

Turkish Natural Gas Market

Division Bell

MEF UNIVERSITY

2021/12/15

Division Bell

Group Members

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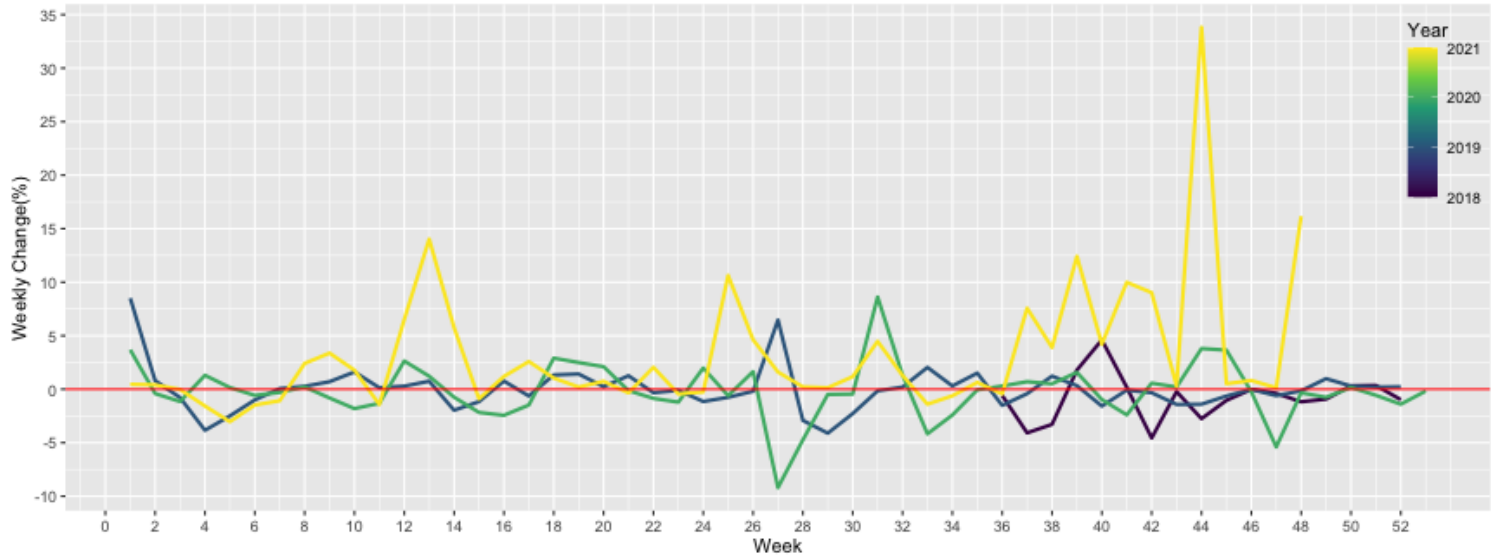
Introduction

- We used two different datasets which are obtained from EPIAS.
- We obtained the Turkish National natural gas market data ranging from 2018 to 2021 from the Energy Transparency Platform. Data contain 1188 rows and 9 variables. Variables are as follows:
 - Date
 - Total Trade Volume (TTV)¹
 - Gas Reference Price (GRP)²
 - Others (Generated from Date variable such as week, month etc.)
- We analysed each dataset and combined different outcomes.

