

Geopolitical Sensitivity of Turkish Car Drivers

Sometimes it is not the driving skills that will make you a good Turkish driver. We all know that it is always the next driver that do not have competence to steer a car or who “bought his driving license from the butcher”.

In the Turkish case, sometimes you should also have a geopolitical insight to qualify as a prudent driver. In this report, a very peculiar example of change in daily gasoline and diesel consumption with respect to geopolitical events will be examined

It is possible to examine diesel or gasoline car drivers’ sensitivity thanks to excellent work of EPDK – Turkish Energy Regulator’s and EİGM – General Directorate of Energy Affairs’ staff and their meticulous efforts to gather and publish daily data¹.

Our case study is based on two geopolitical events.

1. Abqaiq-Khuras attack² on 14th September 2019 has been named as “the single largest daily oil supply disruption in history”³. The total loss amounted to 5.7 million barrels per day (mb/d).
2. 7 October Attacks⁴ on the 7th October 2023 has started the current Middle East and humanitarian crisis.

In both crises, how Turkish petroleum consumers reacted to the news of such attacks can be visualized to a certain degree.

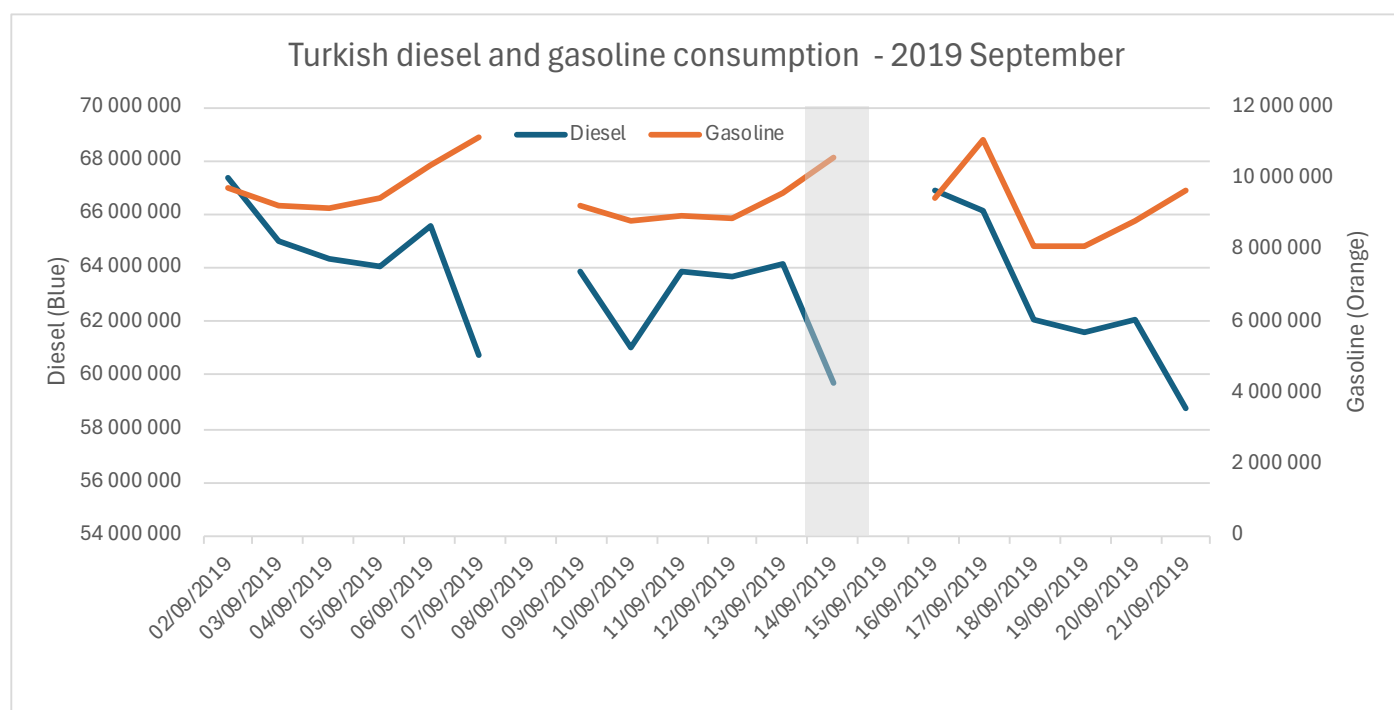


Figure 1 - Gasoline and Diesel consumption (liters) September 2019

¹ <https://enerji.gov.tr/eigm-raporlari>

² https://en.wikipedia.org/wiki/Abqaiq-Khuras_attack

³ <https://www.csis.org/analysis/attack-saudi-oil-infrastructure-we-may-have-dodged-bullet-least-now>

⁴ https://en.wikipedia.org/wiki/7_October_attacks

Abqaiq attacks happened on 14th of September, Saturday, 4:00 am Saudi Time. Unfortunately for 2019, the dataset for daily consumption does not include Sundays(due to data gathering calendar). The dataset is from the 36th, 37th and 38th weeks of 2019.

