

SIX REASONS WHY HOURS OF SERVICE REGULATIONS FOR TRUCK DRIVERS ARE VIOLATED

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ABSTRACT

Two decades of research has established a correlation between tiredness and fatigue, and traffic accident involving truck drivers. Regulations limiting the driving hours of truck drivers thus are necessary precautions. But compliance is a problem. The answer from authorities tend to be disciplinary measures, leading to protests or strikes among the drivers, and an uncooperative climate.

This paper offers an insight into 16 truck drivers' daily practices and strategies towards the European regulation 651, based on a longish ethnographical field study in a Danish haulage company.

The results points to six reasons why the regulations might be violated. The first is that driving time is respected, but resting time is not, which in effect means that the drivers experience the restraining part of the regulation, but not the protection from exploration that it also contains. The second reason is that the regulation seems to be designed to long distance driving, and has some short-comings when applied to short distance drivers. The third reason is that the regulation deprives the drivers of means to control their tiredness. The fourth reason is that the regulation limits room for planning ahead generally, because a truck driver's work is unpredictable and independent, but the regulation is action-defining and inflexible. Thus the regulations provoke violations because they counteract with the reality of truck drivers' work conditions. The fifth reason is that the regulation counteracts with a general independency ideal among truck drivers. The last reason is that the drivers and their employers share an interest in long work hours.

1. INTRODUCTION

Regulations limiting the driving hours of truck drivers are necessary precautions to minimize risks of tired or fatigued drivers endangering traffic safety. But they only work if the truck drivers comply with the regulations, which seem to be an ongoing challenge:

- In October 2007 a number of truck drivers in Denmark launched a spontaneous blockade at a port, as a protest against the regulation. Their action soon inspired others and several ports and bridges were blocked for commercial goods transportation for two days. The action is an example of a series of similar actions against fuel prices or regulations in Europe and USA.
- Research studies have stated that the regulations are frequently violated (Charlton and Baas, 2001; McCartt et al, 2000; McCartt et al, 2008; Monaco and Willmert, 2003).

The purpose of this article is to reveal why truck drivers violate these regulations by way of investigating the truck drivers' interpretation of the regulations, and their daily practice towards the regulations.

2. BACKGROUND

The work environment of Danish truck drivers is less safe than that of the average population (Mikkelsen, 2002), and the sector has an overrate of work accidents (Shibuya et al, 2008), but truck drivers are not the only ones affected by their work environment, also their fellow citizens in traffic are affected.

Thus truck drivers are involved in accidents both as the causing and as the suffering part. It is not the same type of accidents they cause and are victims of, though. Traffic is the most common association made when people outside the sector think of a truck drivers work related risks, but the drivers are exposed to other dangers than traffic. A recent Danish study has stated that 8.4 % of the serious work accidents in the sector from 1993 to 2002 were traffic related (Shibuya et al, 2008), the remaining 91.6 % of the work injuries among Danish truck drivers were sustained under non-traffic activities. Also tiredness and fatigue have received more attention in scientific research than any other factor in the truck drivers' work environment.

It has been documented that sleepiness is a risk for truck drivers (Bunn et al, 2005; McCartt et al 2000; Philip, 2005; Philip and Åkerstedt, 2006) and the same is true for fatigue (Adams-Guppy and Guppy, 2003; Bunn et al, 2005; Charlton and Baas, 2001; Hanowski et al, 2003; Morrow and Crum, 2004). The hours-of-service regulations in the USA (Federal Motor Carrier Service Administration, 2005) and the "Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 march 2006 on the harmonisation of certain social legislation relating to road transport" (Official Journal of the European Union, 2006) (regulation 561), which is valid in the countries in the European union, are designed to reduce fatigue and sleepiness among truck drivers and thus reduce traffic accidents. Since the study to be reported here, was carried out in Denmark only the European regulation 561 is relevant.

Regulation 561 allows a maximum of nine driving hours pr. day, divided in the middle by a 45 min. break in which the driver is required to rest, which excludes loading and unloading activities. Twice a week it is allowed to drive 10 hours. The required off-duty period is nine hours, and the allowed work hours per week are 48 hours on average in a period of six months. The regulation is enforced by the police and the fines to both employer and driver pr. exceeded minute were doubled ten times in 2005, when the regulation was revised towards fewer allowed work hours per week. Compliance is measured by means of mechanical tachographs or onboard computers.

