

# XYZ Ads Airing Report Analysis

Final Project-3



## Introduction

In this project I have provided a dataset having different TV Airing **Brands**, their **Product**, and their category. Dataset includes the **Network** through which Ads are airing, **Types of Network** like Cable/Broadcast and the **Show** name also on which Ads got aired. You can also see the data of **Dayparts**, **TimeZone** and the **Time & Date** at which Ads got aired. It also includes other data like **Pod Position** (the lesser, the valuable), **Duration** for which Ads aired on screen, **Equivalent Sales** and total amount **Spent** on the Ads aired.

I have to use my knowledge in statistics and apply different formulas in Excel and draw necessary conclusions about the dataset based on the following questions:

1. **What is Pod Position? Does the Pod position number affect the amount spent on Ads for a specific period of time by a company?**
2. **What is the share of various brands in TV airings and how has it changed from Q1 to Q4 in 2021?**
3. **Conduct a competitive analysis for the brands and define advertisement strategy of different brands and how it differs across the brands.**
4. **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?**

## What is Advertising?

Advertising is a way of marketing your business in order to increase sales or make your audience aware of your products or services. Until a customer deals with you directly and actually buys your products or services, your advertising may help to form their first impressions of your business. Target audience for businesses could be local, regional, national or international or a mixture. So they use different ways for advertisement.

Advertising business is very competitive as a lot of players bid a lot of money in a single segment of business to target the same audience. Here come the analytical skills of the company to target those audiences from those types of media platforms where they convert them to their customers at a low cost.

## Why is Advertising Important?

Advertisements are a guaranteed method of reaching an audience. By creating an engaging ad, and spending enough to reach your target users, advertisements can have an immediate impact on business. This effect could be seen in improved trade or boosted brand recognition, among many different metrics.

- **Product Advertising:** Creating product advertisements is an important first step in a product lifecycle. It acts as an introduction to a product and can be a great way to get your brand name out into the world.
- **Creating Demand:** Before a product is produced, sales projections are calculated in order to rationalize the cost of production. Once a product is created sales need to become reality and effective advertisements are the way that businesses can introduce the product to the world.
- **Control and Track:** Companies can be highly targeted and can track every conversion from an ad with the click of a button. This control and traceability make advertising super

important in marketing for the likes of **attribution modeling** and **conversion rate optimization (CRO)**.

- **Competition:** Advertising allows you to pit your business against your competitor on a public stage. How you and your competitor react is hugely important as it shapes the market.

## Types of Advertising

### Traditional Advertising

- **Print Advertising:** Whether in a magazine, newspaper, print advertising is an effective way to get your brand name out there.
- **Billboards:** Towering over cities across the world billboards can be static or moving product advertisements for almost anything.
- **Television Advertising:** Television advertising was the most popular way of getting a product in front of people for over 50 years.
- **Radio Advertising:** Radio advertising, although solely audio, with no imagery to pair with it, is still very effective. **There are two distinct audiences:** the older audience and those who listen to the radio on their work commute. Creating ads that are short and straight to the point will keep listeners interested; anything more will overwhelm them.

### Digital Advertising

- **Social Media Advertising:** Social Media platforms have grown in popularity and, with this new trend came advertising on the platforms. Placing promotional ads on well-liked sites is great as you can target demographics more closely than ever before. You can choose your age bracket, interests, locations, and so much more with only a few clicks.
- **Search and Display Advertising:** Search engines have capitalized on effective advertising also with the use of search and display ads that are tailored to keyword searches. This form of promotional advertisement is great for retargeting and remarketing to people who have already been on your website.
- **Mobile Advertising:** Mobile-first advertising could include SMS ads, app ads, and website advertisements aimed at mobile users. The options are endless when you are marketing to an audience who are always on their device.
- **Popups:** Using popups that include calls to action are a great idea. Entice someone back to a page when they are about to leave through an exit popup. Popups that provide discount codes or a link to the exact product you are searching for can make all the difference to a potential customer.

## Project Approach

For this project I have given a dataset that has all the information regarding TV airings and MS Excel 2007 is used to answer the questions asked. First I have checked for the missing values and found out there were **none** present then performed analysis to get the insights.

In **XYZ\_Ads\_Airings\_Data** dataset there are **731784** rows and **19** columns. First I divided the entire dataset into four quarters. All the questions were answered based on quarterly split datasets.

## Tech-Stack Used

Microsoft Excel 2007 is powerful data visualization and analysis software, which uses spreadsheets to store, organize, and track datasets with formulas and functions. Excel is used by data analysts, and other professionals. It's part of the Microsoft Office suite of products.



### What is Excel used for?

- We can enter data in Strings, Dates or Numerical type of data in the Excel
- We can use variety of formulas available in Excel to perform calculations
- We can represent data in Charts
- We can drill down and analyze the data using Pivot Tables

### Features of MS Excel

- **Graphical Features of Excel:** Excel has variety of the graphical features to represent the data in Charts and pictorial format. For Example: Charts, Shapes, Smart Arts, Clip Arts, Pictures, etc.
- **Database Features of Excel:** Excel can be used as database and perform variety of data operations. For example: Pivot Tables, Slicers, Tables, Spark lines, Database, Sorting, Filtering, Data Validation, Grouping, etc.
- **Functional Features of Excel:** Excel Tools and Functions will help to perform powerful calculations and enhance the Excel Application Features. For example: Formulas, VBA Macros, Add-ins, Hyperlinks, Conditional Formatting, Spell Check, Protection, etc.

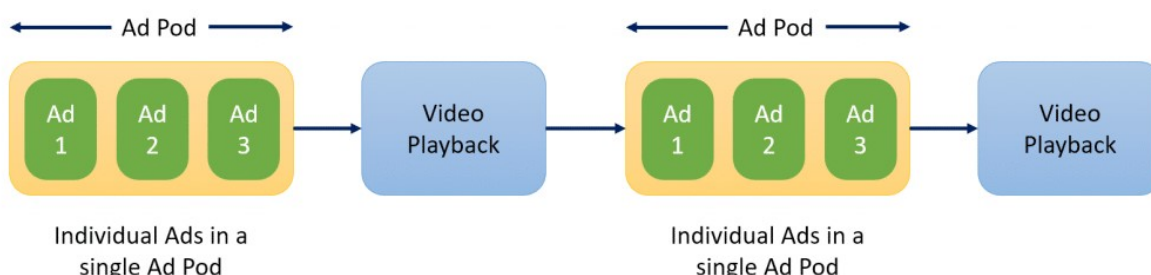
# Insights

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

Ad Pods or **Podding** is a term used to refer to multiple ads that are placed together and then played back one after the other (back to back playback) in a single ad break. They allow publishers to return multiple ads from a single ad request, and then those ads are played in sequence.

Say you're streaming "Halloween Ends" on Netflix and halfway through the movie an ad break starts, the movie playback stops, and the ad pod takes over. The first ad in the pod is played back, followed by the second ad, and so on. All the ads in the pod are played back and the control returns to the movie. You watch three different ads back-to-back, and then the movie resumes. You just sat through an ad pod.

It's also quite common to have "Skip Ad" options in Ad Pods. So, it's possible that a user watches the first ad and skips the rest of the ads in the pod.

