



TNO-report

R0622373/018-31364

**Road Transport Working Time Directive
Self-employed and Night Time Provisions**

Final report

Work and Employment

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Date 7 December 2006

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Contents

Management summary	i
1 Introduction	1
2 Conclusions and recommendations	3
2.1 Aim of the study	3
2.2 Implementation of the Directive into national legislation.....	3
2.2.1 Implementation process	4
2.2.2 Rules in place: working time	5
2.2.3 Enforcement policies and practices	7
2.2.4 Recommendations with regard to implementation and enforcement.....	8
2.3 Night work.....	9
2.3.1 Application of the rules on night work	9
2.3.2 Possible consequences of the provisions on night work.....	10
2.3.3 Recommendations with regard to night work	12
2.4 Inclusion or exclusion of self-employed drivers.....	13
2.4.1 Road safety	13
2.4.2 Conditions of competition (structure of the transport industry).....	17
2.4.3 The structure of the profession (working environment)	21
2.4.4 Social aspects.....	23
2.4.5 Recommendations with regard to the inclusion/exclusion of self-employed drivers	24
3 Starting points, case definition and objectives	27
3.1 General aim and specific objectives	27
3.2 Activities: a stepwise approach in four Work Packages	28
3.3 Work Package 1: Existing policies and practices in the Member States	30
3.4 Work Package 2: Road transport industry structure, profession and road accidents: analysis of available data sources	31
3.5 Work Package 3: Views of stakeholders	33
3.6 Work Package 4: Evaluation, conclusions and recommendations.....	34
4 Results: Existing policies and practices in the Member States	37
4.1 Introduction.....	37
4.2 European legislation on working time	37
4.3 The implementation of the Directive into national legislation: the rules in place	39
4.3.1 The adoption of the Directive into national legislation.....	39
4.3.2 National definitions.....	40
4.3.3 Rules on working time	44
4.3.4 National definition of night time.....	48
4.3.5 National situation regarding self-employed drivers.....	49
4.4 National policy and practice on enforcement	52
4.4.1 Enforcement policy and practice	52
4.5 Summary and conclusion.....	54
5 Results: Views of stakeholders on the Directive	57
5.1 Introduction.....	57
5.2 The implementation process and debate	58

5.2.1	The involvement of stakeholders in the implementation process	58
5.2.2	Main issues with regard to the implementation	61
5.2.3	Problems encountered with the definitions of working time	61
5.2.4	Views on the impact on the sector	63
5.2.5	Problems encountered with regard to enforcement.....	66
5.3	Views on night work.....	68
5.4	Views on the inclusion of self-employed drivers.....	70
5.4.1	Inclusion or exclusion of self-employed drivers.....	70
5.4.2	Views on the impact of self-employed drivers on (road) safety	72
5.4.3	Views on the impact of inclusion of self-employed drivers on the profession	74
5.4.4	Views on the impact of inclusion of self-employed drivers on the sector	75
5.5	Summary and conclusion.....	77
5.5.1	The transposition of the Directive into national legislation.....	77
5.5.2	The inclusion of self-employed drivers into the Directive.....	78
6	Results: Road transport industry, profession, social aspects, road safety and night work: analysis of available data sources	81
6.1	Introduction.....	81
6.2	Analysis of road transport industry structure and conditions of competition	81
6.2.1	Description of the existing situation	81
6.2.2	Analysis: consolidation and fragmentation.....	92
6.2.3	Literature on seniority and shortage of personnel in the transport sector	95
6.2.4	Situation of the self-employed, possible consequences of the inclusion/exclusion of self-employed	97
6.2.5	Main findings on structure of the sector and conditions on competition	104
6.3	Analysis of the road transport profession and social aspects.....	107
6.3.1	The sector ‘Transport, storage and communication’	107
6.3.2	The situation in the sector transport, storage and communication in 2000 compared to 1996.....	111
6.3.3	Characterization of the self-employed in the sector transport, storage and communication	114
6.3.4	Characterization of people working nights in the sector transport, storage and communication	116
6.3.5	Long working week versus no long working week	120
6.3.6	Comparison between country clusters	123
6.3.7	Main findings on profession and social aspects.....	128
6.4	Analysis of road safety	130
6.4.1	Figures on road accidents	131
6.4.2	Literature on working hours, fatigue and road safety	133
6.4.3	Main findings on road safety	139
6.5	Summary and final conclusions.....	139
6.5.1	Summarising the main chapter findings	139
6.5.2	Final conclusions on inclusion or exclusion of self-employed	144
6.5.3	Final conclusions on night time rules within the Directive.....	145
Annex	147

Management summary

Introduction

On 23 March 2005, Directive 2002/15/EC concerning the organization of working time of persons performing mobile road transport activities came into force for mobile workers. Self-employed are temporarily excluded from the scope of this Directive.

Firstly, this report describes the implementation of this Directive in all EU Member States and in particular the application of the rules and consequences of the provisions on night work.

Secondly, this report describes the possible consequences of the exclusion or inclusion of self-employed drivers from Directive 2002/15/EC in terms of road safety, conditions of competition, structure of the profession as well as social aspects.

The responsible ministries in most EU countries have co-operated and returned a questionnaire on the status of implementation. Government representatives, employers' representatives and employees' representatives in most EU countries and at the EU-level have co-operated in anonymous interviews. In addition, available national data sources are used in order to describe the structure of the sector in all Member States and data of the European Working Conditions Survey are used to describe the structure of the profession and working environment of the self-employed. Since the data sources are only limited in scope or content, also scientific literature is used, in particular in the field of (road) safety.

Implementation of the Directive into national legislation

Only four Member States had implemented the Directive by 23 March 2005. At the moment of writing this report (October 2006) still six Member States have not implemented the Directive into national rules. The transposition of the Directive into national legislation has led to a debate in a majority of the countries. The intensity of the debate and the involvement of social partners differ between Member States. The main issues in the debate concerned the definitions of working time and periods of availability, the possible impact on the sector and problems with enforcement. Enforcement is perceived as difficult due to the vagueness of definitions, which leaves room for interpretation, and the translation of these definitions into company administration. Another problem with enforcement is a lack of enforcement capacity (not enough inspectors). Enforcement is perceived as even more difficult (or even impossible) when it concerns self-employed drivers, in particular since enforcement depends on the company's administration.

Consequences of the rules on night work

There was no debate with regard to the implementation of the rules on night time within the Member States. Many countries have used the possibility to derogate from the definition of night time and have used their own (already existing) definitions. Most countries use a night frame between 00.00 and 06.00 hours, all have a night frame that includes the period between 01.00 and 04.00 hours. Most Member States use a limit of 10 hours if night work is performed.

One of the goals of the Directive is to guarantee health and safety for mobile workers. Since working at night can be considered as a risk for health and safety, the Directive aims at limiting work at night. Due to the recent date of the implementation of the Directive, we cannot analyse the direct impact of the rules on night work on health and safety. We can extract some conclusions on the basis of the existing data and literature. Workers in the transport sector work more at night than workers in other sectors: 35% of workers in the transport (and communication) sector work one or more nights a

month (compared to 18% of workers in other sectors). Night workers (within the sector) more often report to think their health or safety is at risk because of their work compared to their colleagues that do not work at night. They also more often experience physical workload and violence/intimidation. And, they more often report that their working hours do not fit with their family and social commitments. Night workers in the sector also report longer working hours.

It is clear that the risk of accidents due to fatigue is highest at night, with a peak at 03.00 in the morning. Besides this, we know that long working hours can also be a risk for safety and health. A reliable and substantial increase of risk of fatal accidents at work is reported after the 9th hour of work, whereas a working time of more than fourteen hours increases the accident risk by 2.5. A combination of working at night and working long hours should therefore be avoided.

So, in order to create healthy work schedules, we must pay attention to the time of work and to the length of the shift. Moreover, the periods of rest between shifts and the time for recovery during the shift, the length and quality of the sleep during rest periods are important factors of working time. But also other aspects of the job (such as monotonous work, stress), environmental factors (climate, roads, light) and characteristics and lifestyle of the worker are important.

General conclusions on night work

- Based upon these facts, it is important to improve health and safety of all drivers, including those who work at night.
- As a method, we do not recommend to put an effort into more harmonisation of the rules and definitions of night work.
- We do recommend to promote and support an integral approach: taking into account working time and work schedules, (quality of the) rest periods, other aspects of the job (such as monotonous work, stress), environmental aspects (climate, roads, light) and individual characteristics.

Inclusion or exclusion of self-employed drivers

As said, this report describes the possible consequences of the exclusion or inclusion of self-employed drivers from Directive 2002/15/EC in terms of road safety, conditions of competition, structure of the profession as well as social aspects.

Road safety

There are few data on road safety that provide insight into the causes of accidents and no data that relate the accidents to the working hours of the professional driver. According to the literature, fatigue is an important factor in 10-25% of traffic accidents. There are several factors that contribute to driver fatigue. Working time is one of these factors. Within working time, driving and resting time is the most important factor: after four hours of continuous driving, the accident risk is doubled, and after eight hours of continuous driving it is ten times higher.

Accident data available do not discriminate between self-employed and non self-employed drivers. Therefore, we cannot present 'hard' conclusions on the (possible) impact of the inclusion of self-employed drivers on road safety. We do have (limited) data that provide some insights into the working hours, working environment and aspects of health and safety of self-employed drivers, that can be related to road safety.

In general, workers in the transport sector work long working days and working weeks, in comparison with workers in other sectors. Within the transport sector, self-employed work even longer working weeks and days. A decrease in working time of self-employed might (in theory) lead to less fatigue among self-employed. This could lead to less accidents caused by fatigue. In order to predict the impact also other as-

pects of the working environment are of importance. Self-employed in general have more variety in their work than other workers in the sector. Since the working environment differs between Member States, the impact will also differ. This will be discussed further below.

Conclusions on road safety

- At first glance, from the viewpoint of safety, inclusion of self-employed could be recommended.
- However, this impact will only be marginal, due to the limited contribution of working time to road safety and the important contribution of other aspects. And, there may also be a negative side-effect to take into account: they might try to work harder, job demands might increase and job control might decrease. This could lead to higher risk of fatigue and eventually to more accidents.
- From a more integral viewpoint we expect that other measures are more successful to increase road safety than the inclusion of the self-employed: in particular enforcement of driving and resting time and attention to environmental aspects (measures with regard to the cabin, the vehicle and the roads).

Conditions of competition (structure of the transport industry)

In order to get more insight into conditions of competition we have studied figures and trends of the road transport industry in all Member States. Although we cannot analyse the impact of inclusion or exclusion on the basis of these data, we can describe trends. There are some autonomous trends within the road transport sector, that lead to the following country profiles:

- Profile I-a: to be found in southern European countries. These countries traditionally have many self-employed and few large companies, but the trend is a growth in large companies (consolidation);
- Profile I-b: to be found in (some of) the new Member States. Also here, there are many self-employed and few large companies. But, contrary to Profile 1-a, there is a further growth in self-employment (fragmentation);
- Profile II: to be found in the middle European countries. There are few self-employed and many large companies. These countries show a continuing increase of large companies (further consolidation);
- Profile III: to be found in northern European countries and in the northern new Member States. In these countries, there are few self-employed and few large companies (small sector). These countries also show an increase in self-employment (further fragmentation).

The inclusion or exclusion of self-employed will have a very different impact on these different country profiles.

- When self-employed drivers remain *excluded* from the Directive the impact is not expected to be large. In general, it will probably mean a continuation of trends in the sector so far. For the self-employed in the middle European countries, their share in the total road freight transport industry is expected to increase slightly. In southern European countries and new Member States there will probably be a small increase in the market share, meaning an increased fragmentation of the structure of the market in these countries.
- In particular in the situation of exclusion of self-employed, attention should be paid to phenomenon of fake self-employment, where workers are 'asked' to become self-employed and work for their old employer or where the self-employed drivers are too (economically) dependent on just one client company;

- When self-employed drivers are *included* in the Directive the impact is in particular expected to be large in the new Member States. For the self-employed in the middle European countries, their share in the total road freight transport industry will probably show a small decrease. In southern European countries the consolidation process will probably accelerate;
- Because the inclusion is expected to result in an increase of the cost burden and a reduction of long working times, the competitive advantage of the road freight transport industry in the new Member States - dominated by self-employed drivers - will be reduced. Drivers in these countries rely on low costs and long working hours. Because the larger firms - dominant in middle European countries - are better suited to cope with reduced working hours by efficiency measures and innovations in working practices, their competitive advantage will increase, resulting in a further strengthening of the consolidation process in the structure of the road freight transport sector.
- The impact of inclusion of the self-employed on entrepreneurship is expected to be great. It will become more difficult and less attractive to start as a self-employed. This, added to an ageing workforce, will lead to (more) labour market shortages for the sector.

Conclusions on conditions of competition

- From the viewpoint of conditions of competition inclusion of self-employed is not recommended, in particular since it will have a disruptive effect on the position of the self-employed and the sector in the new Member States. A remaining exclusion of the self-employed is not expected to have a large impact on competition.
- From the viewpoint of stimulating entrepreneurship, inclusion is not recommended. However, in the case of exclusion of self-employed attention should be paid to the phenomenon of so-called fake self-employed.

The structure of the profession (working environment)

With regard to the structure of the profession we cannot assess the impact of the Directive, but we can give a description of the situation prior to the implementation and extract our conclusion from this.

The psycho-social work profile in this sector is somewhat unfavourable as compared to that in many other sectors. Specific risks are little variation in work (transport of persons), and isolation (freight transport). Workers in this sector have a relatively high exposure to physical load and violence. Particularly in haulage the driver is increasingly involved in loading and unloading trucks, resulting in increased physical load and musculoskeletal disorders. Overall, drivers tend to be overweight, lack physical exercise, and are compelled to take unhealthy meals (international drivers).

The current profile of the self-employed is somewhat mixed. In general, job control is high for self-employed in comparison to other workers. This is also the case for task variety. Control over working time is higher for self-employed than for other workers in all country clusters. The balance between job control, control over working time on the one hand and job demands and time pressure on the other differs between Member States. The self-employed in the new Member States and southern Europe appear to be a risk category with regard to overall fatigue. The self-employed in the new Member States appear to be a risk category with regard to stress. Physical workload appears to be high among the self-employed in southern Europe.

If the self-employed are *included* into the Directive, this could lead to less physical load. However, time pressure will probably increase and job control will decrease.

So, inclusion of self-employed might lead to lower physical risks, but could lead to higher psycho-social risks and will lead to lower income.

Conclusions on the structure of the profession

- From the viewpoint of improving physical conditions the self-employed should be included, providing that the workload will not increase.
- From the viewpoint of improving psycho-social conditions the situation is mixed, as will be the impact. No definite answer can be given, but it appears that their situation will decrease (less control, higher demands) and inclusion is not to be recommended.
- Inclusion will have to be combined with a general improvement of the working environment, and attention should be paid to the differences in risk factors in the working environment between Member States.

Social aspects

In this report we have used a broad definition of the profession and included social aspects (such as income and on family life) into our analysis of the profession.

People employed in the sector report more problems with the fit between work and family/social commitments outside work, compared to workers in other sectors. This is especially the case for self-employed in the sector, workers who work at night, workers with long working hours and workers in the Middle European countries. Working less hours might improve the work-life balance.

Compared to workers in other sectors, workers in the sector earn an income that is above average. However, there are large differences within this sector. Workers in middle Europe more often have income in lower income strata. Workers in southern Europe have relatively high income (compared to workers in other professions within their own country). On the average the self-employed earn more than other workers in the sector. If we compare the self-employed in the different country clusters, the self-employed in southern Europe have the highest (harmonised) incomes, followed by the self-employed in the new Member States and northern Europe, leaving the self-employed in the middle European countries to have the lowest (harmonised) income. Inclusion of self-employed within the scope of the Directive will probably lead to a decrease in income, since they cannot work the same amount of hours. With this, their competitive advantage decreases and it is harder for them to survive as a self-employed.

Conclusions on social aspects

- From the viewpoint of work-life balance, inclusion might be recommended: self-employed are less satisfied with the fit between work and family life. Reduction of working hours could lead to a better fit.
- However, a limitation of their working hours will lead to a decrease in income. This will also impact upon family life.
- From the viewpoint of income position, they should not be included.

General conclusions with regard to the inclusion/exclusion of self-employed drivers

All matters considered, we recommend not to include the self-employed within the scope of the Directive.

Due to difference in the structure of the sector and the structure of the profession inclusion of self-employed within the Directive will have diverging effects on the different Member States. In general, we expect that inclusion will only have a limited impact on road safety and will have a negative impact on conditions of competition. The impact on the profession will be mixed and the social impacts are expected to be negative.

Further more, a possible positive impact of the inclusion will be dependent on the quality of the enforcement, which will be in particular problematic. Because of this, inclusion of self-employed will only lead to a fake feeling of protection, and to negative consequences.

This does not mean that the profession and working environment of the self-employed and road safety cannot be improved. In order to reach the goals of the Directive, in particular the improvement of road safety, safety and health and working environment of all drivers, included the self-employed, we recommend to take other measures:

- Enforcement of driving and resting time;
- Prevention of fake self-employment;
- Improvement of the working environment of self-employed drivers;
- Improvement of the quality of the sector.

1 Introduction

The Directive 2002/15/EC concerning the organization of working time of persons performing mobile road transport activities was adopted on 11 March 2002. It lays down a maximum average weekly working time of 48 hours over a four month reference period, which Member States may extend to six months. It also sets a maximum weekly limit of 60 hours in any one week. In terms of night work, it sets a limit of 10 hours in any 24-hour period; night work is defined as any work performed during night time, a period of at least four hours between 00.00 hours and 07.00 hours as defined in national law. On 23 March 2005, this Directive came into force for mobile workers, a term which in practice covers mainly drivers, but also conductors and tour guides, as well as trainees and apprentices.

With this, the Directive aims to improve road safety, prevent the distortion of competition and guarantee the safety and health of mobile workers.

Self-employed are included within the scope of Regulation 3820/85 with regard to driving times and rest periods, but are excluded temporarily from the scope of Directive 2002/15/EC (and Directive 93/104/EC).

Agreement on these rules both within the European Council and between the Council and the European Parliament was very difficult. Two main issues divided the institutions, namely the application of the rules to self-employed drivers and secondly the introduction of night time limitations.

In terms of the self-employed drivers, it was decided to include them automatically at a later date (23 March 2009). However, their inclusion would be subject to a report to be drawn up by the Commission and presented to the European Parliament and to the Council by 23 March 2007.

Also, the Commission should monitor the implementation of the Directive and developments in this field in the Member States and submit a report on the application of the rules and the consequences of the provisions on night work.

To provide the basis for this report, the Directorate-General Energy and Transport (DG Tren) has granted TNO the project, based on Tender No. TREN/E1/45-2005 concerning the Road Transport Working Time Directive - self-employed and night time provisions. The study had to focus on the consequences of the temporary exclusion of self-employed drivers from the scope of the Directive in terms of road safety, conditions of competition, the structure of the profession as well as social aspects. This study also had to focus on the possible modalities for their inclusion. Apart from this, the study had to focus on the consequences of the night time provisions of the Directive.

In this final report we present the results of this study. In Chapter 3, we highlight the starting points, problem definition and objectives of the study. And, we will describe the steps taken in order to answer to the objectives. Next, we describe the results in the Chapter 4 (Existing policies and practices in Member States), Chapter 5 (Views of stakeholders on the directive) and Chapter 6 (Road transport industry structure, profession, social aspect, road safety and night work). The Annexes, on a separate CD-rom, provide background information. The report starts with the conclusions and recommendations (Chapter 2).

2 Conclusions and recommendations

2.1 Aim of the study

The Directive 2002/15/EC concerning the organization of working time of persons performing mobile road transport activities was adopted on 11 March 2002. On 23 March 2005, this Directive came into force for mobile workers. With this, the Directive aims to improve road safety, prevent the distortion of competition and guarantee the safety and health of mobile workers.

Self-employed are included within the scope of Regulation 3820/85 with regard to driving times and rest periods, but are excluded temporarily from the scope of Directive 2002/15/EC. It was decided to include self-employed drivers automatically at a later date (23 March 2009). However, their inclusion would be subject to a report to be drawn up by the Commission and presented to the European Parliament and to the Council by 23 March 2007 (Directive 2002/15/EC, Article 2).

The objective of this study is to understand the consequences of the temporary exclusion of self-employed drivers from the scope of the Directive in terms of road safety, conditions of competition, structure of the profession as well as social aspects; and to understand the consequences of their inclusion. In addition, the objective is to describe the possible modalities for their inclusion.

Also, the Commission should monitor the implementation of the Directive and developments in this field in the Member States and submit a report on the application of the rules and the consequences of the provisions on night work (Directive 2002/15/EC, Preamble nr.15). This study focuses on the consequences of the night time provisions of the Directive.

In order to provide an answer to these issues, interviews were held with stakeholders (government', employers' and employees' representatives) in all Member States. These interviews were held anonymously and are, therefore, reported at the level of the type of stakeholder (ministry, employer or employee) and/or at the level of the country cluster (northern, middle, southern Europe and new Member States).

In addition, (research) data and scientific literature on the structure of the sector (including conditions of competition), the structure of the profession (including social aspects and night work) and road safety were studied.

Another objective of the study was to assess the existing situation in the Member States as to the transposition of the Directive into national legislation. As is stated in the Directive, the Commission should monitor the implementation of this Directive (Directive 2002/15/EC, Preamble nr.15). In order to provide this information questionnaires have been sent to all national authorities.

In this chapter, the results will be summarized and debated and recommendations will be presented.

2.2 Implementation of the Directive into national legislation

In order to provide an overview of the transposition of the Directive into national legislation, we have requested all national authorities for information. Annex 2 provides a complete overview of the status of the implementation in all Member States. A description of these results is presented in Chapter 4. Here, we will only discuss the main results.

2.2.1 Implementation process

Article 14. Final provisions:

“1. Member States shall adopt the laws, regulations and administrative provisions necessary to comply with this Directive by 23 March 2005 or shall ensure by that date that the two sides of industry have established the necessary measures by agreement (...).”

The transposition of the Directive into national legislation has led to a debate in the majority of the countries. The intensity of the debate and the involvement of social partners differ between Member States. Both Ministries of Transport and Ministries of Labour were equally involved. The employers' organisations were more often involved in the process than the employees' organisation. The debate has been the strongest in the middle and northern European countries. The main issues in the debate concerned the definitions in the Directive (in particular the definition of working time and periods of availability), the possible impact on the sector and problems with enforcement.

Table 2.1 Date of (foreseen) adoption

Country cluster	Member State	Date of (foreseen) adoption
North	Denmark	2/5/2005*
	Finland	15/3/2005*
	Sweden	13/6/2005*
Middle	Austria	1/7/2006
	Belgium	28/4/2005
	Germany	17/8/2006*
	Ireland	10/1/2006*
	Luxembourg	Not adopted: foreseen 2006
	Netherlands	Not adopted: foreseen 2006
	United Kingdom	4/4/2005
South	France	20/7/2005
	Greece	22/8/2006*
	Italy	Not adopted
	Portugal	Not adopted: foreseen 2006
	Spain	Not adopted: foreseen 2006
New Member States	Cyprus	6/5/2005
	Czech Republic	Partially adopted*
	Estonia	12/5/2005*
	Hungary	23/3/2005
	Latvia	12/7/2006
	Lithuania	17/5/2005
	Malta	9/6/2006*
	Poland	16/4/2004*
	Slovakia	3/2/2004*
	Slovenia	12/8/2005

* The presented date is the date of adoption of the latest act as presented by DG Tren.

Only four Member States had adopted the Directive by 23 March 2005: Finland, Hungary, Poland and Slovakia. At the moment of writing this report (November 2006) still six Member States have *not* adopted the Directive: Luxembourg, Netherlands, Italy, Portugal, Spain and Czech Republic (partially adopted). In these countries the implementation is still in process or has not yet started.

There are, at least, three explanations for the delay in the implementation process:

- Consultation of social partners and other stakeholders on the translation of the Directive into national rules takes time, and follows its own national ways;
- The definitions in the Directive are perceived as vague or contradictory to other (EU or national) legislation and rules; national research into the practical and legal consequences also takes time;
- Priority is given to the implementation of rules on driving and resting time or to new or changing national labour laws.

2.2.2 *Rules in place: working time*

Article 4. Maximum weekly working time

“(...) the average weekly working time may not exceed 48 hours. The maximum weekly working time may be extended to 60 hours only if, over four months, an average of 48 hours a week is not exceeded.”

Article 8. Derogations:

“1. Derogations from Articles 4 (...) may, for objective or technical reasons or reasons concerning the organisation of work, be adopted by means of collective agreements, agreements between social partners, or if this is not possible, by laws, regulations or administrative provisions provided there is consultation of the representatives of the employers and workers concerned and efforts are made to encourage all relevant forms of social dialogue.

”2. The option to derogate from Article 4 may not result in the establishment of a reference period exceeding six months, for calculation of the average maximum weekly working time of forty-eight hours.”

