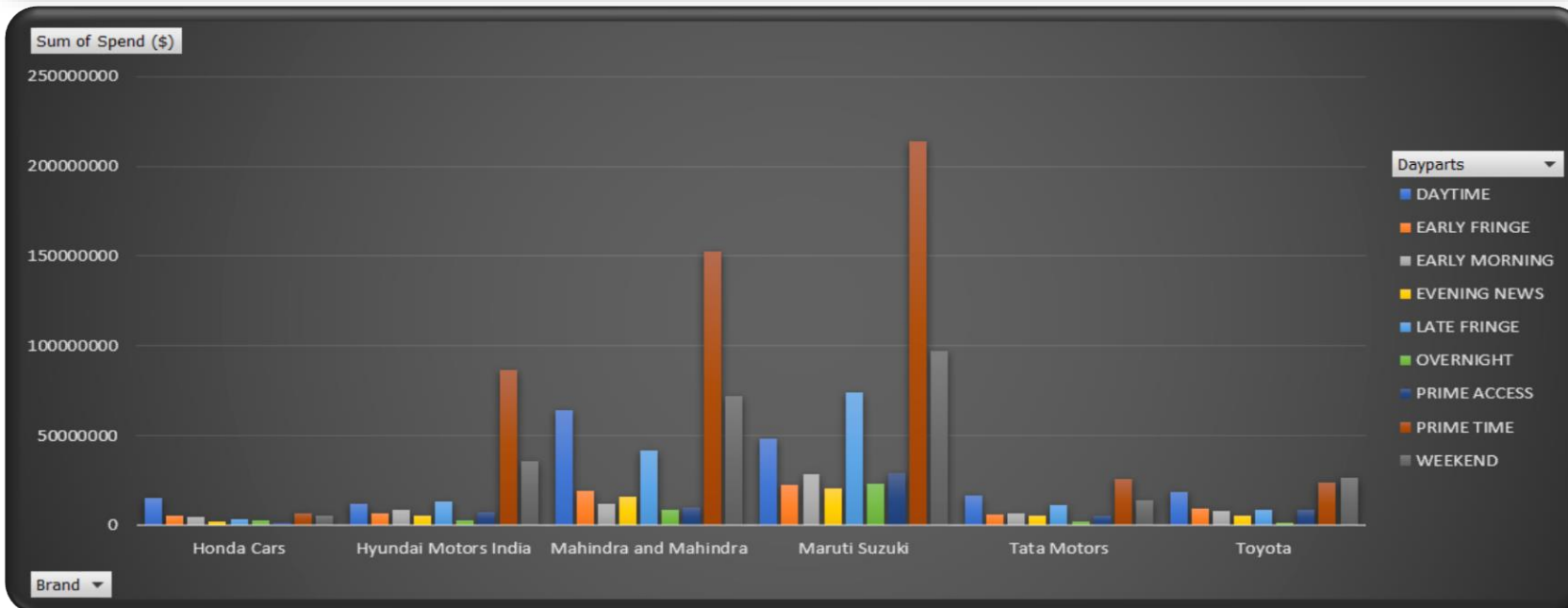


Based on available data, It seems that Honda runs the most successful ad campaign as it spend the less for a Equivalent sales. Honda's maximum part of campaign is in the cable network type. I would suggest to other brand such as Hyundai and Mahindra & Mahindra to increase their cable budget.

C. Conduct a competitive analysis for the brands and define advertisement strategy of different brands and how it differs across the brands.