[1] Dataset 1

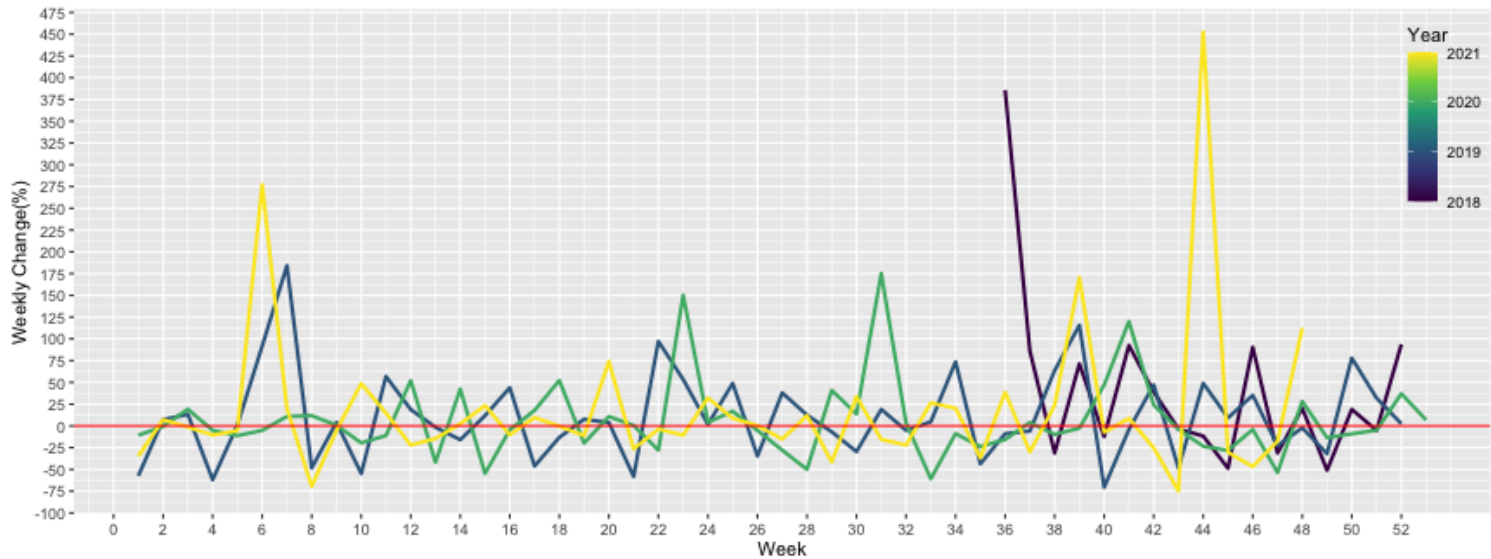
[2] Dataset 2

Weekly Change Percentage of GRP



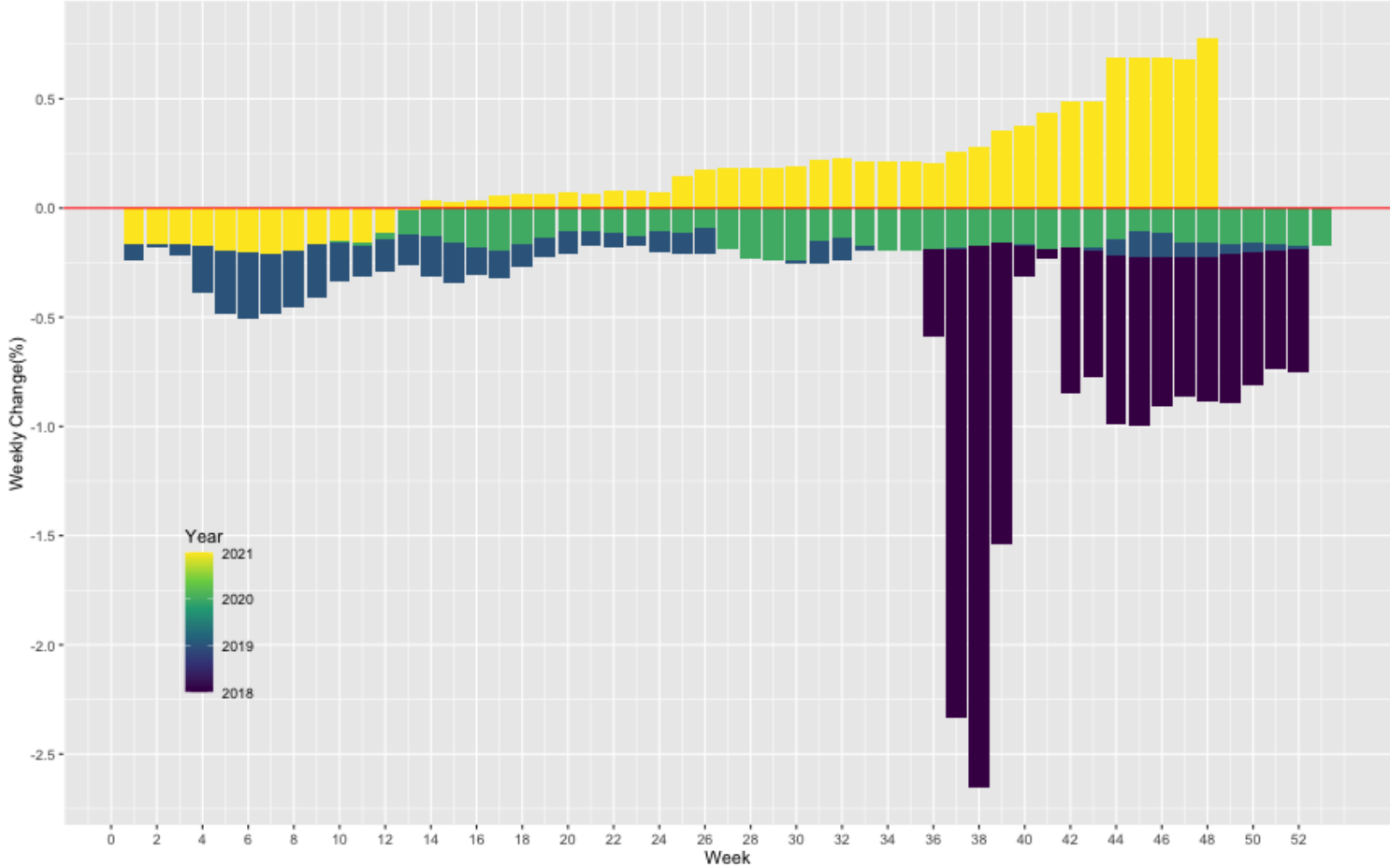
source: TRANSPARENCY PLATFORM - EPIAS

Weekly Change Percentage of TTV



source: TRANSPARENCY PLATFORM - EPIAS

Weekly Moving Average of Change of GRP in Percentage



source: TRANSPARENCY PLATFORM - EPIAS

Days of 5 Highest GRP

Date	Gas_Reference_Price	season	Total_Trade_Volume
2021-12-01	6903.22	Winter	23641605
2021-11-17	4649.00	Fall	2871827
2021-11-18	4649.00	Fall	2783496
2021-11-19	4649.00	Fall	2532450
2021-11-20	4649.00	Fall	3079084

Days of 5 Highest TTV

Date	Total_Trade_Volume	season	Gas_Reference_Price
2021-02-18	40030842	Winter	1206.13
2021-02-13	36458635	Winter	1221.79
2021-09-30	33565372	Fall	2927.10
2021-02-14	33374575	Winter	1217.75
2021-09-29	33271687	Fall	2820.20

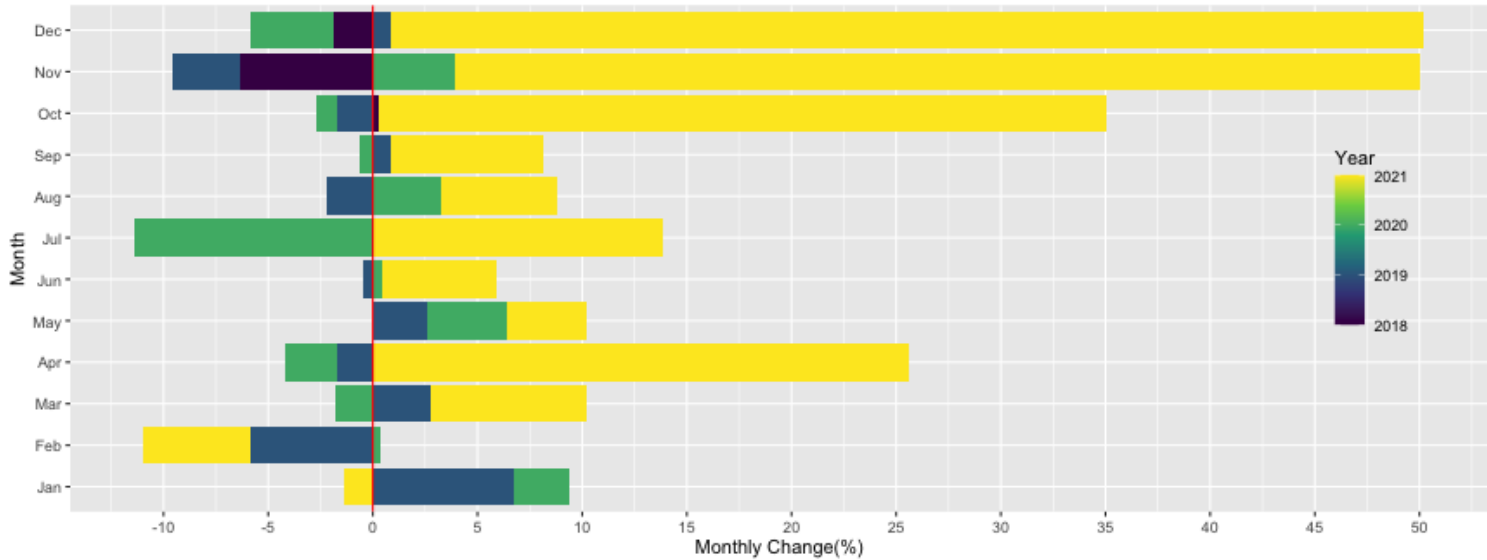
Days of 5 Lowest GRP

Date	Gas_Reference_Price	season	Total_Trade_Volume
2021-02-21	1204.86	Winter	31680228
2021-02-18	1206.13	Winter	40030842
2021-02-17	1210.48	Winter	6773738
2021-02-22	1212.45	Winter	4800860
2021-02-20	1214.45	Winter	5332787