The majority of the countries use the same average and maximum working time and reference period as given in the Directive:

Four countries (intend to) follow more strict rules for the average working week: Belgium (38), Czech Republic (40), France (45/46) and Spain (40);

Three countries (intend to) have more strict rules with regard to the maximum weekly working time (Belgium, Czech Republic, and France);

Most countries follow the reference period of 4 months; two countries (intend to) use more strict rules (Luxembourg, France). Two countries intend to go beyond the 6 month possibility by derogation and use a reference period of 12 months (Czech Republic and Spain, but they use a more strict average of 40 hours).

Table 2.2 Rules on working time in all Member States (final or proposed)

Country cluster	Country	Average weekly working time	Maximum weekly limit	Reference period
North	Denmark	48	60	4
	Finland	48	other	6
	Sweden	48	60	4
Middle	Austria	48	60	4
	Belgium	38	50	6 or 12#
	Germany	48	50	4
	Ireland	48	60	4
	Luxembourg ^{proposed}	48	60	1
	Netherlands ^{proposed}	48	60	4
	United Kingdom	48	60	4

Country cluster	Country	Average weekly working time	Maximum weekly limit	Reference period
South	France	45* or 46**	53* or 50**	3 or 4#
	Greece	48	60	4
	Italy ^{no proposal available}	NA	NA	NA
	Portugal ^{proposed}	48	70	4
	Spain ^{proposed}	40	other	12
New Member States	Cyprus	48	60	4
	Czech Republic ^{proposed}	40	48	12
	Estonia	48	60	4
	Hungary	48	60	4
	Latvia	48	60	4
	Lithuania	48	60	4
	Malta	48	60	4
	Poland	48	60	4
	Slovakia	48	60	4
	Slovenia	48	60	4

* International transport.

** National transport.

To be extended by agreement.

NA No preliminary text available.

Article 3. Definitions

“(a) ‘working time’ shall mean:

1. In the case of mobile workers: the time from the beginning to the end of work, during which the mobile worker is at his workstation, at the disposal of the employer and exercising his functions or activities, that is to say:

- the time devoted to all road transport activities. These activities are, in particular, the following:
 - (i) driving
 - (ii) loading and unloading
 - (iii) assisting passengers boarding and disembarking from the vehicle cleaning and technical maintenance
 - (iv) all other work intended to ensure the safety of the vehicle, its cargo and passengers or to fulfil the legal or regulatory obligations directly linked to the specific transport operation under way, including monitoring of loading and unloading, administrative formalities with police, customs, immigration officers etc.
- the times during which he cannot dispose freely of his time and is required to be at his workstation, ready to take up normal work, with certain tasks associated with being on duty, in particular during periods awaiting loading or unloading where their foreseeable duration is not known in advance, that is to say either before departure or just before the actual start of the period in question, or under the general conditions negotiated between the social partners and/or under the terms of the legislation of the Member States.”

“(b) ‘periods of availability’ shall mean:

- periods other than those relating to break times and rest times during which the mobile worker is not required to remain at his workstation, but must be available to answer any calls to start or resume driving or to carry out other work. In particular such periods of availability shall include periods during which the mobile worker is accompanying a vehicle being transported by ferryboat or by train as well as periods of waiting at frontiers and those due to traffic prohibitions.

- These periods and their foreseeable duration shall be known in advance by the mobile worker, that is to say either before departure or just before the actual start of the period in question, or under the general conditions negotiated between the social partners and/or under the terms of the legislation of the Member States,
- for mobile workers driving in a team, the time spent sitting next to the driver or on the couchette while the vehicle is in motion.”

As mentioned above, the definitions of working time and periods of availability in the Directive are perceived as vague. Because of this, several countries have decided to use different definitions, some use no definitions. The majority of the countries use the same definition as in the Directive and decided to leave the ‘proof of the pudding in the eating’, that is in the future enforcement process. As a consequence, the practical use of the definitions in administration and enforcement is still to be seen.

Table 2.3 National definitions in all Member States (final or proposed)

Country cluster	Country	Definition of active working time	Definitions of periods of availability
North	Denmark	S	S
	Finland	S	S
	Sweden	N	N
Middle	Austria	O	N
	Belgium	O	O
	Germany	O	S
	Ireland	S	S
	Luxembourg ^{proposed}	S	S
	Netherlands ^{proposed}	S	S
	United Kingdom	S	S
South	France	O	O
	Greece	S	S
	Italy ^{no proposal available}	NA	NA
	Portugal ^{proposed}	O	O
	Spain ^{proposed}	O	O
New Member States	Cyprus	S	S
	Czech Republic ^{proposed}	O	O
	Estonia	O	O
	Hungary	O	O
	Latvia	S	S
	Lithuania	S	S
	Malta	S	S
	Poland	O	S
	Slovakia	S	S
	Slovenia	O	S

S = (about) the same as Directive 2005/15/EC.

N = no definition.

O = other definition.

NA = no preliminary text available.

2.2.3 *Enforcement policies and practices*

Almost all countries have laid down a system of penalties. Authorities involved in enforcement are: labour inspection, inspection of transport and the police. Enforcement

will take place ad hoc (in response to reports or accidents), embedded in the duties of companies and/or by means of campaigns.

Several Member States have mentioned problems with enforcement. Part of the problem is the vagueness of definitions, which leaves room for interpretation and the translation of these definitions into company administration. Another problem with enforcement is a lack of enforcement capacity (not enough inspectors).

2.2.4 *Recommendations with regard to implementation and enforcement*

We have asked the stakeholders for best practices, but in particular with regard to the compliance to the rules and enforcement; it appears to be too early in the process to provide examples. We can, however, learn from practices and examples of other EU regulation and give some recommendations with regard to the enforcement of this Directive:

- Information and example:
 - In order to cope with the broadness of the definitions or the possible variety of practices between companies in the sector, national governments should provide clear information on the national translation of the rules (as some countries are doing at the moment or have done already): what is expected from companies, what is expected from employees, what issues will be enforced, etc. Some of the Member States have mentioned that they are in the process of doing this at the moment, or have already done this;
 - Besides this information, it will be helpful for companies and mobile workers, when government and sector organisations provide clear examples of practices and support companies in carrying out their administration. These examples could show different ways of solving practical problems;
- Methods for the definition of priorities:
 - ‘Table of 11’, or compliance assistance: this method is used to get insight in the reasons why rules are not complied and to measure the discipline of compliance to the rules. This information can be used to set priorities in the campaigns of the inspection services: where this discipline is high, there is less need for enforcement activities (www.vrom.nl);
 - AIRA model (Dutch labour inspection): experts within the inspection provide their expert views on risks, national statistics are used to check these views, in a group debate the priorities are set in accordance with the expert views and statistics (Beraad van Inspecteurs-Generaal, 2006; Arbeidsinspectie, 2005;2006);
- Creative use of limited capacity of inspection:
 - ‘Only fish where fish can be found’: this means that they target the limited enforcement capacity only on those places where the largest gains can be found: the highest chance of success, the highest risks and/or greatest impact;
 - Co-operation between inspection services: in the example of the Seveso enforcement, inspection services are working together in a campaign targeted towards a specific site; seeking for creative ways of the enforcement capacity of other inspection authorities and sharing information (Gort et al., 2006);
 - A clear distinction between enforcement and consultancy: a mixture of these roles of inspection services does not help clear enforcement and limits the capacity of the enforcement authorities. Separate institutions for assistance and advice in the field of working time and work organisation can help companies to comply to the rules *and* find new and productive ways of organising their planning.

The Senior Labour Inspection Committee (SLIC) could be used in order to have an European wide debate on the enforcement policies and practices (further information: http://ec.europa.eu/employment_social/health_safety/slic_en.htm).

2.3 Night work

2.3.1 Application of the rules on night work

Article 3. Definitions

“(h) ‘night time’ shall mean a period of at least four hours, as defined by national law, between 00.00 hours and 07.00 hours; (i) ‘night work’ shall mean any work performed during night time.”

Article 7. Night work:

“1. Member States shall take the measures necessary to ensure that: if night work is performed, the daily working time does not exceed ten hours in each 24 period (...).”

Article 8. Derogations:

“1. Derogations from Articles (...) 7 may, for objective or technical reasons or reasons concerning the organisation of work, be adopted by means of collective agreements, agreements between social partners, or if this is not possible, by laws, regulations or administrative provisions provided there is consultation of the representatives of the employers and workers concerned and efforts are made to encourage all relevant forms of social dialogue.”

The debate with regard to the implementation of the rules on night time within the Member States was only limited. Either Member States have used their own already existing (or more strict) rules, or rules on night work were added to national legislation:

- Many countries have used the possibility to derogate from the definition of night time and have used their own (already existing) definitions. These definitions vary between Member States, only seven Member States use the definition of the Directive (00.00-07.00). All Member States have at least a period between 01.00 and 04.00 hours in their definition of night time;
- Most countries follow the daily limit of 10 hours if night work is performed, three countries (intend to) use a more strict limit (Belgium, Czech Republic, Germany, Spain) and one country intends to use a less strict limit (Netherlands).

Table 2.4 Night time definition and limit in the Member States (final or proposal)

Country cluster	Country	Definition of night time	Limit
North	Denmark	01.00-05.00	10
	Finland	23.00-06.00	ND
	Sweden	00.00-07.00	10
Middle	Austria	00.00-04.00	10
	Belgium	20.00-06.00	8 or 11#
	Germany	23.00-06.00	8
	Ireland	00.00-04.00	10
	Luxembourg ^{proposed}	00.00-05.00	10
	Netherlands ^{proposed}	00.00-05.00	10 or 12##
	United Kingdom	00.00-04.00	10

Country cluster	Country	Definition of night time	Limit
South	France	22.00-05.00	10
	Greece	22.00-06.00	10
	Italy ^{no proposal available}	NA	NA
	Portugal ^{proposed}	00.00-05.00	10
	Spain ^{proposed}	00.00-07.00	8
New Member States	Cyprus	00.00-07.00	10
	Czech Republic ^{proposed}	22.00-06.00	8
	Estonia	00.00-07.00	10
	Hungary	00.00-04.00	10
	Latvia	00.00-07.00	10
	Lithuania	22.00-06.00	10
	Malta	00.00-07.00	10
	Poland	21.00-07.00	10
	Slovakia	22.00-06.00	10
	Slovenia	23.00-06.00	10

NA = no preliminary text available.

ND = no official data available.

derogations possible with compensatory rest period.

some night shifts may be extended under specific conditions.

2.3.2 Possible consequences of the provisions on night work

Directive 2002/15/EC

“(11) Research has shown that the human body is more sensitive at night to environmental disturbances and also to certain burdensome forms of organisation and that long periods of night work can be detrimental to the health of workers and can endanger their safety and also road safety in general.”

One of the goals of the Directive is to guarantee health and safety for mobile workers. Since working at night can be considered as a risk for health and safety, the Directive aims at limiting work at night. Due to the recent date of the implementation of the Directive, we cannot analyse the direct impact of the rules on night work on health and safety. We have asked the stakeholders within the countries for their views on the possible impact of night work. A large percentage of stakeholders (44%) do not expect any impact of these rules (see Chapter 5). This could be explained from the fact that (a) the rules are not new to many countries and (b) the limits are still very broad.

Workers in the transport sector work more at night than workers in other sectors: 35% of workers in the transport (and communication) sector work one or more nights a month (compared to 18% of workers in other sectors). In our data on the transport profession, we found that night workers (within the sector) more often report to think their health or safety is at risk because of their work, compared to people who do not work nights (see Chapter 6). They also more often experience physical workload and violence/intimidation. And, they more often report that their working hours do not fit with their family and social commitments. A reasonable question is what could be done to improve health and safety of this group of workers.

Limiting the amount of night work is one thing, but for a proper policy more aspects should be looked at. In order to get more insight into the impact of night work, we have studied relevant scientific literature on the relationship between working time and health and safety (see Chapter 6).

It is clear that the risk of accidents due to fatigue is highest at night (00.00-06.00 hours). In this time frame the human body normally is asleep, and the functional capability is reduced due to a lower metabolic rate. Although some individuals prefer night work over day work and are well adapted to shift schedules, shift work is more often associated with increased health problems, next to decreased production and performance deficits.

However, recommendations as to the optimal night frame for which specific rules should be applied differ somewhat. The Transport Safety Council recommends a night frame between 02.00 and 05.00 hours and in Sea Transport a night frame between 00.00 and 04.00 hour is considered as a high risk category. Over the whole, the peak with the highest risk is to be found at approximately 03.00 in the morning.

As we have seen in Table 2.4, most Member States use a night frame that includes the period between 00.00 and 06.00 hours in the morning. Some countries use a smaller time frame, but all countries include the period between 01.00 and 04.00 hour in their definition of night time. Trying to harmonise these night frames will probably not bring back the amount of night work, but will impact on the wages of the workers through the systems of inconvenience payment. Workers within the sector who work one or more nights a month earn more compared to other workers.

With respect to the time frame of night work, the main issue is that it is important to take into account that workers (employees and self-employed) in the road transport sector will have an increased risk of fatigue and fatigue-related accidents at night.

We must, however, also look at other aspects of the working hours. As we have seen, most Member States use a limit of 10 hours if night work is performed. From our data we know that workers within the sector work long working days and weeks. We also found that those who work one or more nights a month have even longer working hours. We know from the literature that long working hours can also be a risk for safety and health. A reliable and substantial increase of risk of fatal accidents at work is reported after the 9th hour of work, whereas a working time of more than fourteen hours increases the accident risk by 2.5. A combination of working at night and working long hours should therefore be avoided.

In order to create healthy work schedules we must pay attention to the time of work and to the length of the shift. Above this, the periods of rest between shifts and the time for recovery during the shift, the length and quality of the sleep during rest periods are important factors of working time.

But also other aspects of the job (such as monotonous work, stress), environmental factors (climate, roads, light) and characteristics and lifestyle of the worker are important. Based upon literature we can give a list of indicators that should be taken into account when developing healthy work schedules (see Table 2.5). Important to mention is that there is not one way of doing this, all situations should be tailor-made due to the interaction of these indicators.

Table 2.5 Indicators for healthy work schedules (Goudswaard & Kwantes, 2006)

Working time	Autonomy of working time
<ul style="list-style-type: none"> • Length of the shift • Length of the working week • Number of shifts in a row • Starting time of the shift • Time of day/night working • Duration and quality of sleep before the shift • Rest periods during shift • Regularity and predictability of work schedule • Work schedule system (forward rotating) 	<ul style="list-style-type: none"> • Involvement in the development of the work schedule • Individual autonomy over working time • Ability to take a break when needed • Autonomy over work pace

Other work characteristics	Characteristics of the worker
<ul style="list-style-type: none"> • Monotonous tasks • Psychosocial demands • Physical demands • Assistance of colleagues • (In)sufficient staffing • Environmental factors: light, climate, noise, road • Communication with management 	<ul style="list-style-type: none"> • Personality, individual differences • Genetic differences • Age, gender • Lifestyle • Work-life balance

2.3.3 *Recommendations with regard to night work*

In order to improve health and safety of all drivers, including those who work at night, we do not recommend to put an effort into more harmonisation of the rules and definitions. We do recommend to promote and support the development of *fatigue management systems*, following an integral approach (see also Houtman et al., 2005), as well as sector initiatives to support employers in improving the quality of work and employment. Examples are the work and health covenants in the Netherlands which have shown to be very effective (e.g. <http://www.eurofound.eu.int/ewco/2005/12/NL0512NU01.htm>, and <http://www.eurofound.eu.int/ewco/2006/02/NL0602NU02.htm>). Work and health covenants have been initiated by the Ministry of Social Affairs and Employment in the Netherlands to stimulate an agreement between employer and employee representatives in a sector to manage relevant occupational risks in the sector and reduce absence. In many sectors these programmes were agreed upon to cover at least four years.

The causes of fatigue are known: e.g., irregular working hours, insufficient rest, insufficient quality of sleep, inefficient work organisation, monotonous tasks, ergonomic conditions of the cabin, lifestyle, etc. Every transport company, every type of transport, every situation will show (slightly) different causes. That is why it is important to have a management system that focuses on a broad range of causes and can be tailor-made for practical use. Such a system will help to detect all risks for fatigue and generate solutions: This system should not bring on a whole new administration, but can be linked to existing management tools and sources of information. By systematically targeting all aspects related to fatigue, such a system can:

- encourage the awareness of employees and employers;
- make a vague notion such as fatigue more practical and workable;
- make clear where highest risk can be found in any specific situation;
- be used as a preventive approach;
- decrease fatigue and create more healthy workers;
- increase productivity;
- improve the image of the transport sector.

It seems clear that large companies have more opportunities to integrate a fatigue management system within the scope of their regular management systems, for instance within the scope of quality management or safety management. In the case of the smaller companies, the sector or sector organisations could play a role. Examples of a sector approach have been described earlier when discussing the work and health covenants in the Netherlands. Other examples of activities at the level of the branch are: the provision of checklists, information material, training and learning networks.

2.4 Inclusion or exclusion of self-employed drivers

Directive 2002/15/EC, Article 2. Scope:

“1. This Directive shall apply to mobile workers employed by undertakings established in a Member State, participating in road transport activities covered by Regulation (EEC) No 3820/85 (...). Without prejudice to the provisions of the following paragraph, this Directive shall apply to self-employed drivers from 23 March 2009.

At the latest two years before this date, the Commission shall present a report to the European Parliament and the Council. This report shall analyse the consequences of exclusion of self-employed drivers from the scope of the Directive in respect of road safety, conditions of competition, the structure of the profession as well as social aspects. The circumstances in each country relating to the structure of the transport industry and the working environment of the road transport profession shall be taken into account.”

“On the basis of this report, the Commission shall submit a proposal, the aim of which may be either, as appropriate to set out the modalities for inclusion for the self-employed drivers (...), or (propose) not to include self-employed drivers within the scope of the Directive.”

As written in the Directive, the Commission has to submit a proposal with the modalities for the inclusion of the self-employed drivers or propose not to include them. In order to formulate such a proposal, we must understand the possible consequences of the inclusion or exclusion of self-employed drivers from the scope of this Directive. In this report, we have presented the results of our research into the possible consequences of the inclusion or exclusion of the self-employed drivers. We have interviewed stakeholders in all Member States (see Chapter 5) and have studied data on road safety, road transport industry and transport profession (see Chapter 6).

Here, we will present a summary of the results. We will discuss the possible consequences of the inclusion or exclusion of the self-employed on the following aspects:

- Road safety;
- Conditions of competition (structure of the transport industry);
- The structure of the profession (working environment);
- Social aspects.

In each paragraph we will, first, describe the views of the stakeholders on the matter and, second, the available quantitative data to endorse or contradict these views.

From each of these aspects, we will conclude whether or not the self-employed should be better included or excluded, and we will finish with some recommendations.

Both sources of data have their own quality and their limitations. The interviews with stakeholders are not representative and do not give representative quantitative information. However, they do provide us with a clear impression of the different viewpoints and opinions. The quantitative data can fill in part of the gaps. However, data are not available on all topics and the available data are limited in some details, described in the Annex.

2.4.1 *Road safety*

One of the aims of the Directive is to improve road safety (Directive 2002/15/EC, preamble no. 10). Since self-employed drivers are not yet included in this Directive, we have asked the stakeholders in all countries for their view of the impact of inclusion or exclusion. Only a minority of the stakeholders expect that the inclusion of the self-em-

ployed into the scope of the Directive will have a positive impact on road safety. And, even less stakeholders expect that the exclusion of self-employed will have a negative impact on road safety. There are some stakeholders that even expect that the exclusion of self-employed will have a *positive* impact on road safety.

There are two opposite views:

- A reduction of working time is necessary from the viewpoint of road safety and health, in particular in those countries where a significant number of drivers is self-employed;
- The regulation on driving and rest time is sufficient to guarantee road safety and accidents might even increase when working hours are limited (more trucks on the road, higher pressure on individual drivers).

There are few data on road safety that provide insight into the causes of accidents and no data that relate the accidents to the working hours of the professional driver. From the existing data we can conclude that accidents in which trucks are involved are more severe, than other road accidents (see Chapter 6).

According to literature, fatigue is an important factor in 10-25% of the traffic accidents (see Chapter 6). There are several factors that contribute to driver fatigue; factors related to the work (such as work schedules, breaks, long distance driving, payment system, physical workload, type of transport, amount of delivery addresses), and factors related to the driver (such as quality of sleep, age, experience, lifestyle, diseases). Apart from this, other factors are important for road safety: in particular the safety of the vehicle (e.g. the rear view mirror), the condition of the roads and traffic. Also environmental factors such as the climate in the cabin, noise and vibration and distraction are important.

There is a relationship between working time and fatigue or safety, but working time is only one of the many factors. More importantly for road safety than the length of the shift, though, is that the regulations on driving and resting times are taken into account. After four hours of continuous driving, the accident risk is doubled, and after eight hours of continuous driving it is ten times higher.

There is no information on accidents caused by self-employed drivers. Whether or not a driver is self-employed is not coded in databases. We can present no 'hard' conclusions on the impact of the inclusion of self-employed drivers on road safety.

We do have (limited) data that provide some insights into the working hours, working environment and aspects of health and safety of self-employed drivers, which can be related to road safety (see Chapter 6 and Annex 8).

Workers in the transport sector work long working days and working weeks, in comparison with workers in other sectors. Within the transport sector, self-employed work even longer working weeks and days than employees (see Figure 2.1).

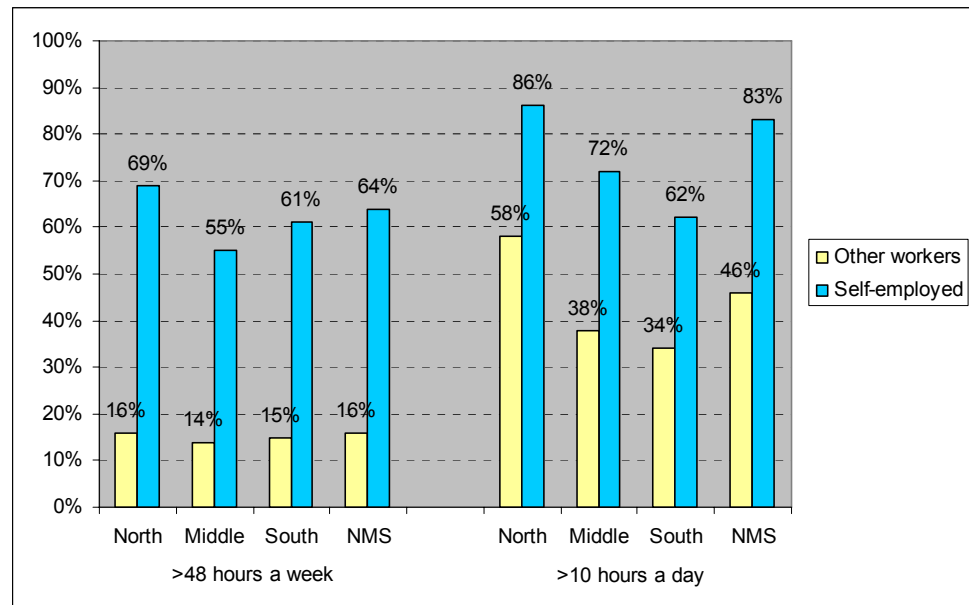


Figure 2.1 Working hours of self-employed and other workers in transport (and communications) sector compared (Source: European Working Conditions Survey)

The current profile of the self-employed is somewhat mixed. Apart from the fact that they work more hours, they have more irregularity in their work, but report to have less shifts. Relating to their long working hours, self-employed earn more than employees in the sector. However, they would like to work less hours and are less satisfied with the fit between work and family life. They experience to have a higher exposure to physical risks and more violence and intimidation as compared to employees in the sector. On the other hand, the self-employed experience high job control and a high task variety as compared to employees in the sector. However, they experience lower training opportunities, higher time pressure and lower support.

In general, self-employed also report more health problems as compared to employees in the sector, but report to be less absent.

Also there are some differences between the Member State clusters in work and health characteristics. In general, the working hours are relatively long in the new Member States, and show more irregularity in the south of Europe. The balance between job control, control over working time on the one hand and job demands and time pressure on the other differs between Member States. The self-employed in the new Member States and southern Europe appear to be a risk category with regard to overall fatigue. The self-employed in the new Member States appear to be a risk category with regard to stress, although all workers in the transport sector in the new Member States report lower physical workload and less violence and intimidation. Physical workload appears to be particularly high among the self-employed in southern Europe.

These results show that the physical and psychosocial demands of the jobs indicate different patterns between member state clusters, and that working long hours may not be the only or main cause of fatigue.