Part-3

Sum of Spend (\$)	Column Labels									
Row Labels	DAYTIME	EARLY FRINGE	EARLY MORNIN	EVENING NEWS	LATE FRINGE	OVERNIGHT	PRIME ACC	PRIME TIME	WEEKEND	Grand Total
Honda Cars	15106799	5763471	5190376	2105762	3421197	2820096	1352961	7002902	5494776	48258340
Hyundai Motors India	12360920	7156835	8708318	5364194	13648569	3181379	7711727	86737738	35939076	180808756
Mahindra and Mahindra	64154402	19204408	12119383	16018235	41781609	8597788	10299276	152713257	72417297	397305655
Maruti Suzuki	48678486	22745305	28920899	20776891	74069950	23614157	29021227	213609797	97209760	558646472
Tata Motors	16513542	6058611	7110565	5829272	11161135	2552537	5799904	25652452	14112209	94790227
Toyota	18560894	9744570	8294798	5409054	8863807	1716154	8979945	24146575	26937315	112653112
Grand Total	175375043	70673200	70344339	55503408	152946267	42482111	63165040	509862721	252110433	1392462562

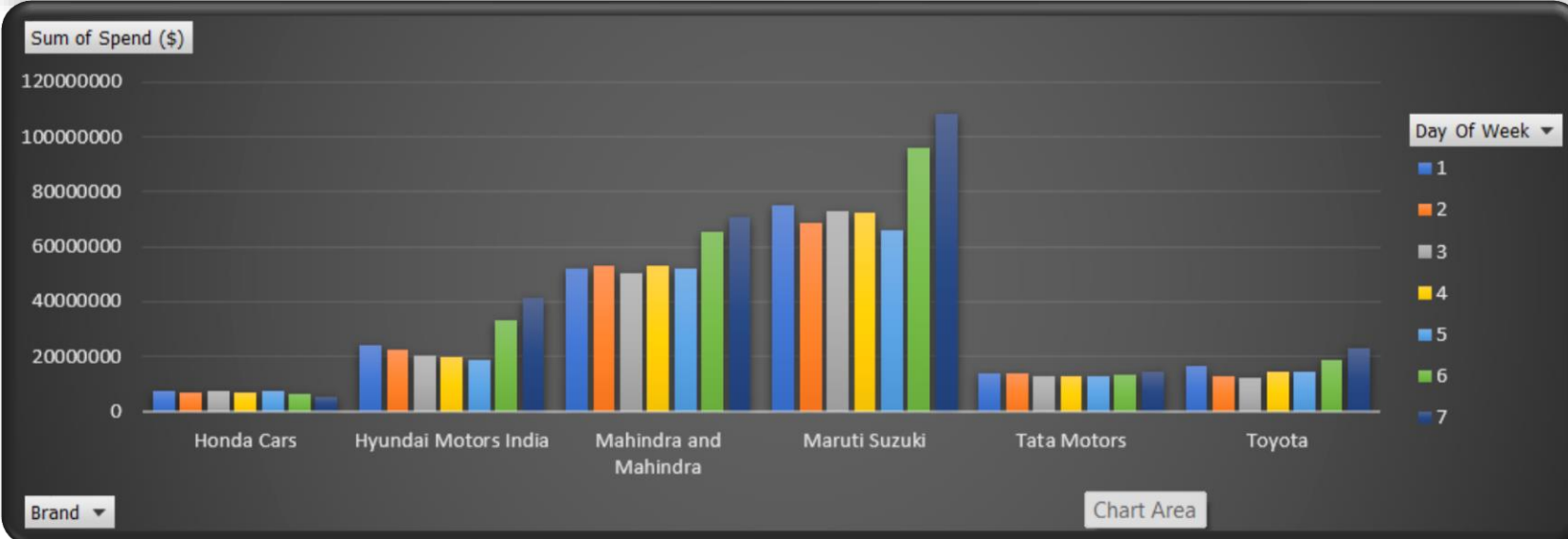


Based on available data, It seems that brand Honda spends the least for sales of a car on average and it's maximum percentage of spend is on Daytime dayparts. I would suggest that Hyundai, Mahindra & Mahindra and Tata Motors should increase their Daytime daypart to increase their effectiveness.

C. Conduct a competitive analysis for the brands and define advertisement strategy of different brands and how it differs across the brands.

