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DRAFT REPORT

with recommendations to the Commission on odometer manipulation in motor vehicles: revision of the EU legal framework
(2017/2064(INL))

Committee on Transport and Tourism

Rapporteur: Ismail Ertug

(Initiative – Rule 46 of the Rules of Procedure)

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

with recommendations to the Commission on odometer manipulation in motor vehicles: revision of the EU legal framework
(2017/2064(INL))

The European Parliament,

– having regard to Article 225 of the Treaty on the functioning of the European Union,

– having regard to Articles 91 and 114 of the Treaty on the functioning of the European Union,

– having regard to Directive 2014/45/EU of the European Parliament and of the Council of 3 April 2014 on periodic roadworthiness tests for motor vehicles and their trailers and its accompanying impact assessment,

– having regard to its resolution of 10 December 2013 on CARS 2020: towards a strong, competitive and sustainable European car industry[1],

– having regard to the EP study from November 2017 entitled "Odometer tampering: measures to prevent it",

– having regard to the final report of the Association of European Vehicle and Driver Registration Authorities entitled "Vehicle Mileage Registration",

– having regard to the European Commission's "Consumer Market Study on the Functioning of the Market for Second-Hand Cars from a Consumer's perspective",

– having regard to Rules 46 and 52 of its Rules and Procedures,

– having regard to the report of the Committee on Transport and Tourism (A8-0000/2018),

Current situation

A. whereas odometer tampering, i.e. the malpractice of deliberate and unauthorised altering of the real mileage of a vehicle shown on its odometer, is a serious and widespread problem throughout the whole European Union especially in cross-border trade;

B. whereas the economic profit of odometer tampering can be remarkable given the low prices of the equipment needed and the artificial increase of the used cars' value; whereas studies estimate the share of tampered vehicles between 5 % and 12 % of used cars in national sales and between 30 % and 50 % in cross-border sales, accumulating to a total economic damage between EUR 5,6 and 9,6 billion in the whole Union;

C. whereas odometer readings are stored and shown digitally while external access for reconfiguration is easy as their protection level is lower than other components' in the

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[1] Texts adopted, P7_TA(2013)0547.

vehicle;

D.   whereas odometer tampering harms consumers, second-hand car dealers, insurers and leasing companies;

E.   whereas buyers of cars with manipulated odometers can experience increased maintenance and repair costs due to unexpected wear and tear which also negatively affects road safety if cars are not inspected according to their real mileage;

F.   whereas cars with tampered odometers can show higher consumption and higher pollutant emissions than expected, thus violating durability requirements of the type approval legislation;

G.   whereas the second-hand car market has the lowest consumer trust among goods markets[1] and odometer tampering seriously contributes to the loss of consumers' trust in second-hand dealers and thus distorts the functioning of the internal market and fair competition;

H.   whereas mileage fraud disproportionally affects social groups and geographical areas with lower income, exposing customers in EU-13 countries to a higher risk of buying a car with manipulated odometer and thus they are more often harmed by this malpractice;

Existing measures addressing odometer fraud

I.   whereas some Member States have already introduced instruments to minimise odometer manipulation like "Car-Pass" in Belgium and "Nationale AutoPas" (NAP) in the Netherlands; whereas both use a database collecting odometer readings at every maintenance, service, repair or periodical inspection of the vehicle, without collecting any personal data and have both almost eradicated odometer fraud in their domains;

J.   whereas the Belgian system is operated on a legal foundation by a non-profit organisation and the system in the Netherlands is run by a governmental agency and both operate at reasonable cost and the success of both systems is accompanied and fostered by awareness and information campaigns as well as a strong legal framework establishing clear rules and dissuasive penalties;

K.   whereas the significantly higher number of manipulated cars in countries without access to these databases shows that cross-border data exchange is crucial to their success;

L.   whereas EUCARIS, the European Car and driving license Information System already provides infrastructure and organisation for the exchange of harmonised data related to transport between member states' authorities and is used by all member states to fulfil obligations from Directive 2011/82/EU while its functionalities already include mileage recordings;

M.   whereas there are also technical solutions, both regarding hardware and software, that could be integrated into vehicles by manufacturers and thus prevent odometer

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[1] Consumer Markets Scoreboard, European Commission 2014