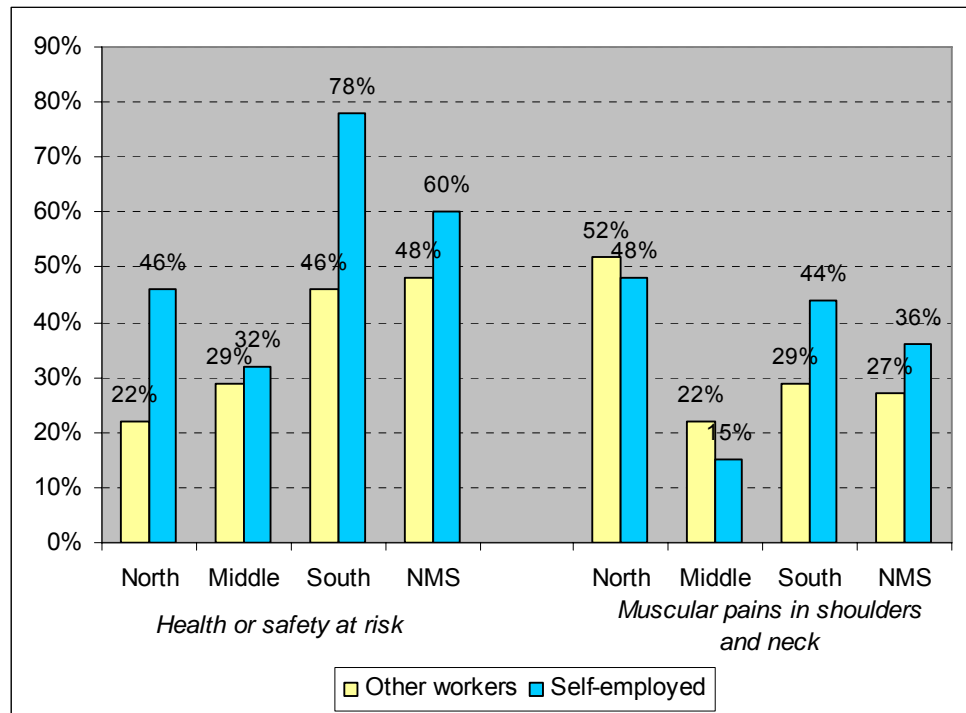


Figure 2.2 Health indicators of self-employed and other workers in transport (and communications) sector compared (1) (Source: European Working Conditions Survey)

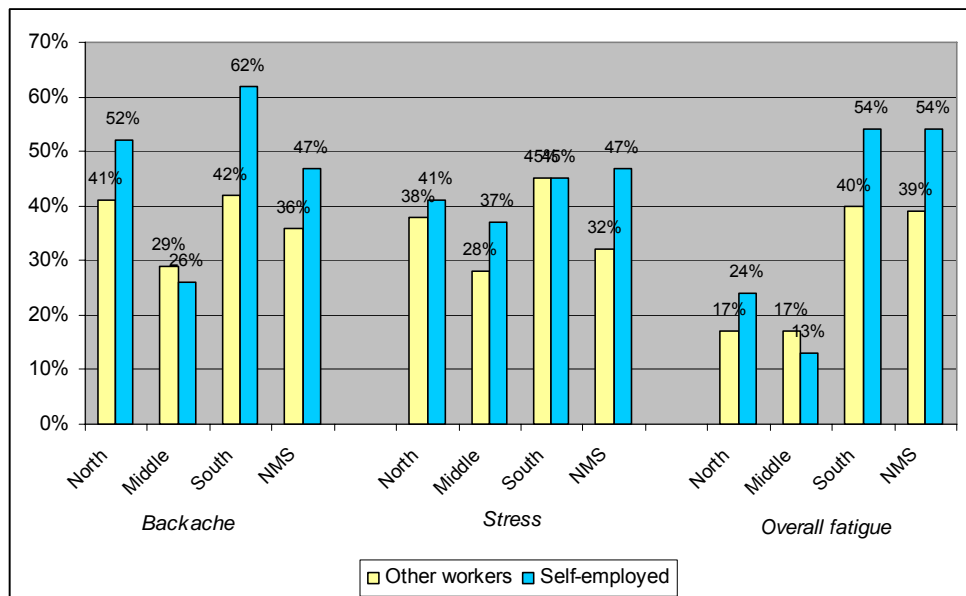


Figure 2.3 Health indicators of self-employed and other workers in transport (and communications) sector compared (2) (Source: European Working Conditions Survey)

Summarising, we come to the following conclusions:

- A decrease in working time of self-employed may (in theory) lead to less fatigue among the self-employed in southern Europe and the new Member States, to less physical complaints in southern Europe, and less stress in new Member States;
- This could lead to fewer accidents caused by fatigue;
- From this narrow viewpoint of safety, inclusion of self-employed might be recommended;

- However, this impact will only be *marginal*, due to the limited contribution of working time to road safety and the important contribution of other aspects;
- And, there might also be a *negative side-effect* to take into account. If they cannot cope, due to a limitation of working hours, and they need to gain their old income level, they will try to work harder, the job demands will increase and the job control decreases. This might lead to *higher* risk of fatigue and eventually to more accidents;
- From a more integral viewpoint other measures might be more successful to increase road safety than the inclusion of the self-employed: in particular enforcement of driving and resting time and attention to environmental aspects (measures with regard to the cabin, the vehicle and the roads).

2.4.2 *Conditions of competition (structure of the transport industry)*

A second aim of the Directive is to prevent distortion of competition by harmonising rules on working time. There are two opposite arguments with regard to the impact of the inclusion or exclusion of the self-employed into the Directive on the conditions of competition and the structure of the sector:

- Exclusion is perceived as unfair competition between self-employed and companies by some of the stakeholders; it will give the self-employed a competitive advantage; the number of self-employed will increase;
- Inclusion is perceived as unfair towards the self-employed by other stakeholders; they will not be able to survive and it will give a competitive advantage to the large companies that will be able to organise their work differently; other aspects are more important for competition so there are no drawbacks if they stay excluded.

In order to get more inside into conditions of competition, we have studied figures and trends of the road transport industry in all Member States (Annex 3). Although we cannot analyse the impact of inclusion or exclusion on the basis of these data (since the implementation of the Directive is too recent), we can try to describe the possible impact based upon the trends so far and show some possible scenario's (see Chapter 6).

- There are large differences between Member States with regard to the structure of the sector.
- Self-employed make up half of employment in most countries in southern Europe and the new Member States (see Figure 2.4). In most countries in northern and middle Europe, the share of self-employed is much smaller. The impact of inclusion of self-employed into the Directive will therefore differ between these country clusters.
- The market share in international road transport is shifting: an increase in new Member States (in particular Poland), at the expense of middle European countries (Belgium). In southern European countries the market share in international road transport is increasing in Spain and decreasing in France.

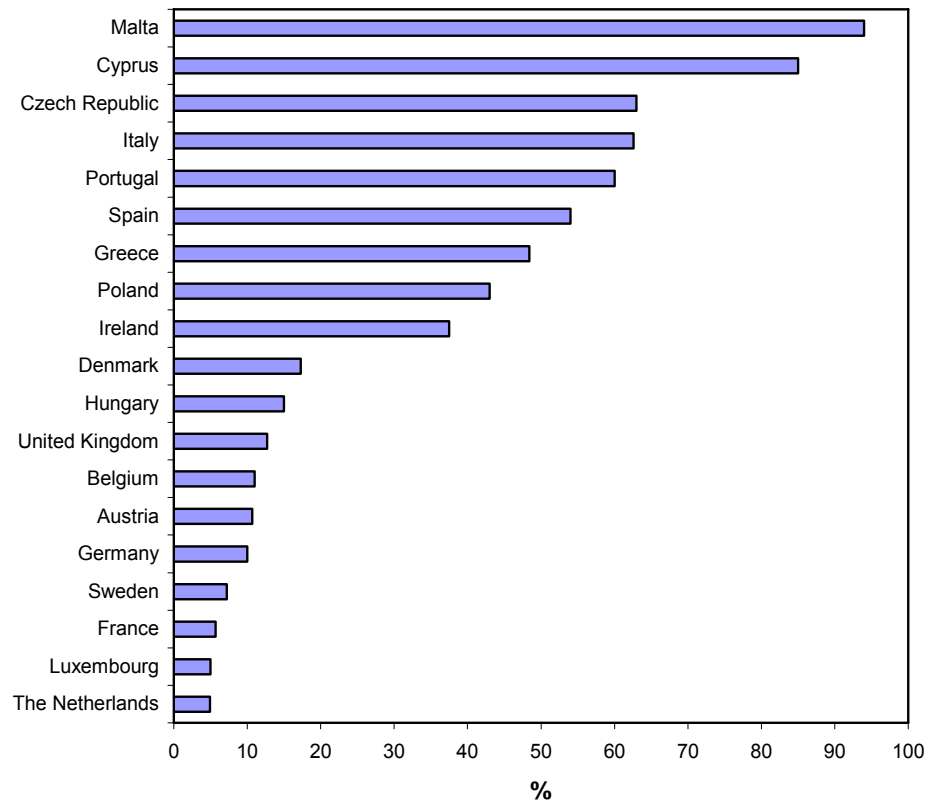


Figure 2.4 Self-employed drivers as a percentage of total employment in the road freight transport industry in the EU-25¹ (Source: Eurostat/country reports)

There are two autonomous trends in road transport:

low costs: these low costs may be realised by self-employed and by large transport firms able to realise economies of scale;

high quality (service, flexibility, safety and responsiveness): this high quality level is realised by means of network-organisations, increasingly on a European wide scale. Next to high service and quality levels, also relatively low costs are demanded of these network-organisations. This asks for large transport organisations, able to realise economies of scale. Self-employed may relate to these large transport organisations as a means to realise flexibility or as a low cost alternative for certain market segments.

Figure 2.5 shows the average yearly growth of employment in road freight transport between 1995-2003 and shows that in some countries the smallest companies are growing, while in others the largest companies are growing.

¹ Finland, Estonia, Latvia, Lithuania, Slovakia and Slovenia: no data.

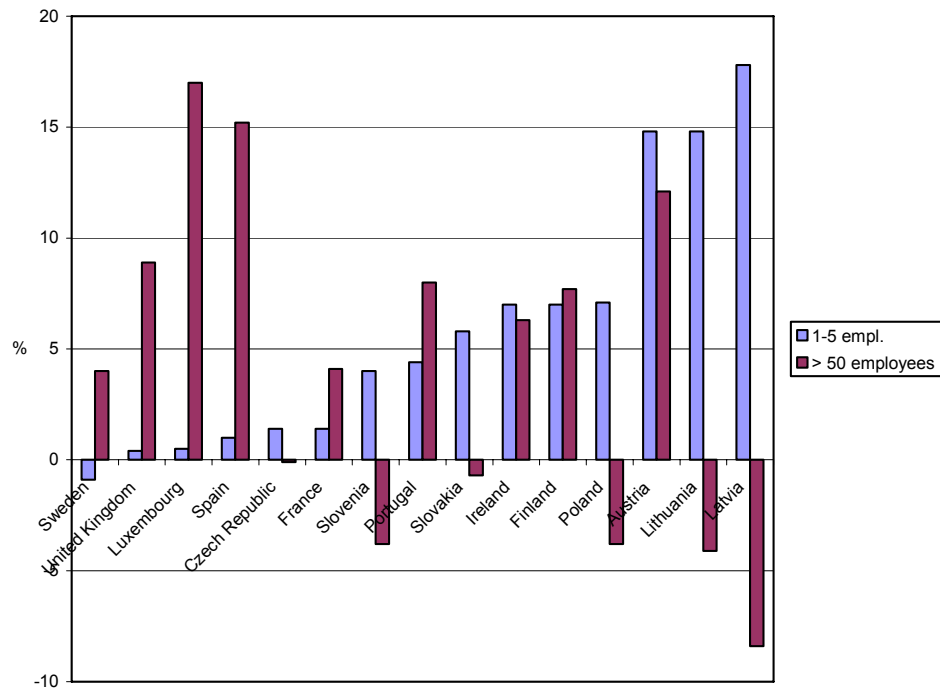


Figure 2.5 Average yearly growth of employment in the EU road freight transport industry in the smallest (1-5 employees) and largest (>50 employees) firms, 1995-2003² (Source: Eurostat/country reports)

Regarding the structure of the European road transport sector, three country profiles can be distinguished (see Chapter 6):

- *Profile I:* Many self-employed and few large companies, as can be found in southern Europe and (some of) the new Member States. The trends are, however, different for these two clusters. There is a growth in large companies (consolidation) in southern Europe. There is a further growth in self-employment (fragmentation) in the new Member States;
- *Profile II:* Few self-employed and many large companies, as can be found in the middle of Europe. These countries show a continuing increase of large companies (further consolidation);
- *Profile III:* Few self-employed and few large companies, as can be found in northern Europe and in the northern new Member States. These countries also show an increase in self-employment (further fragmentation).

Inclusion of the self-employed will have different effects on the different countries profiles:

- Inclusion of the self-employed will have relatively strong effects in *Profile I*. However, the effect will differ between southern Europe and the New Member States.
 - In southern Europe there will be a reduction in self-employed and consolidation will proceed more strongly.
 - In the New Member States the increase in self-employed will stop, and the advantages in competition of the self-employed from the new Member States

² Denmark, Belgium, Germany, the Netherlands, Greece, Italy, Cyprus, Estonia, Hungary and Malta: no data. The years selected may differ for individual countries, see Table 6.7.

as compared to the road transport sector in the 'old-Europe' will be reduced. Because of a reduction in working time, wages will become lower as well. Thus under the scenario of inclusion of self-employed, drivers from the new Member States will seek for other jobs, because the driving profession will become less attractive due to lower income;

- Inclusion of the self-employed will have small effects in *Profile II*, because there are relatively few self-employed. Consolidation will proceed more strongly;
- Inclusion of self-employed will also have relatively small effects in *Profile III*, because there are relatively few self-employed as well. Fragmentation will stop, and, like the new Member States in Profile I, the profession will become less attractive because drivers will have to work shorter hours and thus will earn less.

In general, *exclusion* of self-employed from the Working Time Directive will lead to a continuation of the trends in the sector structure that are presently seen:

- In *Profile I* this will mean a consolidation, less strongly in southern Europe. The sector in these countries will increasingly feel the competition in the new Member States. In most of the new Member States fragmentation will proceed even more strongly. It will still be very attractive to become a self-employed driver, particularly in the new Member States, however the effects of driver-shortages will put limits on further growth;
- For *Profile II*, consolidation will continue to proceed. Self-employed in these countries will increasingly feel the competition pressure from the new Member States;
- The sector in countries under *Profile III* will show a further fragmentation. The self-employed in the northern new Member States will compete with the self-employed in the other countries on their strong selling points (long working hours and low costs).

In order to understand the impact of inclusion or exclusion of self-employed on the road transport industry, it is also important to look at the *labour market* in general. Greying of the work force is a problem of the work force in general, but may be of special importance to the road transport sector since the sector is relatively old. When the sector becomes less attractive, e.g. because of income loss due to a reduced number of working hours, self-employed drivers may look for other jobs to compensate for the expected income loss. Because the work in the road transport sector is physically heavy, many drivers may have stopped driving before reaching their old-age pension. The fact that drivers in road transport generally are overweight - driving a truck is a sedentary job, drivers take little physical exercise, and often do not have healthy meals when they are on the road - does not add to being very fit for driving until old age.

To counteract the greying work force, it will therefore be necessary to find ways to make working in the road transport sector attractive. Including the self-employed in the Working Time Directive will have the opposite effect and drive new (and older) workers away from the sector, and may eventually disrupt the sector, particularly in the new Member States.

Summarising, we come to the following conclusions with regard to the consequences of inclusion or exclusion of self-employed on the road transport industry and conditions of competition:

- There are some autonomous trends within the road transport sector, that lead to three different sector Profiles, described above. When self-employed drivers remain *excluded* from the Working Time Directive this will have different consequences for the Profiles identified, but the impact will be limited. In general, it

will mean a continuation of trends so far. For the self-employed in the Middle European countries with low shares of self-employed drivers, the share in the total road freight transport industry will show a small increase. The continued exclusion of self-employed drivers in southern European countries and new Member States will have the effect of a small increase in the market share, meaning an increased fragmentation of the structure of the market in these countries;

- In particular in the situation of exclusion of self-employed, attention should be paid to phenomenon of fake self-employment, where workers are ‘asked’ to become self-employed and work for their old employer or where the self-employed drivers are too (economically) dependent of just one client company;
- When self-employed drivers are *included* in the Directive, this will also have different consequences for the Profiles identified, but the impact will in particular be large (and negative) for the new Member States;
- For the self-employed in the middle European countries with low shares of self-employed drivers, the share in the total road freight transport industry will show a small decrease, when included. In southern European countries the consolidation process will accelerate;
- Because the inclusion will result in an increase of the cost burden and a reduction of long working times, the competitive advantage of the road freight transport industry in the new Member States - dominated by self-employed driver - will be reduced. Drivers in these countries rely on low costs and long working hours. Because the larger firms - dominant in Middle European countries - are better suited to cope with reduced working hours by efficiency measures and innovations in working practises, their competitive advantage will increase, resulting in a further strengthening of the consolidation process in the structure of the road freight transport sector;
- From the viewpoint of conditions of competition inclusion of self-employed is not recommended, in particular since it will have a disruptive effect on the position of the self-employed and the sector in the new Member States. A remaining exclusion of the self-employed is not expected to have a large impact on competition;
- From the viewpoint of stimulating entrepreneurship, inclusion is also not recommended. The impact of inclusion of the self-employed on entrepreneurship will be great. It will become more difficult and less attractive to start as a self-employed. This, added to an ageing work force will lead to (more) labour market shortages for the sector.

2.4.3 *The structure of the profession (working environment)*

A third aim of the Directive is to improve health and safety of mobile workers. With this the Directive aims at improving the working environment of the road transport profession. Here again, we find two opposite views (see Chapter 5):

- Some stakeholders feel that self-employed should be included, in order to protect them against fake employment and against pressure from large companies and clients;
- Other stakeholders feel that self-employed can protect themselves and have a right of self-determination: they choose to be self-employed and will not be able to survive when included.

The statements in this field are rather general: general improvement of working conditions and health of drivers is expected. The backside of this expectation can be described as social aspects: loss of income and change of jobs (outside the industry) (see next paragraph).

Since the implementation of the Directive is too recent, we cannot assess the impact of the Directive on the structure of the profession, but we can give a description of the situation prior to the implementation. In order to get more insight into the road transport profession and the position of the self-employed within the road transport industry, we have analysed data from the European Working Conditions Survey (1996-2001) (see Chapter 6).

What do we know about the working environment in the sector (see Chapter 6)?

- The psychosocial work profile in this sector is somewhat unfavourable as compared to that in many other sectors: workers in transport show relatively low skill discretion, low job control and high job demands. Specific risks are little variation in work (transport of persons), and isolation (freight transport). Workers in this sector have a relatively high exposure to physical load and violence.
- Particularly in haulage the driver is increasingly involved in loading and unloading trucks, resulting in increased physical load and musculoskeletal disorders.
- Overall, drivers tend to be overweight, lack physical exercise, and are compelled to take unhealthy meals (international drivers).

What do we know about the working environment of the self-employed within the sector (see Chapter 6 and Annex 5)?

- Physical workload is high among the self-employed in southern Europe.
- Job control is high for self-employed in comparison to other workers. Self-employed in new Member States experience the highest job control, where self-employed in middle Europe experience low job control in comparison to other self-employed.
- Control over working time is higher for self-employed than for other workers in all country clusters. Control over working time is highest for self-employed in middle Europe and in the new Member States.
- Job demands are highest for the self-employed in new Member States and for the other workers in northern Europe; time pressure is highest for self-employed in northern Europe and low for self-employed in new Member States.

Table 2.6 Some aspects of the transport profession in different country clusters (Source: European Working Conditions Survey)

	North		Middle		South		NMS	
	Other workers	Self-employed	Other workers	Self-employed	Other workers	Self-employed	Other workers	Self-employed
Physical workload*	0.47	0.47	0.44	0.42	0.48	0.59	0.40	0.46
Job control*	0.60	0.66	0.14	0.39	0.48	0.64	0.59	0.79
Control over working time*	0.51	0.66	0.50	0.86	0.79	0.79	0.43	0.83
Job demands*	0.64	0.56	0.57	0.57	0.52	0.52	0.48	0.60
Has enough time to get the job done	72%	90%	87%	87%	83%	83%	85%	72%

* Scale: 3 items; 0=low, 1=high.

The inclusion of self-employed in the Working Time Directive will cause working hours to decline, which principally is a good thing. Being less exposed (for shorter duration) to the high physical and psychosocial job demands, might lead to lower musculoskeletal complaints, less stress and better health.

However, this does mean that the earnings will be poorer. As a result chances are high that workers employed in this sector will seek to increase their earnings, either by increasing the amount of work done and thus increasing their work pressure and reducing control, or by taking on additional jobs. The latter was already quite normal in the former eastern European countries. The pressure to avoid legislation will increase strongly and enforcement of the law will be under pressure.

Summarising the results, we might expect the following impacts of inclusion:

- The current profile of self-employed is somewhat mixed;
- If the self-employed will be included into the Directive their working hours will be limited;
- This could lead to less physical load, in particular in southern Europe. But only when time pressure does not increase (there is a relationship between stress and physical complaints);
- If the self-employed will be included into the Directive, probably time pressure will increase and job control will decrease;
- So, inclusion of self-employed might lead to lower physical risks, but could lead to higher psychosocial risks and will lead to lower income.

This leads to the following conclusions:

- From the viewpoint of improving physical conditions the self-employed should be included, providing that the workload will not increase;
- From the viewpoint of improving psychosocial conditions the situation is mixed, as will the impact be. No definite answer can be given, but it appears that their situation will decrease (less control, higher demands);
- Inclusion will have to be combined with a general improvement of the working environment.

2.4.4 *Social aspects*

Apart from road safety, conditions of competition and the structure of the profession, the commission also asked to look into social aspects. In this report we have used a broad definition of the profession and included social aspects into our analysis of the profession. Here, we will describe these aspects separately: in particular a possible impact of a reduction of working hours on income and on family life.

The aspect mentioned most by stakeholders is the impact on income (both in relation to the general implementation of the Directive and in relation to the inclusion of the self-employed) (see Chapter 5). As we have seen above, stakeholders are most worried about the possibilities of the self-employed to survive as a self-employed within the sector. Some of the stakeholders expect that the inclusion of self-employed will lead to a loss of salary/income and will also have a negative impact on the business of the self-employed.

We have not been able to analyse the income position of the self-employed in-depth, but we do have some data that compare self-employed with workers in the sector and between country clusters (see Chapter 6). What do we know about the income position of the workers in transport in general and the self-employed in particular?

- Compared to workers in other sectors, workers in the transport (and communication) sector earn an income that is above average. However, there are large differences within this sector. Workers in middle Europe more often have income in

lower income strata. Workers in southern Europe have relatively high income (compared to workers in other professions within their own country);

- On the average the self-employed earn more than other workers in the sector;
- If we compare the self-employed in the different country clusters, the self-employed in southern Europe have the highest (harmonised) incomes, followed by the self-employed in the new Member States and the self-employed in the middle European countries the lowest.

Apart from this, we have some (limited) data with regard to the work-life balance of workers in the sector.

- People employed in the sector transport (storage and communication) report more problems with the fit between work and family/social commitments outside work, compared to workers in other sectors. This is especially the case for self-employed in the sector, workers who work at night, workers with long working hours and workers in the Middle EU.

Summarising the results, we might expect the following impacts of inclusion:

- Self-employed are less satisfied with the fit between work and family life. Reduction of working hours could lead to a better fit;
- If the self-employed will be included into the Directive their working hours will be limited, which will lead to a decrease in income. This will also impact on family life;
- From the viewpoint of income position, they should not be included;
- Moreover, when the income will decrease, self-employed will try to work harder to reach the same output in less time or accept additional jobs. Both strategies to compensate for income loss will lead to a higher physical and psychosocial workload.

2.4.5 *Recommendations with regard to the inclusion/exclusion of self-employed drivers*

In the discussion as presented above most arguments raised suggest that inclusion of self-employed would have a very negative and even disruptive effect on the road transport sector, particularly in the new Member States. A major argument is the expected deterioration of the attractiveness of the sector, particularly for those who want to start in this sector as self-employed. This will become even more of a problem when the greying of the work force will further develop in the new Member States in particular. The fact that the work is physically heavy and the unhealthy lifestyle of the drivers (partly forced on them because of the sedentary job, lack of exercise and having to use not so healthy meals in road restaurants) result in overweight and do not add to the fact that they will easily and healthy be working in this sector until old age. A reduction of working hours may be hypothesized to result in less fatigue, less exposure to the risks of the job, as well as in less health problems and road accidents (as far as the drivers are the cause of these). However, dependent on the way the (self-employed) driver seeks to compensate for his income loss, these benefits will be counteracted, and a less favourable psychosocial risk profile (more demands and less control), more health problems and more fatigue and road accidents may be the consequence.

All matters considered, we ascertain that the inclusion of the self-employed within the scope of the Directive gives more negatives effect than positives. We recommend other measures in order to reach the goals of the Directive, in particular the improvement of

road safety, safety and health and working environment of all drivers, included the self-employed.

Enforcement of driving and resting time:

- Focus on the enforcement of driving and resting time for all drivers. The impact of driving and resting time on road safety is apparent. The enforcement policies and practices in this field are already in place. Practical problems with enforcement in this field can be discussed.

