

4. Reforms-Economic development

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4.1. The effects of the pandemic on the liquid transportation fuels market in 2020 and its prospects

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4.1.1. Introduction

Many significant developments occurred during 2020, dramatically affecting the economy and the markets. The conditions under the health crisis, as well as other market parameters, had a strong impact on the oil market as well. The adoption of restrictive measures to deal with the surges of the pandemic directly affected the retail markets, labour market, tourism, etc. As a result, the transportation people and goods were limited, and the discretionary income of citizens decreased. Because of this, the transportation fuels market has come under considerable pressure. At the same time, because of the small size of the Greek market and the dependency of the country on oil imports, Greece acts as a price recipient and, therefore, any international market developments, in terms of prices and/or policies, have a direct impact on the domestic fuel market, affecting sale prices and demand. Finally, we should not ignore the fact that the new conditions under the pandemic crisis, as well as the recent adoption of ambitious new environmental objectives at national and European levels, seem to create new consumer standards that also affect the market of conventional fuels. Taking into account the above, this article aims at recording and analysing the recent developments of the transport fuels market in 2020, reporting the effects of the pandemic and presenting the market prospects for 2021.

4.1.2. Special characteristics of the market in 2020

The crisis of the pandemic in 2020 had significant impacts on the whole economy, but also on individual markets. In March, restrictive measures were taken to

tackle the first surge of the pandemic. One of the most important measures was the restriction of transportation that was implemented from the end of March until the beginning of May. After the expiry of these, the economy gradually started opening up from May. However, teleworking stayed active for the public sector until the end of the month, and afterwards, for many cases in the private sector as well. Additionally, the summer tourist traffic was significantly limited compared to other years. In November, the implementation of new measures to tackle the second surge of the pandemic began. More specifically, on November 3rd, the government decided to shut down restaurants and retail stores and, on November 7th, to restrict citizens' movement. However, before that, since the end of September, primary measures, such as the implementation of 40% telework in the public sector, were adopted to tackle the spread of the virus.

Measures related to the limitation of movement, such as the implementation of teleworking and the closure of schools, retail stores, coffee shops and restaurants, have led to the reduction of the transportation of citizens. At the same time, we should not overlook the significant reduction of tourism and travelling. Finally, the negative effect of the pandemic on the economy caused a reduction in the discretionary income of citizens, thus restricting demand. As expected, the above parameters also had a major impact on fuel demand. In particular, the effects on the fuels market were not limited to the two periods of severe measures, but are also obvious throughout the whole year. However, we should note that the closure of shops has not only constrained citizens' movements, but has also resulted in the increase of e-commerce and the use of courier services. This had a positive effect on fuel demand, and especially automotive diesel, as analysed in the following sections.

At the same time, another key parameter of 2020 was the significant fall in the international oil price, especially during the first months of the year. This had a great impact on domestic fuel prices. More specifically, the price dispute between Saudi Arabia and Russia, in combination with the effects from the pandemic, led to a downward trend in the international price of Brent oil, starting from January 2020 and escalating during

March and April. Thus, while the average price of Brent oil was above \$65/barrel at the beginning of the year, by the end of April, it was just above \$20/barrel. In May, with the beginning of the opening of the markets, the average price of Brent oil began to recover and, during the period June-August 2020, ranged to about \$40/barrel. By the end of August, the price reached \$45/barrel. However, between September and October, the fear of another surge of the pandemic led again to a downward trend, and eventually, at the end of October, the price was below \$38/barrel. Nevertheless, since the beginning of November, the international price of Brent oil started again to recover. It is possible that factors such as the expectation for the COVID-19 vaccine and the state's economic aid policies contributed to this outcome. As a result, at the end of the year, the average price exceeded \$50/barrel. At the same time, the agreement between OPEC members and Russia to control supply has contributed to the restraint of the prices.