3.METHODS

The results reported are based on a longish ethnographical field study in a Danish haulage company; mainly engaged in short distance transport. I conducted field work in five departments of the company; Plumbing equipment distribution, Cement transport, Concrete haulage, Dangerous goods and Supermarket distribution, during 5 months with 16 drivers, and all trips were short distance. The company and all informants were informed about the purpose of my presence, just as notes, and photographs were taken openly. The study comply with American Anthropological Associations code of ethics (1998) and additionally all names are changed in order to ensure the informants anonymity.

The data was managed and coded by use of N`Vivo7. The results emerge from the data in a circular process of analysis (Flick, 2006). Agar (1986) has described ethnographical analysis as a resolution process; The analysis is set off by a breakdown or a puzzling question, emerging from the data. This leads to the testing of data strips against a theoretical scheme until the phenomenon is thoroughly explained and the question resolved; the analysis presented here follows Agars description. Thus I use data strips from my field diary, as the basis for reflections on the issue that I address.

The aim of the analysis is to unfold the meanings ascribed to the informants' attitudes and behaviour, in this case towards the regulation 561, in order to reveal why the drivers violate the regulation.

4.RESULTS

The following sections are an account of my interpretation of the issues concerning the regulation that emerged during my fieldwork. I point at six reasons why the regulation 561 might be violated.

4.1 First reason: driving time is largely respected, but resting time is not

It emerged as a fact that only the part of the regulation that limits the daily driving time is respected, since it is the one part that is reinforced by fines. The other part of the regulation concerning the resting time the drivers are entitled to, is violated due to misinterpretations by their employers:

“It seems to be important for Kjeld to tell me about the regulation, as an example of how the employers bend some initially sensible rules. In the employers’ interpretation of the regulations, it counts as resting time if the truck has not been running for an hour, even if the driver has been engaged in loading and unloading, or e.g. has been waiting to unload at a building site. That way they can make full use of the drivers’ manpower, in spite of the regulations. This makes it a rest for the truck, but not for the driver. I ask Kjeld if it is not the same thing, as long as the monotony is broken? And he explains that it is not, because the task of driving demands so much concentration, and is so tiring, that one needs to relax properly, for instance by sleeping for 30 minutes or so. Sometimes he pulls over and takes a nap, if he feels very sleepy.”

This violation of the regulation 561 is in accordance with my experiences during fieldwork, and is also backed up by a driver from another company:

“At Ecolab 07.45 o’clock: Another driver comes over to talk. The subject of the conversation is regulation 561 and how unfair it, and especially the new fine rates, is. Because it means that they must park the truck and sleep at all kinds of strange places. And also that they can get high fines, if they forget to report working time, and resting time, and put their name and the date on the tachograph, and so on and so forth. They agree that too many drivers put up with too much just to be allowed to drive a handsome truck. For instance that it does not count as working time to load the truck.”

The fact that the regulation is misinterpreted means that the drivers only experience the restricting effect of the regulation, and not the protective potential that it has. Additionally it makes the drivers feel that the regulation is made to protect the public from them in the traffic, while no-one protects them, since the part of the regulations directed at their protection is not enforced.

4.2 Second reason: sleeping in the truck one hour from home feels silly

To most people the regulation 561 is distant but appears rational and sensible. This was also the case for me, until the moment where I had to comply with it myself, in a situation with a very hard working driver from the cement department:

“Maximum driving time: nine hours a day, ten hours twice a week though, but not in a row. This means that we can drive ten hours today, as long as we take a break after four and-a-half hours. It takes about four hours to drive from Elsinore to Ljungskile, where the truck is parked, while we unload. So when we are done, we can head towards Denmark again, but when we reach the ten hour limit, we must go to sleep. Perhaps we might make it as far as Elsinore. Either way we are going to spend nine hours of our leisure time, somewhere in the south of Sweden or in Elsinore. All of a sudden it seems completely foolish to me: one hour more, and we could spend the night at home, were I know that I would surely relax better. Max seems to comply easily though, apparently the issue is not open for discussion: when we reach ten hours, it is time to tuck in. He also seems calm about the fact of suddenly realising that he is going to spend the night abroad. He tells me, that he only plans social activities for the weekends for that very reason.”