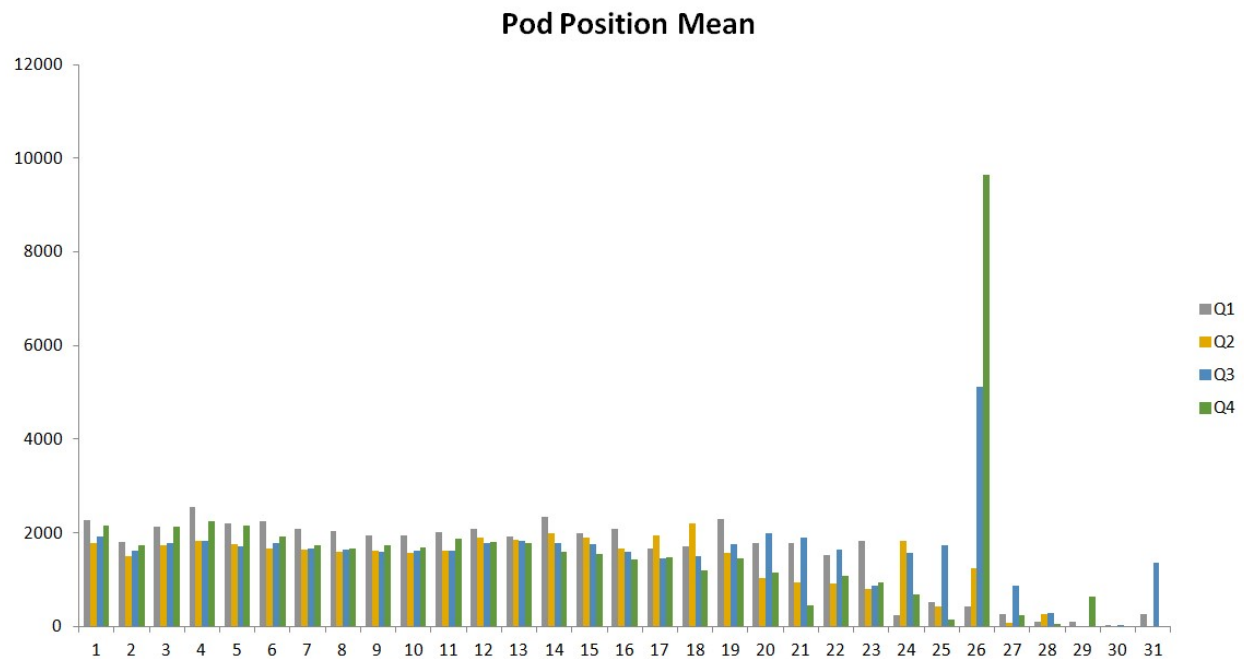


The first ad position in a commercial break captures the highest attention overall. It's likely that after an advertiser captures viewer attention, it is the quality of the ad itself, and not pod position that will determine its impact.

First I checked how mean of the Spent is related with the Pod Position. Below are the details:

Mean				
Pod Position	Q1	Q2	Q3	Q4
1	2276.484	1776.015	1910.066	2151.005
2	1796.666	1492.695	1621.405	1737.114
3	2127.75	1727.295	1771.684	2133.425
4	2543.714	1816.73	1819.824	2236.263
5	2205.004	1745.39	1718.149	2162.408
6	2256.569	1671.654	1772.921	1925.671
7	2092.018	1639.964	1658.826	1730.479
8	2042.917	1584.711	1637.36	1672.994
9	1942.422	1616.503	1586.982	1740.937
10	1953.229	1573.824	1617.964	1684.398

11	2004.384	1606.78	1627.782	1862.086
12	2087.654	1898.31	1779.745	1798.043
13	1927.366	1859.911	1820.013	1786.336
14	2328.767	1990.253	1785.695	1596.788
15	1979.024	1906.741	1762.961	1554.319
16	2091.272	1665.457	1588.054	1437.942
17	1669.79	1934.955	1458.585	1483.402
18	1708.701	2209.264	1507.562	1197.8
19	2288.055	1579.486	1747.398	1449.512
20	1771.311	1027.32	1997.146	1146.237
21	1771.378	940.6552	1893.759	446.5111
22	1529.903	921.9535	1628.519	1073.37
23	1824.414	794.1212	872.8846	935.8824
24	235	1836.857	1568.44	673.4545
25	521.1667	415.0667	1737.786	151.8571
26	423.3	1238.4	5122.5	9640.143
27	271.6	69	871	239.6667
28	106	274	294	41.5
29	101			643.3333
30	11		37	
31	274		1367	



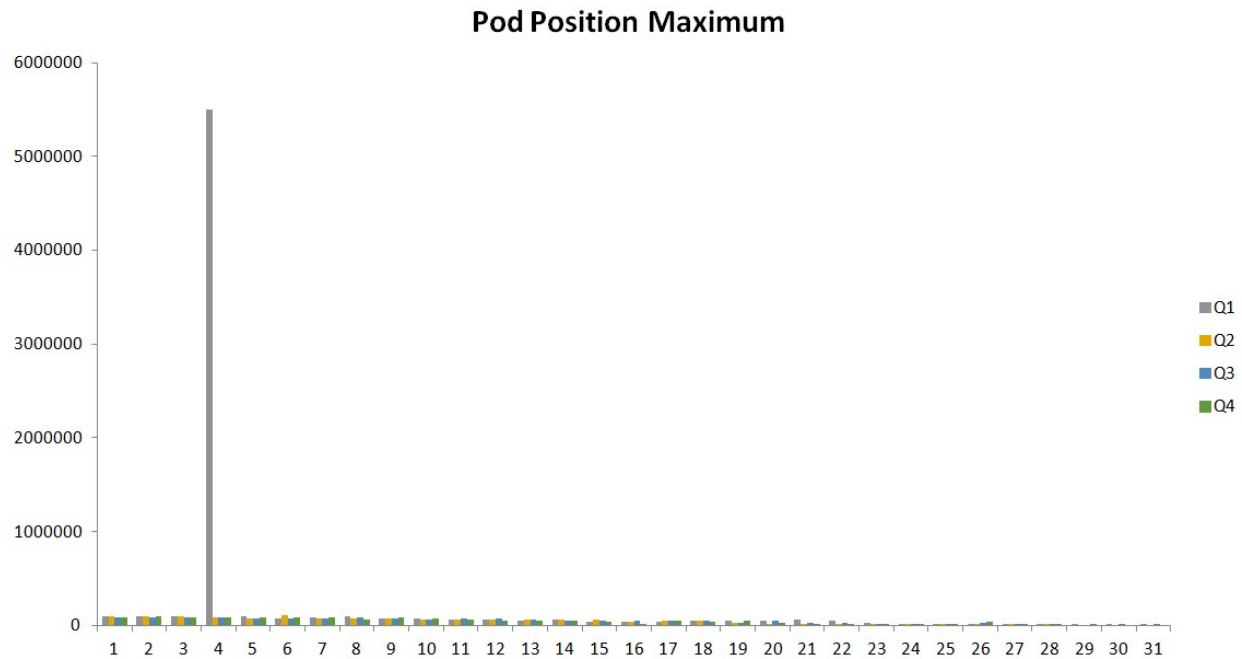
As you can see the mean is well within the interval between 1500 and 2500.



Then I check for the maximum Spent per Pod Position.