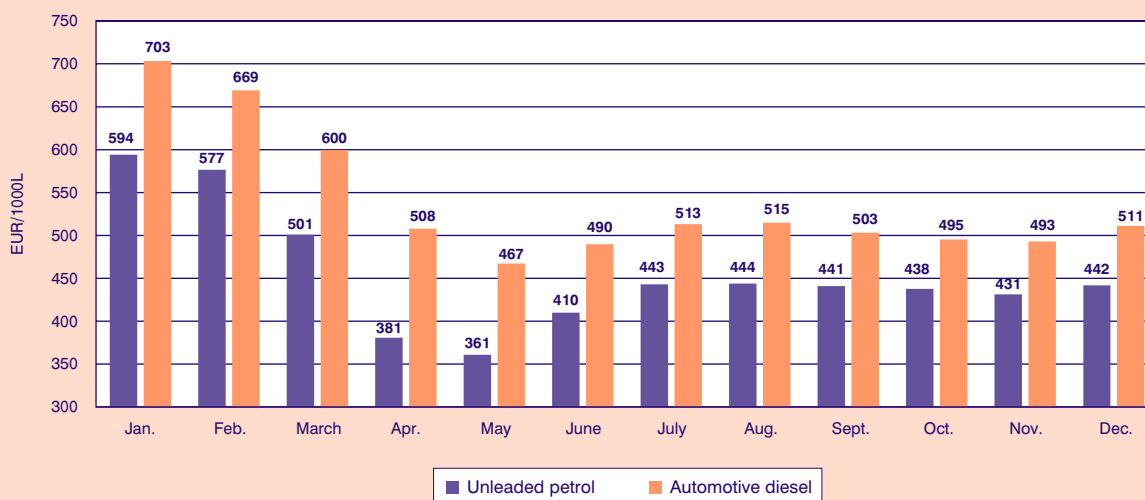
4.1.3. Development of transportation fuel prices in 2020

A key characteristic of the transportation fuels market in our country is the high tax share on the final prices. The main taxes implemented on fuels are excise duty and VAT. More specifically, the excise duty for unleaded petrol is **700 Euro/1,000 litres** and for automotive

diesel is **EUR 410 Euro/1,000 litres**, while the VAT rate is 24%. This section records the monthly evolution of the price of the above two fuel types and analyses the effect of taxation on the final price.

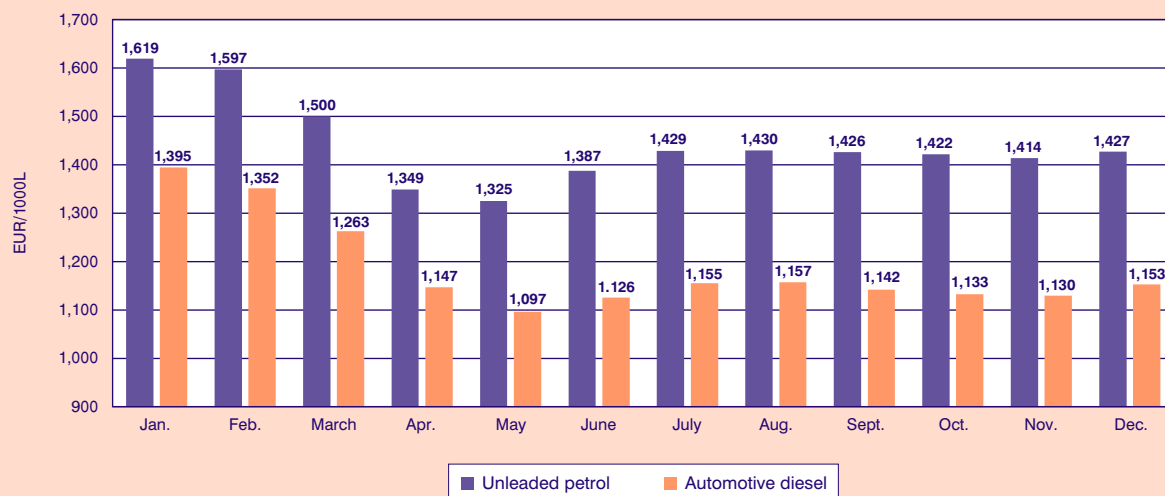
As expected, the changes in international oil price had a direct impact on the domestic prices of transportation fuels. Figures 4.1.1 and 4.1.2 record the average monthly prices of unleaded petrol and automotive diesel before and after taxes, respectively. The prices before taxes reduced significantly in the first five months of 2020, following the downward trend of international prices. More specifically, the price of unleaded petrol decreased by 39% over this period, and the price of automotive diesel decreased by 34%. Afterwards, during June and July, the prices of fuels increased and remained almost stable until the end of the year. Regarding the prices after taxes, the trend was similar, whereas the fall during the beginning of the year was milder. More specifically, the final price of unleaded petrol decreased by 18% over this period, and the price of automotive diesel decreased by 21%. The difference in the percentage changes of the prices before and after taxes is mainly due to the fact that the excise duty is a fixed tax; therefore, as the price before taxes decreases, the value of the excise duty remains stable, and its share in the final price increases. Additionally, the implementation of the VAT escalates the effect of the excise duty. For 2020, the average annual price before taxes of unleaded petrol was **455 Euro/1,000 litres** and the average