Days of 5 Lowest TTV

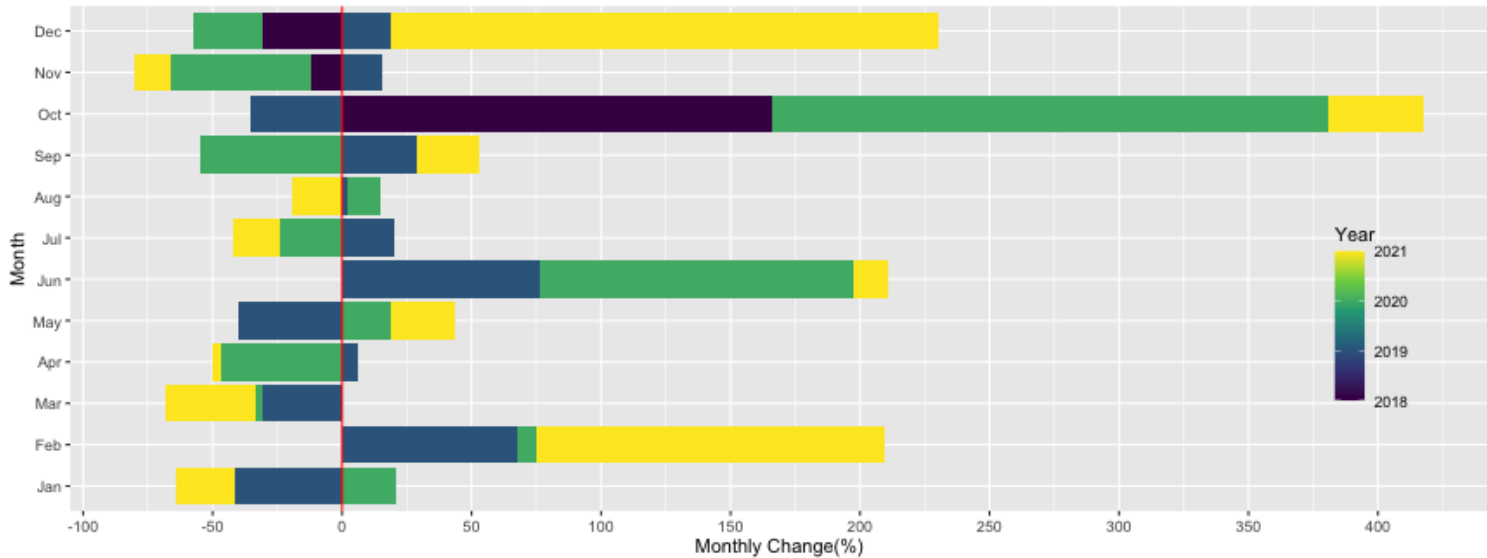
Date	Total_Trade_Volume	season	Gas_Reference_Price
2021-11-30	176662.0	Fall	4649.00
2018-09-24	298453.0	Fall	1535.63
2018-11-11	343503.2	Fall	1510.00
2018-09-01	378501.0	Fall	1650.00
2019-06-24	464941.8	Summer	1491.00

Monthly Change Percentage of GRP



source: TRANSPARENCY PLATFORM - EPIAS

Monthly Change Percentage of TTV



source: TRANSPARENCY PLATFORM - EPIAS

Months of 5 Highest GRP

year_num	month_num	Monthly_Average_GRP	Monthly_Average_TTV
2021	12	6903.220	23641605
2021	11	4621.762	7587283
2021	10	3162.358	8805574
2021	9	2345.915	6411626
2021	8	2187.293	5154411

Months of 5 Highest TTV

year_num	month_num	Monthly_Average_GRP	Monthly_Average_TTV
2021	12	6903.220	23641605
2020	10	1319.651	14136686
2020	6	1465.057	11626111
2018	10	1580.432	10214102
2020	8	1341.563	9951616

Months of 5 Lowest GRP

year_num	month_num	Monthly_Average_GRP	Monthly_Average_TTV
2021	2	1232.091	8695099
2021	1	1298.439	3709074
2020	7	1298.836	8848702
2020	12	1316.072	4797319
2020	10	1319.651	14136686

Months of 5 Lowest TTV

year_num	month_num	Monthly_Average_GRP	Monthly_Average_TTV
2019	5	1512.374	2693888
2019	1	1550.164	3623744
2021	1	1298.439	3709074
2018	9	1576.284	3839869
2019	3	1499.178	4223918

Months of 5 Highest Monthly Average Increase in GRP

year_num	month_num	Monthly_Average_GRP	change_GRP
2021	12	6903.220	49.36339
2021	11	4621.762	46.14921
2021	10	3162.358	34.80275
2021	4	1663.348	25.60209
2021	7	2072.356	13.81544

Months of 5 Lowest Monthly Average Decrease in GRP

year_num	month_num	Monthly_Average_GRP	change_GRP
2020	7	1298.836	-11.345735
2018	11	1480.222	-6.340627
2019	2	1459.291	-5.862138
2021	2	1232.091	-5.109845
2020	12	1316.072	-4.017005

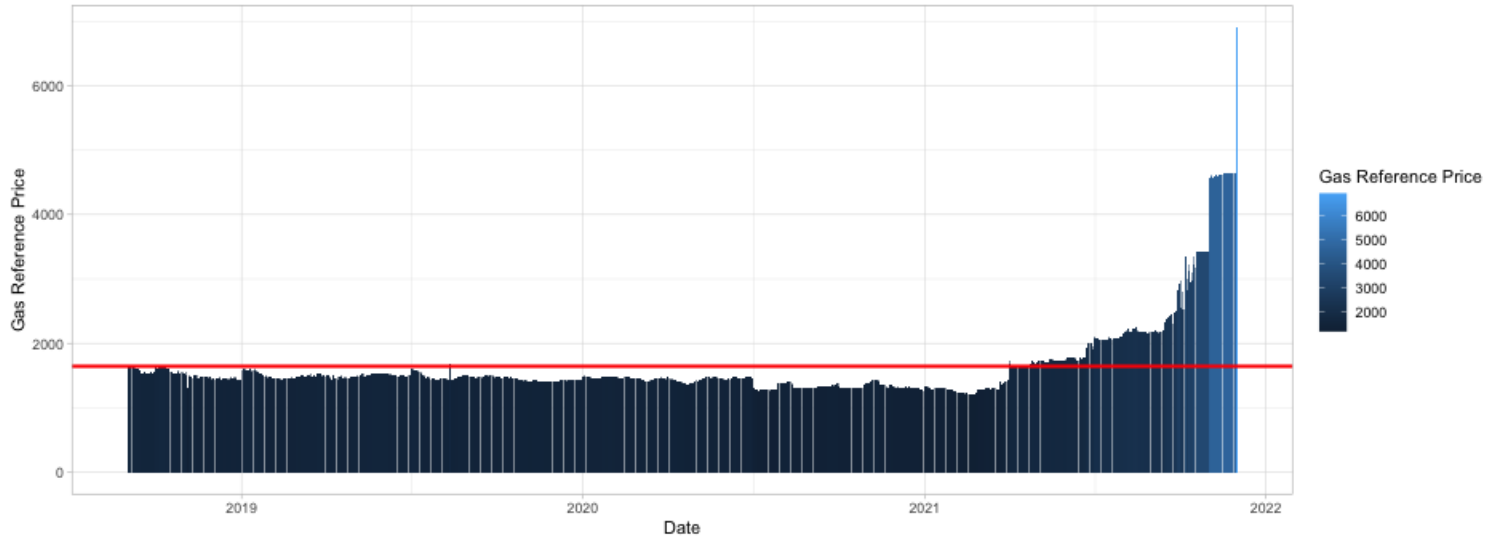
Months of 5 Highest Monthly Average Increase in TTV

year_num	month_num	Monthly_Average_TTV	change_TTV
2020	10	14136686	214.4494
2021	12	23641605	211.5951
2018	10	10214102	166.0013
2021	2	8695099	134.4278
2020	6	11626111	120.9438

