

Original article

Safety in road transport

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INFORMATIONS

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ABSTRACT

The article describes the transport process and the drivers' approach with regard to respecting the applicable driver's working time standards. This paper presents and discusses the results of a survey conducted among professional drivers, the primary purpose of which was to obtain the response to the question whether drivers actually rest during the break. Legal regulations strictly determine the minimum daily and weekly rest periods and the maximum daily and weekly driving times. Appropriate advanced technologies represented by measuring tools to the great extent oblige drivers to take a rest at the right time. Nevertheless, on the basis of the research it was stated that drivers frequently execute other activities, thus trying to increase their profits during break time, and therefore they commit for a rest shorter time than this resulting from the current working time regulations. The introduction of newer and more advanced solutions in the recording equipment substantially limits the possibility of performing other activities related to the vehicle during a break, and forces drivers to have a rest, thereby they pose less risk on the roads.

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KEYWORDS

transport and communication, safety, driver working time



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Introduction

The transportation process comprises operations consisting of the carriage process (loading, transporting, unloading) and activities related to the organization of a given carriage, which precede or follow the carriage process. The process of carriage is a fundamental element of the transportation process, which has a significant impact on transport safety. It requires involvement of a means of transport, and loading and unloading are the essential elements without which this process cannot exist. For carriers, the standing of a transport means under the loading excludes it from the transport work. Consequently, limiting the time of loading, handling and unloading processes is

one of the elementary factors for increasing efficiency of the transport process. For this purpose, 'self-unloading' devices such as tipper trucks [Kapustynski et al. 2011] are used to transport certain types of cargo. In order to increase the transport capacity of the means of transport, drivers try to limit the time of handling, on which, however they often have no bearing. The duration of the loading and unloading phases depends mainly on the mass, dimensions, shape, packaging, natural properties of the cargo, as well as on the size and shape of the cargo spaces and organizational measures in a certain enterprise [Niezbecki et al. 2016]. The duration of logistic and handling operations does not always limit the driving time on a given day, but reduces the period of the driver's actual rest.

1. Working time standards of professional drivers

The driver's working time is restricted by the Working Hours Act [Dz. U. 1999 Nr 44, poz. 432]. The fundamental provisions are based on working time standards. The basic requirement is 8 hours worked per day. This does not apply to an equivalent working system where it is possible to work for 12 hours a day. The next limitation is the 40-hour average weekly work-time. It is important to note that this standard is calculated as an average for the entire reference period. Another limitation is the standard for working time combined with overtime work. The weekly working time of a driver, together with working overtime, cannot exceed an average of 48 hours in a given reference period; this is a weekly average, and thus it does not have to be fulfilled each week but on average in the reference period. This standard does not allow planning overtime work, and it should be borne in mind that overtime work is something exceptional and indispensable at any given moment. Another requirement is ensuring proper daily and weekly rest for a driver. It is of great importance that EU regulations have priority over Polish laws [Niezbecki et al. 2016]. Driving time guidelines strictly determine how many hours per day a driver can drive a vehicle [Gil et al. 2013, 2014].

2. Analysis of a practical aspects of compliance with provisions regulating working time for professional drivers

Based on the survey conducted, the research results and the practical aspects of compliance with the rules governing the working time of a professional driver are presented.

2.1. Own research

The present study describes and discusses the results of the questionnaire survey on the compliance of driver's working time and necessary breaks from driving. Research work was analyzed on the basis of material collected as a result of the survey carried out among professional drivers. The questionnaire was addressed to the employees working in the positions of drivers for the transport company based in the Lubelskie Voivodeship. The questionnaire consisted of several questions. These questions concerned directly or indirectly issues related to driver's working time in road transport. The questionnaire took the form of a printed format with the questions and answers,

and the respondents chose and indicated the ones they considered to be true. Most of the questions were closed. The questionnaire also contained semi-open questions that combined the features of closed and open questions, such as a set of ready-made answers (like a closed question), and the possibility to speak freely (as in an open question). The questionnaire concerned, inter alia, the evaluation of the examined driver's working time regulations, the understanding of the rules of working time, the average duration of the various stages of the transport process and breach of the working time rules. The research was conducted last year. Surveys were handed personally by the co-author of the study. Before filling in the questionnaire, the respondents were informed about the anonymity of their responses, as well as assured discretion and that the information received would be used solely for the purposes of this study. The respondents were guaranteed sufficient time to complete the questionnaire so that they felt they did not have to hurry to respond.