FIGURE 4.1.1
Monthly average price *before taxes* of unleaded petrol and automotive diesel in 2020



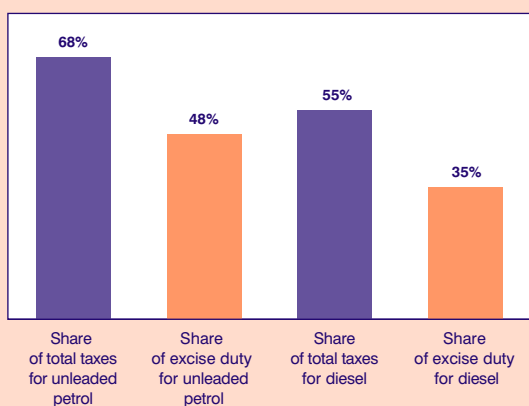
Source: Own processing of data from the European Commission, Energy, Market Observatory & Statistics, Oil bulletin <http://ec.europa.eu/energy/observatory/oil/bulletin_en.htm>.

FIGURE 4.1.2
Monthly average price after taxes of unleaded petrol and automotive diesel in 2020



Source: Own processing of data from the European Commission, Energy, Market Observatory & Statistics, Oil bulletin <http://ec.europa.eu/energy/observatory/oil/bulletin_en.htm>.

FIGURE 4.1.3
Share of taxes in the average final prices of unleaded petrol and automotive diesel in 2020



Source: Own processing of data from the European Commission, Energy, Market Observatory & Statistics, Oil bulletin <http://ec.europa.eu/energy/observatory/oil/bulletin_en.htm>.

final price was **1,444 Euro/1,000 litres**. Respectively, the annual average price before taxes of automotive diesel was **539 Euro/1,000 litres** and the average final price was **1,187 Euro/1,000 litres**.

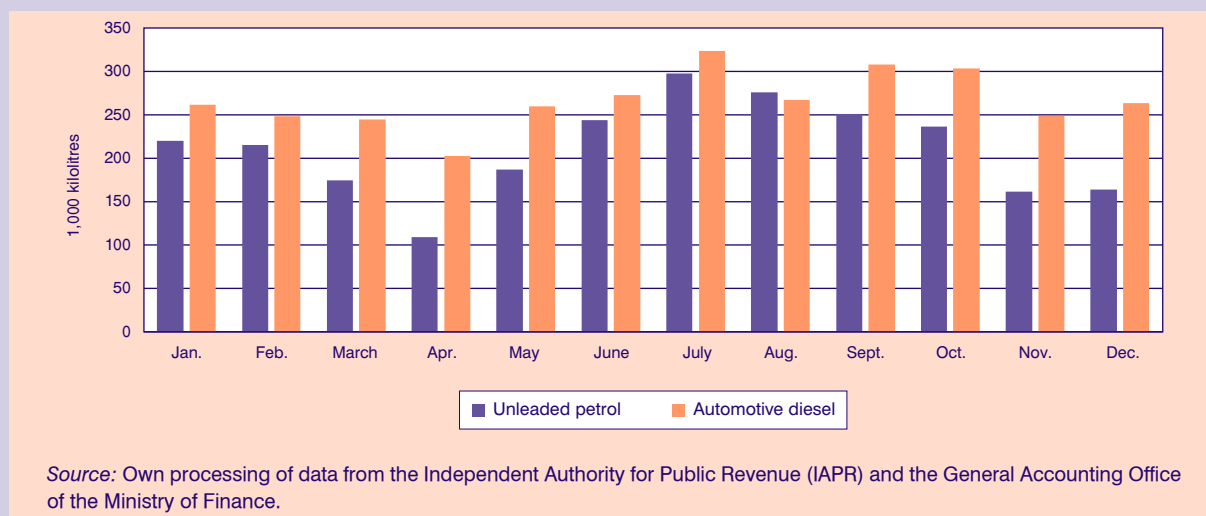
The above figures show the difference between the prices before and after taxes, due to the high rate of fuel taxation. This difference is higher in the case of