Pod Position	Maximum			
	Q1	Q2	Q3	Q4
1	92140	91012	84811	88846
2	90430	91012	81975	91596
3	91525	91525	81801	83870
4	5500000	88846	82314	80497
5	91525	77852	74925	82292
6	77852	103048	75593	83445
7	78887	77852	75213	83935
8	90430	74248	81975	60829
9	76640	78082	67803	78848
10	78418	56003	62229	75263
11	61480	61077	73535	56132
12	56898	59780	75213	47503
13	53256	58036	64521	50084
14	63564	58043	46563	46563
15	37756	57984	46563	37129
16	38651	41640	46563	15286
17	37756	55331	46563	51084
18	46563	48998	46563	41736
19	46563	25304	28099	46563
20	49979	13690	46074	25707
21	55508	17246	26412	2329
22	51283	6404	28595	14613
23	26302	5259	5539	9030
24	1416	17660	15152	5991
25	3774	1914	4918	481
26	2794	2377	27034	40894
27	806	96	1556	473
28	106	274	294	76
29	101			1679
30	11		37	
31	274		2569	

Through this table we can clearly see that Pod Positions 1 to 5 is having the highest amount spent as compared to the Pod Positions 27 to 31 with least amount. Also, there are some special cases as in Pod Position 4 of Q1 the spending is 55 lakhs and Pod Position 26 of Q4 the spending is 40894.

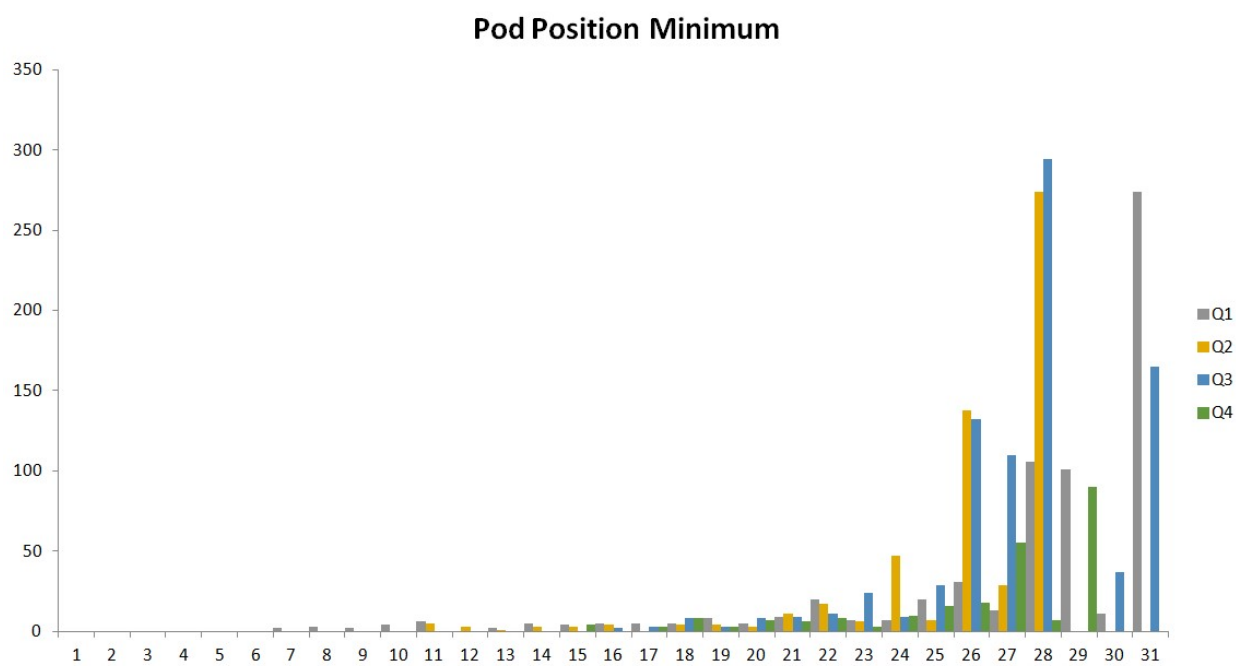


Now, the final piece in this analysis I checked for minimum spending per Pod Position.

Minimum				
Pod Position	Q1	Q2	Q3	Q4
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	2	0	0	0
8	3	0	0	0
9	2	0	0	0
10	4	0	0	0
11	6	5	0	0
12	0	3	0	0
13	2	1	0	0
14	5	3	0	0
15	4	3	0	4
16	5	4	2	0
17	5	0	3	3
18	5	4	8	8
19	8	4	3	3
20	5	3	8	7
21	9	11	9	6
22	20	17	11	8

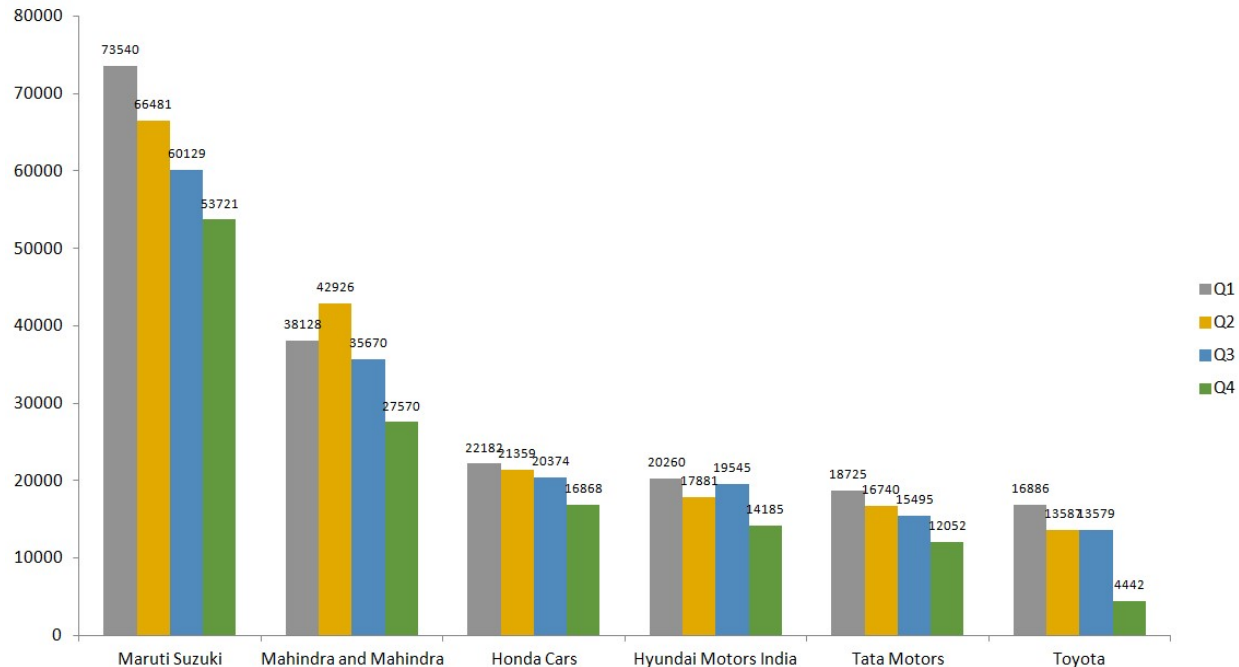


23	7	6	24	3
24	7	47	9	10
25	20	7	29	16
26	31	138	132	18
27	13	29	110	55
28	106	274	294	7
29	101			90
30	11		37	
31	274		165	



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

Brand	Q1	Q2	Q3	Q4
Maruti Suzuki	73540	66481	60129	53721
Mahindra and Mahindra	38128	42926	35670	27570
Honda Cars	22182	21359	20374	16868
Hyundai Motors India	20260	17881	19545	14185
Tata Motors	18725	16740	15495	12052
Toyota	16886	13587	13579	4442



- Quarter 1 has the highest share in each Brand because of various festive activities i.e. New Year, Valentine's Day, Holi etc.
- In Quarter 2 there is a drop in TV airings as there are no such festivities regardless of IPL. So, there is a dip in each Brand.
- In Quarter 3 there is less airings because in Indian calendar we have shradh and people tend to buy less during that period.
- But in Quarter 4 a dip is also observed regardless of two major festivals i.e. Dussehra and Diwali. Also, there is Christmas Eve.