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manipulation from the start, whereas "Hardware Security Modules" (HSM) and "Secure Hardware Extensions" (SHE) are already used to protect electronic control units (ECU) in vehicles against unauthorised access, manipulation or car theft and their cost per vehicle is estimated at one euro;

Legislation and loopholes

N.   whereas odometer manipulation is prohibited in 26 Member States , only ten of them have additional measures to verify the mileage available to customers and only six recognise odometer manipulation as criminal offense1;

O.   whereas Directive 2014/45/EU recognises odometer fraud as threat to roadworthiness and calls on Member States to impose effective, proportionate and dissuasive penalties on such manipulations; further obliges the Commission to establish an electronic platform that allows the cross-border exchange of information on roadworthiness which include odometer readings;

P.   whereas Directive 2014/45/EU contains the obligation to record mileage readings during the periodical technical inspection (PTI) and makes these recordings available for the subsequent PTIs, but only addresses mileage recordings during roadworthiness tests from the first roadworthiness inspection onwards; whereas the first PTI might occur as late as four years after the first registration of the vehicle therefore leaving enough time for odometer manipulation before the first inspection as well as between inspections and might even result in an official recording of incorrect mileage records;

Q.   whereas Regulation (EU) 2017/1151 obliges manufacturers, in order to obtain type-approval for a vehicle, to implement systematic tamper-protection strategies and write-protect features to deter reprogramming of odometers, also taking account of remote data exchange features; whereas it only requires information and explications provided by the manufacturer and does not foresee any testing if the odometer is tampering proof;

R.   whereas neither Directives 2007/46/EC and Commission Regulation (EC) No 692/2008 on type approval, nor UNECE Regulation 39 take account of mileage fraud and tamper-proof odometers;

Future development in the automotive sector

S.   whereas the automotive industry has made huge progress in developing and producing vehicles that are connected, use ITS and communicate with their environment;

T.   whereas most cars entering the market are already capable of connectivity features thus creating an almost completely connected car fleet on Europe's roads;

U.   whereas the average age of cars on European roads is almost eleven years resulting in a fleet that consists of newer, highly connected cars and older cars without any connectivity features;

V.   whereas modern vehicles already today regularly send datasets to manufacturers

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[1] European Consumer Centers Network (ECC-Net, 2015), Cross-border car purchases: what to look out when you're bargain hunting, p.236

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including actual mileage and total operating time delivering key data for the verification of mileage record plausibility;

W. whereas blockchain technology could be key to trusted odometer data storage, offering a hacker proof solution and enabling protection of personal data while it is suitable for both automated transfer of data in connected vehicles and manual entries at PTI;

X. whereas CarTrustChain is a successful project on how to use blockchain technology to eliminate odometer fraud that was co-funded by the European Funds for Regional Development.

1. Calls on the Commission to pursue the overall goal of creating legal, technical and operational barriers to make manipulations either impossible or so time consuming, difficult and expensive that it is no longer lucrative;

2. Underlines that technical solutions like HSM and SHE are already widely used to protect sensitive data in cars and that odometer readings should enjoy the same level of protection;

3. Calls on the Commission to strengthen type approval for in-car security, especially for the technical measures against odometer fraud but also in light of the increase of connected cars;

4. Calls on the Commission to thoroughly monitor the implementation of Regulation 2017/1151 regarding the requirements on technology security for odometers, adjust those requirements if necessary and to report to the Parliament about the effectiveness of the regulation;

5. Notes that national solutions using databases of frequent odometer readings from PTI, garage visits and other vehicle inspections achieved great success in fighting odometer manipulation in the respective Member States;

6. Emphasises in this regard that national registers are not sufficient and that cross border data exchange is a crucial precondition for tackling mileage fraud in the European Union;

7. Underlines that EUCARIS offers an existing infrastructure for cost-effective exchange of odometer readings across the Union based on a database solution;

8. Calls on the Commission to make participation in EUCARIS mandatory and to implement it as a vehicle information platform thus facilitating mileage verification throughout the whole Union;

9. Regrets the fact that the electronic register from directive 2014/45/EU has not been established yet and that the Member States' penalties are not dissuasive enough;

10. Considers a shorter period for the first mandatory PTI more useful and suggests to include odometer readings not only from PTIs, but also inspections and other garage visits;

11. Emphasises that shifting to a blockchain based solution could be more cost-effective

while providing high quality and security; therefore calls on the Commission to explore the possible establishment of a European odometer blockchain network;

