

E-Scooters in German Police road traffic controls – The 2020 situation

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In Germany, the Personal Light Electric Vehicles Act, effective June, 2019, enables to operate e-scooters (20 km/h limit) on public roads. While a full year federal accident report is waiting for giving us figures and details, on what the accident characteristics may be, the Allianz Center for Technology run a pilot, screening all 2020 police road traffic control and enforcement measurements, as given by police press releases.

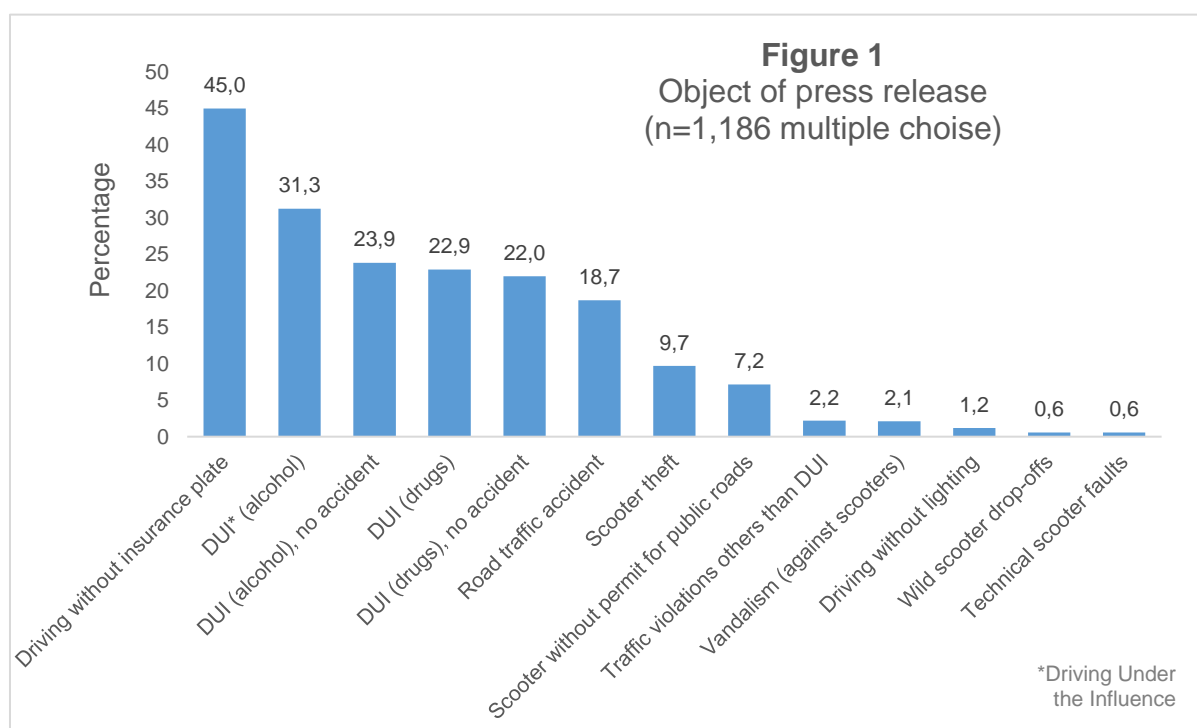
Alcohol, drugs and no vehicle insurance

The full population of all n=1,186 e-scooter related police press releases of the year 2020, drawn from the federal-wide portal *Blaulicht* was used for further in-depth-analyses. Since this portal is feeded quite differently by single police departments, it won't cover all big metropolises, missing Berlin e.g.; an overrepresentation of private and an underrepresentation of rental fleet-scooters is to consider – to the result that the phenomenon of driving uninsured scooters appears of outstanding importance for road safety. As to German law, e-scooters for on road use are subject to compulsory coverage. However, a near half (45 %) of all police press releases were related to violating insurance law, followed by DUI with 31 percentages (figure 1).