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

A competitive analysis is a strategy that involves researching major competitors to gain insight into their products, sales, and marketing tactics. Implementing stronger business strategies, warding off competitors, and capturing market share are just a few benefits of conducting a competitive market analysis.

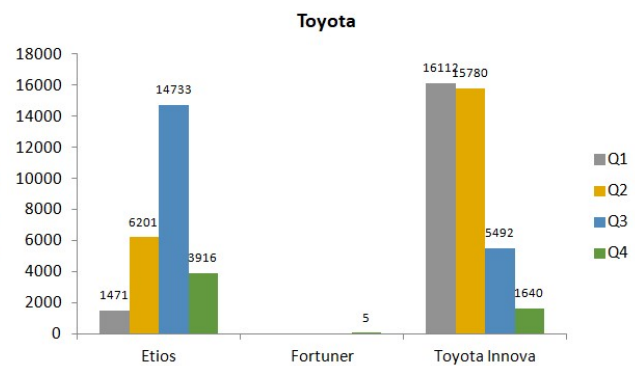
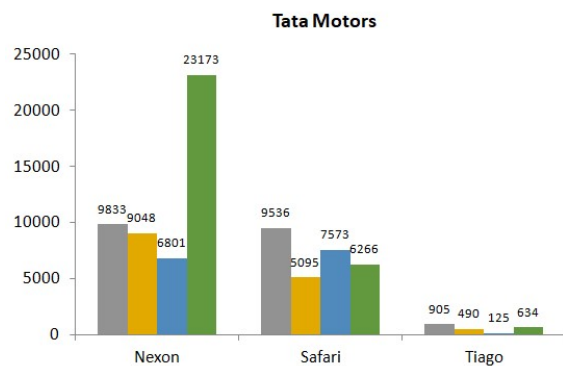
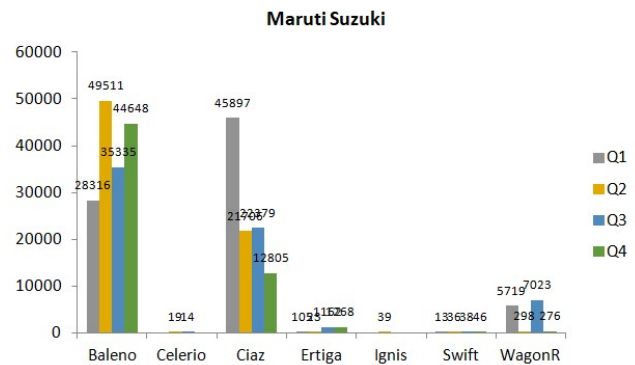
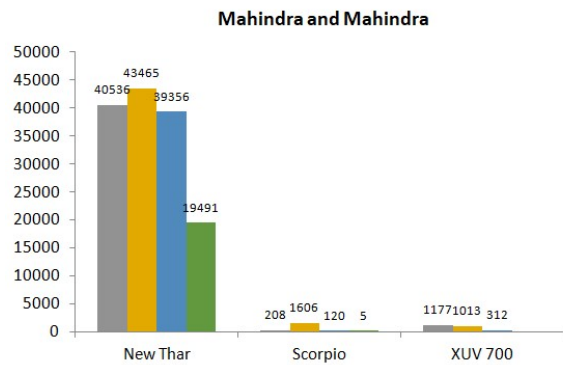
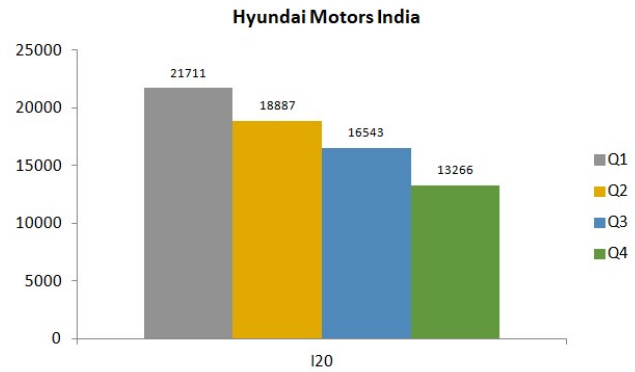
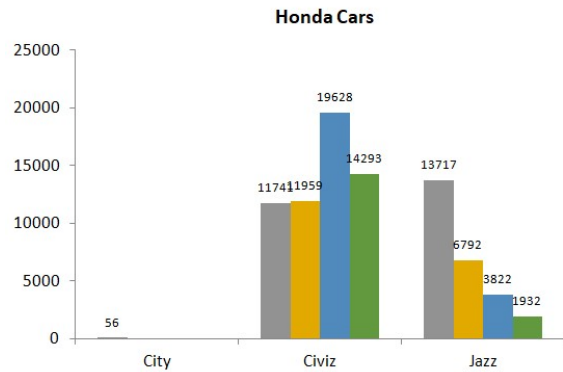
A competitive analysis can help you learn the ins and outs of how your competition works, and identify potential opportunities where you can out-perform them.

- With a competitive analysis, you can discover where your business is doing well, where you need to improve, and which trends you need to get ahead of.

- Complete a competitive analysis when your company isn't moving forward as fast as you want or when competitors are securing orders from your ideal customers.
- A competitive analysis should examine your competitors' market share, pricing, marketing, geography and customer reviews.

Competitive Analysis is performed based on the following questions:

**A. How many times each Brand is advertising their products?**



**B. What is the most preferred Network for each Brand?**

Brand	Network	Q1	Q2	Q3	Q4
Honda Cars	N-10011		1023	1416	
	N-10012	1380	870	991	
	N-10019		930		
	N-10030				707
	N-10079				1020
	N-10112	1017	1401	1319	1131
	N-10115	995			
	N-10117	1339	1140	1733	
	N-10123	966		976	1339
	N-10130				1944

Brand	Network	Q1	Q2	Q3	Q4
Hyundai Motors India	N-10014	1843			1273
	N-10032			782	
	N-10039	1391	1040	1169	1093
	N-10042	1008	858		816
	N-10051				834
	N-10080			637	
	N-10088	776		1017	1051
	N-10121		840		
	N-10123		1299	814	
	N-10136	1699	908		

Brand	Network	Q1	Q2	Q3	Q4
Mahindra and Mahindra	N-10030			1257	
	N-10055	2380	2856	1283	
	N-10058		1402		
	N-10080				819
	N-10097			1398	
	N-10111		1396	1230	
	N-10116	1475	1770	1588	684
	N-10123	1524	1661		
	N-10128	1065			
	N-10132	1412			722

Brand	Network	Q1	Q2	Q3	Q4
Maruti Suzuki	N-10014	1856	1833		
	N-10033		1552		
	N-10038			2113	
	N-10040	2304		2022	2048
	N-10041		1719	1849	1605
	N-10061		1626		
	N-10066	1817		1549	
	N-10074		1469		
	N-10079	1867			2389
	N-10113			2404	2636

Brand	Network	Q1	Q2	Q3	Q4
Tata Motors	N-10009	846	655		1128
	N-10031				789
	N-10046	532			
	N-10048	549	468	484	
	N-10050		454		
	N-10051		638	476	
	N-10066			510	
	N-10086	533	398		890
	N-10087				880
	N-10105				827

Brand	Network	Q1	Q2	Q3	Q4
Toyota	N-10005	1538	2326	2428	
	N-10007				283
	N-10021	1170	1710	783	608
	N-10024	813		1136	
	N-10036		961	1303	316
	N-10039				365
	N-10048	1078	775		
	N-10066			649	
	N-10095		1020		
	N-10109	1043			

No two Brands use the same Network for their TV airings. Also, Honda Cars uses different Network for every quarter.