We used the required break to unload in the passage above, which supports the earlier statements about the employers misinterpreting the regulations. Or perhaps it was actually Max’s choice to do so. It is interesting how the view of the regulation 561 changes when it becomes personal in the data strip. Clearly there is a gap between how the regulations are intended and how they work when applied to short distance transportation. The regulation 561 is a precise and action prescribing form of regulation, there is no room for adjusting the regulation to the

current circumstances, one can only comply or not, while other types of regulations leave more room for individual control and decision making.

4.3 Third reason: increased stress

In the supermarket department the first informant was a well formulated young driver who had previously owned his own company. He had a surprising opinion on the tightening of the regulations:

“Johnny tells me almost immediately, that he thinks the new regulation has added to the stress. Before, he could park the truck and take a nap, if he felt sleepy, but now it is hard to find an opportunity, because of the maximum of 48 work hours per week. So the pressure has actually increased.”

It is a puzzling statement Johnny makes: How can fewer working hours lead to more stress? When I questioned Johnny about it, it became apparent that he is addressing the control issue. The number of goods to transport is equal to before the increase of limited working hours in the regulations, since the company has not cut down on orders accordingly. Consequently Johnny sometimes finds himself in a situation where he is obliged to rest even if he does not feel tired, because of the regulations, while at other times he cannot find the time, even though he needs a rest, because he only has 48 hours a week to transport the same amount as he did before. Johnny's experience of being more stressed even with fewer working hours, finds scientific support in the work of Karasek and colleagues who developed the demand/control model (Karasek, 1979; Karasek and Theorell, 1990). The model is based on the job strain hypothesis implying that psychological strain occurs when the psychological demands in a job are high and the decision latitude low, which creates an imbalance. Strain is measured on two scales: psychological demands and decision latitude (control). Occupations can be analysed with the model, to give an indication of how strained the job is, and Karasek and Theorell have placed freight handlers in the high strain quadrant (high demands – low control), while transport operatives are placed in the passive job quadrant (low demands – low control). Johnny's experience does not match the placement in the passive job quadrant, his description points to a high strain job, but I think that there are arguments in favour of considering Johnny's job to be a high strain job:

- Long distance truck drivers do not handle many goods, but short distance drivers, like Johnny, do.
- Truck drivers transporting heavy goods often receive help to unload in the receiving end, but drivers who transport small goods, like Johnny, do all the handling themselves.
- Driving a truck has earlier been an independent task, without surveillance, but the use of mobile phones and on board computers has ended this era. Meaning that drivers like Johnny experience a time constraint also when driving.

To sum up the arguments, Johnny's job has more elements of the freight handlers job characteristics than a long distance driver's job has, and additionally any driver's job has become more strained since Karasek and Theorell's division of occupations according to strain, because of the general technological development.

In the concrete haulage department, Bent has been the shop steward for a decade, and thus seen many drivers work too hard for too long, and suffer from physical or mental consequences of the hardworking lifestyle, so he acknowledges that some things might be good for the majority and in the long run, even if it is inconvenient for the individual:

“He approves of regulation 651, even though it limits their personal freedom.”

They both agree that the regulations confine them, the older driver with the broad perspective thinks that it is necessary, while the younger driver seems to think that he could control his tiredness better on his own.

4.4 Fourth reason: the regulation limits room for planning

The flexible attitude to what the day might bring, that Max reflects in section 3.2 is the predominant characteristic of the truck driver job. To our elderly shop steward it is for the worse:

“Bent is disillusioned by his work as a shop steward. It is due to the time gone by and the absurdities in the collective agreement: “flexible working hours! It is only for the company that they are flexible”, he says. Bent finds that it was better in the old days, but reminds himself, that the same thing is happening everywhere, not only truck drivers have experienced deterioration.”

So Bent's opinion is that their working hours only are flexible for the benefit of the company.

But not only the hours are flexible, also a generally flexible state of mind seems to be an advantage to meet the tasks of the truck driver's day, as this passage from an unpredictable day in the concrete haulage department shows:

"12.45: The arrival of a diamond-cutter made Bent and Steffen realize that the crew cannot find a stocking place for the remaining five concrete units, so the crew's plan must be to cut the ends off and put the units in position right away. To us, this means, that we will not be able to haul the eight wrecks (the remains of the units after they were cut in Roskilde) to the breaker in Tølløse today. For the time being, we are cast away. The drivers take it amazingly easy, they do not ask the crew what their plans are or even what is going on. They just wait and draw their own conclusions."