unleaded petrol, compared to automotive diesel, because of the higher excise duty. Additionally, VAT, as a percentage tax that is implemented after the excise duty, increases the total effect of taxation on the final price. Another result of the difference between the excise duty rates of the two types of fuels is that even if the price of unleaded petrol before taxes is lower than that of automotive diesel, this relationship is reversed in terms of final prices. On this basis, Figure 4.1.3 presents, on an annual basis, the share of excise duty and the share of total taxes in the average final prices of the two types of liquid transportation fuels. As seen, in 2020, the taxation of unleaded petrol reached almost 70% of the final price, while the respective figure for automotive diesel was 55%. We should note that these figures increased in 2020 because of the decrease of the prices before taxes.

4.1.4. Development of transportation fuel consumption in 2020

This section presents the development of the consumption of unleaded petrol and automotive diesel on a monthly basis. The analysis is based on the only available data, provided by the Independent Authority for Public Revenue (IAPR) and the General Accounting Office of the Ministry of Finance. More specifically, the data used are related to the monthly quantities of liquid fuels that have been processed via the customs clearance procedure. Therefore, in some cases, there

FIGURE 4.1.4
Monthly consumption of transportation fuels in 2020



might be a short lag (of 15 days maximum) between these data and the final sales of the fuels to customers. Figure 4.1.4 presents the monthly consumption of the two types of fuels in comparison. We notice that the consumption of automotive diesel is a little bit higher than that of unleaded petrol. However, a few years ago, in Greece, the consumption of unleaded petrol was much higher than the consumption of automotive diesel.

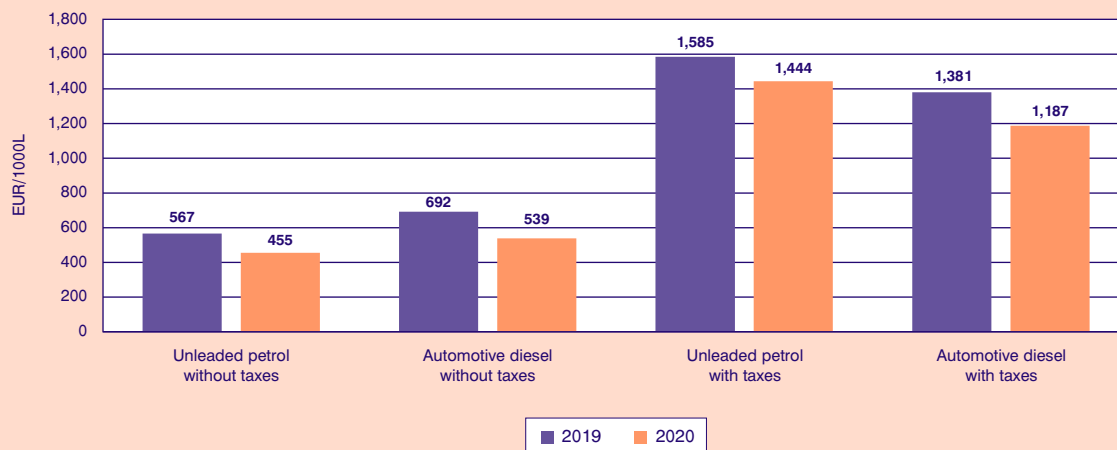
As recorded in this figure, the consumption of transportation fuels decreased during the periods when restrictive measures were implemented to tackle the pandemic surges. In particular, during the first surge of the pandemic, the fall of fuel consumption was much stronger. In fact, during April, the minimum monthly consumption of 2020 was recorded. However, the fall in consumption of unleaded petrol, during this period, was greater than that of diesel. Because of the fact that during the implementation of the restrictive measures, e-commerce and courier services have strengthened, the decrease of the consumption of automotive diesel was not so intense. On the other hand, it appears that the significant fall of the prices in the first months of the year was not enough to boost demand, whereas the restrictive measures had a much stronger effect. However, it would be interesting to note that in April and May, the fall of the sale prices led to a significant increase in heating oil demand. This had a positive contribution to the Greek fuel market. Regarding the implementation of the restrictive measures to tackle the second surge of the pandemic, starting from November, they also had significant negative effects on fuel consumption, especially unleaded petrol. How-

ever, the transportation of citizens during this second period was not limited to the same extent as the first period, and, for this reason, the impact on consumption was not so intense.