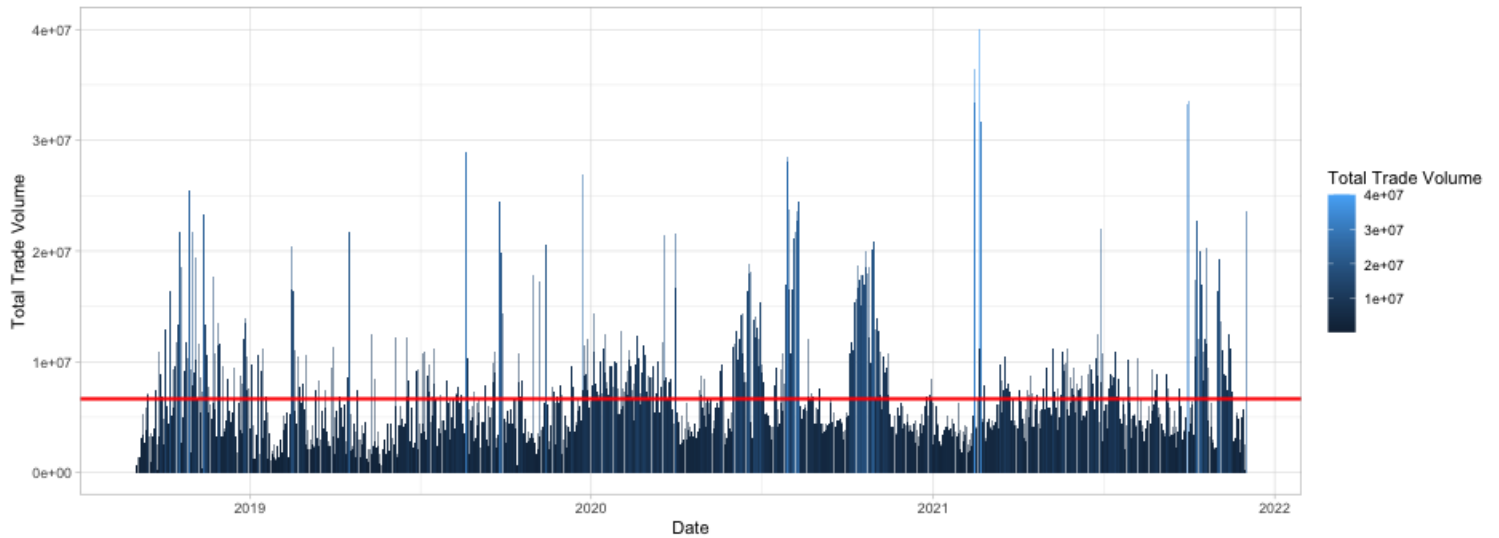
Months of 5 Lowest Monthly Average Decrease in TTV

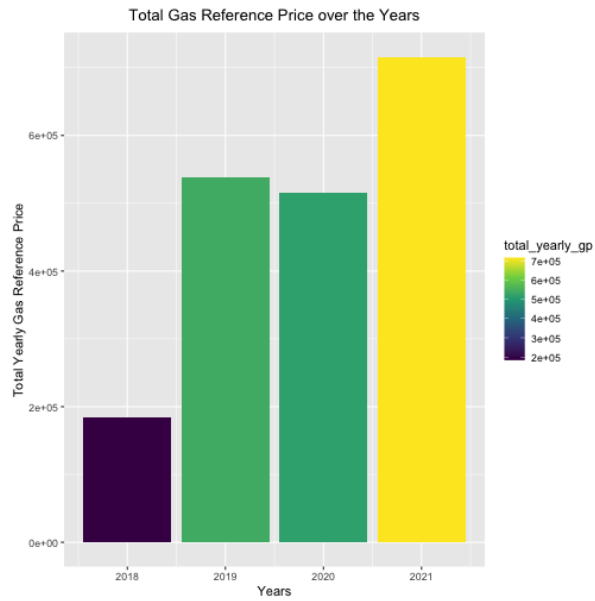
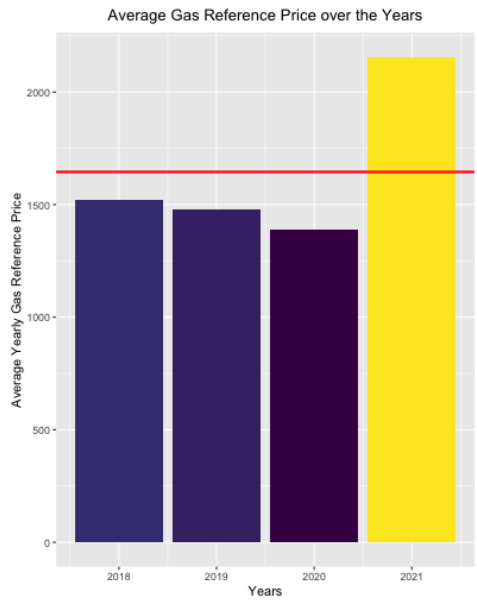
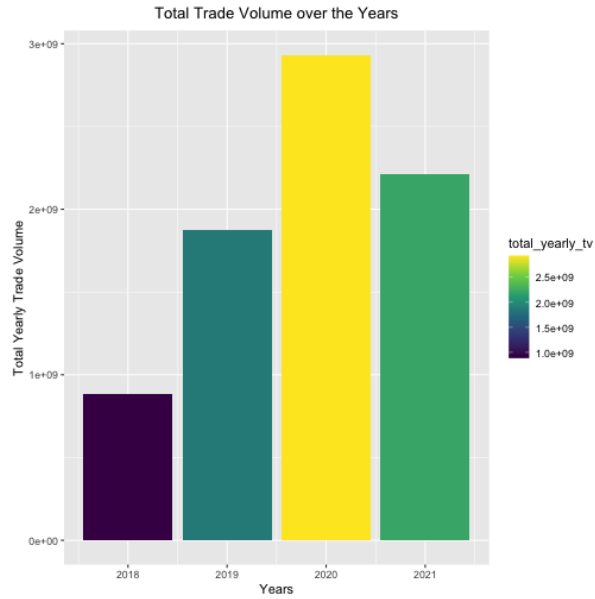
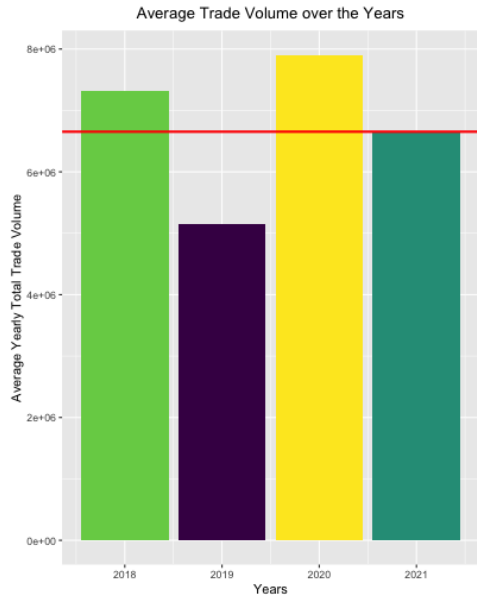
year_num	month_num	Monthly_Average_TTV	change_TTV
2020	9	4495694	-54.82448
2020	11	6501211	-54.01177
2020	4	4425900	-46.83009
2019	1	3623744	-41.45221
2019	5	2693888	-39.92578