Prevention of fake self-employment and improvement of the working conditions of self-employed drivers:

- Focus on the possible negative impacts, such as fake self-employment. A negative example is the so-called 'quiet partnership' model which was developed and deployed by one of Austria's largest haulage companies. In this model the driver as a so-called silent partner acquires a share of the company by signing over his truck as a company property. Since most drivers do not have their own truck, the owner of the road haulage company - through a legally separate firm - offers them rental contacts for trucks. Through this arrangement the truck remains the property and at the disposal of the company, while the truck driver officially becomes an independent entrepreneur, even if he receives the same orders from management as dependent employees do. Moreover, while employees are paid according to hours or distances travelled, silent partners receive a share of the profits, leaving them with the risks, but only a small part of the gains. According to the Austrian Chamber of Labour, after deduction of taxes and social security contributions, some 'silent partners' earned less than 56 cents per hour worked. As some former silent partners are currently suing the company, the courts will have to decide if the 'quiet partnership' model corresponds to the law, or if it is an illegal attempt to circumvent employment legislation and/or to avoid application for mandatory haulage licences. Union representatives have also stressed that victims are not only drivers who are deprived of money but also public health insurance and pension funds which lose contributions that would have been mandatory for regular dependent employees (Houtman et al., 2004);
- It is important to keep 'an open eye' for these developments. Both government and branches should monitor unwanted situations, where the self-employed are too (economically) dependent. Setting clear definitions of self-employed (and enforcement of abuse) should help to improve the situation of the so-called fake self-employed;
- Stimulate attention for decreasing physical and psychosocial workload for self-employed drivers; include self-employed as a target group in promoting fatigue management systems and in workplace health promotion and support them in improving their personal working environment, for instance at the level of the branch (information, training);
- Stimulate the organisation of self-employed (network, union). A good example is the organisation of self-employed in the Netherlands (VERN). Such a network can be of assistance with insurances, legal advice, information, political lobby, etc. Also small networks of self-employed can help to divide the workload among one another.

Improve the quality of the sector:

- Promote corporate social responsibility within the transport sector, including the responsibility for the safety and health of (self-employed) subcontractors (examples: see Zwetsloot & Starren, 2004);

- Reduce or simplify the amount of regulations related to the sector;
- Identify target groups for the entrance to the profession - women for instance - and develop focussed campaigns for attracting these target groups;
- Focus on the quality of the profession in training and admittance of self-employed drivers. The workplace of the truck driver has changed in several ways over the last number of years. Many technical changes (ICT-related) have taken place, but also social skills are more necessary as the driver has become the main personal contact between the transport organisation and the client. More foreign languages and skills to communicate with different cultures have become necessary as Europe continues to expand and evolve towards one single market. According to regulatory changes in Spain, a one-week training course per year has come into force (in Houtman et al., 2004);
- Introduce measures anticipating the drawbacks of congestion on the road infrastructure for drivers (traffic information systems, alternative routes, driving lanes for trucks, etc.);
- Increase the quality of the infrastructure for the profession (safe parking places, good quality of food and resting places alongside the main trunk roads, etc.);
- An improved image of the sector will also have a positive impact on the labour market as it might attract different/new types of workers (younger, female).

Finally, some recommendation can be made with regard to future research. In our research project we have found that the existing data are either limited or just not available. In particular in the field of road safety there is a need for more information on the causes of accidents. At the moment neither working time, night work, stress nor fatigue are monitored. In order to provide more founded conclusions, more information is needed. Also, in order to know the impact of the Directive on the long term, more research data are needed.

3 Starting points, case definition and objectives

3.1 General aim and specific objectives

As defined in the Tender Specification attached to the Invitation to Tender, the general aim of the project is to provide information on two issues:

- The consequences of the *exclusion of self-employed drivers from the scope of the Directive* in terms of road safety, conditions of competition, the structure of the profession as well as social aspects. The circumstances in each Member State relating to the structure of the road transport industry and to the working environment of the road transport profession should be taken into account;
- The consequences of *the introduction of night work rules for drivers*. The impact on professional drivers, the industry and road transport should be included.

More specific objectives are also provided in the Tender Specification:

- (i) Assessing the existing situation in each Member State as to:
 - the rules in place concerning working time for professional drivers;
 - the national structure of the road transport industry, both haulage and passenger, such as number of SMEs, trends towards consolidation, cooperation or fragmentation in the industry, split between national and international activities;
 - the working environment of the road transport profession, both haulage and passenger, particularly in terms of competitive pressure, profitability, costs, level of oversight by enforcement bodies;
 - the competent authorities that enforce this acquis: training of inspectors and policy regarding enforcement of this acquis;
 - extract data from the road accident or insurance databases to establish to what extent there has been a difference since the implementation of this Directive by the Member States;
 - through contacts with the industry, drivers' organizations, freight forwarders, enforcement staff amongst other sources, obtain a preliminary assessment of the national distinction made between self-employed drivers and mobile workers; indicate with evidence what consequences this distinction has produced in terms of implementation of the directive, the conditions of competition in the national and international markets, the structure of the transport profession and road accidents. The social partners should in particular be asked what consequences the exclusion has had in terms of working conditions and the development of salaries for professional drivers;
 - the rules in place for night work, the extent to which they have been implemented and the consequences for industry as well as driver health and safety. Any potential or actual benefits accruing to road safety should also be highlighted. Not only industry, driver's organizations and enforcement authorities should be consulted but also any health and safety body which would have an interest.
- (ii) Identifying the main difficulties arising from the temporary exclusion of independent drivers in each of the Member States and the consequences of their inclusion within the working time rules.
- (iii) Identifying the main issues concerning the current night time rules, with recommendations as to the best way forward.

- (iv) Comparing the differing ways in which the directive is implemented in terms of the exclusion of self-employed and the introduction of night time rules. Common problem areas should be highlighted as well as best practice.
- (v) Assessing the impact of inclusion of the self-employed drivers within the Directive from the following perspectives:
 - conditions of competition,
 - road safety,
 - the structure of the profession,
 - driver working conditions,
 - impact on the structure of the road transport industry,
 - salaries of professional drivers.
- (vi) Evaluating the best way in which self-employed drivers could be included under the directive, in terms notably of fair competition and ease of enforcement.
- (vii) Evaluating the consequences of continued exclusion of the self-employed drivers from the scope of Directive 2002/15/EC and the maintenance of the current night time rules.
- (viii) Draw up overall conclusions and recommendations on:
 - the inclusion of the self-employed drivers within Directive 2002/15/EC,
 - the current night time rules within Directive 2002/15/EC.

3.2 Activities: a stepwise approach in four Work Packages

We have translated the objectives of this project further into a practical stepwise approach of the research, consisting of four Work Packages. This chapter will present the content of each component of the study, following these Work Packages.

When we look more closely at the given objectives, we can divide them into four categories, namely (1) the facts of the implementation policy and practice in all Member States, (2) the main issues in the implementation process from the viewpoint of all stakeholders, (3) the analyses of available data on sector, profession and road safety, and (4) overall conclusions and recommendations.

In order to provide a complete and practical methodology, we identified four general Work Packages:

1. Assessment of the existing situation in each Member State as to the *implementation* of the Directive into national policy and practice;
2. Assessment of the existing situation in each Member State as to *characteristics of the sector and the profession*;
3. Assessment of the main issues and differences in the *views of the different stakeholders*;
4. *Evaluation, conclusions and recommendations.*

For each Work Package we discuss below:

- The aim of the Work Package;
- The available sources;
- The project approach.

Figure 3.1 shows the stepwise approach.

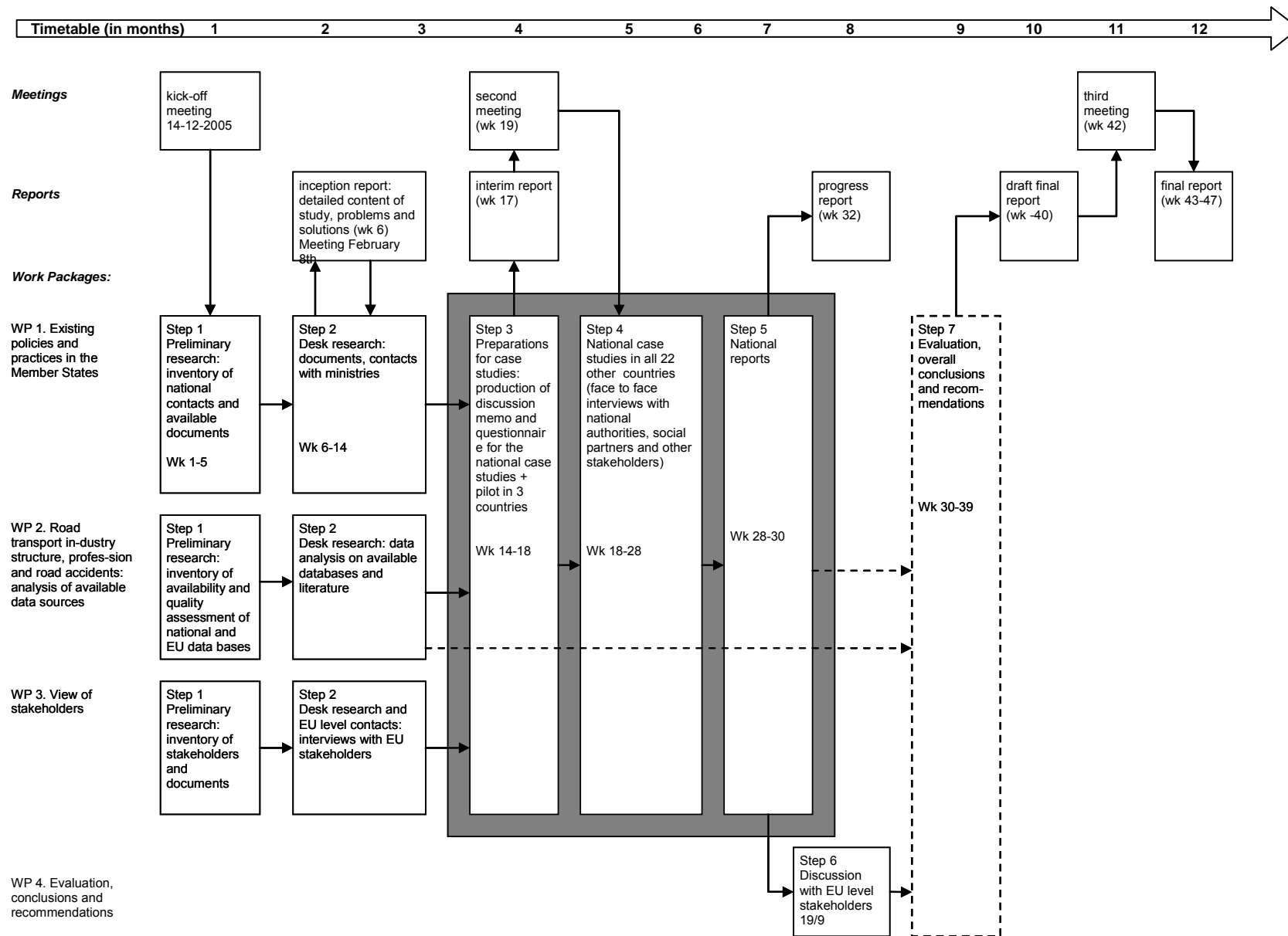


Figure 3.1 Stepwise approach

3.3 Work Package 1: Existing policies and practices in the Member States

Objectives

The main objective of work package 1 is the assessment of the existing situation in each Member State as to the *implementation* of the directive into national policy and practice:

- the rules in place concerning working time for professional drivers (i);
- the national distinction made between self-employed drivers and mobile workers (i);
- the rules in place for night work (i);
- the enforcement policy, training of inspectors, the level of oversight by the enforcement bodies as to the working environment (i);
- best practices (iv).

Sources

For the opening of the facts and figures about the implementation in all Member States we turned to the national authorities (Ministry of Transport and/or Ministry of Labour). Information about the implementation process and debate at the EU level is gathered through contacts with DG Tren and DG Employment. The main sources for this Work Package are, however, the questionnaires that have been completed by the national ministries and the interviews held with the national ministries. Annex 8 contains the questionnaire, Annex 2 the answers given by the Member States.

Research approach

The following steps have been taken.

Step 1. Preliminary research

- First inventory of national contacts in all Member States (staff of Ministries, enforcement authorities).
- Inventory of available knowledge at EU level and available documents.

Step 2. Desk research and EU level interviews

- Desk research of available documents at EU level.
- Preliminary analysis of differences and main issues, based upon the available information.
- Identifying gaps in knowledge to be filled in with the national case studies.

Step 3. Preparations for national case studies

- Contact with national Ministries and enforcement authorities to fill in the gaps in information, completion of contact list.
- Production of questionnaire for national case studies.
- Pilot in 3 countries: the Netherlands, the United Kingdom and Hungary.

Step 4. National case studies, carried out in all 22 other Member States

- Interviews with Ministries and/or enforcement staff (if applicable).

Sep 5. National reports

- Production of national reports (completed questionnaires and grouped in north, middle, south and new Member States).
- Production of database (Annex 2) catalogue of data.

Some limitations

Some of the limitations of the research were:

- The quality of the respondent is unknown, the level of oversight will differ between respondents, and the level of politically strategic answers is unknown. The

interview protocol has been tested in a pilot and is made more concrete before the national case studies were performed;

- The Directive is not implemented in all countries; the level of details in implementation, policy and practice varies. We have to accept variation in descriptions between countries;
- Usually the national policy documents are not available in English. Tables are provided to the respondents to be completed before the interview took place. They were asked to complete these tables on the basis of their own documents. The latter only concerned the rules in place. The main conclusions from other relevant documents were asked during the interviews. Non-English documents were not studied by the project team.

3.4 **Work Package 2: Road transport industry structure, profession and road accidents: analysis of available data sources**

Objectives

An assessment was performed of the existing situation in each Member State as to characteristics of the sector and the profession:

- The national structure of the road transport industry, both haulage and passenger transport (i);
- The working environment of the road transport profession (i);
- Data on road accidents in relation to the implementation of this Directive by the Member States (i).

Within this Work Package a distinction is made between the analysis of data on the road transport industry (Work Package 2.1), the road transport profession (Work Package 2.2) and road accidents (Work Package 2.3).

Sources

This information has been opened up through the study of existing recent literature and through the analysis of available data sources. We have organized the TNO project team in such a way that available knowledge, access to databases and appropriate European networks are present in all three areas of this Work Package: the sector (WP 2.1), the profession (WP 2.2) and road accidents (WP 2.3). The three areas differ in content, but also in the availability and the quality of data. On behalf of this research we have made an assessment of all relevant and available data. Annex 9 gives a detailed overview of all available data and discusses content and quality of this data. Based upon this quality assessment, Annex 8 gives a plan for data-analysis. In addition to these data, scientific literature has been used to answer the research questions: Annex 10 gives an overview of the available literature.

Project approach

The following steps have been taken.

Step 1. Preliminary research

- Inventory and quality assessment of available data at national level, through existing networks.
- Inventory and quality assessment of available data at EU level (both data sources and literature).
- Creating a plan for analysing the available data.
- Identifying the gaps in knowledge.

Step 2. Desk research: analysis of available data and literature

- Description of the structure of the sector.

- Description of the working environment of the profession.
- Description of differences in road accidents.
- Analysing the (possible) impacts of the distinction between self-employed drivers and workers.
- Analysing the (possible) consequences of the implementation of the rules on working time.
- Analysing the (possible) consequences of the implementation of the rules on night work.

Some limitations of the research in this Work Package

Some of the limitations of the research in this Work Package concern:

- The description of the current situation to be analysed is not more recent than the situation in 2004. We have to accept that the description of the current situation is the situation before 2004;
- The impact of the Directive can not be analysed: since the implementation - if taken place at all - did not take place before 2005 and data are only available until 2004. Only indirect argumentation and possible impact can be analysed: see plan for analysis (Annex 8). This project can thus mainly be used for monitoring the main indicators in the current situation. This may be monitored and repeated in 2007/2008 when more concrete evaluations can be performed;
- Road transport industry structure: unfortunately there are no data available regarding the period after implementation of the Directive. Consequently it is not possible to provide full evidence from data and (possible) impacts of the Directive on the road freight transport industry structure are difficult to substantiate. In addition there are no sufficient data available on the industry structure of passenger road transport in the EU to allow an assessment of the structure of the passenger transport industry. Also searching at a lower level, i.e. within Member States, was not successful, either data were lacking or too limited to be of use. The statistical overviews of Eurostat do not provide data on the industry structure of passenger road transport at all. As a result it is not possible to report on passenger road transport. Data on the structure of the road freight transport industry are available; however, 2003 is the most recent year and the availability differs very strongly between the different EU countries. Therefore the information to build the analysis on is rather fragmented;
- Road transport profession: high quality data are available at EU level (EU 25); in particular data from the European Foundation are complete with regard to all relevant aspects of the working environment; however, the number of self-employed is not high enough to make a separate analysis for all EU countries on the basis of these databases; this is also true for the data of 1996-2000; data of 2005 will certainly not be available before the end of 2006. Difficulties with comparison of data on country level may have occurred here as well. Apart from difficulties due to language, differences in operationalisation of concepts may have occurred. A recent comparison of national data for the EU 15 has been done, but the data reflect the situation before 2004. We therefore analysed the data at EU level, on the situation before implementation. A clustering has been performed of groups of countries, complemented with more recent available in-depth literature;
- Road accidents: there are no data to study the situation after implementation and trends in road accidents are related to many indicators outside working hours (such as blind spot mirror). It was difficult to determine statistically significant determinants of accidents due to lack of longitudinal data and the low number of truck accidents with injured or killed occupants. Additionally, self-employed are not coded in the accident databases, nor are working hours, or loss of attention.

No data are available at EU level, only in some Member States. The influence of the Directive on road accidents can not be determined. Only indirect analysis was possible focussing on causes of an accident due to loss of attention or sleepiness. A literature study is performed on the relation of working hours, sleepiness and accidents at work (the literature included both transport sector and other sectors, as well as experimental studies).

3.5 Work Package 3: Views of stakeholders

Objectives

In this work package an assessment is performed of the main issues and differences in the *views of the different stakeholders* regarding:³

- The existing situation with regard to the distinction between self-employed drivers and mobile workers (i);
- The consequences of the exclusion of self-employed drivers in terms of working conditions and the development of salaries for professional drivers (i);
- The main difficulties arising from the temporary exclusion of independent drivers in each of the Member States (ii);
- The (possible) consequences of the inclusion of independent drivers within the working time rules (ii);
- The consequences of the rules for night work for industry as well as driver health and safety (including any potential or actual benefits accruing to road safety) (i);
- Identifying the main issues concerning the current night time rules, with recommendations as to the best way forward (iii);
- Best practices (iv).

The aim of this Work Package is to provide more in-depth background information to the available data sources (or where data are not available), based upon the knowledge and the views of the different stakeholders.

Sources

This information has been opened up through available documents at the EU level, but more importantly through interviews held with the stakeholders, both at EU level and at the national level. Background information available at the EU level has been gathered through contacts with DG Tren and other EU stakeholders (DG Employment, IRU and ETF), national background information through national stakeholders. Annex 6 and 7 give an overview of the national stakeholders interviewed and of the interviews held.

Project approach

The following steps have been taken.

Step 1. Preliminary research

- First inventory of contacts with national stakeholders (social partners, sector organizations, health and safety bodies).
- Preparation of draft interview protocol.
- Inventory of available knowledge and documents at EU level.
- Inventory of relevant stakeholders at EU level.

Step 2. Desk research and EU level contacts

³ The stakeholders are social partners in the sector: drivers' organizations, freight forwarders, enforcement staff, health and safety bodies, both at the national and European level.

- Contact with EU stakeholders: interviews with DG Tren, DG Employment, IRU and ETF.
- Preliminary analysis of differences and main issues.
- Identifying gaps in knowledge to be filled in with the national case studies.
- Completion of the list of contacts.

Step 3. Preparations for national case studies

- Production of questionnaire for national case studies.
- Pilot in 3 countries: the Netherlands, the United Kingdom and Hungary.

Step 4. National case studies, carried out in the 22 other Member States

- Interviews with national stakeholders in all 22 other Member States.

Step 5. National reports

- Production of national reports (confidential questionnaires and grouped in north, middle, south and new Member States).
- Analysis of the national reports on behalf of the final report.

Some limitations of research in this Work Package

- A limited amount of interviews (3) could be performed per country, which led to choices to be made between several relevant stakeholders. Priority was given to national authorities (sometimes one interview could be held with two persons) and social partners (employers' organisation and employees' organisation with highest organisation within the road transport industry to be interviewed).
- The presence of relevant stakeholders varied between countries; the way of organisation of stakeholders varied; not all sub-sectors were represented at the same level; often self-employed were not organized (except in the Netherlands). We have to accept a variation between countries with regard to the interviewed stakeholders, but we made sure that the main stakeholders were covered for all the EU countries; employers' organisations for the SMEs were asked about the organisation of self-employed.
- The quality of the respondent is often unknown, the level of oversight differs between respondents, and the level of politically strategic answers is an unknown factor. We developed a structured interview protocol in order to minimize differences in quality; also this protocol was tested in a pilot study in three countries: the Netherlands, the United Kingdom and Hungary.
- Confidentiality was granted to all stakeholders interviewed.

3.6 Work Package 4: Evaluation, conclusions and recommendations

Objectives

The aim of this Work Package is to provide DG Tren with an overall evaluation of the current situation, with conclusions on the main consequences and difficulties and with recommendations for the future:

1. Evaluating the best way in which self-employed drivers could be included under the Directive, in terms notably of fair competition and ease of enforcement (vi);
2. Evaluating the consequences of continued exclusion of the self-employed drivers from the scope of Directive 2002/15/EC and the maintenance of the current night time rules (vii);
3. Draw up overall conclusions and recommendations on the inclusion of the self-employed drivers within Directive 2002/15/EC (viii);
4. Draw up overall conclusions and recommendations on the current night time rules within Directive 2002/15/EC (viii).

Sources

The source for this Work Package will be all information gathered in Work Packages 1, 2 and 3. Additionally, a discussion meeting with EU level stakeholders was organized in order to discuss the results of the national case studies and to discuss conclusions and recommendations.

Project approach

Step 6. Discussion with EU level stakeholders.

Step 7. Evaluation, conclusions and recommendations.

4 Results: Existing policies and practices in the Member States

4.1 Introduction

In this chapter the rules in place in the 25 Member States will be discussed. This result is based upon the information given by the national ministries, either through the e-mail questionnaires or in the interviews in the case studies. In the few cases where the e-mail questionnaire was not returned, the text of the transposed Directive is used to complete the overview of rules in this chapter.

Annex 2 gives a complete overview of the rules in each Member State, with the exception of those Member States that did not (wish to) return the e-mail questionnaire on implementation. Views of stakeholders with regard to the policies and practices will be discussed in Chapter 5.

4.2 European legislation on working time

Generally spoken, the lawmaking process regarding working times is a complex one. First of all, the interests and aims of all parties involved are different. The employee searches for a balance between working times and time spent to other things important in life; the employer searches for profitable and effective working times; branches try to find an effective mixture between employer and employees; inspection bodies prefer clear and enforceable working times, etc. Secondly, working times are a typical example of a subject which can be excellent dealt with in a labour agreement between the employer and the employee. The same can be said for collective labour agreements. In other words: working times is a subject employers and employees (organisations) regard as their playing field. This view exists since labour law was born.

National authorities respect this autonomy of the social partners in this area, but want to set out rules for the health and safety of the employees involved in general and for road safety in the case of drivers. The argument for this is that public goals are at stake, such as the prevention of serious road accidents.

Therefore, national authorities have to operate very delicately. They have to respect the autonomy of the social partners on the one hand and have to set out clear rules on the other hand.

Typical solutions made by national authorities regarding working times laws:

- create a system of working time rules in which social partners still have a role to play;
- create working time rules with broad or vague definitions; subsequently the social partners have the freedom of coping with these rules in a relative flexible way.

This complex and subtle lawmaking process regarding working times in the different EU Member States has been exported to the EU-level at the end of the twentieth century.

In 1993 the first EU Directive on Working Times (93/104/EEC) was adopted, based on article 118A in the EEC-treaty related to social provisions (nowadays Art. 137 of the EEC-treaty). This directive has the same structure as the national legislation. As a result, many rules concerning working times were left to the national legislation or to the social partners in the Member States.

The scope of this Directive was broad, but excluded the transport sector. A new directive (2000/34/EC) brought the transport sector into the general Directive 93/104/EC. Because the Working Times Directive changed often, a new complete text of this directive came available as Directive 2003/88/EC.

Apart from this general directive on working times, more specific directives were published:

- The organisation of working time of seafarers (1999/63/EC);
- The organisation of working time of mobile workers in civil aviation (2000/79/EC).

Council Regulation No. 3820/85 of 1985 already set out common rules on driving times and rest periods for drivers.