12. Emphasises that vehicles have become increasingly capable of connectivity and that this development will continue thus allowing to automatically feed odometer data into a database or a blockchain network;

13. Highlights that all measures involving transmission and storage of data should follow the European data protection *acquis*;

14. Calls on Member States to improve their legislation on odometer fraud in order to make it a criminal offence;

15. Requests the Commission to submit, on the basis of Article 91(1) and Article 114 of the Treaty on the Functioning of the European Union, a proposal for an act on measures tackling odometer manipulation, following the recommendations set out in the Annex hereto;

16. Considers that the requested proposal does not have financial implications;

17. Instructs its President to forward this resolution and the accompanying recommendations to the Commission and the Council.

**ANNEX TO THE MOTION FOR A RESOLUTION:
RECOMMENDATIONS AS TO THE CONTENT OF THE PROPOSAL REQUESTED**

Fostering technical solutions and type approval

In order to make the manipulation of odometer readings more difficult, a higher level of in-vehicle security for odometer data should be established. This shall be achieved through the following means:

– Monitor the implementation of Article 5 (3) (f) of Regulation 2017/1151 and report the results as soon as possible to the Parliament;

– Making "Hardware Security Modules" (HSM) mandatory in new vehicles for securing odometer readings against manipulation;

– Introduce a test method or apply the Common Criteria for Information Technology Security Evaluation for the preventive solutions from Regulation 2017/1151 regarding odometer fraud;

European database

Databases with odometer readings significantly reduce the number of manipulated vehicles. It is important to achieve a European solution, as isolated national initiatives cannot prevent odometer fraud in cross-border trading of second-hand vehicles. Therefore, following measures should be proposed:

– the mandatory odometer reading recordings as called for in Directive 2014/45/EU should be made available for cross-border exchange in a European database to customers too;

– existing odometer reading databases on Member States' level should be integrated in this system and existing infrastructure like the EUCARIS should be used for a cost-effective and timely implementation;

– data protection rules should be respected and, where necessary, adapted in a way to enable storage and exchange of the relevant data and protection of privacy as long as there is no fraudulent behaviour;

Blockchain and connectivity as long-term solutions

Vehicles become increasingly connected and the share of connected vehicles in the European fleet is constantly growing. They already transmit data like the actual mileage reading to the manufacturers' servers. Those data could already be used to discover mileage fraud.

The blockchain technology offers a reliable tool to secure data in a network and successfully prevent manipulation of data entries. Combining those developments and technology could be a long-term solution to odometer fraud.

Therefore, following measures should be proposed:

– establish a European blockchain network for odometer readings;

– create the legal and regulatory framework for an automated transmission of odometer readings of cars that are equipped with connectivity functions;

– include the additional option to transmit odometer readings from PTI, garage visits and inspections and thus integrating but advancing from the database system;

Legislation and enforcement

Until now, odometer fraud is not a criminal offence in all Member States, although Directive 2014/45/EU explicitly calls for that. Having effective legal measures, including fines and penalties is crucial for eradicating odometer fraud. Therefore, following measures should be proposed:

– odometer fraud should be regarded as an offence, punishable by effective, proportionate, dissuasive and non-discriminatory penalties that follow a highly comparable standard in the whole Union;

EXPLANATORY STATEMENT

Introduction

Odometer fraud is a widespread phenomenon posing a serious threat to road safety, distorting the proper functioning of the internal market and imposing unfair an additional cost to consumers, insurers, second-hand car dealers, leasing companies and also manufacturers.

Estimates show that between 5% and 12% of cars are affected in national markets but between 30% to 50% of all cars in cross border trade. The economic damage for the whole EU is estimated between EUR 5.6 and 9.6 billion. Consequently, trust in the second-hand car market is the lowest among all goods markets in the EU.[1]

So-called odometer adjusting or odometer correction tools are easily available and start at very low prices. In a higher price range more sophisticated tools with software update subscriptions are available, which amortise quickly, when the service is offered on a commercial basis. The profits are remarkable as the artificially increased economic value is − depending of the vehicle segment − on average between EUR 2.000 and 5.000[2].

There is also an unequal distribution of the probability of buying a car with tampered odometer, both geographically and socially. In EU13 countries problems related to manipulated odometers have been reported more frequently than in other member states. Mileage fraud also disproportionally affects social groups with lower disposable income.