Daily Gas Reference Prices

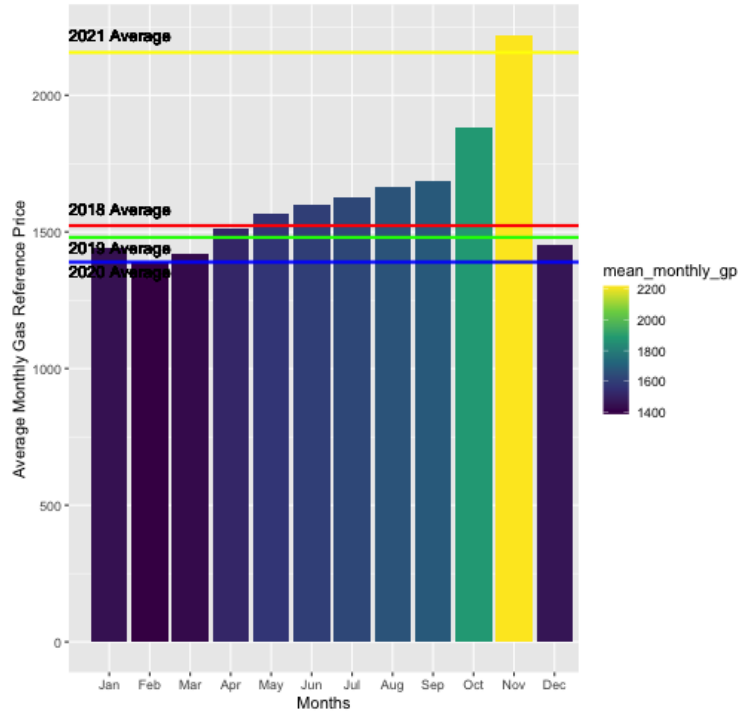


Daily Total Trade Volume

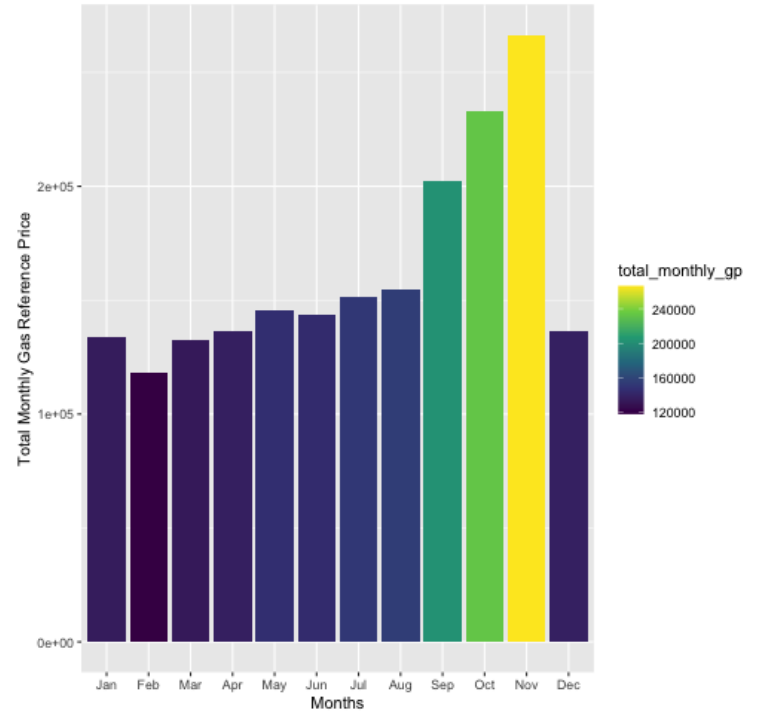




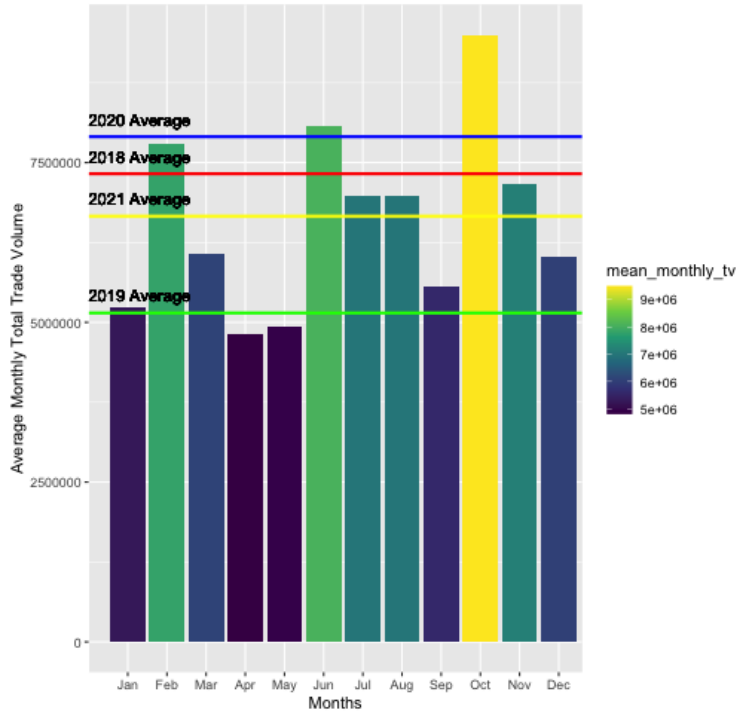
Average Gas Reference Price over the Months



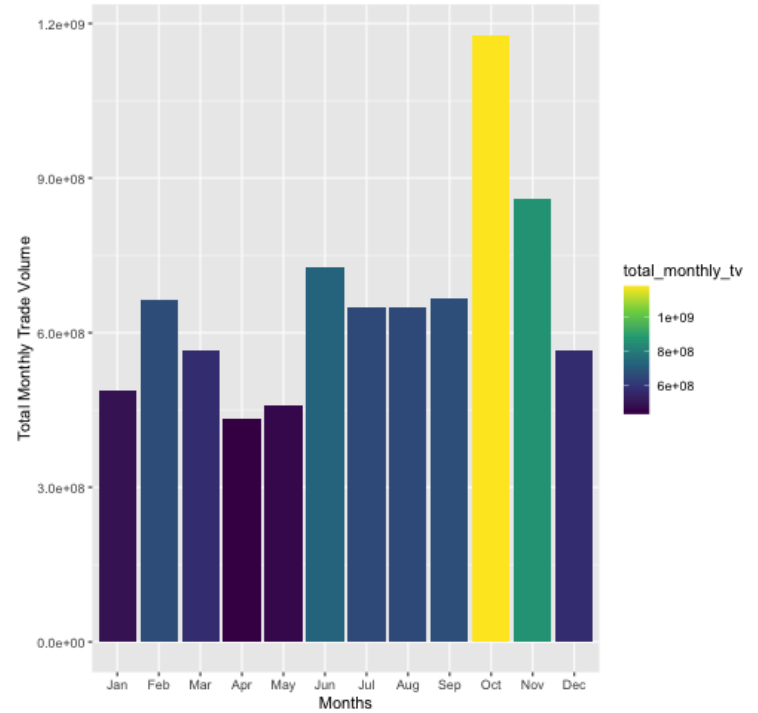
Total Gas Reference Price over the Months