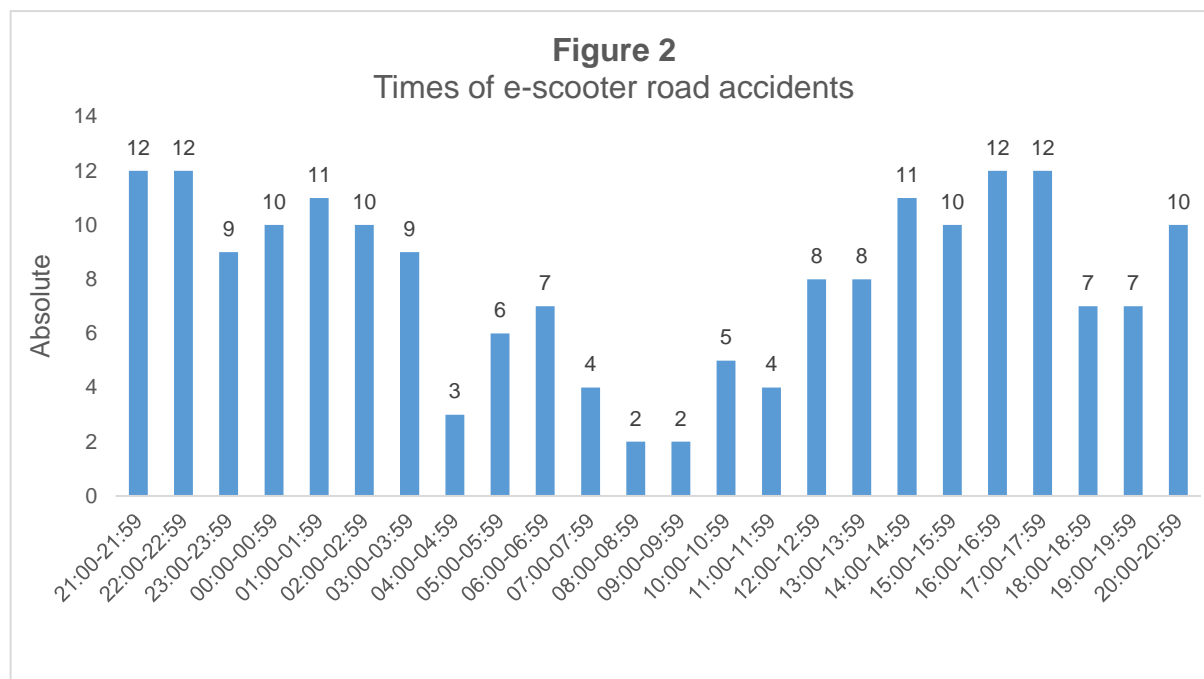
From the beginning, the German situation was as predicted by experts: E-scooters are readily ridden, while intoxicated by alcohol (DUI, driving under the influence). People are not aware of driving a motorized vehicle, when using a scooter. Same is true with drugs, namely cannabis (23 % of all press releases). Drugs are considered of having a remarkable renaissance in road safety discussions since the last years.

19 % of the police notices were dealing with reporting road accidents – that is, at least, giving every tenth case on media record (compared a to a federal accident figure pre-view for January to September 2020). Wild rental scooter drop-offs did not gain importance for police press, so didn't accompanying co-riders or riding sidewalks (a result, again, under the caveat of underrepresentation of urban fleets). Nevertheless, e-scooter use is male (three in four) and young adult. Mean age of all reports refer to 30 years, with 25 % 18-24ys and 41 % 25-44ys. Children-, teenage-, and senior-driving do not matter, and so any user older than 44ys didn't.



Road accidents

In 222 accidents were reported 77 % male and 20 % female drivers (difference to 100 no information given). This is in line with federal statistics for light motorized two-wheelers with insurance-plates (S-Bikes etc.), but not for non-motorized bicycles (incl. low-speed e-bikes), with the latter being distributed by two thirds male to one third female. Mean age was 33ys. Again, seniors were out of importance. Time distribution was widely spread, except in the pre-noon, allowing to assume that driving to work is not the case in the first place, when using private scooters, since commuter-hours are accident hours, by exposure. Time hours of reported e-scooter thefts were found congruent with the figure of accident times given above (figure 2).



E-scooter accidents – The well-known weekend-night classics

38 % did happen in darkness, which is higher than in federal statistics for two-wheelers. Co-riders and sidewalk-use (both incongruent with law) were seldom, but occasionally due to the selectiveness of the sample. There were 40 % accidents under the influence of alcohol. A similar 2019 study with police press releases done at Allianz Partners by Morgenstern came to 28 % (an increase, which cannot be explained with having an over-representation of rental scooter in the Morgenstern sample). In fact, a considerable majority took place in the night-time-week-end-window. E-scooters are expected an alternative transport mean for driving when drunken.

Last not least, single accidents are predominant with 42 %, being as double as high as in the average accident set in Germany, regardless of type of vehicle. Crashing or falling while driving without second party involved (car, pedestrian etc.) is of notable relevance, and subsequently, non-police-reported dark-figures are with it. Falling with no other reason but by own fault or driving errors is evident, so wearing helmets should be a must for riding e-scooters. The Allianz Center for Technology advises helmets to wear regardless of the type of bicycle.

A German languaged article with further details will appear in forthcoming March volume of Springer Media *Verkehrsunfall & Fahrzeugtechnik* 03/2021.