## TRANSPORT

during the pandemic

80

## Warsaw University of Technology Faculty of Mathematics and Information Science

Authors: Adrianna Grudzień Jakub Jung Maria Kałuska Tomasz Nocoń

Percentage share of single ZTM tickets in Warsaw in 2020 in comparison to average 2017-2019 100 2020 **Average** 12.03 Closing schools 20.04 Loosening the restrictions 25.03 Public transport restrictions

month

Looking at the graph, we notice a drop in sales of one-off tickets by over 5 percentage points in April. However, this does not mean that the number of long-term tickets sold has increased. In April 2020 ticket sales dropped from 7 million to 600 000, therefore we are not able to draw conclusions from this. The trend since June, when the number of all tickets was getting closer to the one from previous years, is much more interesting. We observe an increase of over 2.5 percentage points in favor of buying one-way tickets, which may mean that we are travelling with public transport more spontaneously -there are less people who use it as their everyday mean of transport.

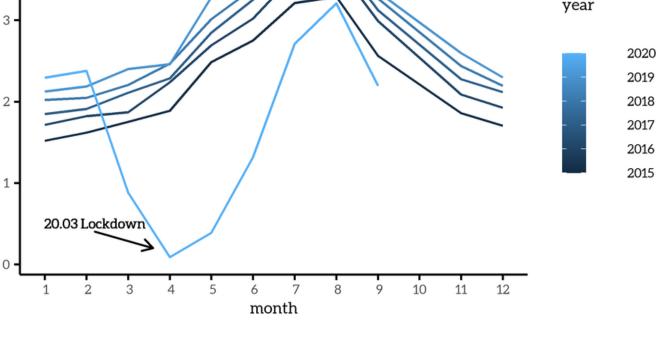
Gas prices in 2020 and its average in 2016-2019 in Poland Average price in PLN 02.03 flight restriction 20.03 lockdown month

The graph shows changes in gas prices throughout the 2020 and compares it with the average petrol cost over the period of 2016-2019. There is a noticeable drop in gas price at the beginning of February which lasts until the end of March. Main reason for that may be the epidemic restriction enforced by the government. Going further, the cost has started to raise alittle bit and then remained stable for the rest of the year, being below the curve which represents the average from past years.

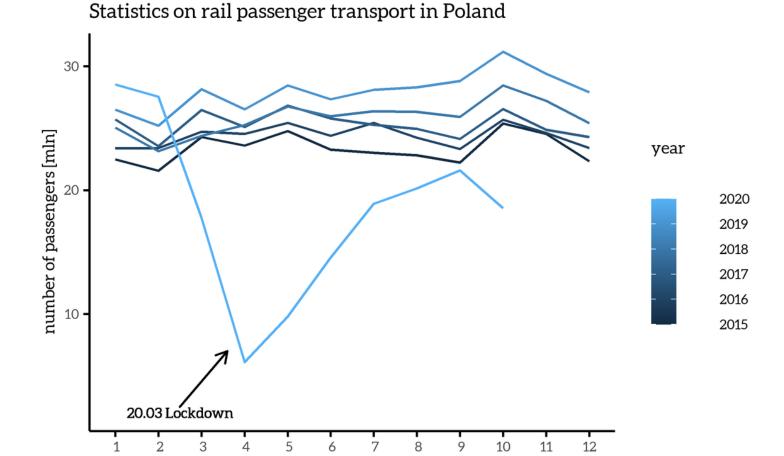
## number of tourists [mln] year

Statistics of tourists renting rooms in tourist facilities

The graph shows number of people renting rooms in tourist facilities in Poland by month for the period of 2015 -2020. Between 2015 and beginning of 2020 there is a general upward trend from one year to another. It stops in March 2020 when the first case of coronavirus was reported. There is an interesting observation that despite the number being so low for the first half of 2020, in August, the peak of summer season, it nearly reaches the value from 2015 –when there was no global pandemic



The graph shows rail transport statistics in Poland. Despite the general upward trend in subsequent years, in 2020, at the turn of spring accidents, a sharp drop in prices for rail travel will suddenly occur. The smallest number of people traveled in April, what may results from the lockdown introduced on 20th March. In the following months, when restrictions on public space were gradually lifted, the number of travelers began to increase.



month

The latest data comes from October 2018. and represent a renewed decline in interest in travel. This is probably due to the introduction of the "50% occupied seats" rule in rail transport on 17th October.

Data: https://www.ztm.waw.pl/statystyki/ https://utk.gov.pl/pl/raporty-i-analizy/analizy-i-monitoring/statystyka-przewozow-pa/16386,Daneeksploatacyjne-w-2020-rMonthly-statistics-2020.html https://www.orlen.pl/PL/DlaBiznesu/HurtoweCenyPaliw/Strony/archiwum-cen.aspx?Fuel=Pb95&Year=2020