The two drivers met the challenge of not knowing what is happening by quietly observing and drawing their own conclusions. So their strategy for coping with an unpredictable work environment was to remain passive. But that is not the case for Bjarne from the dangerous goods department, who is an elderly driver, who likes to think ahead and ensure that he can perform his tasks properly and safely. The following strip from my field notes is a bit confusing, because it follows the mental strings of Bjarne, who is worried about all sorts of situations that might occur:

"Bjarne has just talked to TMC (the company we are going to haul chemicals to Sweden for), they told him that the container for Hallandsåsen has arrived. A colleague named Arne was supposed to haul it, but he is on sick leave due to an occupational accident. It seems that we will end up making the trip to Hallandsåsen. But there is a problem, Bjarne tells me,: the dispatcher expects us to be done with the first load of the day at 10.00, but we will not be. This means that the guy who knows where to unload the substance at the factory in Hallandsåsen, will not be there when we come, because he goes home at 14.00. Someone will be present, but the others do not know much about how to unload. As an example of their ignorance, Bjarne tells me that last time his colleague (Arne) went there, they told him to use the same hose, for the substance he was about to unload, as a German driver, who had just left, had used for a different substance, that he unloaded. Arne was doubtful about it, so he looked both substances up in the dangerous goods handbook, and the two substances were not to be mixed it said!. That might have been dangerous. Bjarne plans to call the unloading contact in hallandsåsen, if we can see that we will arrive later than 14.00, and ask him to instruct his colleagues about our load."

This passage shows that a truck driver's daily tasks are unpredictable, because the circumstances might change rapidly. It also shows that a truck driver cannot rely on other to foresee the problems he might be confronted with. Although not all drivers are as careful as Bjarne, a younger or less experienced driver might never notice a problem and end up mixing two substances, perhaps without anything happening, or perhaps resulting in an accident.

This unpredictability and flexibility demand in a truck drivers' job is a challenge for compliance with the regulations because the regulations do not leave much room for individual planning. And the problem is that problem solving and the feeling of independency, is what makes the job interesting to most truck drivers. The sector seems to share what one might call an independency ideal.

4.5 Fifth reason: the regulation counteracts the independency ideal

The notion of independency among truck drivers is double: It is an adventurous feeling as well as dissociation from other kinds of unskilled jobs. The following passage describes why Max from the cement department chose his line of work:

"Max is word-blind. His father was a truck driver like himself. Max is a trained mechanic, but he prefers to be a truck driver, because he likes to see things happen. He has learned English and German by himself, because he was not taught it at school."

So to Max not all career options were open, given the circumstances he choose the job with an element of adventure. The shop steward from the concrete haulage department is experienced as well as disillusioned, yet he explains the attraction of the job, in quite romantic terms:

“Bent says: ”it comes to run in the blood”, meaning the free life. One is left in peace (not as much any longer though, because of the cell phone and the computer), one gets around to watch the nature and all that is happening here and there. And nobody interferes in what is going on in this little space. “One builds up a little kingdom”.”

Again the mentioning of getting around and watch, but also to be left in peace – from supervision and the presence of a foreman, at a factory for instance. The kingdom most likely refers to the feeling of being one’s own boss.

Earlier research (Agar, 1985; Ouellet, 1994) has shown that this independency ideal is a double-edged sword, since not even independent truck drivers control their work conditions, but the independency ideal makes them work as hard as independents tend to. The independency ideal is counteracting compliance with regulation 561, because the regulation deprives them of control. That is of course the nature of regulations, but the degree to which regulations direct the actions and decision-making processes of their target, vary.

4.6 Sixth reason: Employers and drivers are united against the regulation

Another tendency that counteracts with the regulation is that truck drivers and their employers have a common interest in keeping truck drivers’ working hours long. The employers, on their side, need to keep the trucks on the road for as long as possible, because they do not make money when the trucks are in the garage. And most owners and drivers prefer to keep the system of one driver pr. truck. The owners prefer it because the drivers take more responsibility for the truck if they are the only driver, and the drivers prefer it, because they come to know the truck and feel safer when they know its’ condition. They can also decorate it to their personal taste if they are the only driver. Thus in order for the drivers to drive one truck only, they need to drive it long hours to keep the production up. But for the truck drivers the main reason for wanting long hours seems to be money, since their wages are low, but higher in periods of overtime:

“Hermann has been working for the company for five years this time round, he has had three rounds in all. In between, he has been a bus driver, he liked that, but the schedules were bad; sometimes morning, sometimes evening and in the weekend every fortnight. And it did not pay much, because one only drove the scheduled hours, without means of making a little extra.”