C. On which Show does each Brand advertise most?

Brand	Show	Q1	Q2	Q3	Q4	
Honda Cars	S-12680	328			408	
	S-12900					
	S-14666			471		
	S-15146	350		289	346	
	S-15148			311	398	
	S-16010				371	
	S-16747	306			411	
	S-18294	250	369			
	S-19877	324				
	S-20311		303	392		

Brand	Show	Q1	Q2	Q3	Q4
Hyundai Motors India	S-12551	1486			406
	S-12560				722
	S-14098				
	S-14162	354	320	281	
	S-15146		560	255	
	S-15148	352	501	292	
	S-17261		381		
	S-17401				372
	S-19909	530			
	S-19396	913	950	898	643

Brand	Show	Q1	Q2	Q3	Q4
Mahindra and Mahindra	S-12551	889			357
	S-12560				
	S-12900	723			
	S-13726			521	
	S-14098	618	891		
	S-15892				429
	S-16994	592	743	989	393
	S-17401				363
	S-19337			669	383
	S-21922	624	682		



Brand	Show	Q1	Q2	Q3	Q4
Maruti Suzuki	S-10130			1044	
	S-12551	1262			664
	S-12560				797
	S-15870	591			
	S-15892		528		
	S-16729		548		
	S-16747	556			1150
	S-18528	770	702	807	
	S-19396	1103	686	1146	1239
	S-19407		753	2002	2386

Brand	Show	Q1	Q2	Q3	Q4
Tata Motors	S-11229		128		
	S-12279			125	
	S-12551	237			
	S-15870		134	144	
	S-15892	248	169	250	289
	S-16747	245			350
	S-18294		154		
	S-19055	146	126		256
	S-19396	173		161	308
	S-20470			119	435

Brand	Show	Q1	Q2	Q3	Q4
Toyota	S-10130			279	
	S-11824	221	376		
	S-12551	687			
	S-12560				541
	S-15029			233	
	S-15870				121
	S-16386	299	370		
	S-16388			276	
	S-17401		231		179
	S-19396		312	211	291

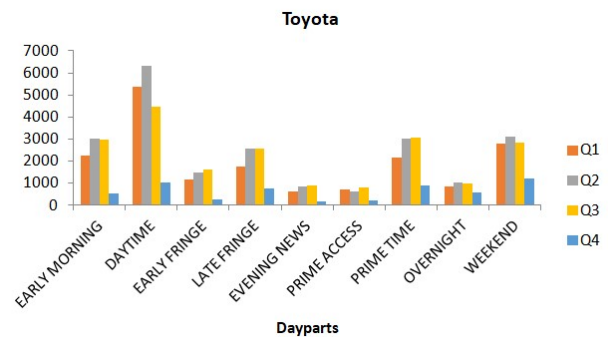
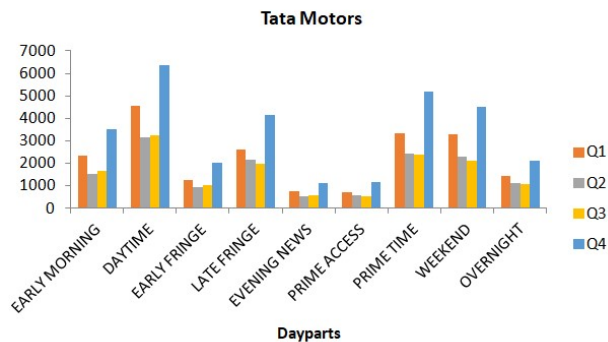
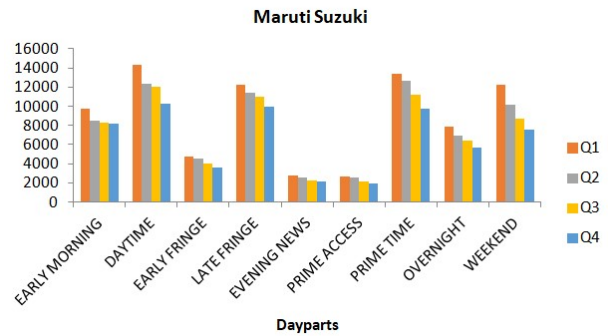
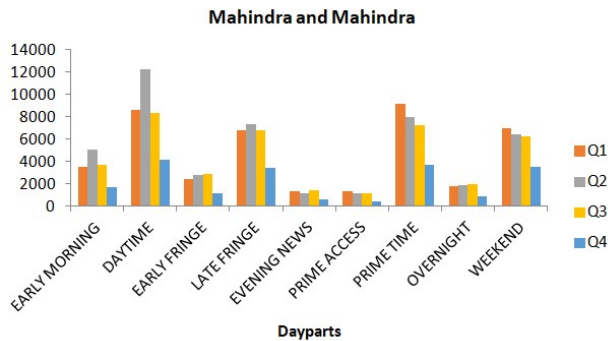
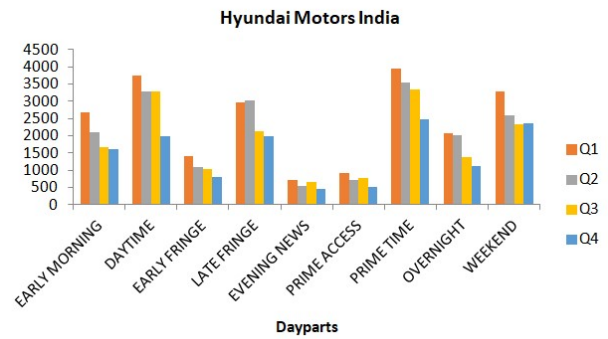
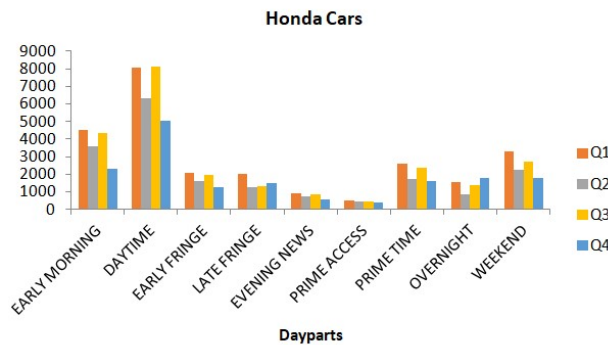
Above are the most popular Show choices for each Brand.