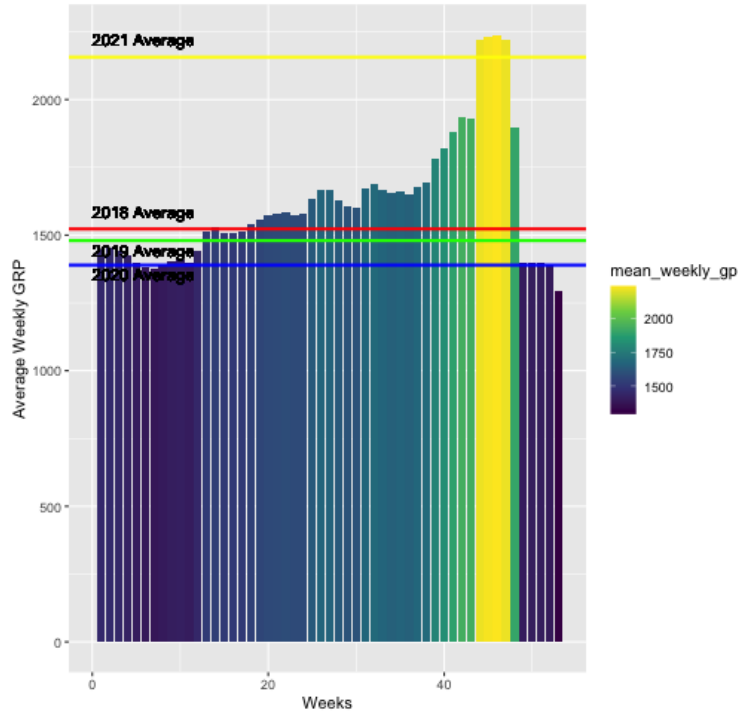
Average Trade Volume over the Months



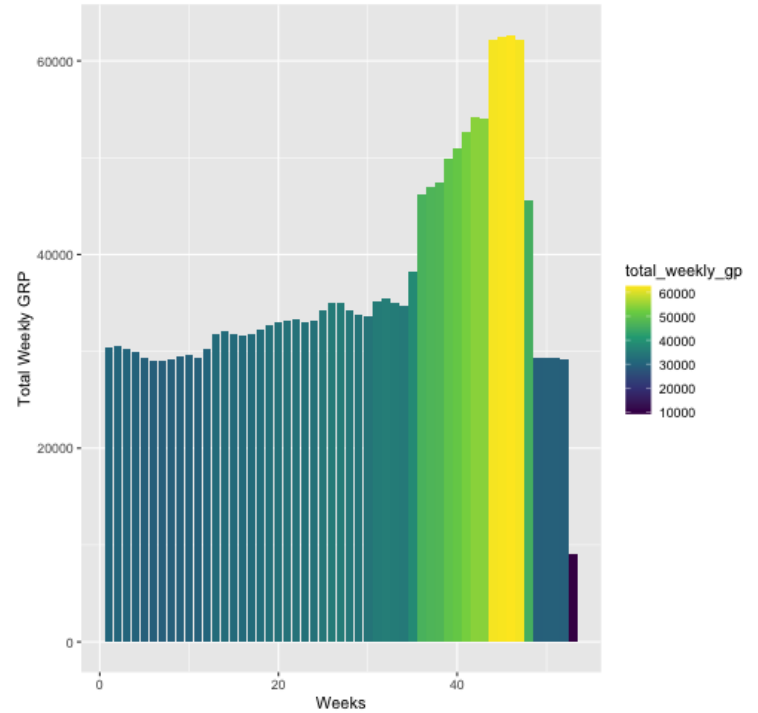
Total Trade Volume over the Months

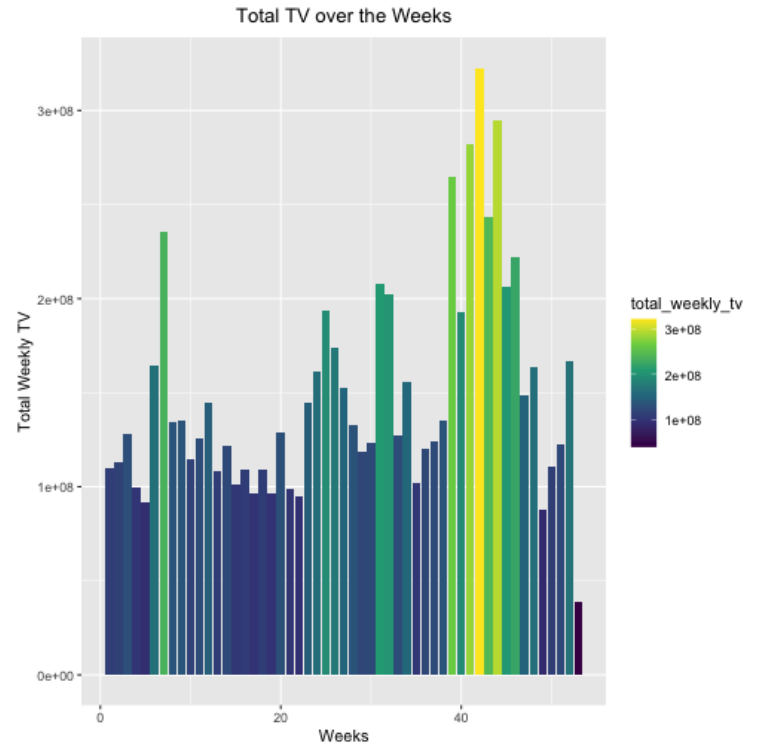
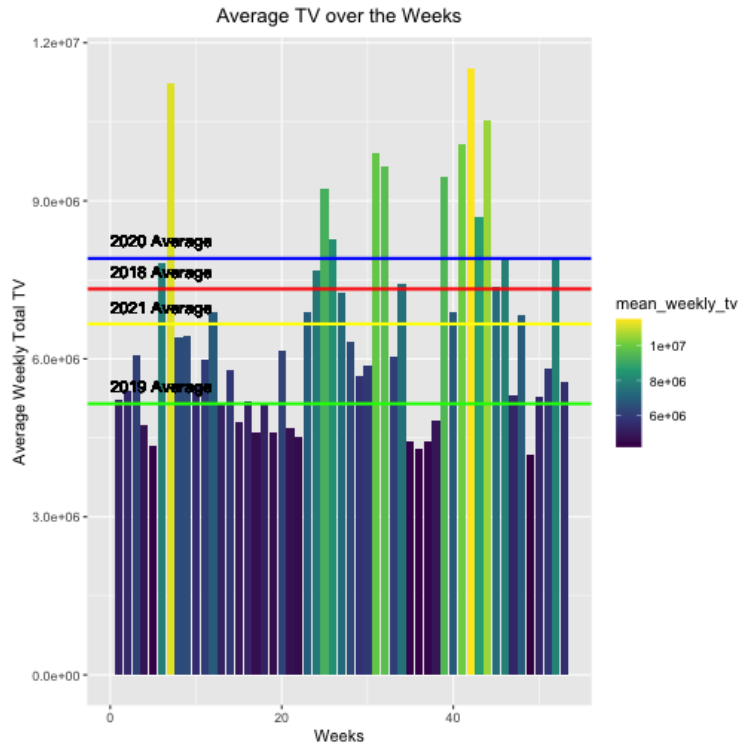