Part-4

Sum of Spend (\$)	Column Label: ▾						
Row Labels ▾	1	2	3	4	5	6	7 Grand Total
Honda Cars	7295660	7272297	7430315	7218942	7606955	6251541	5182630 48258340
Hyundai Motors li	23948566	22423170	20515865	19880982	18929031	33527438	41583704 180808756
Mahindra and Ma	51962016	53028844	50694312	53323646	51835345	65723919	70737573 397305655
Maruti Suzuki	74950307	68745503	72893206	72270606	65798163	95767180	108221507 558646472
Tata Motors	13842790	13780519	13029067	13164347	12916368	13478145	14578991 94790227
Toyota	16557975	13019177	12204227	14304986	14362454	19013743	23190550 112653112
Grand Total	188557314	178269510	176766992	180163509	171448316	233761966	263494955 1392462562

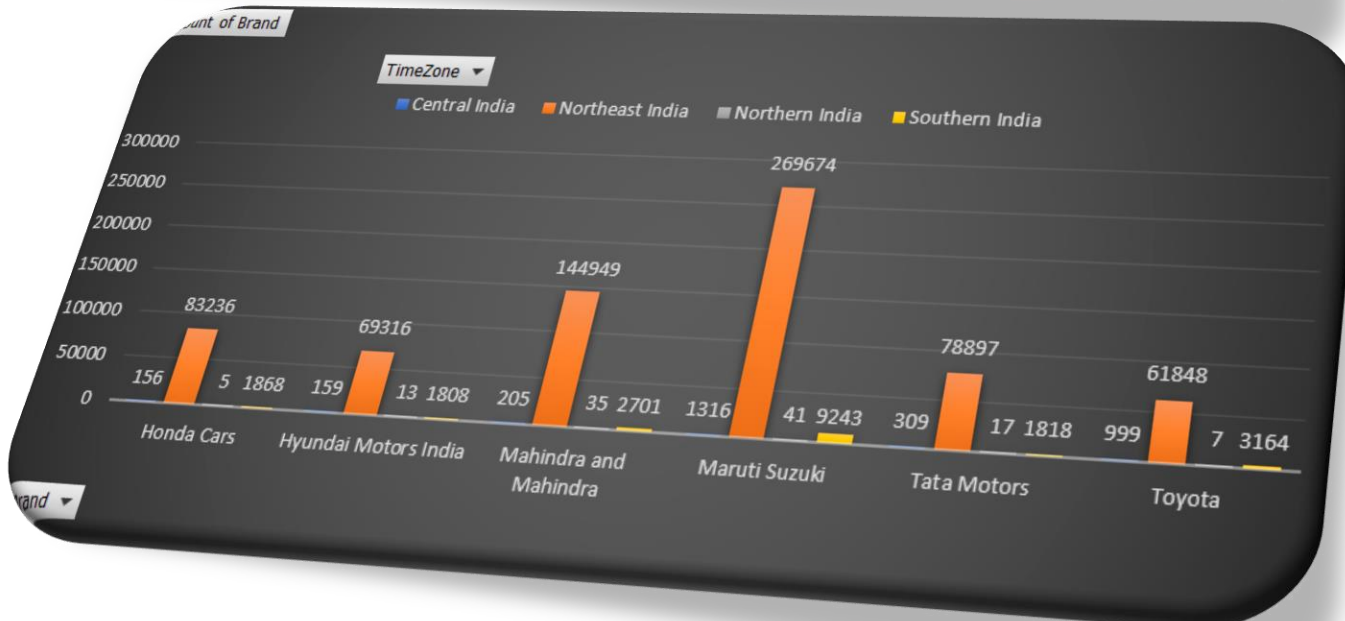


Based on available data, It seems that brand Honda spends the least for sales of a car on average and Honda's spend throughout the week is same. I would suggest that Hyundai, Mahindra & Mahindra and Maruti should reduce their weekend spends.

D. Mahindra and Mahindra wants to run a digital ad campaign to complement its existing TV ads in Q1 of 2022. Based on the data from 2021, suggest a media plan to the CMO of Mahindra and Mahindra. Which audience should they target?