As expected gasoline demand is much higher during the weekends, diesel is higher on Mondays. Diesel consumption is around 65 million liters at the start of week and decreases to 60 million liters by weekends. Gasoline consumption is around 9 million liters in weekdays and climbs to 11 million liters during the weekend, at that time.

In the graph above, the dataset does not include the next day. But on the day of attack, the demand didn't change significantly. There may be a weekend effect. But starting from next Monday, both diesel and gasoline demand is elevated. It is especially more visible with gasoline.

Compared to the 9th of September 2019 (Monday of the Week of the Attack in Blue), the Monday demand on the 16th is not as high as expected. But on the 17th of September some drivers changed their behaviours. Probably they may be expecting a price increase so they rushed to the petrol stations. This extra demand looks like ebbing the demand from the rest of the week.

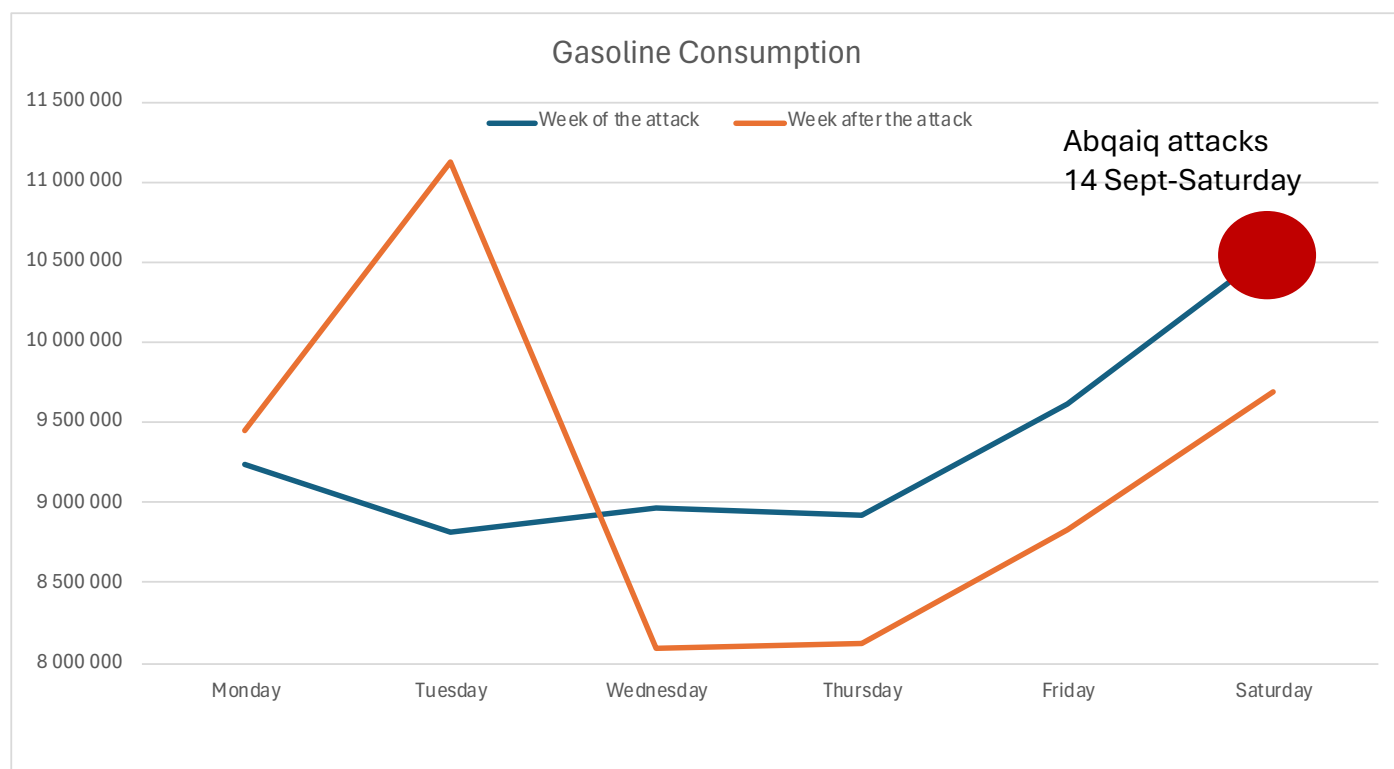
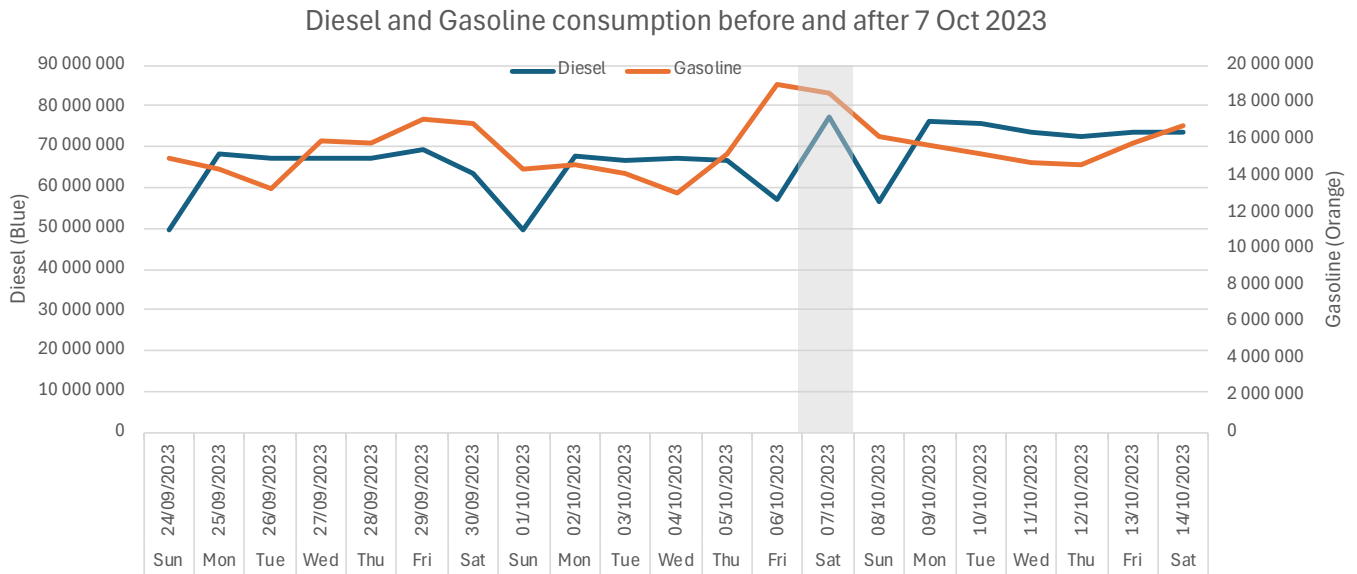