2.2. Results and research analysis

The research objective was to investigate the observance of provisions regulating professional drivers' working time, which significantly affect the safety during transport. All employees working as drivers filled in the questionnaire. The relevant factors determining the driver's time-related issues included the length of service, categories of driving licenses and whether the driver worked in national or international traffic. Among the respondents, almost half of them were drivers with a work experience of over 10 years as a professional driver. Only 20% declared that they had been working less than 2 years as a professional driver.

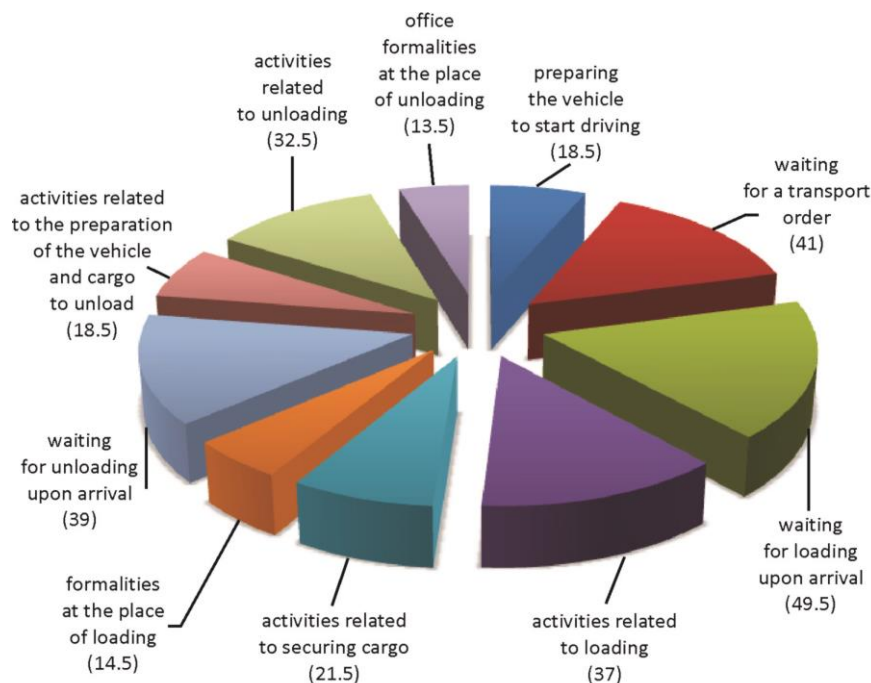


Fig. 1. Activities other than rest that drivers perform during a work-break
 Source: [Niezbecki et al. 2016].

Most of the surveyed drivers had a category C + E driving license (73%), a few persons had a category D + E, and one a category C. The interviewed persons mostly drove on international routes. This group accounted for 70%. The remaining 30% worked in national traffic. It has appeared from the research carried out that 70% of drivers believed that the rules governing their working time were understandable and 30% declared that not everything was always clear enough. Most respondents expressed opinion that working time regulations made it difficult for them to work (80%), while 20% had a positive attitude – the rules simplified their work. Figure 1 shows the average working time for activities other than driving during the transportation process.

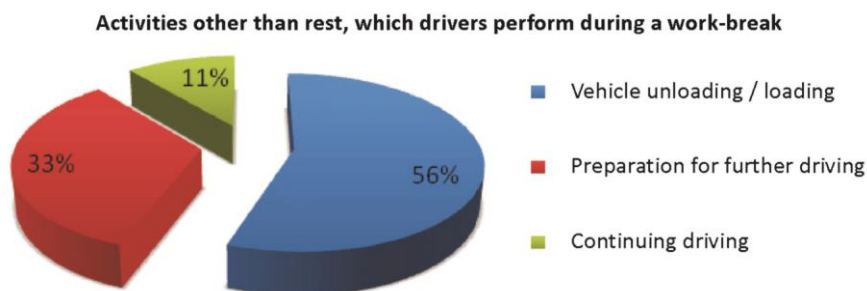


Fig. 2. The average time of particular phases if the transport process
Source: [Niezbecki et al. 2016].