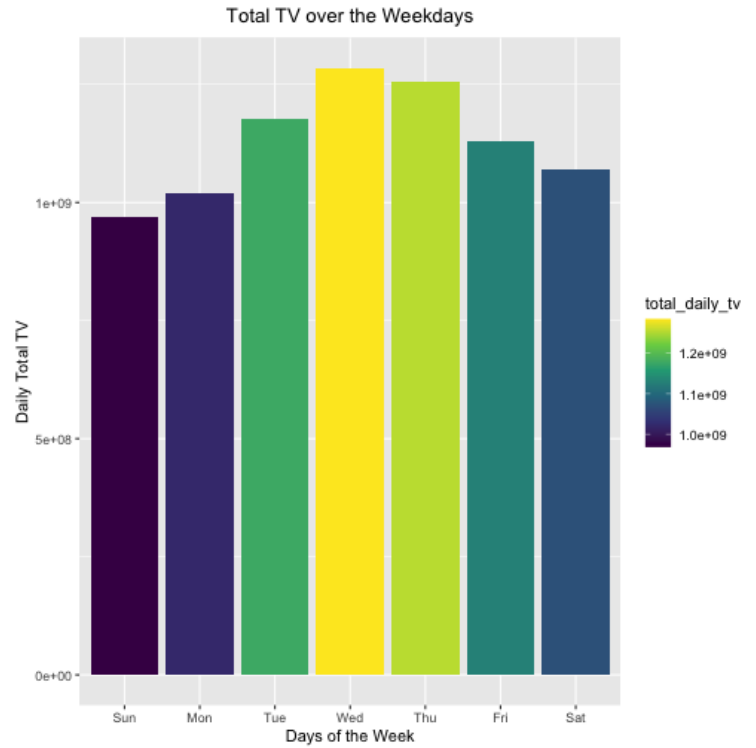
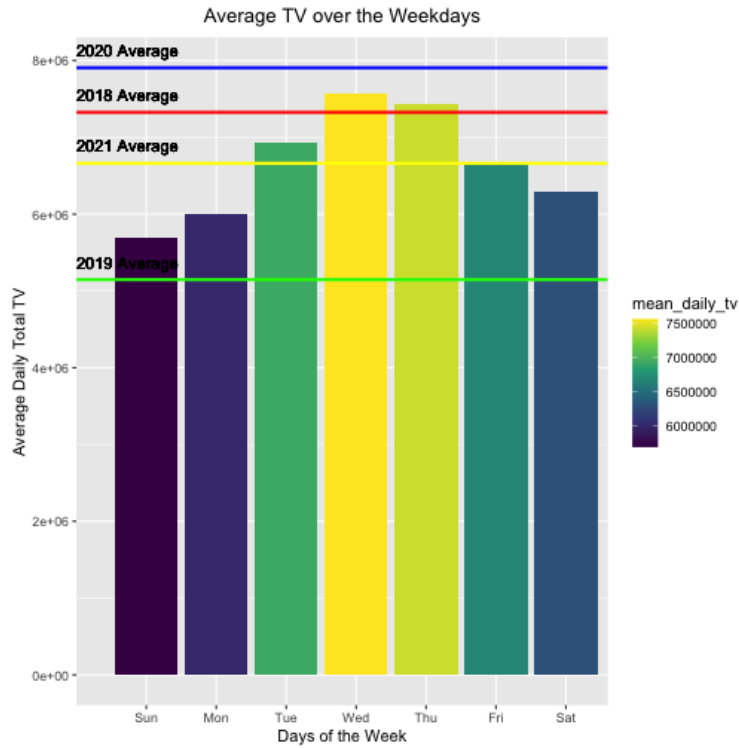
Average GRP over the Weeks