### D. What Pod Position is desired by each Brand?

Pod Position				
Brand	Q1	Q2	Q3	Q4
Honda Cars	2	1	1	1
Hyundai Motors India	1	1	1	1
Mahindra and Mahindra	1	1	1	1
Maruti Suzuki	1	1	1	1
Tata Motors	1	1	1	1
Toyota	1	1	1	1

### E. Which Dayparts are mostly preferred?



Daytime and Prime Time are the most preferred Dayparts.

**F. What are Mean, Median and Maximum & Minimum Duration of Ads for each Product?**

Mean					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	15			
	Honda Civiz	26.94021	24.78844	25.23742	23.6238
	Honda Jazz	24.47984	23.60866	23.15934	23.42391
Hyundai Motors India	Hyundai I20	24.28216	23.22153	23.3555	24.18024
Mahindra and Mahindra	Mahindra New Thar	30.01394	29.71379	29.78034	29.43205
	Mahindra Scorpio	30	30	30	30
	Mahindra XUV 700	20.56924	20	20	
Maruti Suzuki	Maruti Suzuki Baleno	29.91048	29.69098	28.851	29.89081
	Maruti Suzuki Celerio		30	30	
	Maruti Suzuki Ciaz	29.92766	29.84774	28.63019	29.99649
	Maruti Suzuki Ertiga	26.76191	15.21739	29.82788	30
	Maruti Suzuki Ignis		20		
	Maruti Suzuki Swift	30	30	30	30
	Maruti Suzuki WagonR	30	30	30	30
Tata Motors	Tata Nexon	16.7004	21.53736	20.211	19.72749
	Tata Safari	19.3535	5.235525	5	5
	Tata Tiago	29.42541	29.7551	29.52	16.08833
Toyota	Toyota Etios	30.63222	25	22.41091	17.70046
	Toyota Fortuner				30
	Toyota Innova	31.6317	28.08745	28.07811	29.65549

Median					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	15			
	Honda Civiz	30	30	30	30
	Honda Jazz	30	30	30	30
Hyundai Motors India	Hyundai I20	30	30	30	30
Mahindra and Mahindra	Mahindra New Thar	30	30	30	30
	Mahindra Scorpio	30	30	30	30
	Mahindra XUV 700	20	20	20	
Maruti Suzuki	Maruti Suzuki Baleno	30	30	30	30
	Maruti Suzuki Celerio		30	30	
	Maruti Suzuki Ciaz	30	30	30	30
	Maruti Suzuki Ertiga	30	10	30	30
	Maruti Suzuki Ignis		20		
	Maruti Suzuki Swift	30	30	30	30
	Maruti Suzuki WagonR	30	30	30	30
Tata Motors	Tata Nexon	15	30	15	15
	Tata Safari	15	5	5	5
	Tata Tiago	30	30	30	10
Toyota	Toyota Etios	15	15	15	15
	Toyota Fortuner				30
	Toyota Innova	30	30	30	30

Maximum					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	15			
	Honda Civiz	30	30	30	30
	Honda Jazz	30	30	30	30
Hyundai Motors India	Hyundai I20	75	30	30	30
Mahindra and Mahindra	Mahindra New Thar	60	60	30	30
	Mahindra Scorpio	30	30	30	30
	Mahindra XUV 700	30	20	20	
Maruti Suzuki	Maruti Suzuki Baleno	30	30	30	60
	Maruti Suzuki Celerio		30	30	
	Maruti Suzuki Ciaz	30	30	30	30
	Maruti Suzuki Ertiga	30	30	30	30
	Maruti Suzuki Ignis		20		
	Maruti Suzuki Swift	30	30	30	30
	Maruti Suzuki WagonR	30	30	30	30
Tata Motors	Tata Nexon	30	30	30	30
	Tata Safari	60	30	5	5
	Tata Tiago	30	30	30	30
Toyota	Toyota Etios	120	120	30	30
	Toyota Fortuner				30
	Toyota Innova	120	120	120	30

Minimum					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	15			
	Honda Civiz	10	10	10	10
	Honda Jazz	15	15	15	15
Hyundai Motors India	Hyundai I20	15	15	15	15
Mahindra and Mahindra	Mahindra New Thar	5	5	5	15
	Mahindra Scorpio	30	30	30	30
	Mahindra XUV 700	20	20	20	
Maruti Suzuki	Maruti Suzuki Baleno	5	5	5	10
	Maruti Suzuki Celerio		30	30	
	Maruti Suzuki Ciaz	5	5	5	5
	Maruti Suzuki Ertiga	10	10	10	30
	Maruti Suzuki Ignis		20		
	Maruti Suzuki Swift	30	30	30	30
	Maruti Suzuki WagonR	30	30	30	30
Tata Motors	Tata Nexon	5	5	5	5
	Tata Safari	5	5	5	5
	Tata Tiago	10	10	10	10
Toyota	Toyota Etios	15	15	15	15
	Toyota Fortuner				30
	Toyota Innova	10	10	10	10



**G. What are Mean, Median and Maximum & Minimum Spend on Ads for each Product?**

Mean					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	1054.482			
	Honda Civiz	675.7692	523.5128	556.8006	609.6647
	Honda Jazz	633.9509	428.735	370.9181	198.3903
Hyundai Motors India	Hyundai I20	2804.906	2151.537	2401.964	2799.38
Mahindra and Mahindra	Mahindra New Thar	3035.146	2253.758	2421.568	3755.605
	Mahindra Scorpio	2294.875	1055.715	872.975	131.8
	Mahindra XUV 700	982.1351	523.9181	393.6378	
Maruti Suzuki	Maruti Suzuki Baleno	2208.665	1899.059	2108.853	2058.989
	Maruti Suzuki Celerio		2886	3517.214	
	Maruti Suzuki Ciaz	2281.074	1593.109	1652.122	1808.403
	Maruti Suzuki Ertiga	3055.61	4046.87	1694.277	1305.778
	Maruti Suzuki Ignis		904.6923		
	Maruti Suzuki Swift	292.6923	57.80556	164.4474	69.82609
	Maruti Suzuki WagonR	1861.036	774.2383	1654.092	232.8225
Tata Motors	Tata Nexon	1181.18	1449.519	1661.965	1314.867
	Tata Safari	1289.966	567.1052	462.9803	807.8458
	Tata Tiago	1491.031	537.5163	979.648	841.4117
Toyota	Toyota Etios	1497.702	1303.38	1430.862	2966.198
	Toyota Fortuner				31910.8
	Toyota Innova	2307.832	1364.708	1423.327	1356.58

Median					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	1166.5			
	Honda Civiz	266	280	299	245
	Honda Jazz	282	152	97	58
Hyundai Motors India	Hyundai I20	691	558	695	319
Mahindra and Mahindra	Mahindra New Thar	834	655	695	845
	Mahindra Scorpio	919.5	385.5	323	20
	Mahindra XUV 700	60	96	88	
Maruti Suzuki	Maruti Suzuki Baleno	632	562	625	512
	Maruti Suzuki Celerio		2746	3330	
	Maruti Suzuki Ciaz	621	541	487	443
	Maruti Suzuki Ertiga	809	768	583	512
	Maruti Suzuki Ignis		367		
	Maruti Suzuki Swift	10	21.5	76.5	0
	Maruti Suzuki WagonR	629	78.5	423	20.5
Tata Motors	Tata Nexon	445	475	522	406
	Tata Safari	438	159	156	319
	Tata Tiago	539	137.5	107	247.5
Toyota	Toyota Etios	396	398	485	315
	Toyota Fortuner				27758
	Toyota Innova	697.5	415	452.5	282.5