For independent drivers it might be a necessity to work long hours to pay for the truck, as is the case for Steffen, an outsider¹, who often works for the company:

“We ran into Steffen, who showed us a bruise, from a fall off the platform, because he hurried too much, he explained. Steffen has small children and try to be home in time to do the dishes after supper, because he knows that his wife is almost fed up, with him driving all the time. He is one of the outsiders and needs to earn enough to pay for the truck.”

Karl-Erik from the cement department had to explain to his dispatcher that he was not interested in working overtime, because she simply assumed that all drivers do:

“Karl-Erik is working on civilizing Karina (his dispatcher), because of her habit of loading on orders without asking him if he is willing to work overtime. She seems to assume that they work over every day. She has even threatened Karl-Erik by saying that he does not have to show up if he does not like it, but he does not take her threats seriously. He replies that the contract he signed said working hours from 06.00 to 13.30, to which she says that it is not true for drivers. Their average working hours are nine to ten hours a day. For the time

¹ He is not employed by the company, but by a smaller contractor who occasionally drives for the company. Around 1/3 of the company’s transport tasks is outsourced this way.

exceeding 37 hours they receive overtime wages, which in effect let them keep up a relatively high income, because the ordinary wages are low. Most of his colleagues say that 37 hours is not enough to make a living."

It seems to be common for the employers to put pressure on the drivers to work long hours:

"When we had reached our destination and disconnected the walkie talkie line to Brian, Johnny told me, that Brian is someone who lets himself be pushed, because he does not refuse, and has an employer who pushes him (in contrast to our company), that is why he is wearing himself out."

The statement that our company does not push is modified by Max from the cement department, who in the following passage sounds as if he is being pushed:

"Dan told me, that Max sleeps in the truck, the way he said it made it sound as if it was Max's own choice, but Max tells me, that he is tired of working so many hours, last week he was on the road for 78 hours. He is fed up with it. In the first six months of the year he has already made 200.000 dkr. (27000 euros). He has tried to tell Karina that he does not want to work so much, which helped for about two days, then it was apparently forgotten. Yesterday he told Michael (director of the company) the same. His response was to suggest that Max regard himself as an export driver, like he has been before. That means not driving home for the night, that way he would have more hours to sleep, and his family would not be disappointed when he comes home late, because they would not be expecting him. But Max does not want to pull over and sleep some 25 km. from his home. It is different when one is in Germany or something, the conditions are completely different there, but to be parked in the vicinity of one's home, is just too stupid. So he told Michael, that he could consider the conversation a warning in case he burns out."

The two previous drivers, Karl-Erik and Max, seem to have been working too much, for their own health and taste. Max is from the cement department, where the drivers work very long hours. For Jens from the plumbing equipment department – a young driver - it is the opposite notion, as he prefers to work around 50 hours a week:

"Jens is planning to leave because of the new regulation, since he likes to drive about 50 hours a week. When he does not, he gets bored." He willingly take on extra tasks in return for favours from the dispatch manager (such as driving home in the truck and thus save the petrol for his own car) and is happy to work overtime when necessary."

I discovered a pattern in the distribution of the drivers' attitude towards working hours; young drivers tended to want to work many hours while older drivers tended to wish for more time at home. Perhaps a reason for this is that young drivers have recently started a family, and have payments on a house, thus they need a high income. At the same time they are young and can keep up with the speed and lack of sleep that comes with the extended working time. But older drivers have experienced that their body cannot endure the demands any longer. My observation is reflected in the findings of an American sociologist and truck driver (Ouellet, 1994) who detects three approaches to the job; Supertrucker, trucker and worker, the first type is mainly a young driver, who gives his work the highest priority in his life, while the latter tend to be older and have a more pragmatic attitude.