Part-1

Count of Brand	Column Label				
Row Labels	Central India	Northeast India	Northern India	Southern India	Grand Total
Honda Cars	156	83236	5	1868	85265
Hyundai Moto	159	69316	13	1808	71296
Mahindra and	205	144949	35	2701	147890
Maruti Suzuki	1316	269674	41	9243	280274
Tata Motors	309	78897	17	1818	81041
Toyota	999	61848	7	3164	66018
Grand Total	3144	707920	118	20602	73178



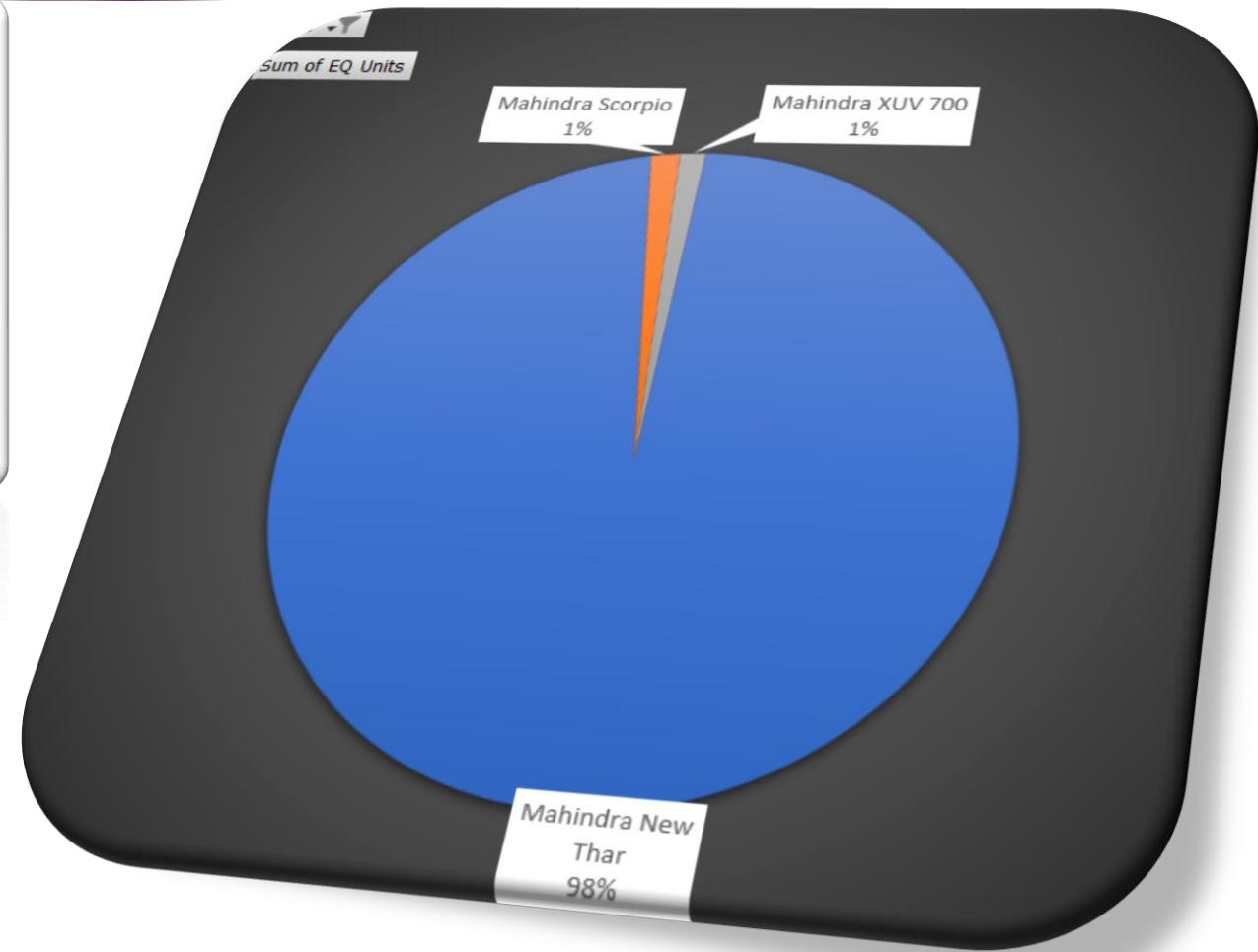
Based on the available data, Northeast India seems to be the target market for the ads. Therefore, I would suggest Mahindra and Mahindra to target this region in the digital ad campaign as well.