Alarming data can be observed when analyzing the survey conducted. More than a half of the respondents admitted that they had contact with fraud to tachograph records. All respondents acknowledged that during work they faced situations of exceeding a daily permissible working time. The diagram below illustrates premises for the above. The most common reason given by the respondents is the difficulty in finding a parking space (25%). In the second place the respondents reported traffic jams (22%) as a reason, 18% explained the necessity of reaching the place of loading and unloading, and 14% – made a mistake in calculating the correct working time. Fourteen percent of the respondents admitted that they had exceeded the time in order to reach home or the base. As the last of the reasons the drivers mentioned waiting in line at a border crossing point.

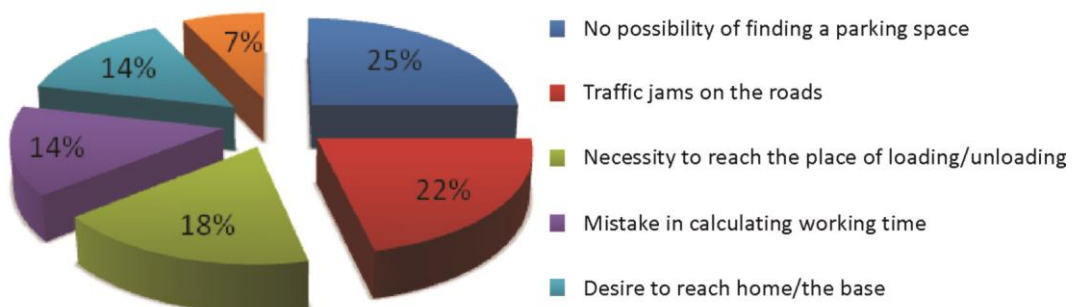


Fig. 3. Reasons for exceeding the work-time period
Source: [Niezbecki et al. 2016].

3. Conclusion and final comments

The worrying data can be observed when analyzing the survey conducted. More than a half of the respondents confesses to the falsification of tachograph records. These respondents who had falsified records of tachographs explained that they had done so due to the obligation to meet the need for fast carriage of goods and delivering it on time to the indicated address. Legal regulations and the application of technologically advanced control tools serve for the normalization of driver's working time so that economic circumstances do not obscure the key issue, i.e. safety, and ensure the most appropriate working conditions. The study allowed for drawing the following conclusions:

- Extremely important is the emphasis put on training future drivers so that they can fully understand and be able to apply working time standards in practice.
- With the increase in length of service, drivers are more aware of the rules governing working time.
- There is no need to make changes to work-breaks and obligatory rest – according to drivers, adequate time is ensured for them for rest and body regeneration, provided the regulations are respected.
- Despite the strong emphasis on monitoring the compliance with working time and the development of technology aiming to streamline the process, drivers still falsify recordings of control devices. Therefore, such equipment and monitoring measures should be constantly improved in order to make them more effective.
- The transport process should be improved, including elements that are not dependent on a driver and have a significant impact on his/her working conditions, e.g. duration of waiting for loading/unloading, amount of office formalities.
- It is important to focus on making drivers and their employers more aware that performing activities other than rest during a mandatory resting period involves exposing them to risk.
- Most of situations in which working time is exceeded result from factors independent from a driver and an employer. However, the economic circumstances, i.e. the need to arrive at the place of loading/unloading often threatened by contractual penalties, are one of the three most common reasons for non-compliance.
- It is important to consider the adoption of more flexible approach to driver's working time and introduction of more possibilities for its adjustment to specific situations – when the driving time is coming to an end and a driver wants at all costs to arrive at his/her base or place of loading/unloading; when in a rush, stressed and under the pressure of time, he/she poses a greater risk on the road than if it were possible to legally extend the driving time and reach the final destination. On the other hand, changes in legislation should be designed in such a way as to avoid abuse and excessive use of such opportunities.

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Conflict of interests

The author declared no conflict of interests.

Author contributions

All authors contributed to the interpretation of results and writing of the paper. All authors read and approved the final manuscript.

Ethical statement

The research complies with all national and international ethical requirements.

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