For creating a comparable directive on working times of persons performing mobile road transport activities it appeared impossible to get an agreement between social partners on the EU level as well as an agreement based upon the paragraph of social policy within the EEC-treaty (i.c. Art. 137 EEC-treaty). So the foundation of this directive changed to a paragraph related to transport (or transport safety) (i.c. Art. 71 of the EEC-treaty); no longer the social policy was predominant. Nevertheless, also this Directive (2002/15/EC) breathes the atmosphere as if it was a pure social directive.

In 2002 the new Directive on the organisation of the working time of persons performing mobile road transport activities (2002/15/EC) was published. Because this directive has more specific requirements for the organisation of working time for the mobile road transport sector it takes precedence over Directive 93/104/EC. Directive 2002/15/EC covers only mobile workers employed by transport undertakings participating in mobile road transport activities covered by Regulation 3820/85. Other mobile workers keep covered by Directive 93/104/EC.

Due to the fact that Directive 2002/15/EC was adopted through a paragraph related to transport (or transport-safety), the scope of the Directive is broadened towards self-employed drivers (although they are excluded temporarily until 23 March 2009). This group of drivers are also included in the scope of Regulation 3820/85 on rules and driving times and rest periods, but are excluded from Directive 93/104/EC.

This change of focus from social policy to transport safety brings regulations on working time beyond the field of employees and into the field of the self-employed. This is unprecedented when it concerns working time, but could be seen in line with the debate on working conditions. In 2003 the Council of the EU adopted a recommendation concerning the improvement of the health and safety at work of self-employed workers (Official Journal of the EC, L-53, 28-2-2003). But this recommendation focused especially on the subject of safety and health at work and not working time.

In most EU Member States the position of the self-employed worker is comparable with the position of the employer. In a market-economy the self-employed worker is his of her own employer. Theoretically, the employer and the self-employed worker don't need to be protected by the national authorities. They are both entrepreneurs and are seeking risks. Nevertheless, in practice, the position of self-employed workers is often the same as that of employees. In other words: they are exposed to the same risks. This is for example quite clear in the construction branch. In some directives on health and safety at work rules have been set out for self-employed workers, for example in the Directive on temporary and mobile construction sites (92/57/EC).

4.3 The implementation of the Directive into national legislation: the rules in place

4.3.1 The adoption of the Directive into national legislation

19 of the 25 Member States have adopted the Directive. Four Member States adopted the Directive before 23 March 2005. Four Member States have foreseen to adopt the Directive in 2006. The (foreseen) date of adoption is unknown for the Czech Republic and Italy.

Table 4.1 Date of (foreseen) adoption

Country cluster	Member State	Date of (foreseen) adoption of the latest act	Reference
North	Denmark	2/5/2005*	Law No 395 of 1 June 2005 Working Time Act applicable to mobile employees within the road transport sector
	Finland	15/3/2005*	Several publications in Suomen Saadoskokoelma
	Sweden	13/6/2005*	Svensk författningssamling. Nr. 2005/395. 13-6-2005
Middle	Austria	1/7/2006	Bundesgesetzblatt für die Republik Österreich. Nr. 138/2006. 3-8-2006
	Belgium	28/4/2005	Several publications in Moniteur Belge
	Germany	17/8/2006*	Notification from the Government of the Federal Republic of Germany to the Commission of the European Communities of 1 September 2006
	Ireland	10/1/2006*	European Communities (Organisation of Working Time of Persons Performing Mobile Road Transport Activities) Regulations 2005. Iris Oifigiúil, 10-1-2006
	Luxembourg ¹	Foreseen end 2006	No official reference available
	Netherlands ¹	Foreseen 2006	No official reference available
	United Kingdom	4/4/2005	The Road (Working Time) Regulations 2005, No. 639
South	France	20/7/2005	Several publications in Journal Officiel de la République Française
	Greece	22/8/2006	Government Gazette of the Hellenic Republic Part1. No 179. 22 August 2006
	Italy ²	Foreseen date unknown	No preliminary text available
	Portugal ¹	Foreseen 2006	No official reference available
	Spain ¹	Foreseen 2006	No official reference available
New Member States	Cyprus	6/5/2005	Number 47(I) of 2005. Act regulating the organisation of the working time of persons performing mobile road activities
	Czech Republic ¹	Foreseen date unknown*	Several publications in Sbirka Zakonu CR
	Estonia	12/5/2005*	Regulations on the duration and calculation of driving and rest times for drivers of power-driven vehicles. Act to Amend the Traffic Act RT I 2005, 31, 228.
	Hungary	23/3/2005	Act XI of 2005 on the modification of Act I of 1988 on Road Traffic

Country cluster	Member State	Date of (foreseen) adoption of the latest act	Reference
	Latvia	12/7/2006	Cabinet Regulation No 520. Adopted on 12 July 2005. Regulations regarding the organisation of, compliance with and recording of the working time of mobile workers.
	Lithuania	17/5/2005	Resolution No 587 of 14 May 2003 laying down a list of types of work in which a working time of up to 24 hours a day may be applied, the Characteristics of Working and Rest Time in Areas of Economic Activity, Working Conditions under which Aggregate Recording of Working Time may be introduced and the procedure for introducing aggregate recording of working time in undertakings, institutions and organisations (Official Gazette 2003, No 48-2120)
	Malta	9/6/2006	Several publications in The Malta government gazette
	Poland	16/4/2004*	Act of 16 April 2004 on drivers' working time. Journal of Laws of the Republic of Poland No 92, item 879
	Slovakia	3/2/2004*	Act no. 121/2004 Coll. on working time and rest periods in transport and amending certain acts
	Slovenia	12/8/2005	Several publications in Uradni list RS

* In these countries the date of adoption of the latest act as presented by DG Tren is used. This data may differ from the date mentioned by the Ministry depending on the definition of implementation: date of adoption of the law, date of informing DG Tren, date of coming into force of the law.

¹ At the time of collection of the information regarding the national transposition, these Member States had not (or partially) adopted the Directive. The text presented in this chapter is the preliminary text.

² At the time of collection of the information regarding the national transposition, Italy had not adopted the Directive. There is no preliminary text available.

All three Northern European Countries have adopted the Directive in 2005. In five of the seven middle European countries, the Directive is adopted. In Luxembourg and the Netherlands the adoption is scheduled for 2006. Directive 2002/15/EC is not adopted at the time of writing in Italy, Portugal and Spain. In Portugal the Directive will be adopted the second half of 2006, the adoption date in Spain is unknown. In France and Greece, the Directive is already adopted. The Directive is adopted in nine new Member States. In the Czech Republic the Directive is at the time of writing partially adopted. The date of full adoption is unknown.

4.3.2 *National definitions*

In this paragraph the definitions of a mobile worker, active working time and periods of availability are presented: first, the definition of Directive 2002/15/EC, secondly the definitions as transposed in the national legislation. In a few Member States the directive is not yet transposed. For these countries the preliminary text is presented.

Table 4.2 Definition in Directive 2002/15/EC

Definition	Directive 2002/15/EC
Definition of a mobile worker	Mobile worker shall mean any worker forming part of the travelling staff, including trainees and apprentices, who is in the service of an undertaking which operates transport services for passengers or goods by road for hire or reward or on its own account.
Active working time	<p>In the case of mobile workers:</p> <ul style="list-style-type: none"> • the time from the beginning to the end of work, during which the mobile worker is at his workstation, at the disposal of the employer and exercising his functions or activities, that is to say: <ul style="list-style-type: none"> - the time devoted to all road transport activities. - driving - loading and unloading - assisting passengers boarding and disembarking from the vehicle - cleaning and technical maintenance - all other work intended to ensure the safety of the vehicle, its cargo and passengers or to fulfil the legal or regulatory obligations directly linked to the specific transport operation under way, including monitoring of loading and unloading, administrative formalities with police, customs, immigration officers etc. • the times during which he cannot dispose freely of his time and is required to be at his workstation, ready to take up normal work, with certain tasks associated with being on duty, in particular during periods awaiting loading or unloading where their foreseeable duration is not known in advance, that is to say either before departure or just before the actual start of the period in question, or under the general conditions negotiated between the social partners and/or under the terms of the legislation of the Member States
Periods of availability	Periods other than those relating to break times and rest times during which the mobile worker is not required to remain at his workstation, but must be available to answer any calls to start or resume driving or to carry out other work. In particular such periods of availability shall include periods during which the mobile worker is accompanying a vehicle being transported by ferryboat or by train as well as periods of waiting at frontiers and those due to traffic prohibitions. These periods and their foreseeable duration shall be known in advance by the mobile worker, that is to say either before departure or just before the actual start of the period in question, or under the general conditions negotiated between the social partners and/or under the terms of the legislation of the Member States, for mobile workers driving in a team, the time spent sitting next to the driver or on the couchette while the vehicle is in motion

Table 4.3 presents the definitions as described in national legislation or in preliminary documents as preparation on the implementation. The table shows if a definition is different from the Directive (O). The text of the specific national definition can be found in Annex 2.

Table 4.3 National definitions in all Member States

Country cluster	Country	What is your definition of a mobile worker?	What is the definition of active working time in the national legislation?	What is the definition of periods of availability?
North	Denmark	S	S	S
	Finland	S	S	S
	Sweden	S	N	N
Middle	Austria	N	O	N
	Belgium	S	O	O
	Germany	S	O	S
	Ireland	S	S	S
	Luxembourg	S	S	S
	Netherlands	S	S	S
	United Kingdom	S	S	S
South	France	O	O	O
	Greece	S	S	S
	Italy	NA	NA	NA
	Portugal	S	O	O
	Spain	S	O	O
New Member States	Cyprus	S	S	S
	Czech Republic	O	O	O
	Estonia	O	O	O
	Hungary	O	O	O
	Latvia	S	S	S
	Lithuania	S	S	S
	Malta	S	S	S
	Poland	O	O	S
	Slovakia	N	S	S
Slovenia	S	O	S	

S = (about) the same as Directive 2002/15/EC

N = no or no definition

O = other definition

NA = no preliminary text available

17 of the 25 Member States have taken up (about) the same definition of a mobile worker as Directive 2002/15/EC. Five national directives contain another definition, two national directives contain no definition of a mobile worker.

The definition of active working time as presented by Directive 2002/15/EC, is also taken up in national directives in 12 Member States. 11 national directives contain another definition, one national directive contains no definition of active working time.

15 of the 25 Member States have taken up (about) the same definition of periods of availability as Directive 2002/15/EC. Seven national directives contain another definition and two national directives contain no definition of periods of availability.

Northern European countries

All three Northern European countries contain the same definition of a mobile worker as Directive 2002/15/EC. The Swedish directive does not contain a definition of active

working time and periods of availability. The definition of active working time is commensurate with the Swedish law. Denmark and Finland have used the definition of Directive 2002/15/EC with regard to active working time and periods of availability.

Middle European countries

The definition of a mobile worker is in six middle European countries about the definition as mentioned in Directive 2002/15/EC. Austria has no definition of a mobile worker. The definition of 'active working time' is in four national directives of the Middle European Countries (about) the same as in Directive 2002/15/EC. The directives of Austria, Belgium and Germany contain a different, short definition.

Definition of 'working time' in Belgium: "the time during which the individual is available to the employer"
 Definition of 'working time' in Austria and Germany: "the time from the beginning to the end of work without breaks"

The definition of 'periods of availability' is in five directives exactly the same as in Directive 2002/15/E, except for Belgium. The Austrian directive contains no definition regarding 'periods of availability'.

Definition of 'periods of availability' in Belgium: "A Royal Command taken at the request of the duly authorized Equal Opportunities Commission can determine the availability times which may be excluded. In this context, royal commands must take account of the definition of the directive".

Southern European countries

From the Southern European countries, France has expanded the definition of a mobile worker, Greece, Portugal and Spain use the same definition as described in the Directive.

With regard to the definition of active working time, the French have added the following text to the definition in Directive 2002/15/EC: 'the time spent by a second driver in a running vehicle while he does not drive is equally counted as working time'. The Portuguese directive describes another definition of working time, which includes a remuneration of different types of breaks that are included in active working time. The Greek directive contains the same definitions of working time and periods of availability as Directive 2002/15/EC. The Spanish directive contains shortened definitions of active working time and periods of availability.

The Portuguese directive contains the definition of periods of availability as in Directive 2002/15/EC, except that the part regarding waiting periods is not included. The French directive refers to the definition of active working time. The preliminary definitions of working time and periods of availability in Italy and Spain are not known.

- Definition of 'active working time' in Spain: "Active working time is the time in which the worker is at the disposal of the employer and exercising his functions or activities, the time devoted to driving or other activities in relation to the vehicle (or means of transport), passengers or load".
- Definition of 'periods of availability' in Spain: "Periods of availability is the time in which the worker is at the disposal of the employer which is not active working time, such as: waiting, standing still, guarding, traveling without service, eating on the way and similar activities".

New Member States

In the New Member States, in five directives the definition of a mobile worker is about the definition as mentioned in Directive 2002/15/EC. Four directives include another definition. The Slovakian directive has no definition of a mobile worker.

Definition of 'mobile worker' in Poland: "all drivers employed under an employment contract"

The definition of 'active working time' is in five national directives (about) the same as in Directive 2002/15/EC, from which the Directive in Malta contains the same definition of active working time, except the part regarding self-employed drivers. The directives of the Czech Republic, Estonia, Hungary and Poland contain another definition. The Estonian directive partly refers to regulation 3820/85/EC for the definition of active working time. The Czech directive contains a short definition of working time.

Example: definition of 'working time' in Hungary: the definition as in Directive 2002/15/EC without the part: "In the case of mobile workers: the time from the beginning to the end of work, during which the mobile worker is at his workstation, at the disposal of the employer and exercising his functions or activities, that is to say:"

Example: definition of 'working time' in Poland: the following text is added to the definition as in Directive 2002/15/EC: A driver's working time also includes a break of 15 minutes which must be introduced by the employer if a driver's daily working time is at least 6 hours.

The definition of 'periods of availability' is in seven directives exactly the same as in directive 2002/15/EC. The Czech Republic, Estonia, Hungary and Slovenia have another definition. In the preliminary text of the Czech Republic "on-call time" is defined.

Example: definition of 'periods of availability' in Slovenia: the following text is added to the definition in Directive 2002/15/EC: "breaks are not included in active working time".

Example: regarding 'periods of availability' the directive in Estonia states that: "The driver's working time does not include the on-call time of the other team member seated next to the driver in the moving vehicle if this does not include work-related activities or if not provided in the collective agreement".

4.3.3 *Rules on working time*

The rules on working time as taken up in Directive 2002/15/EC and in national legislation in all Member States are presented in this paragraph.

Table 4.4 Rules on time in Directive 2002/15/EC

Definition	Directive 2002/15/EC
Maximum average weekly working time	48 hours
Maximum weekly limit in any one week	60 hours
Reference period	4 months
Breaks	Persons performing mobile road transport activities, without prejudice to Article 2(1), in no circumstances work for more than six consecutive hours without a break. Working time shall be interrupted by a break of at least 30 minutes, if working hours total between six and nine hours, and of at least 45 minutes, if working hours total more than nine hours. Breaks may be subdivided into periods of at least 15 minutes each.

Table 4.5 Rules on working time in all Member States

Country cluster	Country	What is the maximum average weekly working time?	What is the maximum weekly limit in any one week?	What is the reference period for the maximum average weekly working time (in months)?	Which breaks are agreed?	Did you make use of the possibility for derogations by means of collective agreements and/or social dialogue?	Are there any additional limitations with regard to working hours?
North	Denmark	48	60	4	S	Y	N
	Finland	48	O	6	O	Y	Y
	Sweden	48	60	4	S	Y	Y
Middle	Austria	48	60	4	S	Y	N
	Belgium	38	50	4 or 12#	O	Y	N
	Germany	48	60	4	S	Y	N
	Ireland	48	60	4	S	Y	N
	Luxembourg	48	60	1	S	Y	N
	Netherlands	48	60	4	S	Y	N
	United Kingdom	48	60	4	S	Y	N
South	France	45* or 46**	53* or 50**	3 or 4#	S	N	Y
	Greece	48	60	4	S	Y	N
	Italy	NA	NA	NA	NA	NA	NA
	Portugal	48	70	4	S	Y	Y
	Spain	40	O	12	S	Y	ND
New Member States	Cyprus	48	60	4	S	Y	N
	Czech Republic	40	48	12	O	Y	N
	Estonia	48	60	4	O	Y	N
	Hungary	48	60	4	S	Y	N
	Latvia	48	60	4	S	Y	N
	Lithuania	48	60	4	S	Y	N
	Malta	48	60	4	S	Y	N

Country cluster	Country	What is the maximum average weekly working time?	What is the maximum weekly limit in any one week?	What is the reference period for the maximum average weekly working time (in months)?	Which breaks are agreed?	Did you make use of the possibility for derogations by means of collective agreements and/or social dialogue?	Are there any additional limitations with regard to working hours?
	Poland	48	60	4	O	Y	N
	Slovakia	48	60	4	S	Y	N
	Slovenia	48	60	4	S	Y	N

Y = yes

S = (about) the same as Directive 2002/15/EC

N = no or no definition

O = other definition

NA = no preliminary text available

ND = no official data available

* long distance drivers (international transport)

** short distance drivers (national transport)

to be extended by agreement

In 20 national directives the maximum average weekly limit of working time is the same as in Directive 2002/15/EC. Four Member States have taken up a stricter limit than Directive 2002/15/EC. 18 national directives contain the same maximum weekly limit in any one week as Directive 2002/15/EC. Belgium, the Czech Republic and France have a stricter limit; Finland and Portugal have a less strict limit. With regard to the maximum limit in any week, the Spanish preliminary directive only states that workers can not work more than a total of 12 hours a day (including additional hours). The reference period is in 18 national directives four months, as set in Directive 2002/15/EC. In Belgium, Finland and France two reference periods are mentioned. Luxembourg has a reference period of one month, the Czech Republic and Spain a period of 12 months. 19 Member States have taken up the same rules regarding breaks, five Member States have taken up (partly) other rules. In 22 Member States derogations with regard to maximum limit of working time and reference period are possible by means of collective agreement and/or social dialogue. In six Member States additional limitations have been taken up in the national directives.

Northern European countries

In Finland the maximum weekly limit in any one week is not taken up in the directive. It is stated that the maximum amount of overtime during a four month period is 138 hours. The reference period is four months or one year. Regarding the amount of breaks, the Finnish directive states that drivers must be given a minimum of 30 minutes' rest in one or two sequences for each work period of five hours and 30 minutes. Danish and Swedish directives contain the rules as in Directive 2002/15/EC. The Danish directive contains no additional limitations, the Swedish and Finnish directives do. The Finnish directive contains additional limitations with regard to daily rest periods and free time.

Middle European countries

In the middle European countries, the maximum weekly working time of 48 hours is taken up in six directives. The Belgian directive contains a maximum weekly working time of 38 hours with a reference period from a quarter of a year, with a possibility for

extension to one year in collective agreement. The reference period in Luxembourg is one month. In the others countries the reference period is similar to the period in the Directive and can be extended with collective agreement. The maximum working hours in one week is in six countries 60 hours, the maximum in Belgium is 50 hours. The Austrian directive states that the working time limit determined by law agrees with the Directive, however attaining these limits will only be possible if this is approved by the collective agreement. In six Directives breaks are exactly as in Directive 2002/15/EC. In Belgium the working period without breaks is also six hours. In the Belgian directive is further mentioned that if the time worked exceeds six hours, a break must be stipulated. The length of the break is fixed by collective work agreement. All countries made use of the possibility for derogations. This concerns the possibility for derogation (expansion) of working hours and/or the reference period with collective agreement and in some cases with individual approval. In general, derogations of the specific rules for working time are possible by means of collective and/or individual agreement. There are no additional limitations regarding working times that have not been mentioned in this summary.

Southern European countries

For the southern European countries, there is no preliminary text available for Italy. The maximum (average) weekly working time in France has been split up for drivers of long and short distance. Portugal has a deviate maximum limit in any week of 70 hours. With regard to the maximum limit in any week, the Spanish preliminary directive only states that workers can not work more than a total of 12 hours a day (including additional hours). In Spain the reference period is 12 months in stead of four. Greece has taken up the same limits as Directive 2002/15/EC. Greece, Portugal and Spain have made use of the possibility for derogations in the form of exceptions. The Greek directive states that “The option to derogate from Article 4 may not result in the establishment of a reference period exceeding six months, for calculation of the average maximum weekly working time of forty-eight hours”. What the preliminary exceptions are for Portugal and Spain is not known. Other limitations in the French directive are taken up for drivers of value transport or parcel services. Extra limitations in the Portuguese directive are provisions for maternity and paternity.

New Member States

In the New Member States, the maximum weekly working time of 48 hours and the maximum weekly limit in any one week of 60 hours are taken up in all national directives, except for the Czech Republic (respectively 40 and 48 hours). In all national directives the reference period is exactly as in Directive 2002/15/EC, except for the Czech Republic, which has a reference period of 12 months. The Czech, Estonian and Polish directives contain other rules regarding breaks than Directive 2002/15/EC. Drivers in Estonia must have a break of 45 minutes after four and a half hours driving. By way of exception this can be minimised to a break of 30 minutes after four hours of driving. The Czech directive only states that a break of at least 30 minutes must be provided after a maximum of six hours of continuous work. All New Member States have made use of the possibility for derogations by means of collective agreement or social dialogue, except Slovenia. Derogations by means of collective agreement concern in most cases the possibility for expansion of working hours. In Poland there is no uniform collective agreement at country level for road transport. Collective agreement is possible at enterprise level or for a number of enterprises. The directive in Poland contains additional limitations with regard to working hours. The specific limitations are unknown. The Slovakian directive contains the additional limitation that working

time during 24 hours must not be more than 12 hours. Other countries have no additional limitations.

4.3.4 *National definition of night time*

The definition of night time and the limit of working hours in the night are presented in this paragraph.

Table 4.6 Night time in Directive 2002/15/EC

Definition	Directive 2002/15/EC
Definition of night time	A period of at least four hours, as defined by national law, between 00.00 hours and 07.00 hours
Limit working hours in the night	10 hours in each 24 period

Table 4.7 Night time in the Member States

Country cluster	Country	What is the definition of night time?	What is the limit of working hours in the night?
North	Denmark	01.00-05.00	10
	Finland	23.00-06.00	N
	Sweden	00.00-07.00	10
Middle	Austria	00.00-04.00	10
	Belgium	20.00-06.00	8 or 11
	Germany	23.00-06.00	8
	Ireland	00.00-04.00	10
	Luxembourg	00.00-05.00	10
	Netherlands	00.00-05.00	10 or 12
	United Kingdom	00.00-04.00	10
South	France	22.00-05.00	10
	Greece	22.00-06.00	10
	Italy	NA	NA
	Portugal	00.00-05.00	10
	Spain	00.00-07.00	8
New Member States	Cyprus	00.00-07.00	10
	Czech Republic	22.00-06.00	8
	Estonia	00.00-07.00	10
	Hungary	00.00-04.00	10
	Latvia	00.00-07.00	10
	Lithuania	22.00-06.00	10
	Malta	00.00-07.00	10
	Poland	21.00-07.00	10
	Slovakia	22.00-06.00	10
	Slovenia	23.00-06.00	10

Y = yes

S = (about) the same as Directive 2002/15/EC

N = no or no definition

O = other definition

NA = no preliminary text available

The definition of night time varies between the Member States. Seven definitions are the same as in Directive 2002/15/EC, namely from 00.00-07.00. All definitions contain

the period from 01.00 to 04.00 hours. 18 national directives have taken up the same limit for working hours in the night as Directive 2002/15/EC. Three directives contain a limit of fewer hours than Directive 2002/15/EC. In Belgium the limit is eight hours or 11 hours with compensatory rest breaks.

Northern European countries

In northern European countries, the definition of night time in the Danish directive is from 01.00-05.00 hours, unless it is collectively agreed that another time period of four hours between 00.00 hours and 07.00 hours shall be considered as 'night time' period. The limit of night work is the same as in Directive 2002/15/EC. The Finnish definition of night time is 23.00-06.00 hours. The rules regarding daily rest in Finland limit night work. The definition and limit of working hours in the night in the Swedish directive are the same as in Directive 2002/15/EC.

Middle European countries

The definition of night time varies between the middle European countries. The period that is defined for the United Kingdom, Austria and Ireland is 00.00-04.00 hours. Belgium has a deviate period of 20.00-06.00 hours. Germany, Luxembourg and the Netherlands have a deviate period from, respectively, 23.00-06.00 hours, 00.00-05.00 hours and 01.00-05.00 hours. The United Kingdom has a different definition of night work for passenger transport, namely 01.00-05.00 hours.

In four countries the limit of working hours in the night is the same as in Directive 2002/15/EC, 10 hours. In Belgium the limit is eight hours, with a possibility for extension to 11 hours with compensatory rest breaks. In Germany the limit is eight hours, with a possibility for extension to 10 hours. The Netherlands has a possibility for extension to 12 hours with collective agreement.