D. Mahindra and Mahindra wants to run a digital ad campaign to complement its existing TV ads in Q1 of 2022. Based on the data from 2021, suggest a media plan to the CMO of Mahindra and Mahindra. Which audience should they target?

Part-2

Brand	Mahindra and Mahindra
Row Labels	Sum of EQ Units
Mahindra New Thar	142399
Mahindra Scorpio	1939
Mahindra XUV 700	1698
Grand Total	146036

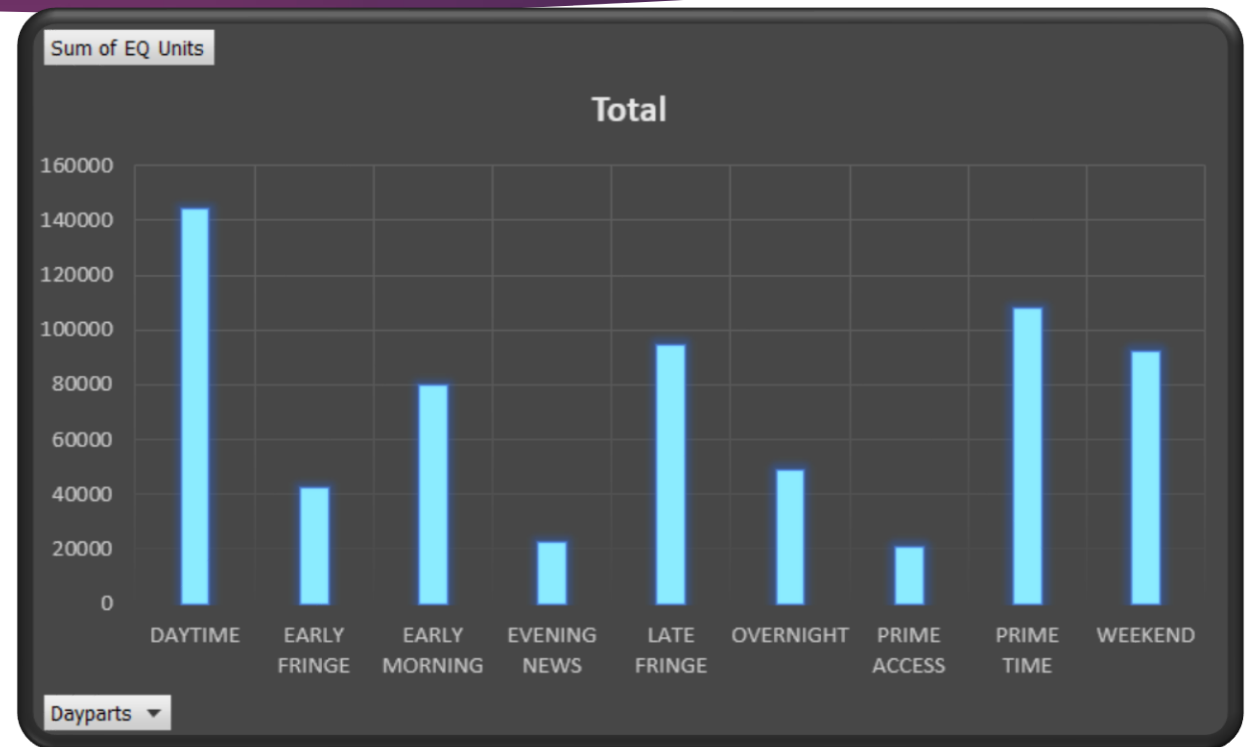
Based on the available data, Mahindra New Thar seems to be the most popular car in sales. Therefore, I would suggest Mahindra and Mahindra to focus on Mahindra New Thar in the digital ad campaign as well.