4.1.5. Comparing 2019 and 2020

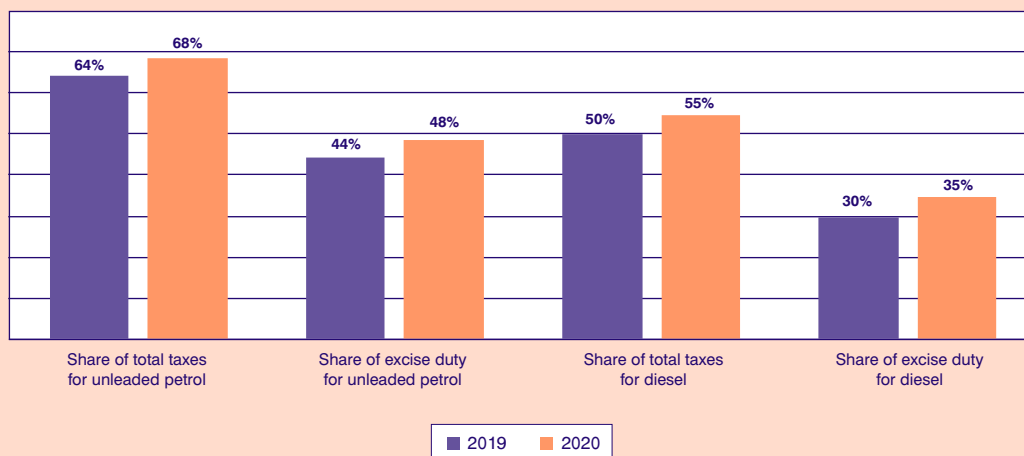
Because of the special conditions of 2020, it is interesting to compare the developments of transportation fuel, in terms of prices and consumption, in 2020 and 2019. As already mentioned, the notable decrease of the international oil price at the beginning of the year has led to a fall of the domestic transport fuel prices. As shown in Figure 4.1.5, the average annual price before taxes of unleaded petrol in 2020 decreased by 20% compared to the price of 2019. Respectively, the price before taxes of automotive diesel decreased by 22%. Regarding the final prices after taxes, the change was lower, because of the effect of the fixed taxes. More specifically, the average final price of unleaded petrol in 2020 decreased by 9% compared to the average price of 2019, and the final price of automotive diesel decreased by 14%. The lower fall of the final price of automotive diesel, compared to the price of unleaded petrol is due to the lower rate of the excise duty. Additionally, because of this price fall, the share of taxes in the final price increased, as shown in Figure 4.1.6. The total share of taxation in the final price of unleaded petrol increased from 64% in 2019 to 68% in 2020, and in the final price of automotive diesel from 44% to 48%. With regard to the excise duty, its share increased from 50% to 55% in the final price of unleaded petrol and from 30% to 35% in the final price of automotive diesel.

FIGURE 4.1.5
Annual average price, before and after taxes, for unleaded petrol and automotive diesel in 2019 and 2020



Source: Own processing of data from the European Commission, Energy, Market Observatory & Statistics, Oil bulletin <http://ec.europa.eu/energy/observatory/oil/bulletin_en.htm>.

FIGURE 4.1.6
Percentage share of taxes in the average annual final price of unleaded petrol and automotive diesel for 2019 and 2020

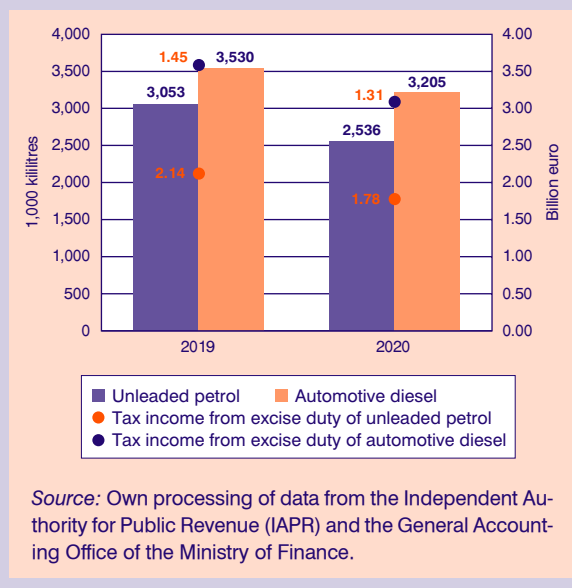


Source: Own processing of data from the European Commission, Energy, Market Observatory & Statistics; Oil bulletin <http://ec.europa.eu/energy/observatory/oil/bulletin_en.htm>.