Southern European countries

The definition of night time in Spain is the same as in the Directive. Greece, France and Portugal have a deviate period of respectively 22.00-06.00 hours, 22.00-05.00 hours and 00.00-05.00 hours. The limit of working hours in the night is in Greece, France and Portugal the same as in Directive 2002/15/EC. In Spain the limit is eight hours. The situation in Italy is unknown.

New Member States

In Latvia the definition of night time is from 01.00-05.00 hours, with a four hour period between 01.00 and 07.00 hours. The directives of Cyprus, Estonia and Hungary have the same definition of night time as Directive 2002-15-EC; the directives from the remaining countries have another definition. The limit of working hours in the night is in all new Member States the same as in Directive 2002/15/EC, except for the Czech Republic, which has a limit of eight hours.

4.3.5 *National situation regarding self-employed drivers*

In this paragraph is described what definition Member States have regarding self-employed and what distinction they have made between workers and self-employed. Also is described if Member States have made preparations for the possible inclusion of self-employed in the Directive.

Table 4.8 Definition of self-employed in Directive 2002/15/EC

Definition	Directive 2002/15/EC
Definition of a self-employed driver	Self-employed driver shall mean anyone whose main occupation is to transport passengers or goods by road for hire or reward within the meaning of Community legislation under cover of a Community licence or any other professional authorisation to carry out the aforementioned transport, who is entitled to work for himself and who is not tied to an employer by an employment contract or by any other type of working hierarchical relationship, who is free to organise the relevant working activities, whose income depends directly on the profits made and who has the freedom to, individually or through a cooperation between self-employed drivers, have commercial relations with several customers.

Table 4.9 National definition of self-employed in the Member States

Country cluster	Country	What is your definition of a self-employed driver?
North	Denmark	N
	Finland	S
	Sweden	N
Middle	Austria	N
	Belgium	O
	Germany	N
	Ireland	S
	Luxembourg	N
	Netherlands	S
	United Kingdom	S
South	France	S
	Greece	S
	Italy	NA
	Portugal	N
	Spain	ND
New Member States	Cyprus	S
	Czech Republic	N
	Estonia	O
	Hungary	O
	Latvia	S
	Lithuania	S
	Malta	S
	Poland	N
	Slovakia	S
	Slovenia	S

S = (about) the same as Directive 2002/15/EC NA = no preliminary text available

N = no definition

ND = no official data available

O = other definition

12 Member States have taken up a definition regarding self-employed in the national directive. Eight Member States have no definition taken up and three have taken up a different definition.

Northern European countries

Denmark and Sweden have not taken up a definition regarding self-employed drivers, since the Directive does not apply to self-employed drivers. The Finnish directive contains the same definition as Directive 2002/15/EC.

Middle European countries

The directive from Ireland, the Netherlands and the United Kingdom contain (about) the same definition as Directive 2002/15/EC. Germany, Luxembourg and Austria have no definition of self-employed drivers. The Belgian directive contains a different definition, namely: a worker who does not provide his service under a bond of authority with an employer.

Southern European countries

In the southern European countries, the Greek and French directives contain the same definition as Directive 2002/15/EC. Portugal has no definition and there is no preliminary text available for Italy and Spain.

New Member States

The directives from Cyprus, Latvia, Lithuania, Malta, Slovenia and Slovakia contain (about) the same definition as Directive 2002/15/EC. Poland and the Czech Republic have no definition of self-employed drivers. The definition of the Czech Republic was, at the time of writing, not yet transposed. The directives of Estonia and Hungary contain a different definition. The Estonian directive describes that sole proprietors must be entered in the commercial register and must have an activity licence for road transport services. In the Hungarian definition the following text is not taken up: “the time from the beginning to the end of work, during which the mobile worker is at his workstation, at the disposal of the employer and exercising his functions or activities, that is to say”.

Table 4.10 Current distinction between workers and self-employed in the Member States

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Number of countries in cluster	7	5	3	10	25	100
Distinction between workers and self-employed (# countries responded)	6	4	3	8	21	100
• No rules on work hours and night time	6	3	2	7	18	86
• Other	0	1	1	0	2	10
• No distinction	0	0	0	1	1	5
Preparations for inclusion self-employed in 2009 (# countries responded)	5	3	3	9	20	100
• No special preparations	5	3	3	9	20	100

The current situation regarding the distinction between workers and self-employed is, that in most of the Member States self-employed do not have to follow rules on working hours and night time. Self-employed drivers do have to follow the Directive regarding driving and rest times. None of the Member States have yet made preparations for the (possible) inclusion of self-employed in 2009. Some of the government repre-

sentatives state that they will wait for the EC which will make the first move in 2007, two years prior to the inclusion.

4.4 National policy and practice on enforcement

The national policy and practice of enforcement is described in this paragraph. First, have Member States taken up a system of penalties? Second, which authorities enforce the Directive and what is their level of oversight? And third, how is the Directive enforced and what kinds of penalty are used?

4.4.1 Enforcement policy and practice

Table 4.11 Enforcement policy

Country cluster	Country	Have you laid down a system of penalties?
North	Denmark	Y
	Finland	Y
	Sweden	Y
Middle	Austria	Y
	Belgium	Y
	Germany	Y
	Ireland	Y
	Luxembourg	Y
	Netherlands	Y
	United Kingdom	Y
South	France	Y
	Greece	Y
	Italy	NA
	Portugal	Y
	Spain	N
New Member States	Cyprus	Y
	Czech Republic	Y
	Estonia	Y
	Hungary	Y
	Latvia	Y
	Lithuania	Y
	Malta	Y
	Poland	Y
	Slovakia	Y
	Slovenia	Y

Y = yes

N = no

NA = no preliminary text available

All Member States have laid down a system for penalties. In Spain there is no penalty system specific for the transport sector. It will have to be developed once the transposition is approved. It is unknown if Italy has laid down a system for penalties.

Table 4.12 Enforcement bodies and their responsibilities

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Number of countries in cluster	7	5	3	10	25	100
Involvement in enforcement (# countries responded)	7	4	3	9	23	100
• Labour Inspection	6	2	1	9	18	78
• Inspection of transport	5	4	3	6	18	78
• Police	1	1	2	6	10	43
• Custom authority	1	0	0	1	2	9
• Other authorities	1	1	1	0	3	13
Responsibilities (# countries responded)	6	4	2	9	22	100
• Labour Inspection						
- Control	5	3	2	9	19	86
- Fining	2	4	0	5	11	50
• Inspection of transport						
- Control	5	2	1	6	14	64
- Fining	2	2	0	4	8	36
• Police						
- Control	1	1	0	4	6	27
- Fining	1	1	0	1	3	14
• Custom authority						
- Control	1	0	2	1	4	18
- Fining	1	0	0	1	2	9

The authorities that are involved in enforcement of the Directive are in most Member States the labour inspection, the inspection authority of transport and the police. In some countries there is one authority responsible for enforcement, but in most countries several authorities are responsible. All authorities are responsible for control and/or fining.

Regarding the responsibilities of enforcement bodies in the different Member States must be stated that answers might not only respond to regulations regarding Directive 2002/15/EC, but also regarding other (national) legislation.

Nothing can be concluded concerning to the level of oversight of enforcement bodies with regard to (parts of) the transport industry. Few representatives gave or could give their view on this matter, so the number of answers is too small to draw a conclusion.

In table 4.13 the enforcement in practice is presented.

Table 4.13 Enforcement bodies and their responsibilities

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Number of countries in cluster	7	5	3	10	25	100
How does enforcement take place? (# countries responded)	5	3	3	8	19	100
• Ad hoc	3	3	1	5	12	63
• Campaigns	3	1	0	3	7	37
• In reaction to reports or accidents	2	1	2	7	12	63
• Embedded in duties of companies	3	2	2	4	11	58
What penalties are laid down? (# countries responded)	7	3	3	9	22	100
• Financial penalties	7	3	3	9	22	100
• Penalties regarding licence	0	1	1	4	6	27
• Criminal prosecution/imprisonment	3	0	2	1	6	27
Who is responsible for settlement of penalties? (# countries responded)	4	3	3	8	18	100
• Company/employer	2	2	2	2	8	44
• Driver	0	0	0	0	0	0
• Company/employer and/or driver	2	1	1	6	10	56

Enforcement takes place with different kinds of activities: ad hoc, with campaigns, in reaction to reports or accidents. Enforcement is also embedded in duties of the enforcement authorities. In most Member States enforcement takes place with two or more kinds of activities.

The penalties that are being used exist of financial penalties, penalties regarding the licence and criminal prosecution, possibly leading to imprisonment. Financial penalties are mostly used. In all cases the company (the employer) is responsible for settlement of penalties. In some countries the driver is also responsible. In no Member States the driver alone is responsible for settlement of penalties.

4.5 Summary and conclusion

In this chapter, the rules in place in the 25 Member States have been presented. Questionnaires answered by the national authorities in May 2006 provided the basis for our information. Three countries did not return the questionnaire. We have gathered additional information to fill in the gaps in information. There is, however, one country left where we do not have any information (Italy). Annex 2 provides a complete overview of the information we have gathered with regard to the implementation of the Directive into national legislation.

At the present time (October 2006), 18 out of 25 Member States have adopted the Directive into national legislation. In order of adoption date: Slovakia (3/2/04), Finland (15/3/05), Poland (16/4/04), Hungary (23/3/05), United Kingdom (4/4/05), Belgium (28/4/05), Denmark (2/5/05), Cyprus (6/5/05), Estonia (12/5/05), Lithuania (17/5/05), Sweden (13/6/05), France (20/7/05), Slovenia (12/8/05), Ireland (10/1/06), Austria (1/7/06), Latvia (12/7/06), Malta (12/8/2006), Germany (17/8/2006), Greece (22/8/2006).

In the presentation of the content of the national legislation in Annex 2 we have presented the final legislation for these 19 Member States and the draft legislation for the other Member States.

In 20 Member States the maximum average weekly limit of the working time is the same as in the Directive (48 hours). Four Member States have taken up a stricter limit: Belgium (38 hours), the Czech Republic (40 hours), France (45/46 hours) and Spain (40 hours).

In 17 Member States the maximum weekly limit is the same as in the Directive (60 hours). Two Member States use a more strict limit (Belgium: 50 hours; Czech Republic: 48 hours; France: 53/50 hours), two Member States use a less strict limit (Portugal: 70 hours; Finland: 138 hours overtime during a four month period). With regard to the maximum limit in any week, the Spanish preliminary directive only states that workers can not work more than a total of 12 hours a day (including additional hours). Furthermore, the Member States vary in their definitions of active working time and periods of availability.

The maximum shift length in the case of night work varies between 4 to 12 hours: 4 hours (Slovenia), 8 hours (Belgium, Czech Republic, Germany, Spain), 10 hours (Denmark, Sweden, Austria, Ireland, Luxembourg, United Kingdom, France, Portugal, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia), 12 hours (Netherlands).

Also, the definition of night time varies between the countries. The following range is used:

- 01.00-05.00 hours (Denmark)
- 00.00-04.00 hours (Austria, Ireland, United Kingdom, Hungary)
- 00.00-05.00 hours (Luxembourg, Netherlands, Portugal)
- 00.00-07.00 hours (Sweden, Spain, Cyprus, Estonia, Latvia, Malta)
- 22.00-05.00 hours (France)
- 23.00-06.00 hours (Germany, Slovenia)
- 22.00-06.00 hours (Czech Republic, Greece, Slovakia, Lithuania)
- 21.00-07.00 hours (Poland)
- 20.00-06.00 hours (Belgium).

Almost all countries have laid down a system of penalties: financial penalties, penalties regarding the licence and criminal prosecution. The authorities that are involved in the enforcement of the Directive are the labour inspection, the inspection of transport and the police. In some countries there is one authority responsible, but in most countries several authorities are responsible.

Enforcement takes place or will take place with different kinds of activities: ad hoc, campaigns, in reaction to reports or accidents and embedded in duties of the enforcement bodies.

5 Results: Views of stakeholders on the Directive

5.1 Introduction

In this chapter the results of the national case studies will be discussed. Annex 6 gives an overview of all stakeholders we have interviewed within the 25 countries. These interviews were held anonymously. That is why we will use quotes from the interviews, but will only mention the type of stakeholder (ministry, employers' representative or employees' representative) and the type of country: northern European countries (Denmark, Finland, Sweden), middle European countries (Austria, Belgium, Germany, Ireland, Luxembourg, The Netherlands, United Kingdom), southern European countries (France, Greece, Italy, Portugal, Spain) and new Member States (Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia). Table 5.1 gives a summary of the total number of interviews.

Table 5.1 Number of interviews with stakeholders in 25 Member States

Country cluster	Ministry of Transport	Ministry of Labour	Employers' organisation	Employees' organisation	Other	Total number of stakeholders	Number of countries
Middle	6	3	6	4	1	20	7
South	3	2	5	5	–	15	5
North	2	3	3	3	1	12	3
New Member States	8	5	8	5	–	26	10
Total	19	13	22	17	2	73	25

In this chapter we will discuss the views of the stakeholders, as has been presented during the interviews. In addition to these interviews, the preliminary results have been presented at an European expert meeting for road transport in Brussels, attended by government' and employers' representatives of all Member States and at a meeting of ETF in Brussels, attended by a number of employees' representatives. Their views are - when necessary - also included in this chapter. The following topics will be discussed:

- The implementation process and debate
 - involvement of stakeholders in the implementation process;
 - main issues with regard to implementation of the Directive;
 - problems encountered with the definitions of working time;
 - problems encountered with regard to enforcement;
 - views on the impact on the sector;
- Views on night work
- Views on the inclusion of the self-employed
 - inclusion or exclusion of self-employed drivers;
 - views on the impact of the inclusion on road safety;
 - views on the impact of inclusion on the profession;
 - views on the impact of inclusion on the sector.

5.2 The implementation process and debate

5.2.1 The involvement of stakeholders in the implementation process

Table 5.2 Number of countries where a debate has taken place and involvement of different stakeholders in the implementation

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Number of countries in cluster***	7	5	3	10	25	100
Debate:						
• No	1	1	0	1	3	12
• Limited*	0	3	0	4	7	28
• Yes**	6	1	3	3	13	52
• Unknown	0	0	0	2	2	8
Involvement:						
• Ministry of Transport	5	3	0	7	14	20
• Ministry of Employment	4	2	3	6	15	20
• Employers' organisations	7	4	3	6	20	26
• Employees' organisations	7	2	3	3	15	20
• Other stakeholders (parliament, other ministries, scientists, branch representatives)	2	2	2	5	11	14
Number of stakeholders in cluster mentioned***	25	13	11	27	76	100

* Limited can mean that not all stakeholders were involved, or only one-way information from the government to the stakeholders.

** yes can mean consultation of the stakeholders, focus on reaching consensus and/or negotiations on collective agreements.

*** Involvement of stakeholders is unknown in one country (nms).

The first issue we discussed with the national stakeholders was whether or not there has been a debate regarding the national implementation of the Directive. As can be seen from the Table 5.2, there has been a (limited) debate in the majority of the countries. Only three out of 25 countries do not mention any debate and from two countries this is unknown. The debate differs, however, in character and intensity.

In three countries there has been no debate, either because the Directive has not been implemented yet or because the implementation was considered as unproblematic.

- “There was no debate, directive not yet enforced.” (Ministry of Transport, Southern Europe)
- “The implementation was unproblematic, because most of the regulations were already given in the current working time law.” (Ministry of Transport, Middle Europe)
- “We were able to comment a draft version and took part in the preliminary discussion.” (Employees’ representative, the same middle European country)
- “There has been no debate about the content of Directive; the working time law adopted the Directive. Our main concern was fulfilled: working time law was sufficient and did not have to change due to the Directive.” (Employers’ representative, the same middle European country)

In seven countries the debate has been limited. The qualification ‘limited’ can mean that the debate was mainly one-way or the stakeholders did not feel that they had any

influence. It might also mean that not all stakeholders were involved. In one case, the social partners had a debate, but the government was not (yet) involved.

- “The debate was mainly one-way: the ministry organised meetings to provide information.” (Ministry of Labour, New Member State)
- “The employers and employees organisations were against implementation of the Directive. We did not have the feeling that our arguments would be heard: the current Minister of Transport made it clear that nothing could be changed.” (Employees’ representative, New Member State)
- “Our main problem was that the dialogue with the trade unions very weak developed is.” (Ministry of Welfare, New Member State)
- “The employers have started to speak with the employees and made a request to postpone. There was no government representative to discuss with.” (Employers’ and Employees’ representatives Southern Europe).

Thirteen countries mention a debate that has been more thorough. In these cases a distinction can be made between more or less thorough (rounds of) consultation, even trying to reach a consensus and implementation of the Directive by means of collective agreements, which includes negotiations between social partners.

- “It has been a long term process, with two procedures of approval, but there have been few discussions with social partners.” (employer middle Europe).
- “There has been no debate about whether it should be enforced, but about the kind of implementation. Immediate implementation was crucial to the ministry. The debate with the social partners has yet to come, since the appropriate collective agreements must be made in all affected sectors.” (Ministry of Labour in the same middle European country).
- “There has been a huge debate.” (employer in middle Europe).
- “It came as a massive chock. A new organisation of employees and self-employed came out of nowhere and participated with an obstructive attitude. They had not understood the directive and later on admitted that they would not have started if they would have understood, but some politicians had already taken on their viewpoints.” (employer in northern Europe).
- “There has been a very intense debate among social partners, trying to clarify the lacks in the Directives in transposition and make sure the directive is applied correctly.” (employer in southern Europe).
- “The employers wanted more flexibility. That is why they aimed to misinterpret the directive and move some limits already established in national legislation.” (employee in the same southern European country).
- “There has been a strong debate about the implementation of the Directive. What is the point of implementing if the social partners see no added value?” (Ministry of Transport in middle Europe)
- “The Ministry has accepted the proposal of the social partners.” (employer in the same middle European country).

Both Ministries of Transport (20% of all stakeholders mentioned) and Ministries of Labour (Labour inspectorate) (20%) were almost equally involved in defining the rules and enforcement. In some countries one of the Ministries was involved or leading and in others both Ministries were equally involved. Sometimes also other Ministries were involved, such as the Ministry of Internal Affairs (police) or Justice.

The employers’ organisations were more often involved in the implementation process (26% of all stakeholders) than the employee’s organisations (20% of all stakeholders). The involvement of social partners differs in strength. In some countries the debate was mainly informative and the social partners could lobby and give their opinion on the Directive, but the outcome was up to the Ministry or the Parliament.

- “The Directive is just a directive and it has to be implemented. It can be implemented in a way to make the regulations more restrictive than they are in the Directive; but it is not possible to make the regulations more liberal. So in fact our opinions do not really count, they do not mean a lot here.” (Employers’ representative, New Member State).
- “In our opinion our suggestions are good solutions, they would not be a burden for employers, but would be good for drivers. However, these are often not taken into account. As a trade union we don’t have sufficient possibility to influence the law made by Parliament. Employer’s organizations have more money and thus other resources allowing them for such a lobbying.” (Employees’ representative, the same new Member State).
- “Things have been decided without us being asked for our opinion.” (Employees’ representative, Southern Europe)
- “We have been asked for our opinion in discussion meetings, but we had no influence on forehand. We hoped it would increase the number of collective agreements and grow dialogue, but it really has not so far.” (Employees’ representative, New Member State)

In other countries most comments of the social partners were taken into account. And in some countries the social partners have negotiated a collective agreement, as part of the implementation of the Directive.

- “We were involved in defining the rules and enforcement and negotiated and implemented a collective agreement.” (employer and employee in middle European country)
- “We were involved in defining enforcement, inclusion of an exception in the collective agreement reached in 2004 (60 hours possible if average does not exceed 48 hours).” (Employees’ representative in northern Europe)
- “We were involved in trying to reach a collective agreement, and information to our members and clear misunderstandings.” (Employers’ organisation the same in northern European country)
- “We gave advice in a sector based small consensus round debating the draft law with the government and social partners, plus we had bilateral discussion with government and unions. A number of our advises have been adopted.” (employers in middle European country)
- “The social partners reached an unanimous proposal that will be followed by the Ministry.” (employer and employee in middle European country)
- “We were involved in a pro-active way in making clear the consequences of the Directive.” (employer in middle European country)
- “39 organisations were involved: all ministries, employers organisations and unions. They made 89 suggestions from which 41 were accepted.” (Ministry in new Member State).

Summarizing, one might say that the debate has been the strongest in the middle and northern European countries.

When we look into the different quotes, we might suggest that part of the delay in the implementation of the Directive into national legislation is due to the process of consultation in some of the countries where there has been a debate trying to reach consensus.

Another explanation can be found in the problems the countries encountered with the implementation. The next paragraph highlights some of the main points for discussion.

5.2.2 *Main issues with regard to the implementation*

Table 5.3 Main issues in the national debate on the implementation of the Directive (number of times spontaneously mentioned)

Main issues in the debate*	Middle	South	North	NMS	Total EU (no.)	Total (%)
Number of countries in cluster	7	5	3	10	25	100
Translation of the rules on working time						
• Definitions of periods of availability	6	3	0	5	14	56
• Maximum weekly working time	4	2	0	5	11	44
• Definition of working time	2	4	1	1	8	32
• Reference period	3	2	1	1	7	28
• Calculation of average working time (absenteeism)	1	2	1	2	6	24
• Driving and resting time, breaks (relation to 3820/85)	1	2	1	2	6	24
• Night work**	1	0	2	1	4	16
Other issues:						
• Possible impact on profession	3	1	1	3	8	32
• Possible impact on sector	1	0	0	5	6	24
• Enforcement***	0	1	1	1	3	12
• Possible impact on labour market	0	0	1	1	2	8
• Inclusion of self-employed****	1	0	1	0	2	8
• Safety	0	0	0	2	2	8
• Work for more than one employer	0	0	0	2	2	8
• Corruption	1	0	0	1	2	8

* Number of times an issue is spontaneously mentioned in the first instance, per country.

** Night work: in 11 countries there has been attention for night work in implementation, but only 1 country mentions this among the main issues and 3 countries mention some problems with implementation of night work (see § 5.3).

*** Enforcement: 3 countries spontaneously mention enforcement as one of the main issues of the debate. At a more specific question on problems with enforcement only 3 out of 20 responding countries mention that there were no problems (see § 5.2.5).

**** Self-employed: in 12 countries there has been attention for the self-employed in implementation of the Directive, but only in 2 countries this is mentioned as main issue (see § 5.4).

We have asked the stakeholders to mention the main issues for their organisation in the national debate regarding the implementation of the Directive. Most part of the debate concerned the used definitions of working time, in particular periods of availability. This issue will be discussed in the next paragraph (5.2.3). Another part of the debate concerned the possible impact of the Directive on the sector and the profession. This will be discussed in paragraph 5.2.4. Also, problems encountered with regard to the enforcement will be discussed (5.2.5).

5.2.3 *Problems encountered with the definitions of working time*

The main problem the stakeholders had to cope with concerned the used definitions. The definition of 'periods of availability' is debated in 56% of the Member States.

Stakeholders were very critical about the distinction that is made in the Directive between ‘working time’ and ‘periods of availability’. In particular the definition of the periods of availability is unclear and might - according to the stakeholders - lead to fraud.

- “We discussed working time and availability time. The new definitions are worse than the old ones.” (Employee representative middle European country)
- “We discussed the financial costs of waiting hours.” (Employer representative in the same middle European country)
- “The difference between on call duty and working time will be problematic in practice, we would have preferred a limitation of on call time, now employers have a high degree of flexibility.” (Employer representative in middle European country)
- “Problem with drivers stand by (waiting) while the lorry is charged/loaded.” (employee middle European country)
- “There is a conflict of interest between employers and employees with regard to waiting time on frontiers. Drivers are responsible and will stay in the truck, while employers do not want to include this in working time and pay for it.” (Ministry Transport new Member State)
- “We used to get paid for all working time, except rest. Now the difference between working time and availability time will lead to fraud.” (employee middle European country).
- “National legislation defines availability in completely different terms, namely as time spent out of the workplace.” (Ministry of Transport new Member State)
- “National legislation refers to attendance time to be decompensate with leisure time. Definition of availability time in the Directive is vague and contradictory and has caused debate and misunderstandings.” (Employer southern European country)

The second issue is the maximum weekly working time (debated in 44% of all countries). Other issues are the definition of working time (‘what is work and what is not’), the reference period (‘is this an ongoing period or a fixed period’), the calculation of the average working time (‘do we include or exclude absenteeism’), and the relation with the definitions of driving and resting periods in 3820/85. Some of the issues are mainly practical (‘how do we translate vague definitions into practice’ and ‘how do they relate to other legislation’), others are more fundamental (‘why do we limit the number of working hours in this way’).