D. Mahindra and Mahindra wants to run a digital ad campaign to complement its existing TV ads in Q1 of 2022. Based on the data from 2021, suggest a media plan to the CMO of Mahindra and Mahindra. Which audience should they target?

Part-3

Row Labels	Sum of EQ Units
DAYTIME	144140.21
EARLY FRINGE	42262.42
EARLY MORNII	79669.42
EVENING NEW	22573.4
LATE FRINGE	94491.01
OVERNIGHT	49026.02
PRIME ACCESS	20764.33
PRIME TIME	107890.48
WEEKEND	92161.43
Grand Total	652978.72

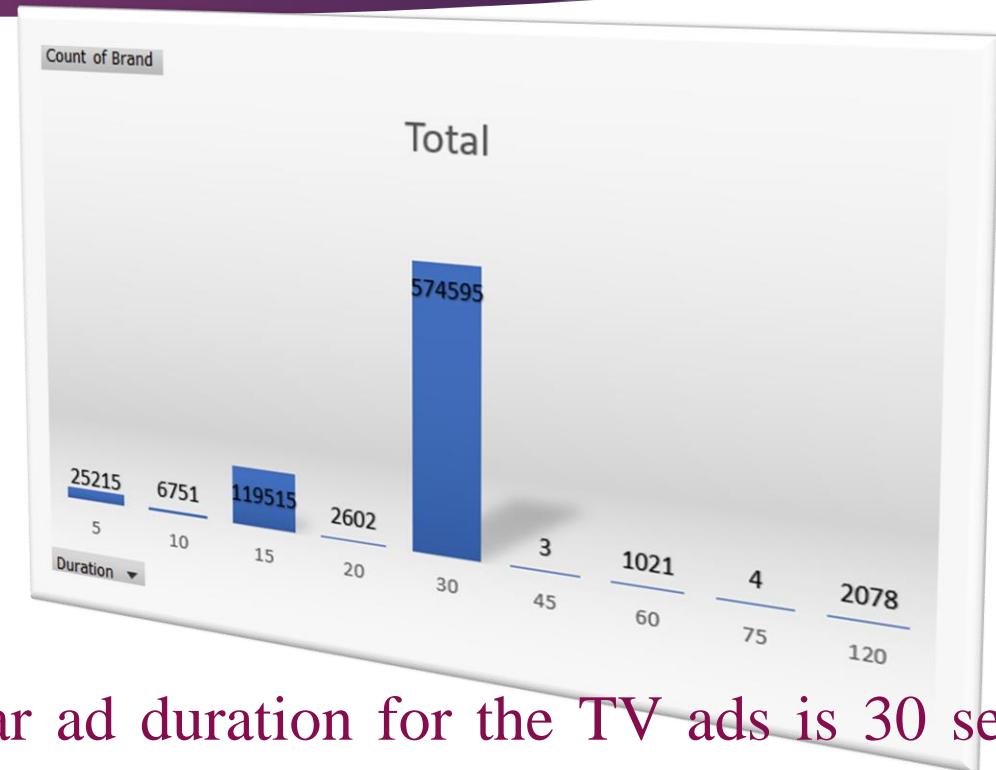


Based on the available data, the most effective dayparts for the TV ads are Prime Time, Daytime, and Late Fringe. Therefore, I would suggest targeting these dayparts for the digital ad campaign as well.

D. Mahindra and Mahindra wants to run a digital ad campaign to complement its existing TV ads in Q1 of 2022. Based on the data from 2021, suggest a media plan to the CMO of Mahindra and Mahindra. Which audience should they target?