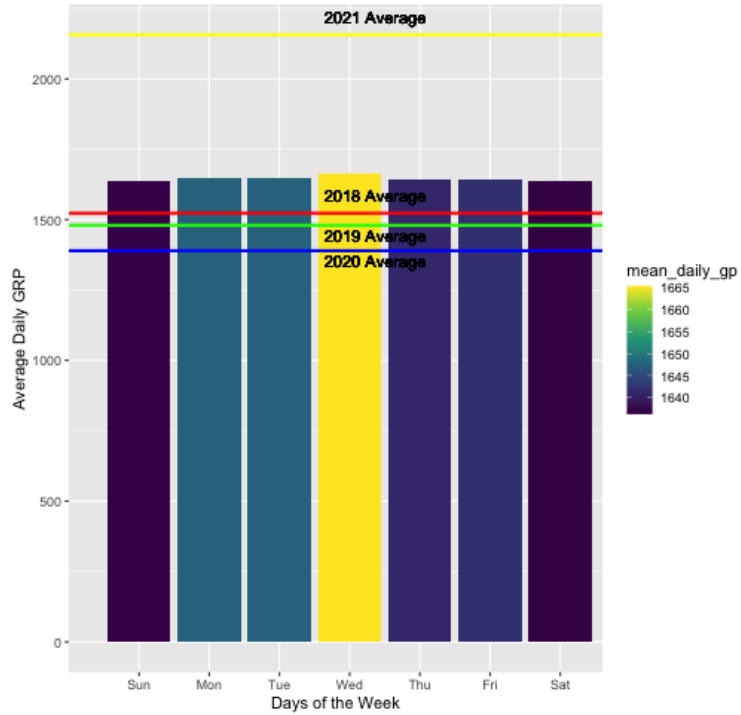
Total GRP over the Weeks



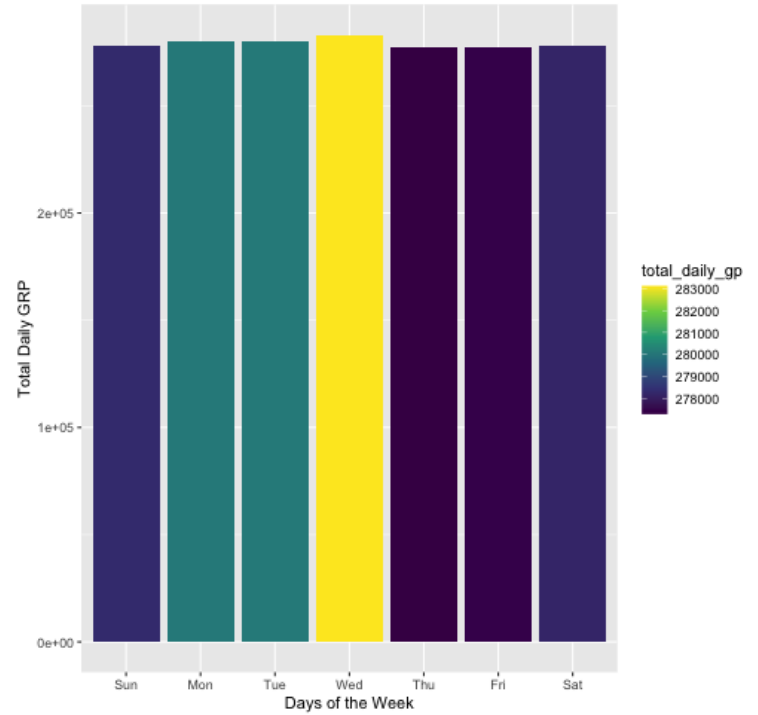




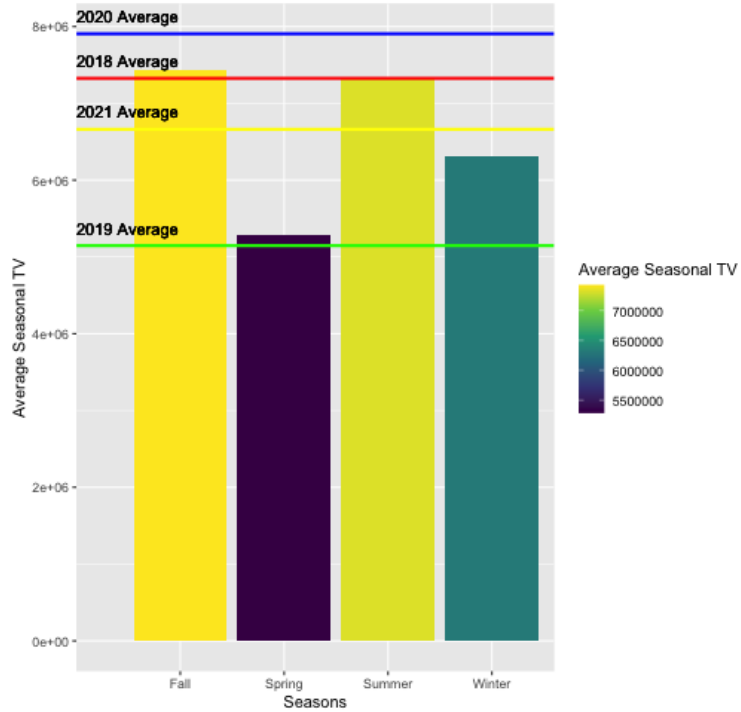
Average GRP over the Weekdays



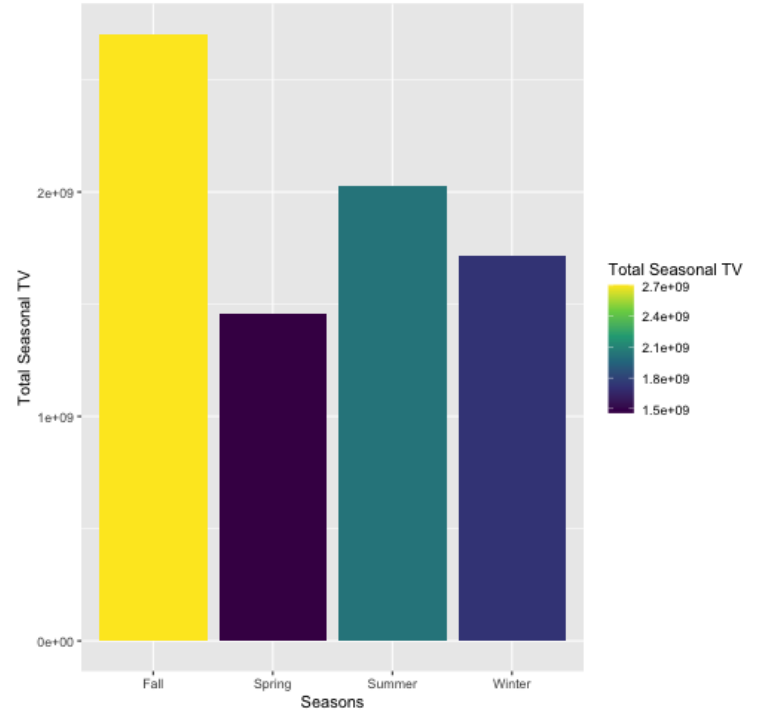
Total GRP over the Weekdays



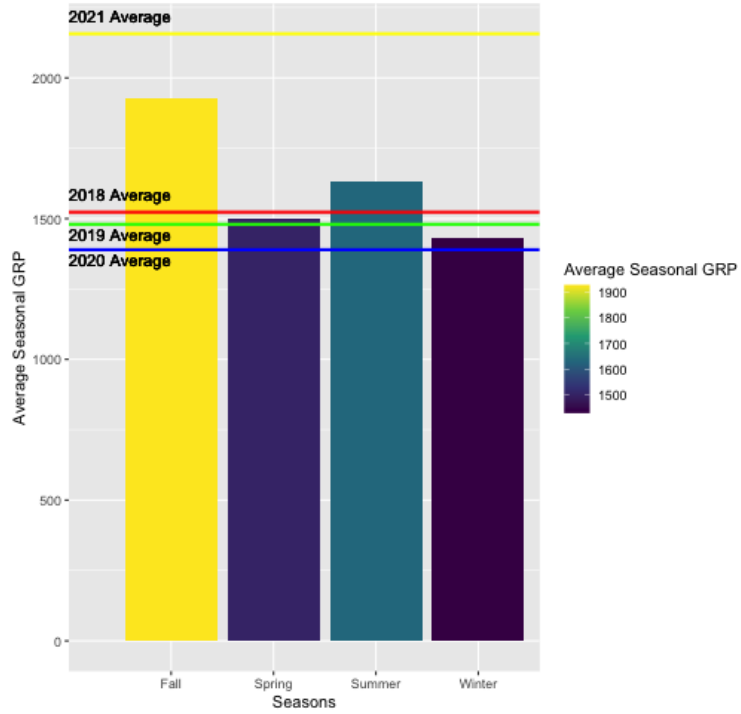
Average TV over the Seasons



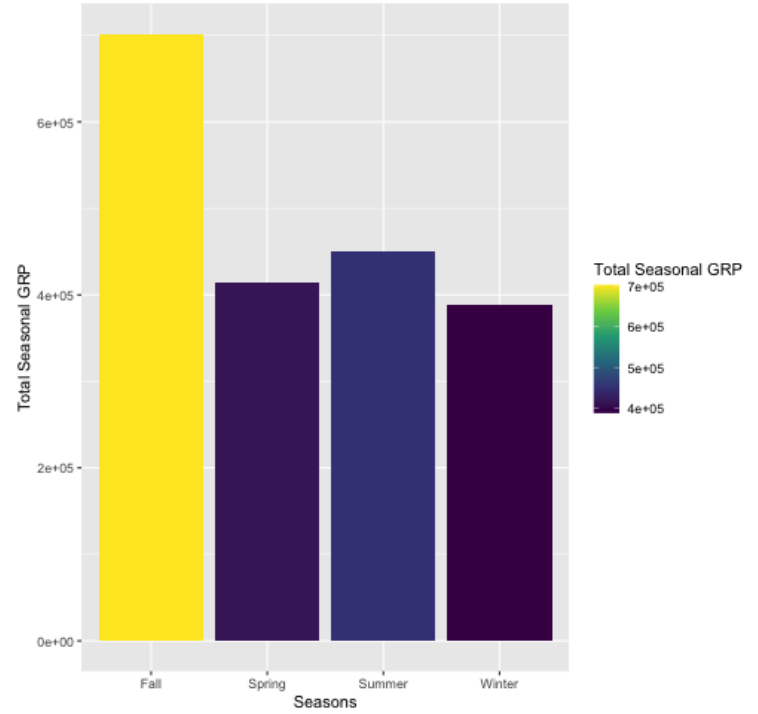
Total TV over the Seasons



Average GRP over the Seasons



Total GRP over the Seasons



Thank you for listening!