Figure 2 - September 2019, gasoline consumption on the week of the attack and after the attack

In the case of 7th of October 2023, as the events unfold, there is clearly a visible uptick in both gasoline and diesel demand. In the previous week, diesel demand softens by Saturday and Sunday. This is generally the trend as we have seen previously. Gasoline demand is higher on Fridays and Saturdays.



This time diesel demand looks like reacting to news nearly instantly. Gasoline demand is inconclusive. But there is a hitch.

On the 5th of October 2023, in compliance with a decrease of gasoline prices in the international markets, domestic prices were lowered by 3.5%⁵. This expectation has shifted some demand from Thursday 4th October to 5th October. On the orange line above, it is quite visible that Thursday is lower and Friday is way higher. From the data it is seen that, a 3.5% discount has increased the demand by 7.6% on the 5th of October compared to 3rd of October

This is interesting due to a high elasticity of demand to short term price increases. The demand increase continued on Saturday, too.

For the diesel prices, 8% price decrease has been announced as valid from 7th October 2023. Again for the blue line, 6th October has a lower demand than the previous week (after the announcement most drivers wait for the next day). But this demand is not significantly higher on Sunday, the day after the attack. Although starting from Monday there is an elevated demand for 2 days.

Diesel demand's price elasticity is close to gasoline. A decrease in 8%, increased the demand by 15%. But one should not forget that, there is a shifted demand from the previous day as well. In this analysis weather effects are omitted.

We should also remember that, 35.6% of all cars in Türkiye are diesel, 33.5 % is LPG and gasoline(dual fuel) and 28.7% is gasoline only cars⁶. But the majority of diesel consumption is by the non-LCV(light commercial vehicles).

As a discussion, it looks as if, gasoline car drivers are more sensitive to price changes and geopolitical events. Since in both instances, there is a persistent demand lasting till Tuesday-Wednesday.

⁵ <https://www.haberturk.com/benzine-ikinci-indirim-geldi-6-ekim-2023-guncel-akaryakit-fiyatlari-ile-lpg-motorin-ve-benzin-fiyatlari-ne-kadar-oldu-3627248/4>

⁶ <https://www.trthaber.com/haber/ekonomi/otomobil-yakintinda-dizel-ve-lpg-benzini-tahtindan-etti-841309.html>

We may not scientifically conclude anything since more analysis is needed with a better understanding of data coverage. But after the Abqaiq attacks, we know for sure that some petrol stations requested additional gasoline and diesel transfers from distributors⁷. So there is a demand from either consumers(end use) or customers(petrol stations).

But to conclude this analysis, here are my personal points:

- a. Gasoline car drivers in Türkiye are sensitive to geopolitical concerns,
- b. How much of this sensitivity is due to price changes or expectation of price changes needs further study,
- c. The impact is not immediate, but muted in weekends and more visible at the start of following week,
- d. Price sensitivity of gasoline and diesel consumers are high in the short term especially to the news of price updates,
- e. Geopolitical news are impacting with a delay. This may be due to driving habits.
- f. As diesel is replaced by gasoline we may see a much bigger impact.

⁷ <https://www.haberturk.com/son-dakika-haberi-epdk-dan-shell-e-2-milyon-750-bin-tl-idari-para-cezasi-haberler-2604322-ekonomi>