Maximum					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	2827			
	Honda Civic	57567	44013	72902	34764
	Honda Jazz	42557	52343	13244	10799
Hyundai Motors India	Hyundai i20	5500000	91525	84811	78887
Mahindra and Mahindra	Mahindra New Thar	91525	103048	80664	77891
	Mahindra Scorpio	63564	57839	5294	529
	Mahindra XUV 700	62159	8027	5369	
Maruti Suzuki	Maruti Suzuki Baleno	91525	91012	81975	91596
	Maruti Suzuki Celerio		5811	8393	
	Maruti Suzuki Ciaz	91525	91012	71541	83445
	Maruti Suzuki Ertiga	22972	22649	40065	18906
	Maruti Suzuki Ignis		13551		
	Maruti Suzuki Swift	3035	493	902	1691
	Maruti Suzuki WagonR	91525	55508	79353	23995
Tata Motors	Tata Nexon	57060	59381	67395	83935
	Tata Safari	71194	59086	54707	60775
	Tata Tiago	78887	19767	46563	46563
Toyota	Toyota Etios	59413	89301	71618	75330
	Toyota Fortuner				38140
	Toyota Innova	92140	64372	75213	59155

Minimum					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	64			
	Honda Civic	0	1	1	0
	Honda Jazz	0	0	1	0
Hyundai Motors India	Hyundai i20	2	0	0	0
Mahindra and Mahindra	Mahindra New Thar	0	0	0	0
	Mahindra Scorpio	4	3	3	7
	Mahindra XUV 700	2	1	1	
Maruti Suzuki	Maruti Suzuki Baleno	0	0	0	0
	Maruti Suzuki Celerio		712	889	
	Maruti Suzuki Ciaz	0	0	0	0
	Maruti Suzuki Ertiga	6	6	0	0
	Maruti Suzuki Ignis		11		
	Maruti Suzuki Swift	2	1	0	0
	Maruti Suzuki WagonR	0	1	0	1
Tata Motors	Tata Nexon	4	0	0	0
	Tata Safari	0	1	0	0
	Tata Tiago	0	1	0	0
Toyota	Toyota Etios	0	0	0	1
	Toyota Fortuner				27758
	Toyota Innova	1	0	0	3

#### H. Which Broadcast Week has the maximum Ads for each Product?

Week Number					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	3			
	Honda Civiz	11	26	29	52
	Honda Jazz	4	19	27	44
Hyundai Motors India	Hyundai I20	13	16	30	51
Mahindra and Mahindra	Mahindra New Thar	9	18	27	40
	Mahindra Scorpio	13	14	27	52
	Mahindra XUV 700	8	21	30	
Maruti Suzuki	Maruti Suzuki Baleno	9	22	27	52
	Maruti Suzuki Celerio		23	27	
	Maruti Suzuki Ciaz	2	14	38	41
	Maruti Suzuki Ertiga	3	18	39	40
	Maruti Suzuki Ignis		17		
	Maruti Suzuki Swift	4	18	39	43
	Maruti Suzuki WagonR	9	26	39	40
Tata Motors	Tata Nexon	5	22	39	48
	Tata Safari	8	26	29	51
	Tata Tiago	13	19	39	45
Toyota	Toyota Etios	12	26	33	50
	Toyota Fortuner				46
	Toyota Innova	5	18	29	52

#### I. Which Day Of Week has the maximum Ads for each Product?

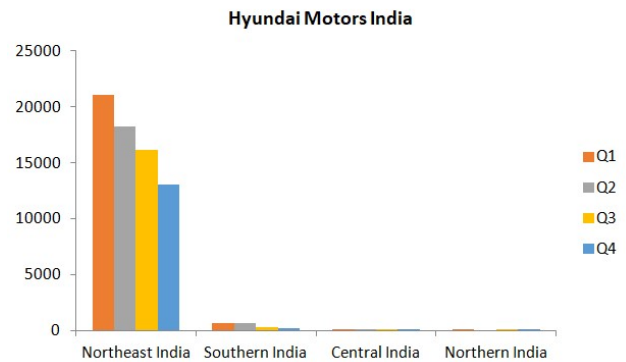
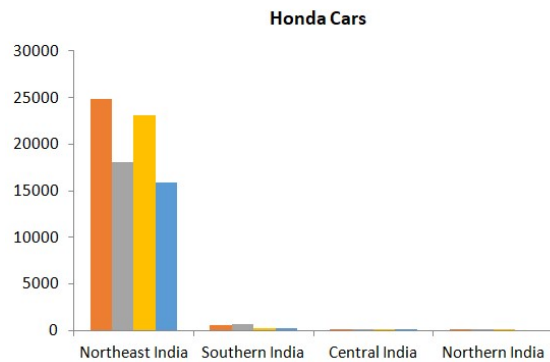
Day Of Week					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	6			
	Honda Civiz	5	5	4	1
	Honda Jazz	5	5	5	1
Hyundai Motors India	Hyundai I20	7	7	7	7
Mahindra and Mahindra	Mahindra New Thar	6	3	6	6
	Mahindra Scorpio	5	3	3	5
	Mahindra XUV 700	6	5	3	
Maruti Suzuki	Maruti Suzuki Baleno	7	7	7	7
	Maruti Suzuki Celerio		6	3	
	Maruti Suzuki Ciaz	7	7	7	4
	Maruti Suzuki Ertiga	4	4	1	1
	Maruti Suzuki Ignis		5		
	Maruti Suzuki Swift	4	7	6	1
	Maruti Suzuki WagonR	7	6	7	1
Tata Motors	Tata Nexon	6	6	7	1
	Tata Safari	7	7	1	4
	Tata Tiago	7	2	1	1
Toyota	Toyota Etios	5	7	1	6
	Toyota Fortuner				7
	Toyota Innova	5	1	1	6



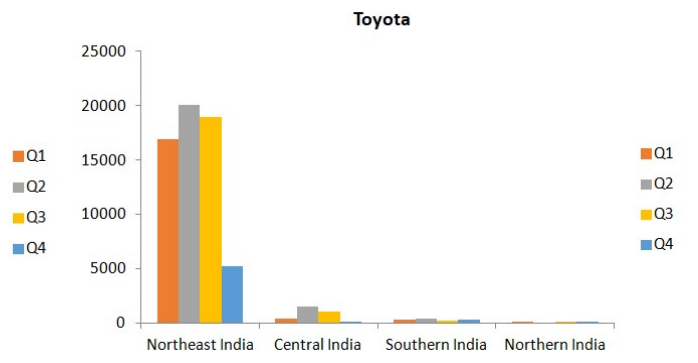
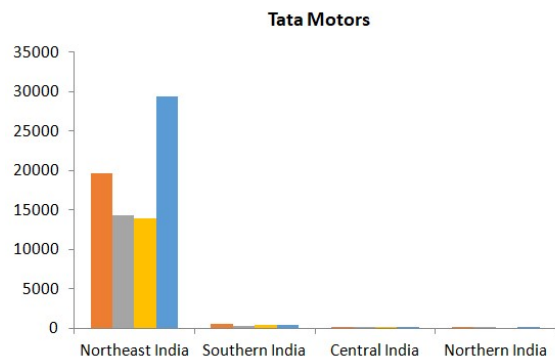
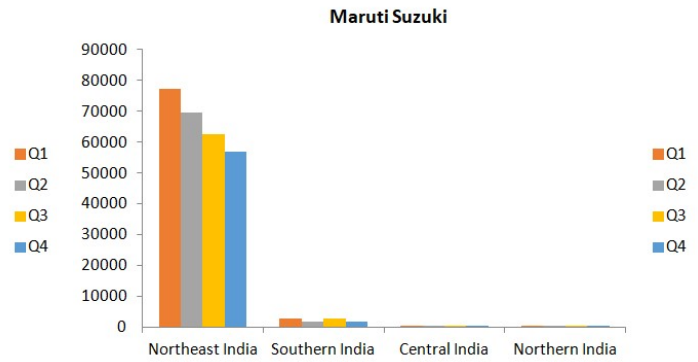
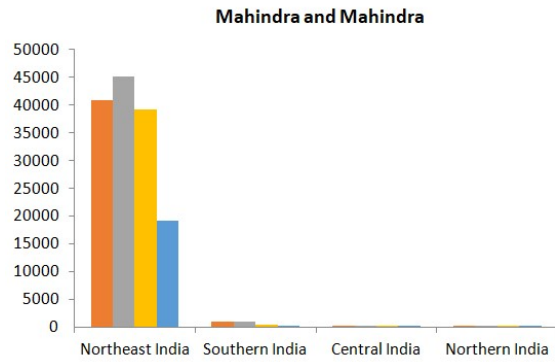
### J. Which Hour Of Day has the maximum Ads for each Product?