Besides economic effects, there are severe negative impacts on road safety. Due to the incorrect mileage, the car owner will follow a wrong maintenance and inspection plan, which in turn can lead to a delayed or wrong replacement of parts and components. Premature wear and tear will lead to increased maintenance and repair needs and − due to unexpected cost, many people cannot bear - to more unsafe vehicles on the roads.

Moreover, the environmental performance of those cars is worse than expected and pollutant emissions increase. Therefore, cars with manipulated odometers can unexpectedly fail the emissions tests during the periodical technical inspection. Other consequences of the manipulation can also have an impact on manufacturers. Indeed, Regulation 715/2007 defines durability requirements for pollution control devices; however, a car that complies in reality with the Regulation but has a manipulated odometer may show reduced emissions control capabilities and subsequently be a threat for the manufacturer's performance.

Discussion of countermeasures

Due to the scope of odometer manipulation and its negative impact on road safety, environment, economy and consumers, some member states have addressed the problem and introduced countermeasures. The goal is to create legal, technical and operational barriers to make manipulations either impossible or so time consuming, difficult and expensive that it is no longer lucrative.

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[1] Consumer Markets Scoreboard (European Commission, 2014)
[2] KTI, Technische Informationen 2/2014 Tachobetrug (http://www.k-t-i.de/fileadmin/edit/publikationen/ti/2014/2014-02_TI_Tachobetrug_V1.0.pdf)

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Belgium and the Netherlands have established database systems that store mileage recordings from PTI, maintenance and inspection visits at garages. As a result, the number of cars with manipulated odometers decreased significantly and the phenomenon almost disappeared. However, this effect is only valid for internal second-hand car sales. Nevertheless, the number of manipulated cars in cross-border sales remains constant. In order to have the same effect in cross-border trade, three factors are crucial: data must be collected, it must be correct and cross-border access to those data must be possible.

That is why a European database solution could help to collect data in a uniform manner and to enable cross border exchange. Building upon existing structures like the EUCARIS would be a cost effective approach.

As databases only store mileage from the first recording onwards – which is in the worst case the first PTI after four years – one could still manipulate the odometer before this date. As a result, an incorrect mileage would be recorded officially and hence "legalised".

In order to avoid this risk, many stakeholders advocate for an in-vehicle solution. Specific parts of the vehicle's electronic control units (ECU) have a higher security level than others or are specifically protected against unauthorised access. So-called "Hardware Security Modules" are already in use for this purpose and according to several stakeholders represent a cheap and efficient solution, the manufacturers would have to implement. It would be a solution right from the start to set an additional barrier to manipulation.

Proposed solutions: from short term to long term

The problem of odometer fraud should be tackled through a multi-level approach. Mandating manufacturers to specifically secure the odometer against manipulation is a first step that will better protect all new cars coming to the market. Establishing a European database solution would include all cars on the road as well as all future cars.

Having a look at the technological progress, both in the automotive industry and IT, illustrates that a combination of connected cars and blockchain technology could be a long-term solution. Connected cars are already on European roads and their numbers are likely to increase further. OEMs already receive datasets from these vehicles including amongst others the current mileage. Therefore, relevant data and an automated transmission technology are already in use.

Instead of sending those datasets to a classic database, where alteration and deletion cannot be ruled out, a blockchain network could be a safe, secure and cost efficient alternative. Blockchains are by design resistant to modification of data. In the long run, automated transfer of odometer data to a European blockchain could put an end to odometer manipulation.

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ANNEX: LIST OF ENTITIES OR PERSONS
FROM WHOM THE RAPPORTEUR HAS RECEIVED INPUT

The following list is drawn up on a purely voluntary basis under the exclusive responsibility of the rapporteur. The rapporteur has received input from the following entities or persons in the preparation of the draft report:

Entity and/or person
ACE Auto Club Europa e.V. (ACE)
Allgemeiner Deutscher Automobil-Club e.V. (ADAC)
Association of European Vehicle and Driver Registration Authorities (EReg)
Car-Pass
Centre Européen des Consommateurs France
Certificare
CTIC Centro Technológico
DEKRA
European Council for Motor Trades and Repairers (CECRA)
Fédération Internationale de l'Automobile (FIA)
Gesamtverband der Deutschen Versicherungswirtschaft (GdV)
Kraftfahrzeugtechnisches Institut und Karosseriewerkstätte (KTI)
Verband der TÜV e.V. (VdTÜV)

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