- “The Directive should not have been implemented: the rules on driving time are enough (employee northern European country)
- “A lot of debate was based upon false interpretation of the Directive about what counts as working time and what not: misunderstandings about payment and working time.” (Employer in the same northern European country)
- “Our legal space already existed, so we had to convince the necessity of changing it, of which the actual reason was the forced order from Brussels rather than any practical need.” (Ministry Transport new Member State)
- “One of the main issues was the question why this Directive is necessary.” (Ministry Welfare new Member State)
- “Definition of working time and waiting time. The average time was counted per week, now per 3 to 4 months. This has implications for compensating overtime with resting time. A main issue was compensation of overtime in free time (the way extra hours are counted).” (Employer southern European country)
- “Because of the different way of calculating hours, we lose our 30 extra resting days a year, and at the most keep 8 days (2 days per period of 3 months).” (Employee the same southern European country)

- “The 48 hour limit is not conform our current practice. We had a discussion on the calculation of working time and the impacts on sector and salaries.” (Ministry of Transport middle European country)
- “The Directive has meant to protect workers, in reality it prevents workers to make the working time they want and does not match the current lifestyle. The trade union is in favour of the Directive, but large numbers of their members are against.” (employer middle European country)
- “The Directive limits driver performance by setting the average working time at 48 hours and limits possible overtime without any rational reason. Up to this time the Driving Time Directive has allowed to work at average of 56 hours.” (Employer new Member State)

5.2.4 Views on the impact on the sector

As we have seen in Table 5.3 part of the debate on the implementation of the Directive has been appointed towards the consequences for the profession and the sector. Apart from this spontaneous answer to the question of the main issues in the national debate, we have asked the stakeholders for their own opinion on the impact of the Directive. Most of them give answers based upon their own (expert) opinion. Not all stakeholders answer all questions, which is why we must be careful in interpreting the data. Not much data seem to be available to verify their views. In the next chapter, we will look into the quantitative data that are available. In this chapter, we will present the different views. With this we give an in-depth qualitative overview of the different viewpoints.

Table 5.4 Foreseen impact of 48 hour limit per country cluster (more than one answer possible)

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Total interviews	20	15	12	26	73	
No answer	6	5	1	11	23	
Answer:					50	100
• Positive impact on health and safety	4	3	3	7	17	34
• Positive impact on working conditions	3	3	3	6	15	30
• Positive impact on road accidents	5	0	2	6	13	26
• Negative impact on cost-effectiveness (due to higher costs and/or loss in effectiveness)	4	0	2	4	10	20
• Loss of salary (less overtime)	2	3	2	4	11	22
• Lack of drivers	0	0	0	4	4	8
• Other kinds of impact	11	4	3	7	25	50
• No impact	4	3	2	3	12	24

Table 5.5 Foreseen impact of 48 hour limit per group representatives (% of answers) (more than one answer possible)

	Representatives		
	Ministry	Employer	Employee
Total interviews	32	22	17
No answer	5	9	9
Answer:	27	13	8
• Positive impact on health and safety	30%	23%	75%
• Positive impact on working conditions	30%	8%	75%
• Positive impact on road accidents	26%	15%	50%
• Negative impact on cost-effectiveness (due to higher costs and/or loss in effectiveness)	11%	46%	13%
• Loss of salary (less overtime)	11%	15%	75%
• Lack of drivers	0%	23%	13%
• No impact	26%	15%	38%

Tables 5.4 and 5.5 show the expected impact of the 48 hour limit. A large part of the government' representatives and employees' representatives that responded expect a positive effect of the 48 hour limit on health and safety, working conditions and road accidents. Less employers' representatives expect this impact. Almost half of the employers' representatives expect a negative impact on cost-effectiveness (see Table 5.5). Other kinds of impact are also mentioned, such as a loss of productivity, a negative effect on competitive position, reorganisation of labour and trucks.

- "General improvement of medical and mental fitness of drivers, the same working conditions for all drivers." (government, new Member State)
- "Drivers working conditions will improve." (government, northern Europe)
- "Disconnection between driver and truck could be positive for attracting new groups on the labour market, but we do not know if this will work this way." (government, middle Europe)
- "Positive effect on the structure of the sector, better organisation of the sector and of the working hours." (employer, new Member State)

About a fifth of the respondents mention negative effects: cost-effectiveness of the sector (20%), loss of salary (22%) or a lack of drivers (8%) (see Table 5.4).

Problems with cost-effectiveness are related to the administrative costs, but also to an optimal use of trucks. Companies will have to plan their work in a different way: for instance with two drivers per truck or the detachment of driver and truck. As some employees' representatives mention, this can also be seen as a chance for new ways of working.

- "Additional administrative costs for employers and less flexible use of personnel. Problem with planning of personnel and trucks." (Ministry, Middle Europe)
- "Loss of productivity for small enterprises." (Employers' representative, Middle Europe)
- "We do not want to limit the working time. The limitation of maximum hours will have a negative effect on effectiveness and business in road transport." (Employers' representative, New Member State)
- "On the positive side, this Directive is a gift to contractors: now they have to plan their transport." (Employees' representative, Northern Europe)
- "Disconnection between driver and truck could be positive for attracting new groups on the labour market, but we do not know if this will work this way." (government, middle Europe)

- “Positive effect on the structure of the sector, better organisation of the sector and of the working hours.” (employer, new Member State)

The loss of salary is calculated by some stakeholders as an outcome of the decrease in working hours or in working overtime. The actual outcome of the implementation process in terms of salaries depends on more aspects (payment of availability and/or waiting time; negotiations on basic salaries, etc.).

- “We have calculated a 15-20% loss of income for the individual driver. If holidays and sickness would not count in the calculation of the average working time, the gap would not have been so great.” (employer the same middle European country)
- “There will be a loss in income, due to working overtime . But there is no control. The drivers that are being honest are the ones being put in the worst conditions.” (employee, northern Europe)
- “There was a massive public debate, with examples of drivers’ wives crying on national television about the need to sell the house because their husbands were not able to work as much as they used to.” (Ministry the same northern European country)
- “Why don’t we turn the discussion around: workers want to work less hours, provided they gain the same income. The argument of the loss of income is used by the employers. This cannot be used as a new goal of the Directive.” (Employees’ representative, Middle Europe)

In some Member States, the shortness of labour is already felt or foreseen and mentioned as a side-effect of the decrease in working hours per employee. More personnel is needed and difficult to be found. Other stakeholders see the new ways of working as a possible opportunity to reach new groups of (potential) employees.

- “More personnel needed.” (Ministry, Middle Europe)
- “The work will have to be done with less employees, lack of drivers due to generation gap and young potential drivers go to other countries.” (Employers’ representative, new Member State)
- “We expect a massive escape from the sector with the limited pay expected.” (employer northern European country)
- “The current shortage of drivers is the main issue: limiting working hours will cause problems and will give competitive advantages to non EU states.” (employer new Member State)
- “The Directive is perceived as the success of the labour unions in some old Member States, which are strong and which do not share the problems the new members of the Euro have with shortage of drivers and other problems.” (Employer the same new Member State)

About a quarter of the respondents (24%) do not expect any impact (Table 5.4). If we compare different types of stakeholders, we see that the employers’ organisations are most negative in their expectations of the impact of the 48 hour limit on the sector (cost-effectiveness and lack of drivers). The employees’ organisations are most negative on the impact on salaries. Ministries are most positive in their expectations of the 48 hour limit on health and safety and road accidents. On the other hand, half of the governmental representatives do not expect any impact.

When we summarize the views of the stakeholders and look into their arguments, we can see two opposite views on the impact on the profession and the sector. In this, those who are critical to the Directive have the most detailed arguments.

5.2.5 Problems encountered with regard to enforcement

Table 5.6 Problems regarding enforcement (more than one answer possible)

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Number of countries in cluster	7	5	3	10	25	100
Main problems regarding enforcement (# countries that responded)	6	2	3	9	20	100
• Enforcement of the Directive is very difficult	2	0	0	4	6	30
• Not enough enforcement power	1	1	0	4	6	30
• Vague definitions, room for interpretation	3	0	0	1	4	20
• Other	1	1	3	3	8	40
• No problems	2	0	0	1	3	15

Stakeholders mention that enforcement of this Directive is more difficult than the enforcement of the regulation on driving time, since control cannot take place on the road. Inspection must be aimed at the administration of companies.

- “Working hours can not be checked on the road, inspection must be aimed at the administration. Registration of working hours must be done by the employees. No specific actions, the ministry can not do anything about it.” (Ministry of Transport, New Member State)
- “Registration of working hours is difficult.” (employer northern Europe)
- “Use the legislation regarding driving and rest times. Directive 2002/15/EC is impossible to implement for self-employed drivers. The bureaucracy would prove a massive problem.” (Ministry northern Europe)

This inspection of the administration is difficult due to above mentioned problems with definitions. Representatives call them too vague en thereby there is room for interpretation. This is also a complicating factor for enforcement.

- “Legislation is incomplete. Definitions are unclear, obscure and do not cover all possibilities, which can lead to fraud. Controllability cannot be enforced.” (Ministry of Employment, middle Europe)
- “How to control that people obey the directive because there is room for interpretation, not all definitions are clear. We do not have enough manpower to control; there are legal and social issues, loopholes.” (Ministry of Employment, middle Europe)
- “The difference between working time and availability time will lead to fraud.” (Employee representative, middle Europe)

Apart from these problems, other issues are mentioned with regard to enforcement. In six Member States the enforcement power is a main problem, there is a lack of (experienced) inspectors. Also, it is very difficult to check working hours when a driver has more than one employer. Other issues are the lack of safe parking places to rest, which leads to a breaking of the rules and, finally, penalties. According to the representatives penalties (for foreign drivers) are too low and because of that the penalties do not deter drivers and companies.

- “There is still insufficient awareness of the regulations. One of the reasons of breaking the regulations in intentional transport is that there are no safe parking places.” (Ministry Transport, New Member State)
- “It is impossible to determine a drivers working hours when that driver has more than one employer.” (Ministry of Employment, New Member State)

We have requested recommendations with regard to enforcement (see Table 5.7). Only few recommendations are given. They concern the recommendation to solve organisational problems, improvement of penalty measures and the recommendation to increase awareness regarding the usefulness of the directive.

Table 5.7 Recommendations towards EU regarding enforcement (more than one answer possible)

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Number of countries in cluster	7	5	3	10	25	100
Recommendations regarding enforcement (# countries that responded)	3	3	3	9	18	100
• Make definitions less vague	2	0	0	2	4	22
• Simplify regulations	0	0	0	2	2	11
• Describe how to control companies and (self-employed) drivers	0	0	0	2	2	11
• Codify different directives	0	1	1	0	2	11
• Other	2	1	1	0	4	22
• None	1	0	0	3	4	22

Unfortunately, those countries that mention no problems with enforcement do not provide us with a clear solution to the encountered problems.

- “There are no particular problems expected. No special preparations.” (Ministry of Employment, middle European country)
- “We handle self-employed drivers equally to other drivers, the police handles them equally in traffic.” (Ministry new Member State)

As became clear in the debate with stakeholders in Brussels in September, some of the countries that have implemented the Directive are only in the beginning of the process of enforcement and results cannot be given.

- “It is still unclear if the reference period is ongoing or fixed. If we want to take the Directive seriously, enforcement is needed. We have not reached the goal of enforcement and sanctions yet. We are going to control the administration, to see if the rules are applied correctly.” (Employees’ representative, Northern Europe)
- “Periods of availability is nonsense. So far, nothing has changed.” (Employees’ representative, Middle Europe)

5.3 Views on night work

As can be seen in Table 5.3, there has not been a large debate on the implementation on the rules on night work. Night work was not an issue for those countries that already had national legislation in place on night work for these drivers, and/or that decided to stick to their own - stricter - rules.

- “We maintained the more strict national law where night work is between 22-06 hours.” (Employee middle European country)
- “It was no issue, since nothing will change.” (employee middle European country)

Other countries had to add new rules to their national law or synchronise their national law with the definitions of the Directive. This was either perceived as complementary or contradictory to the national situation.

- “Regulation concerning night work was lacking for drivers so far, most important thing for the Ministry.” (Ministry Labour middle European country)
- “Definition and extra remuneration for night work: it was already settled, now we had to double solve it for narrow segment of certain drivers. What really matters is how tired a driver is, not night time according to the clock; if night time means dark, how to handle Nordic Countries in winter?” (Ministry of Economics new Member State)
- “10h maximum night work complicates the general transportation operations which are mostly done during nights in order to avoid additional day time traffic on main roads.” (long distances in the country, thus lengthy transport times) (Employer northern European country)
- “Limitations for night work as defined in the Directive are in the workers best interest.” (employee the same northern European country)
- “Night time work in former working time legislation has not concerned the transport sector: this will change transport planning, since far distance transports are going during night time.” (Employer northern European country)

Apart from this spontaneous answer to the question of the main issues in the national debate, we have asked the stakeholders for their own opinion on the (expected) impact of the rules on night work in the Directive (see Tables 5.8 and 5.9). This question has only been filled in by 42 of 73 respondents.

Table 5.8 Foreseen impact of night work per country cluster

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Total interviews	20	15	12	26	73	
No answer	4	7	3	18	32	
Answer:					41	100
• Positive impact on health and safety	3	2	3	7	15	37
• Positive impact on working conditions	2	2	1	4	9	22
• Positive impact on road accidents	1	0	1	5	7	17
• Negative impact on cost-effectiveness (due to higher costs and/or loss in effectiveness)	2	0	3	3	8	20
• Loss of salary (less overtime)	1	1	0	2	4	10
• Other kinds of impact	2	1	1	1	5	12
• No impact	10	4	1	3	18	44

Of the stakeholders that filled in this question, 44% do not expect any impact, 37% expect a positive impact on health and safety. Only 17% of the respondents expect a positive impact on road accidents.

- “In our country there is already regulation on this subject. It has had a positive effect on health and safety, good working conditions and a reduction of traffic accidents.” (Employee, Southern European country)

There are also 20% of the respondents that expect a negative impact on cost-effectiveness.

- “Additional labour costs for night work are generally higher than saved fuel and time due to less nightly traffic.” (Employer, New Member State)

One respondent mentions that the impact might be either positive or negative; it depends on what weighs more.

- “We do not know the impact on accidents: during the night a driver /may be less fresh, but on the other site the traffic tension is lower.” (Employer, New Member State)

The foreseen impact that is described in Table 5.8 has been given by the three groups of representatives, ministries, employers’ and employees’ representatives. Table 5.9 describes the percentage of representatives that has given those answers.

Table 5.9 Foreseen impact of rules on night work per group representatives (% of answers)

	Representatives		
	Ministry	Employer	Employee
Total interviews	32	22	17
No answer	9	14	11
Answer:	23	8	6
• Positive impact on health and safety	35%	25%	83%
• Positive impact on working conditions	30%	0%	33%
• Positive impact on road accidents	13%	13%	50%
• Negative impact on cost-effectiveness (due to higher costs and/or loss in effectiveness)	4%	50%	50%
• Loss of salary (less overtime)	4%	0%	50%

If we look at the different stakeholders we see that the employees' representatives have more positive expectations than the government representatives and the employers' representatives have the least positive expectations with regard to health and safety, working conditions and road accidents. Both employers' and employees' representatives also have negative expectations (cost-effectiveness and/or loss of salary). In the next chapter we will discuss scientific literature with regard to night work, in particular in relation to health and safety.

5.4 Views on the inclusion of self-employed drivers

5.4.1 Inclusion or exclusion of self-employed drivers

As we could see in Table 5.3, only two countries mention the situation of the self-employed as one of the main issues in the debate on implementation (1 northern and 1 middle European country). Most countries have postponed this issue to the period after the general implementation of the Directive. This does not mean that it has not been discussed. We have asked more specific questions on the debate on the inclusion of the self-employed drivers. It appears that the inclusion of self-employed drivers has been discussed in at least thirteen countries.

- “Should they be included or excluded? How do we deal with fake independents and fraud, grey zone? What (fake) independents will come to our country and how do we enforce rules on them?” (Ministry of Employment, Middle Europe)
- “The 48 hours limit is problematic for self-employed. We had a debate on the position of self-employed vs. competition, administrative time, hard to check.” (Employer in the same middle European country)
- “Our main concern is with the fake independents and the fact that they get a reprieve until 2009.” (employee in the same middle European country)
- “We handle self-employed drivers equally to other drivers, the police handles them equally in traffic.” (Ministry of Transport new Member State)
- “The topic of self-employed was rather easy as no one really represents them.” (employer the same new Member State).

Table 5.10 Foreseen impact of inclusion of self-employed per country cluster

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Total interviews	20	15	12	26	73	
No answer	10	6	2	11	29	
Answer:					44	100
• Positive impact on health and safety	4	3	0	8	15	34
• Positive impact on road accidents	4	3	1	6	14	32
• Positive impact on working conditions	2	3	0	4	9	20
• Competition will be equalized	0	2	1	4	7	16
• (More) difficult/impossible enforcement	5	1	0	1	7	16
• Negative effect on business of self-employed	4	0	1	2	7	16
• Loss of salary/profit	1	1	2	3	7	16
• Negative impact on cost-effectiveness (due to higher costs and/or loss of effectiveness)	1	1	3	1	6	14
• Negative impact on competitive situation of self-employed	1	0	1	4	6	14
• Structure: less self-employed	1	0	3	2	5	11
• Other kinds of impact	3	5	3	5	26	59
• No impact	0	1	1	0	2	5

Table 5.11 Foreseen impact of exclusion of self-employed per country cluster

	Middle	South	North	NMS	Total EU (no.)	Total (%)
Total interviews	20	15	12	26	73	
No answer	9	8	0	13	30	
Answer:					43	100
• (Possible) unfair competition	3	3	2	2	10	23
• Negative impact on health and safety	2	0	1	2	5	12
• Negative impact on working conditions	0	1	2	2	5	12
• Negative impact on road accidents	0	1	2	2	5	12
• Difficult/impossible enforcement	2	0	1	1	4	9
• Structure: more self-employed	1	1	2	2	6	14
• Positive impact on working conditions	1	1	0	1	3	7
• Positive impact on road accidents	0	1	1	1	3	7
• Other kinds of impact	2	2	2	5	11	26
• No impact	4	0	3	4	11	26

Apart from the general question on the main issues debated, we have asked the stakeholders for their opinion on the foreseen impact of inclusion or exclusion of the self-employed. Tables 5.10 and 5.11 show the results of this question. The main issues discussed can be divided into two categories:

- Problems with implementation and enforcement;
- Impact of inclusion on sector and profession.

Table 5.12 Foreseen impact per group representatives (% of answers)

	Representatives		
	Ministry (n=23)	Employer (n=12)	Employee (n=9)
Inclusion of self-employed			
• (More) difficult/impossible enforcement	17%	0%	33%
Exclusion of self-employed			
• Difficult/impossible enforcement	0%	0%	44%

Problems with implementation and enforcement encountered in general, are even more present when it concerns self-employed. Problems with the check on company administration and the interpretation of the definitions are even more difficult with regard to the self-employed. 16% of the stakeholders mention expected problems with enforcement when self-employed are included (Table 5.10). There are also stakeholders that mention problems with enforcement when stakeholders remain excluded (Table 5.11). When we look at the different stakeholders, we find that in particular employees' representatives expect problems with enforcement, either in the case of inclusion or in the case of exclusion. This could possibly be explained by the feeling that enforcement of the Directive will only be 'half' when self-employed remain excluded. Employers' representatives do not spontaneously mention expected problems with enforcement as an impact of the inclusion or exclusion of the self-employed (Table 5.12).

- "Working time of self-employed cannot be enforced." (Ministry, middle Europe).
- "Control of self-employed is not possible to actually achieve in practice." (Ministry, Middle European country)
- "Without the real possibility of execution of the Directive, without indicating the responsible person and the range of responsibility, without stating possible sanctions such a regulation will be dead. We are not supposed to create legal fiction." (Ministry, New Member State)
- "For us the self-employed drivers are a paradox. We would like to include them, why not, it can only improve security on the road, but at the same time, we do not see how; we do not see how we can limit the working time of a person who is working as an independent." (Employer, Southern European country)

One third of the stakeholders expect a positive impact of the inclusion of the self-employed on health and safety and on road accidents. One fifth of the stakeholders expect a positive impact on working conditions (Table 5.10). 16% of the stakeholders expect a positive impact on competition, while 14% expect a negative impact on competition and 16% expect a negative impact on the business of the self-employed.

The content of the debate with regard to the foreseen impact will be discussed in the next paragraphs, including the different viewpoints of the different stakeholders. The results will be discussed separately for the three main topic of this report, namely the impact on road safety, on profession (including the rights of self-employed) and the impact on the sector.

5.4.2 Views on the impact of self-employed drivers on (road) safety

One of the main goals of the Directive is to improve road safety. Only one third of the stakeholders expect that the inclusion of the self-employed will lead to higher health and safety or to lower road accidents (see Table 5.10). When we compare stakeholders, we find that the employees' representatives are most positive in their expectations to-

wards (road) safety (see Table 5.13). The difference between government representatives and employers' is only small when it concerns the positive impact of inclusion. When we look at the possible negative impact of exclusion we find that employers' representatives do not expect negative impacts and government representatives and employees' representatives are equally negative (Table 5.13).

Table 5.13 Foreseen impact on (road) safety per group of representatives (% of answers)

	Representatives		
	Ministry (n=23)	Employer (n=12)	Employee (n=9)
Impact of inclusion			
• Positive impact on health and safety	30%	25%	56%
• Positive impact on road accidents	26%	25%	56%
Impact of exclusion			
• Negative impact on health and safety	22%	0%	0%
• Negative impact on road accidents	17%	0%	22%
• Positive impact on road accidents	0%	8%	22%

There are two opposite views on the added value of the Directive with regard to road safety and workers' health and safety:

- reduction of working time is necessary from the viewpoint of road safety and safety and health, or
- regulation on driving and rest time is sufficient to guarantee safety and health, and road accidents can even increase.

Pro inclusion	Contra inclusion
Argument: Reduction of working time necessary from the viewpoint of road safety, safety and health	Argument: Regulation on driving and rest time is sufficient to guarantee safety and health, and road accidents can even increase
Quotes: "In theory health and safety will improve." (employer, middle Europe) "We expect a positive effect on health & safety, working conditions and accidents." (Ministry, middle Europe) "Positive impact on health and safety, working conditions and accidents." (Ministry, new Member State) "Inclusion essential for a country where 60% of transport workers are self-employed, otherwise objective of road safety will not be reached."(employer southern European country) "If the issue is about road safety, why not now or are the supposed to be safer drivers than the employees." (employee in the middle European country).	Quotes: "We should better focus on the enforcement of Regulation 2820/85." (Ministry of Transport and employer representative, middle European country) "No impact on accidents: there is proper regulation on driving times. We could expect more trucks on the road in order to fulfil time limits, which could lead to less safety." (employer, middle Europe) "The Directive should not have been implemented at all, since they are already regulated via driving and resting time." (employees organisation, northern Europe) "There is no scientific evidence of effect on health and safety." (Ministry, middle Europe) "Health and safety is not only effected by working time, but also by the activities one has in the

“There is no understanding of why mobile self-employed workers are not included in the directive given that this is a significant number of the workers in this sector and whether the Directive really aims to attain the objectives set out in it.”
(Employee, Southern European country)

rest of the time: in this case employees might do more unhealthy activities than self-employed.”
(government middle Europe)

Facts and figures on the road accidents and the relationship between working time and health and safety are given in the next chapter.

5.4.3 Views on the impact of inclusion of self-employed drivers on the profession

We have also asked stakeholders for their view on the impact on the profession. The different stakeholders mention both positive and negative impacts: 20% of the stakeholders mention an expected positive impact of the inclusion on the working conditions, but 16% mention a negative effect on business of the self-employed (see Table 5.10). Employers’ organisations do not mention a positive impact on working conditions, and mainly foresee negative impacts for the profession (business of self-employed and loss of salary). In particular, employees’ representatives mention a positive impact on working conditions (see Table 5.14). They, however also mention negative impacts on the business and salaries of self-employed. The positive impact they mentioned in the case of exclusion (see Table 5.14) may be related to the expectation that current income levels could be remained as a result of persisting long working hours.

Table 5.14 Foreseen impact on profession per group of representatives (% of answers)

	Representatives		
	Ministry (n=23)	Employer (n=12)	Employee (n=9)
Impact of inclusion			
• Positive impact on working conditions	22%	0%	44%
• Negative impact on business of self-employed	9%	17%	33%
• Loss of salary/profit	9%	25%	22%
Impact of exclusion			
• Negative impact on working conditions	17%	0%	11%
• Positive impact on working conditions	4%	0%	22%

The discussion on the impact of the Directive on the profession mainly focussed on the situation of the employees within the sector. But some specific issues have been discussed with regard to the self-employed (see the quotes below). Here again, we have found two opposite views:

- protection of self-employed: against fake self-employment, against pressure by large companies and clients, or
- right of self-determination, they can protect themselves, they choose to be self-employed, they will not be able to survive when included.

Pro inclusion	Contra inclusion
Argument: Protection of self-employed: against fake self-employment, against pressure by large companies and clients	Argument: Right of self-determination, they can protect themselves, they choose to be self-employed, they will not be able to survive when included

Quotes:

“Self-employed drivers work longer hours, without being able to control working hours themselves. Fleet owners, transportation agencies and customers force self-employed drivers into working more hours, for time and cost efficiency reasons.” (employers organisation southern European country)

“How do we deal with fake independents and fraud, grey zone, what (fake) independents will come to our country and how do we enforce rules on them.” (Ministry of Employment in middle European country).