Hour Of Day					
Brand	Product	Q1	Q2	Q3	Q4
Honda Cars	Honda City	14			
	Honda Civic	10	10	11	12
	Honda Jazz	12	12	15	18
Hyundai Motors India	Hyundai I20	21	22	21	22
Mahindra and Mahindra	Mahindra New Thar	21	9	1	21
	Mahindra Scorpio	20	9	13	18
	Mahindra XUV 700	17	7	18	
Maruti Suzuki	Maruti Suzuki Baleno	20	21	23	23
	Maruti Suzuki Celerio		20	20	
	Maruti Suzuki Ciaz	20	23	23	23
	Maruti Suzuki Ertiga	19	2	21	23
	Maruti Suzuki Ignis		18		
	Maruti Suzuki Swift	10	9	18	17
	Maruti Suzuki WagonR	23	23	23	22
Tata Motors	Tata Nexon	21	19	21	21
	Tata Safari	11	22	2	16
	Tata Tiago	14	21	15	19
Toyota	Toyota Etios	9	11	23	21
	Toyota Fortuner				14
	Toyota Innova	14	9	23	2

### K. Which TimeZone is mostly preferred?

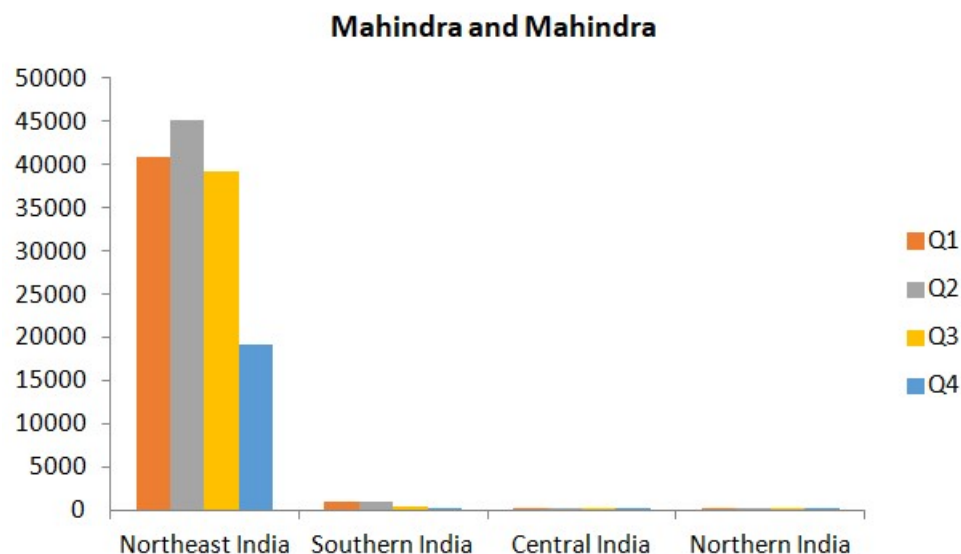
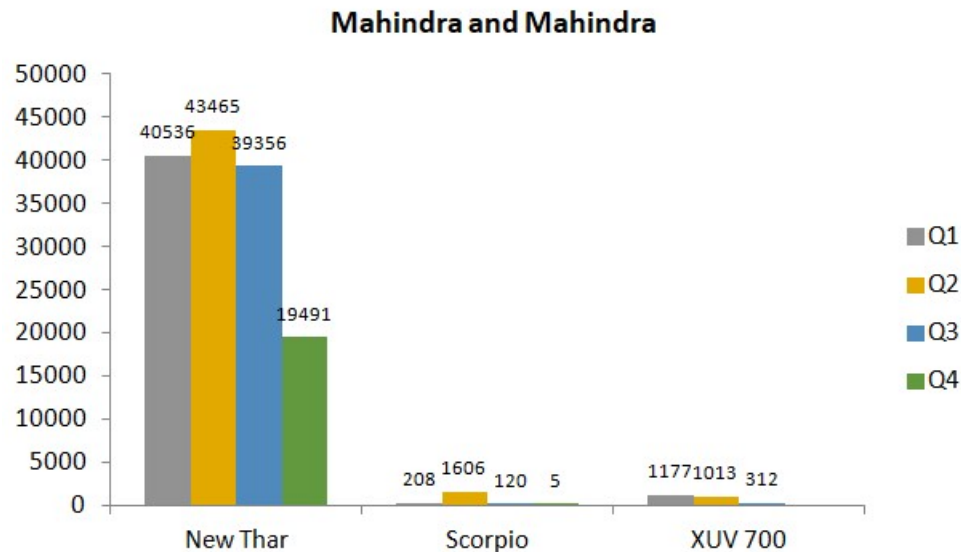






All the Brands are targeting Northeast India rigorously.

4. 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?



## Mahindra and Mahindra's SWOT Analysis

Understanding the internal factors of the company will help influence your ability to take advantage of an opportunity. SWOT Analysis is an extremely effective tool for analyzing and studying an organization's strengths, weaknesses, opportunities, and threats.

### Strengths

- Focus on innovation and investments in technology

- Strong brand position in the domestic market
- Apt for Indian roads

### **Weaknesses**

- Geographic dependence
- Overdependence on the automotive industry

### **Opportunities**

- Fast-growing automobile industry and export potential

### **Threats**

- Stiff Competition
- Stringent Regulations

If the company can continue to bank on its strengths, it will definitely be able to steer clear of the threats.

## Result

**How this project helped me:** This project helps me to understand the importance of data analysis. Through this project I am able to understand Ads Airing Report Analysis data analysis and how the companies use this data as a secret weapon. With an informed and proactive approach, they can leverage insights to make data-backed decisions that optimize their strategy and boost ROI.

**Challenges that I faced in this project:** Personally I feel that it was easy to solve the questions but the dataset is relatively huge.

**Conclusion:** Living in a world where there are sophisticated platforms to make everyday work simpler, we need to take full advantage and MS Excel is the perfect example of this by knowing how to interpret in real time can help us to find out what performs best. Whenever utilized correctly data analytics achieved a significant positive effect on our general public.