Part-4

Row Labels	Count of Brand
5	25215
10	6751
15	119515
20	2602
30	574595
45	3
60	1021
75	4
120	2078
Grand Total	731784

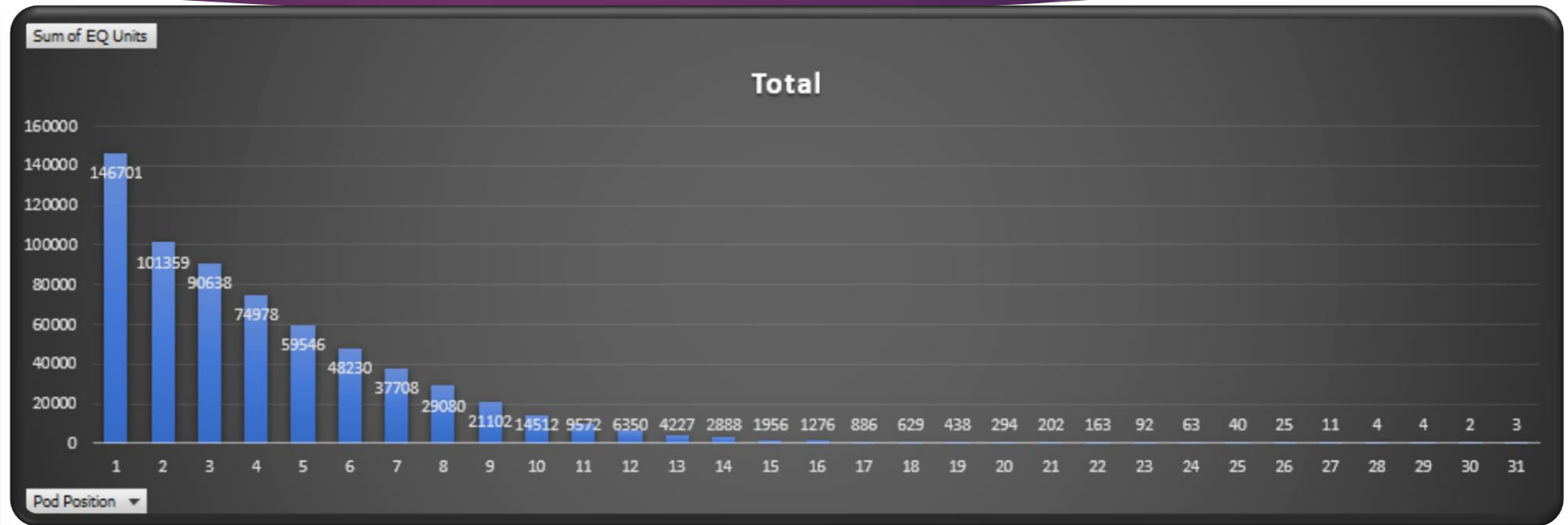


Based on the available data, the most popular ad duration for the TV ads is 30 seconds. Therefore, I would suggest Mahindra and Mahindra to target this duration for the digital ad campaign as well.

D. Mahindra and Mahindra wants to run a digital ad campaign to complement its existing TV ads in Q1 of 2022. Based on the data from 2021, suggest a media plan to the CMO of Mahindra and Mahindra. Which audience should they target?

Part-5

Row Labels	Sum of EQ Units
1	146701
2	101359
3	90638
4	74978
5	59546
6	48230
7	37708
8	29080
9	21102
10	14512
11	9572
12	6350
13	4227
14	2888
15	1956
16	1276
17	886
18	629
19	438
20	294
21	202
22	163
23	92
24	63
25	40
26	25
27	11
28	4
29	4
30	2
31	3
Grand Total	652979



In terms of ad placement, the most effective pod position for the TV ads is 1. Therefore, I would suggest targeting this pod position for the digital ad campaign as well.

Drive Link

[HTTPS://DOCS.GOOGLE.COM/SPREADSHEETS/D/1-WULMZQX-DVRLJT1CZYX3TXNLO3J2NAF/EDIT?USP=SHARE_LINK&OUID=111299441641572124265&RTPOF=TRUE&SD=TRUE](https://docs.google.com/spreadsheets/d/1-WULMZQX-DVRLJT1CZYX3TXNLO3J2NAF/edit?usp=share_link&oid=111299441641572124265&rtPOF=true&sd=true)



Thank You

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