A Swedish ethnologist who has described truck drivers' professional culture (Nehls 2003) draws a line back in history and finds that the occupation started out as a side occupation for farmers, which makes the occupation profoundly different from the occupations rooted in the industrialisation, with their trade union tradition and history of struggles with employers. Nehls has a very important point in my view, truck drivers do not consider themselves to be comparable to factory workers, and tend not to wish to unite against their employers, or to unite at all, even when they protest against the regulation it is in a spontaneous and disorganised manner as the example in the introduction section shows. Also their employers are seldom as different from the drivers as a factory owner is from a factory worker, since the industry consists of small firms, with many bankruptcies and many new firms (Nielsen & Sornn-Friese, 1997), so that employer and employee might easily shift positions. This means that employers and employees tend to form a common front against authorities imposing regulations on them, instead of the employees holding their employers responsible for their work conditions.

5. DISCUSSION

All my data stem from one company only, and was gathered by one person as well, so it is a subjective picture I have presented. The question is of course to what extent my findings are typical for the sector. There are arguments suggesting that my account might show a more positive version, than the sector in general represent, because the company is one of the largest in the country, they have a head of occupational health and safety as well as local safety groups in their departments. Whereas the majority of haulage contractors in Denmark are small or Owner/driver firms, that tend to have less resources for administrative tasks, negotiations with authorities and customers, and training of their employees. The fact that the company allowed an ethnographer into their company to study safety also suggests that it is a well run company, with a collaborative attitude towards authorities.

Safety procedures and regulations are necessary tools to enhance safety in the work place, but as several studies have shown, they are not sufficient, in actually ensuring safety (Rasmussen, 1997; Grote, 2007; Hale and Swuste, 1998).

In safety research it has been pointed out by Dekker (2003) that following safety procedures does not guarantee safe performance, rather the safest outcome is achieved when the employee performing an action is able to make an informed choice based on various sources of information, including procedures. Dekker argues that there is always a gap between procedures and practice. The gap varies according to the nature of the work, and he advises organisations to acknowledge and monitor the gap. But regulation 561 is not the sort of regulation that assumes that a gap between procedures and practice exist. Rather it demands to be followed precisely and to the minute even though it is designed at a centralised level far from the context they are applied in.

The regulations addressing non-traffic accidents of truck drivers by the Danish work authorities are not as strict and precise as regulation 561, and are not enforced by fines either. When compared they appear to be guidelines, stating that the parts involved in the loading and unloading situations, should find a solution in co-operation. This has proven difficult because the haulage contractors are reluctant to make demands on their customers out of fear of losing the contract, and the customers on their side, do not take much interest in the truck drivers' health and safety. Neither do scientists, it seems, since the health and safety of truck drivers is seldom the subject of scientific literature, even if it seems logical that it is closely connected to the drivers' performance and behaviour. A search in web of science for Work environment AND Truck driver in a timespan of all years in the databases SCI-EXPANDED, SSCI and A&HCI gave 8 hits. In contrast a search for (Sleepiness OR fatigue) AND Truck driver in the same timespan and databases gave 5.458 hits. The search is not exhaustive, but it gives an indication of the distribution of scientific interest. Of course fatigue and sleepiness are important health and safety factors, but given their association to traffic related injuries and the distribution of 8.4 % traffic related injuries to 91.6 % non-traffic related injuries in truck drivers hospitalization pattern as referred earlier, the scientific interest seems unevenly distributed.

Roughly speaking the truck drivers are left alone in terms of health and safety, and being left alone is, the - sometimes unacknowledged - disadvantage of independency. The companies seem to be lacking the necessary level of safety maturity (Feyer and Williamson, 1991; Reason, 1997) as well as a sufficient administrative apparatus to meet the challenge of ensuring their employees health and safety. In a surveillance study involving 1627 Danish companies only 5 percent of companies in the transport industry was assessed to have a proactive attitude towards safety, and 60 percent was assessed to have a passive or ignoring attitude (Mikkelsen et al, 2003). The passive attitude of the companies paired with the attention of the authorities in the form of regulations that seems detached from context, is an unfortunate spiral that calls for more insight into the content of the gap between procedures and practice.

6. CONCLUSION

Our knowledge of truck drivers' safety is flawed, since their work conditions have not attracted as much attention as their driving hours. It seems that there has been a tendency to overlook other factors than limiting driving hours, which might contribute to the truck drivers' performance. There is no question of the need to limit the driving hours, but the means might have more facets, than the regulation 561 offer. The results presented here

suggest that companies and drivers need to be part in the regulation design process to a much larger extent than they are, but cannot be expected to solve the internal safety challenges on their own.

The truck drivers on their part need to acknowledge that independency has a down side; Independency should mean the ability to make qualified decisions, not willingly being ignored.

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