As mentioned, the implementation of the restrictive measures during 2020 had an impact on the consumption of transportation fuels. More specifically, the total annual consumption of unleaded petrol decreased by 16.9%, from 3,053 thousand kilolitres in 2019 to 2,536 thousand kilolitres in 2020. Similarly, the total annual consumption of automotive diesel decreased by 9.2%, from 3,530

thousand kilolitres in 2019 to 3,205 thousand kilolitres in 2020. As expected, the state revenues from excise duty were also reduced respectively. In particular, the revenues for the excise duty of unleaded petrol decreased by 362 million euro, from 2,14 billion euro in 2019 to 1.78 billion euro in 2020. Additionally, the revenues from excise duty of automotive diesel decreased by 133 million

FIGURE 4.1.7
Annual consumption of liquid transportation fuels and revenues from excise duties, comparison between 2019 and 2020



euro, from 1,45 billion euro in 2019 to 1.31 billion euro in 2020. Therefore, an overall decrease of 495 million euro in state tax revenues was recorded for excise duty alone. Figure 4.1.7 presents the above figures.

However, it is more interesting to compare the difference in consumption in 2020 and 2019 on a monthly basis, in order to track down the impact of the restrictive measures. Figures 4.1.8 and 4.1.9 present the per-

centage change in monthly consumption for unleaded petrol and automotive diesel, respectively. Regarding unleaded petrol, only in the first two months of 2020 was there a slight increase of consumption compared to the corresponding months of 2019. Throughout the rest of the year, consumption was lower. During the two periods where severe restrictions for transportation were active, a notable decrease of consumption took place. Thus, during the first period, i.e., between March and May 2020, there is an important fall in consumption, especially in April when the maximum decrease of 56% was recorded. Also, during the second period of November-December, a significant decrease in the consumption of unleaded petrol was indicated.

Similarly, regarding automotive diesel, monthly consumption increased by 13% in January 2020, compared to the corresponding month of 2019, and remained stable in February. Throughout the remaining months, consumption was lower compared to 2019. However, this decrease is lower than that of unleaded petrol, as analysed above. During the first surge of the pandemic, the implemented restrictive measures led to a significant decrease of the consumption of automotive diesel. Again, the maximum decrease of 27% was recorded in April. However, the implementation of the restrictive measures during the second surge had a much lower effect on the consumption of automotive diesel. Additionally, the significant decrease in consumption recorded in September, when no severe restrictive measures were active, is a matter of great interest. Probably, this was caused due to the uncertainty over the estimate of the second outbreak of the pandemic.

FIGURE 4.1.8
Percentage change of the monthly consumption of unleaded petrol between 2019-2020

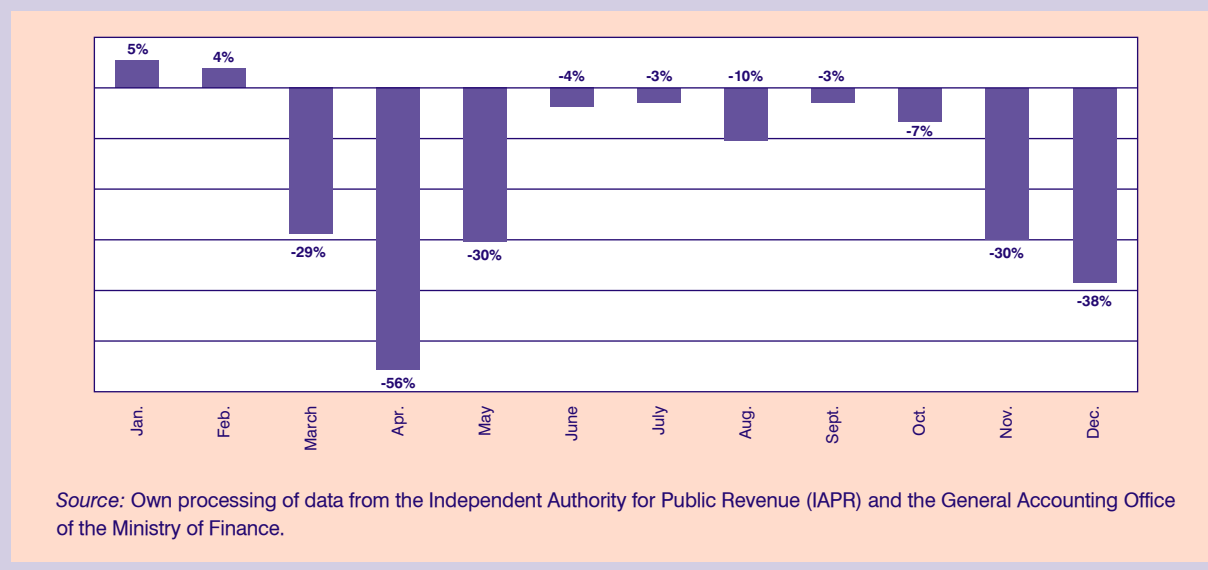
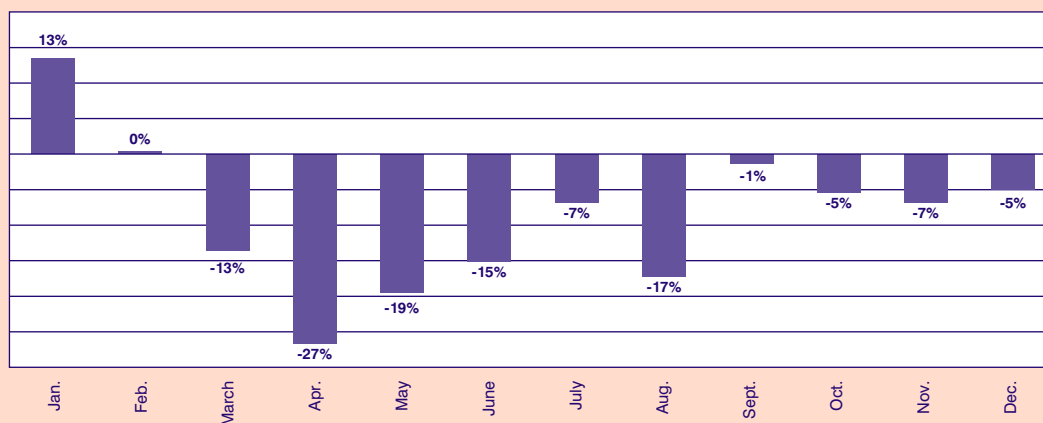


FIGURE 4.1.9**Percentage change of the monthly consumption of automotive diesel between 2019-2020**

Source: Own processing of data from the Independent Authority for Public Revenue (IAPR) and the General Accounting Office of the Ministry of Finance.

4.1.6. Summary, conclusions and forecasts for 2021

As analysed, the specific conditions of 2020 had a significant impact on the transportation fuels market in our country. The restrictive measures that were implemented to tackle the pandemic surges led to the reduction of the consumption of unleaded petrol and automotive diesel. This impact was more intense during the first pandemic surge from March to May. The fall of fuel prices in the beginning of the year was not enough to invert this trend in consumption. Additionally, the health crisis had a much stronger effect on unleaded petrol compared to automotive diesel. However, during the second pandemic surge in November and December, the effects on fuel consumption were milder, especially for automotive diesel. Nevertheless, this analysis covers the period until the end of 2020. The health crisis continues and the effect on the markets and the economy seems to last. According to primary signs of 2021, the consumption of transportation fuels is reduced in January and this trend is expected to last, at least for the first quarter of the year. Finally, it should be noted that since the beginning of 2021, a Green Fee of **30 Euro/1,000 litres** has been implemented on the price of automotive diesel. According

to the average automotive diesel price of December 2020, this charge is expected to increase the final price by 2.6%. Since, today, the fuel price ranges at a relatively low level, this additional charge might not have a significant impact on demand at this time.

Regarding the international price of Brent oil, it appears to have recovered to some extent, as prices have been moving upwards since the end of 2020. The forthcoming control of the pandemic and the opening of the economy will contribute to the increase of the international demand for oil. At the same time, the agreement between OPEC members and Russia to control supply, and, hence, the prices, remains active. According to the forecasts of international market agents, the international Brent oil price will start to rise during the second semester of 2021. Nevertheless, apart from the direct effects of the pandemic and the restrictive measures, the long-term impacts will be much more important. It is believed that the forthcoming growth after the health crisis will be towards a new, different economy. Specific parameters such as the expansion of teleworking, the limitation of transportation, the achievement of green objectives, the decarbonisation of the economy, the electrification of transportation and the strengthening of the electric vehicle market will contribute to the reduction of demand for conventional fuels.