“We think there will be more false self-employed if they are not included.” (Ministry and Employee, Southern European country)

“If they are not included, it is not very likely that there will be an increase in the practice in which self-employed drivers will become ‘slaves’ to a number of large companies and are becoming totally dependent of those companies. It is expected that the existing rules and regulations are very well suited in preventing such practices and no additional regulations are needed.” (Ministry, Middle European country)

“It would be good to include self-employed to give them at least a minimum of protection and provision.” (Employee, New Member State)

Quotes:

“Part of being an independent is to be free to choose the number of working hours. Inclusion of self-employed is contradictory to the principal that a self-employed can be autonomous in his/her time.” (Ministry, Middle European country)

“Inclusion of self-employed will be the end of self-employed as we know them today. They will be administered to death so to speak.” (Self-employed, Northern European country)

“The sudden implementation of the Directive was a wake up call for the self-employed: the matters concerning are the ones with direct effect on making a decent living; the definition of what is work and what's not is not crystal clear; it is impossible to distinguish hours of work from everyday life.” (employer/self-employed northern European country)

“If self-employed will be included there will be a need for extra trucks, extra drivers. Long distances will not be possible for self-employed. Trucks must make enough driving hours for economic efficiency; you will need 2 drivers.” (self-employed middle Europe).

Facts and figures on the profession (and the specific position of the self-employed) will be presented in the next chapter.

5.4.4 *Views on the impact of inclusion of self-employed drivers on the sector*

One of the main goals of the Directive is to prevent distortion of competition. The debate on this issue is directed towards the competition between Member States on the one hand, but towards the competition between companies with employees and self-employed on the other hand. Only 16% of the stakeholders mention an expected equalization of competition when self-employed are included (see Table 5.10). When we compare the different stakeholders, we find that employers have higher expectations in this field than the other stakeholders (see Table 5.15).

Table 5.15 Foreseen impact on the sector per group of representatives (% of answers)

	Representatives		
	Ministry (n=23)	Employer (n=12)	Employee (n=9)
Impact of inclusion			
• Competition will be equalized	9%	25%	22%
• Negative impact on cost-effectiveness (due to higher costs and/or loss effectiveness)	4%	25%	22%
• Negative impact on competitive situation of self-employed	13%	8%	22%
• Structure: less self-employed	0%	17%	44%
Impact of exclusion			
• Possible unfair competition	17%	25%	33%
• Structure: more self-employed	4%	25%	22%

The views on the impact of the inclusion of the self-employed on the sector are divergent:

- unfair competition between self employed and companies, or
- large companies will profit from the self-employed, and other aspects are more important for competitions than the self-employed (international competition, enforcement differences).

Pro inclusion	Contra inclusion
Argument: Unfair competition between self-employed and companies	Argument: Large companies will profit from the self-employed (see above) Other aspects are more important for competitions than the self-employed (international competition, enforcement differences)
Quotes: “The exclusion of self-employed is perceived as unfair as it gives competitive advantage to the one employee companies and non-EU states; big companies will have higher costs.” (employer new Member State)	Quotes: “One of the main issues was the self-employed and their trade regulations: inclusion should have been avoided in order to avoid problems for their trade.” (Ministry of Transport northern European country)
“The goal was that equal competition has to be granted for common employees compared to self-employed drivers.” (employee new Member State)	“We share the government view that the self-employed should be excluded in order to avoid negative effects on the trade.” (employer northern European country)
“By inclusion of self-employed competition will be equalized. A driver is a driver, no matter what entrepreneurship he/she has.” (Employer, New Member State)	“The open borders have a higher impact on competition than the issue of the self-employed.” (government middle Europe)
“If they are excluded, there will be an unfair competition, there will be too much pressure on self-employed to work more hours and efficient control of self-employed will be difficult.” (Employee, Middle European country)	“Tax policies of countries are more important for competition than the inclusion of self-employed.” (Employer, new Member State)
	“Exclusion means a fair chance of surviving for self-employed. Large companies are able to have their vehicles on the road 24 hours a day. This is

<p>“There will be more and more self-employed if they will be excluded. For companies it is much easier and more cost effective to use self-employed. Big companies even will not have to employ drivers any more.” (Employee, Middle European country)</p>	<p>not possible for self-employed.” (Self-employed, Northern European country)</p> <p>“The benefits in competition between self-employed and regular companies would be still present, if they are excluded.” (Ministry, New Member State)</p>
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Facts and figures on the road transport sector will be discussed in the next chapter.

5.5 Summary and conclusion

5.5.1 *The transposition of the Directive into national legislation*

In this chapter we have presented the views of stakeholders in most Member States: government representatives, employers’ representatives and employees’ representatives. These views were gathered by means of interviews.

The transposition of the Directive into national legislation has led to a debate in the majority of the Member States. In three countries there has been no debate, either because the Directive has not yet been implemented, or because implementation was considered as unproblematic. In seven countries the debate has been limited: either one-way information from government to stakeholders, or not all stakeholders have been involved. Thirteen countries mention a debate that has been more thorough: more or less thorough rounds of consultation, even trying to reach a consensus and implementation by means of collective agreements.

Both Ministries of Transport and Ministries of Labour were equally involved. The employers’ organisations were more often involved in the process than the employees’ organisations. The debate has been the strongest in the middle and northern European countries.

When we look into the different views, we might suggest that part of the delay in the implementation of the Directive into national legislation is due to the process of consultation in some of the countries where there has been a debate trying to reach consensus.

Another explanation can be found in the problems the countries encountered with the implementation.

Most part of the debate was directed towards the used definitions of working time, in particular the periods of availability. This definition is perceived as unclear and/or does not correspond with the current practice in national legislation. The distinction between working time not devoted to road transport activities and periods of availability is not an easy one. Also, the matter of payment for the different activities is discussed. Apart from difficulties in defining the different activities, also the calculation of the average working time was part of the debate. And, of course, the limits that needed to be set, when these limits were not corresponding to the current practice of long working weeks.

Another part of the debate concerned the possible impact of the Directive on the sector and the profession. This debate was directed towards the expected positive or negative effects on sector and profession of the limitation of the working week to 48 hours.

There are diverging views on the expected impact: both positive and negative effects are expected. Some stakeholders expect an improvement of the general working conditions, of health and safety and less road accidents. Some stakeholders expect negative impacts on the cost-effectiveness of road transport companies or on the income of the professional drivers. Also, negative effects on the labour market are expected when more drivers are needed for the same amount of work. Other respondents are more optimistic and believe that a new organisation of work might attract new groups of workers.

Finally, problems were encountered with regard to enforcement. Part of the problem is the vagueness of definitions, which leave room for interpretation and the translation of these definitions into company administration. Another problem with enforcement mentioned is a lack of inspectors.

There has not been a large debate on the implementation of the rules on night work. Either Member States have used their own already existing - or more strict - rules, or rules on night work were added to national legislation.

5.5.2 *The inclusion of self-employed drivers into the Directive*

Only two countries mention the inclusion of the self-employed as one of the major issues in the implementation process of the Directive. Most countries have postponed this debate to the period after the initial transposition.

We have, however, asked the stakeholders for their views on the inclusion of the self-employed. It then appeared that this issue has been discussed in at least 13 countries.

In the discussion on the inclusion of the self-employed, a broad range of negative and positive impacts are brought to the forefront. We have presented them separately for the perceived impact on (road) safety, the profession and the sector.

Of the stakeholders that answered this question, 34% expect that the inclusion of self-employed will lead to higher health and safety and 26% expect a positive impact on road accidents. There are two viewpoints with regard to (road) safety:

- On the one hand, stakeholders believe that a reduction of working hours must lead to better health and safety and fewer accidents, in particular in those countries where the majority of drivers is self-employed;
- On the other hand, stakeholders find the Regulation 3820/85 on driving time and rest periods more appropriate and sufficient for the improvement of road safety. There are even stakeholders that believe that road safety will decrease, because they expect more trucks on the road.

Of the stakeholders that answered this question, 20% expect a positive impact on working conditions, 16% expect a negative impact on the business of the self-employed.

With regard to the impact of inclusion on the profession, there are also two viewpoints:

- On the one hand, stakeholders feel that the self-employed need protection against pressure from larger companies and clients. These stakeholders fear that the

amount of self-employed will grow, and that there is a need for a protective system against fake self-employment;

- On the other hand, stakeholders believe in the right of self-determination for the self-employed. They feel that they can protect themselves and choose to be self-employed. These stakeholders fear that the self-employed drivers will not be able to survive when included.

Of the stakeholders that answered this question, 16% expect that competition will be equalized when self-employed are included. There are two viewpoints with regard to the impact on the sector:

- On the one hand, stakeholders believe in unfair competition between self-employed and companies, when they are not included. They believe that this would give a competitive advantage to the self-employed. They also believe that the number of self-employed will grow. These are arguments pro inclusion;
- On the other hand, stakeholders believe that the self-employed will not be able to survive and that inclusion would mean unfair competition, since larger companies have more opportunities to organise work according to the new rules. These stakeholders also believe that other aspects, such as open borders, are more important for competition within the sector. These are arguments contra inclusion.

6 Results: Road transport industry, profession, social aspects, road safety and night work: analysis of available data sources

6.1 Introduction

In this chapter an assessment is made of the existing situation in the EU as to the characteristics of the sector (including conditions of competition), the profession (including working environment and social aspects), road safety and night work. In Annex 8 the plan for analysis is described and in Annex 9 an assessment is made of the available data sources. As we have discussed in these Annexes and in Chapter 3, there are some limitations with regard to the data that we have to accept. In particular, we cannot evaluate any impacts of the Directive, since the Directive has only recently been implemented and the most recent data are from 2004. What we will do in this chapter is summarised in Table 6.1.

6.2 Analysis of road transport industry structure and conditions of competition

The objective of the analysis of the road transport industry structure, including the conditions of competition, is the assessment of the situation regarding the national structure of the road freight transport industry, both freight and passenger transport within the EU. In paragraph 3.4 is referred to some limitations of the analysis presented. In Annex 8 a detailed description of the method used in the data analysis is presented and in Annex 3 the country reports are presented which are used to provide the data for the analysis presented here.

6.2.1 *Description of the existing situation*

This paragraph deals with the existing situation of the structure of the road freight transport industry in Europe (EU-25). For each country the following is presented:

- The number of firms active in the road freight transport industry;
- Employment in road freight transport;
- The number of self-employed drivers;
- Number of firms and employment according to size classes;
- Growth patterns of the number of road freight transport firms and employment in the road freight transport industry.

Table 6.2 gives an overview of the total number of enterprises in the road freight transport industry and the number of self-employed drivers (see also figure 6.1). The results are categorised into North, Middle and South European countries and New Member States.

When looking at the number of enterprises, the large number of enterprises in Spain, Italy and Poland are striking, compared to - for instance - the United Kingdom, France or Germany. This is a first indication of a rather scattered or fragmented structure of the road freight transport industry in countries like Spain, Italy and Poland, in which employment is concentrated in small firms (1-5 employees), in contrast to the United Kingdom, where employment is concentrated in the largest firms (>50 employees).

Table 6.1 Summary of data analyses

Topic	Description of the current situation	Evidence of the (possible) consequences of the distinction between self-employed and worker	Insight into the impact of the implementation of the rules on working time and night work
National structure of the road transport industry, including conditions of competition	National data (1995-2005): <ul style="list-style-type: none"> • Number of firms in road freight transport • Employment in road freight transport • Number of self-employed drivers • Number of firms according to size • National and international markets shares • Ageing workforce 	Description of different trends and country profiles, based on national data: <ul style="list-style-type: none"> • Growth patterns of number of firms and employment • Autonomous trends towards consolidation or fragmentation in the industry 	
The road transport profession (working environment and social aspects)	EU-25 data 1996-2000: <ul style="list-style-type: none"> • Working hours (duration, irregularity, night work) • Working environment (skill development, monotonous tasks, job control, job demands, ambient conditions, physical load, violence) • Health and safety • Social aspects (salaries and work life balance) 	Analysis of differences between self-employed and employed drivers on aspects of working hours, working environment, health and safety and social aspects	Analysis of data (and literature) on the relationship between working hours and night work and other aspects of the working environment and social aspects
Road safety	Number of road accidents with professional drivers involved (EU-15, Germany, France, The Netherlands, Spain and the United Kingdom, 2002)	No data available	Study of the literature on the relation between working hours, night work, fatigue or sleepiness and accidents at work.

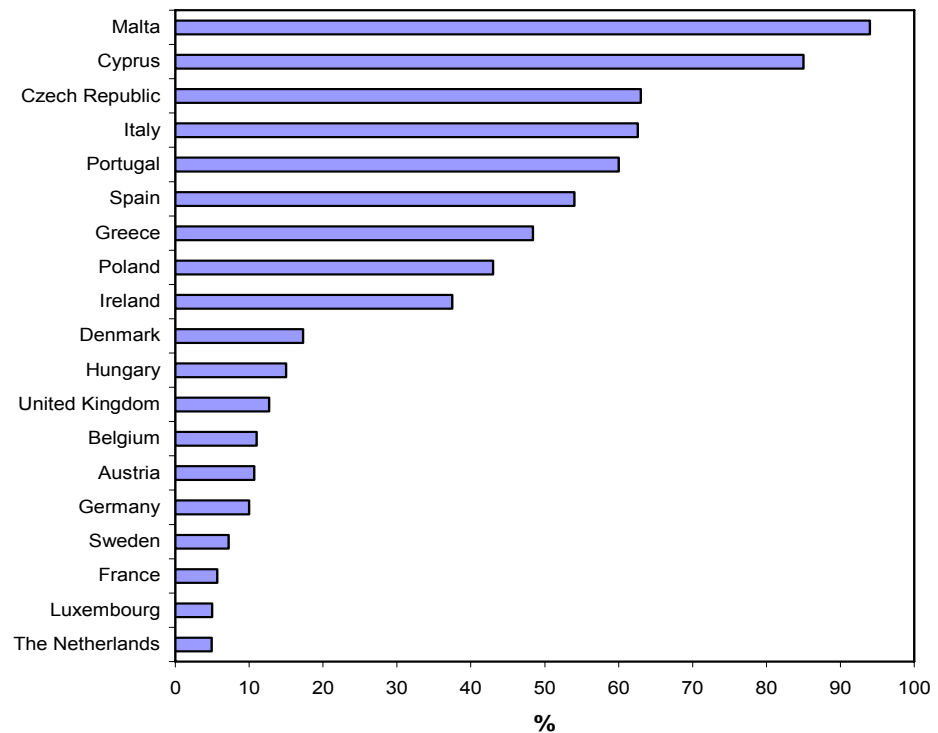


Figure 6.1 Self-employed drivers as a percentage of total employment in the road freight industry in the EU-25⁴

The number of self-employed drivers shows large differences. In countries like the Netherlands, France or Luxembourg the number is small, some 5% of total employment in the road freight transport industry. In most Middle European countries the share of self-employed is in the 10-12% range, with Ireland being a clear exception. On the other hand, in countries like Greece, Italy, Portugal, Cyprus and the Czech Republic, the share of self-employed is substantial: 50-85% of the total employment in the road freight transport industry. Based on a number of sources - amongst others IRU Fact sheets (2003) and Université Catholique de Louvain (2004) - the number of self-employed in the New Member States is estimated to be high to very high - more than 50% of the total workforce in the industry -, but specific estimates in the share of self-employed in most New Member States are lacking.

The structure of the road freight transport industry in each country is influenced by three main characteristics:

- Economic activity in the national market; a large home market relates to a large share of the national road freight transport industry within the EU;
- Economic activity in international markets; this relates to a large share in the EU-road freight transport industry and will also have an impact on the size of the national road freight transport industry;
- Characteristics of the logistics market; in a number of countries a small number of large integrated logistics service providers dominate the market. Other countries have markets in which these large firms are absent and in which a large number of companies restrict themselves to road freight transport instead of integrated logistics services dominate the market.

⁴ Finland, Estonia, Lithuania, Slovakia and Slovenia: no data. Source: Table 6.2.

Table 6.2 Number of enterprises, employment in the road transport industry and the share of self-employed enterprises or drivers in EU-25, 2003

	Numbers *,000			Self-employed drivers (%)	
	# Enterprises	# Employees	Employees/ Enterprise	Enterprises	Employees
<i>North</i>					
Denmark	7,3	36,0	4.9	–	17.3 ^a
Finland	11,2	38,0	3.4	–	–
Sweden	8,1	50,8	6.3	–	7.2 ^b
<i>Middle</i>					
Austria	6,5	55,3	8.5	–	10.7 ^c
Belgium	9,2	54,7	5.9	–	11
Germany	46,1	403,6	8.8	–	10
Ireland	3,4	12,6	3.7	–	25-50
Luxembourg	0,4	6,8	17.0	–	5
Netherlands	13,7	129,8	9.5	46.6	4.9
United Kingdom	35,7	282,6	7.9	–	12.7
<i>South</i>					
France	38,7	345,3	8.9	–	5.7 ^d
Greece	15,4	105,1	6.8	–	48.4 ^e
Italy	111,4	270,5	2.4	–	62.6
Portugal	6,2	50,0	8.1	–	(60) ^f
Spain	126,5	336,7	2.7	69.3 ^g	28 ^g
<i>NMS</i>					
Cyprus	1,9	2,2	1.2	–	85 ^h
Czech Republic	55,5	141,8	2.6	–	63 ^g
Estonia	1,4	–	–	–	–
Hungary	5,6	31,2	5.6	–	10-20 ^j
Latvia	1,2	12,0	10.0	–	–
Lithuania	2,5	24,6	9.8	–	–
Malta	–	2,2	–	–	94
Poland	85,0	197,0	2.3	–	43 ^j
Slovakia	9,9	21,4	2.2	–	–
Slovenia	0,9	6,7	7.4	–	–

Numbers: Austria, UK, Spain: 2002, Denmark, Germany, Luxembourg: 2001, Greece: 1995 & employees: NACE 60, Ireland: 1998, Portugal: 1999, Italy: employee data: 1997.

^a 2001 & NACE 60.2

^b 1999

^c 1999, NACE 602

^d 1994 ('transport/communication')

^e 2002 NACE 60

^f estimation based on IRU data for total transport sector

^g 2001

^h 2000

^j estimation: see country report.

Source: country reports.

In the next sections more information is presented on these characteristics.

National market share road transport in EU-countries, 2000-2004

The largest national markets for road freight transport (expressed in ton-kilometres) in 2004 are Germany, France, Italy, Spain and the UK (Table 6.3). The main explanation is the fact that these five countries have the largest populations and the largest economies in the EU-25. The amount of ton-kilometres transported is a crude indicator of the economic activity in a country.

Table 6.3 National market shares road freight transport industry of EU-25 countries (ton-kilometres, 2000 and 2004)

Country cluster	Country	National market shares in EU-25			
		2000 (%)	2004 (%)	2000 (%)	2004 (%)
North	Denmark	1.03	0.90	6.56	6.04
	Finland	2.59	2.34		
	Sweden	2.94	2.80		
Middle	Austria	1.16	1.06	41.86	39.88
	Belgium	1.85	1.66		
	Germany	21.14	19.89		
	Ireland	0.77	1.13		
	Luxembourg	0.04	0.04		
	Netherlands	2.94	2.90		
	United Kingdom	14.00	13.20		
South	France	15.23	15.34	43.74	45.41
	Greece	1.87	1.76		
	Italy	14.78	13.55		
	Portugal	1.60	1.49		
	Spain	10.26	13.27		
New Member States	Cyprus	0.12	0.09	8.04	8.62
	Czech Republic	1.33	1.37		
	Estonia	0.07	0.13		
	Hungary	1.10	0.94		
	Latvia	0.14	0.21		
	Lithuania	0.14	0.19		
	Malta	–	–		
	Poland	4.48	5.03		
	Slovakia	0.48	0.46		
	Slovenia	0.18	0.20		

Source: Eurostat/Country reports

An increase of the national market share may relate to increased national macro-economic growth. Ireland, for instance, realised an annual average growth in its GDP of 7.7% in the years 1992-2002 explaining its increase of the national market share of ton-kilometres. GDP-growth in the UK was only 2.8% in the years 1992-2002, one of the factors explaining the loss of national market share in the EU. Other factors explaining the national market share of the road freight industry are (Kuipers et al., 2005):

- The industry structure of a country (the amount of industries dependent on road freight transport for their operations);
- The export orientation of the economy; countries with a high trade-ratio usually have a large international market share. Germany and the Netherlands are examples of this type of countries;
- The competitive position in a country of alternative transport modes (rail, inland waterways, shortsea shipping, pipelines);
- The efficiency of the national road freight transport industries;
- The innovative capacity of the road freight transport sector and logistics sector;
- The amount of de-industrialisation of the national economy;
- Factors related to the physical environment of the country.

The national market share of the southern EU-countries - Spain in particular - and the New Member States increased in the EU-25 as a whole (Table 6.3).

International market share road transport in EU-countries, 2000-2004

The structure of the national road freight transport industry in the different EU-countries is also related to the international market share. The dominant and increasing position of the New Member States in the EU-25 market share in international road freight transport is striking when assessing the development of international market shares (Table 6.4). In the year 2000 this market share was already 19.7% and increased towards 23.6% in 2004. The Polish road freight transport industry showed a dominant growth rate in market share from 6.4 to 8.5%. The Northern (Denmark) and Middle European countries (Belgium, the Netherlands and the UK) lost market share. In the southern European countries France saw a large decrease in its market share, while Spain increased its market share. The growth of total employment in road freight transport activities in Spain is related to this growth in international transport. In the international market, Spain became the number two in the EU-25, after Germany. Germany and Spain are the countries with the biggest market share in international transport, 13.8% and 12.8% respectively in 2004. These are countries with both a large national as well as a large international market share. When comparing the national market share with the international market share, a number of countries are showing a much larger market share in international transport than in national transport; measured in the share of ton-kilometres realised. Luxembourg and Lithuania are the most striking examples. These two countries realise 0.04% and 0.19% of all national ton-kilometres within the EU-25, but are responsible for an international market share of respectively 1.74% and 1.96% (compare Tables 6.3 and 6.4). The production of road freight transport services for strictly national users is not important compared to transport for international users in these countries. Countries in which the market share of international transport is much more important than for national transport are - next to Luxembourg and Lithuania-: Denmark, Austria, Belgium, the Netherlands, Portugal, the Czech Republic, Estonia, Latvia, Lithuania, Slovakia and Slovenia. Poland also has a relatively high international market share (8.5%), but the Polish road freight transport sector is also dependent on the national market (5.0%).

Factors responsible for small countries having a relatively large market share are:

- A number of countries have a transit economy, in which large amounts of goods arrive via seaports, are stored in (European) distribution centres and are re-exported to other EU-countries by road. Belgium and the Netherlands are examples of these countries;
- Some countries have characteristics of transit-economies related to their location, for instance Austria. Austria has developed itself in a transit-country in which transport-flows coming from southern and western European origins are transported to East-European destinations;
- Countries like Estonia, Lithuania or the Czech Republic - and in addition other New Member States - have a competitive advantage in European road freight transport because of the low costs related to their carriers;
- Heavy foreign investment in New Member States, both in production facilities as in logistics infrastructure like distribution centres resulted in additional transport flows for export markets. Large industrial and logistics parties from American, Asian and West European origin have invested in these countries.

Table 6.4 International market shares road freight transport industry of EU-25 countries (ton-kilometres, 2000 and 2004)

Country cluster	Country	National market shares in EU-25			
		2000 (%)	2004 (%)	2000 (%)	2004 (%)
North	Denmark	3.10	2.44	5.13	4.24
	Finland	1.03	0.97		
	Sweden	1.00	0.83		
Middle	Austria	5.41	5.20	43.48	40.49
	Belgium	7.46	5.53		
	Germany	12.92	13.84		
	Ireland	0.93	0.76		
	Luxembourg	1.72	1.74		
	Netherlands	11.44	10.82		
	United Kingdom	3.60	2.60		
South	France	9.73	6.40	31.55	31.51
	Greece	0.36	0.29		
	Italy	6.29	7.52		
	Portugal	5.20	4.54		
	Spain	9.97	12.76		
New Member States	Cyprus	0.00	0.00	19.71	23.62
	Czech Republic	5.51	5.82		
	Estonia	0.76	0.70		
	Hungary	1.70	1.80		
	Latvia	0.79	0.97		
	Lithuania	1.48	1.96		
	Malta	–	–		
	Poland	6.44	8.53		
	Slovakia	2.22	2.54		
	Slovenia	0.81	1.30		

Source: Eurostat/Country reports

The EU-25 road transport industry categorized in size classes

By looking at the number of firms and the number of employees active in the road freight transport industry, it became clear (see Table 6.2) that employment in the road freight transport in some countries was concentrated in a relatively small amount of firms. In the UK for instance, 282,6 thousand employees were working in 35,7 thousand enterprises (including self-employed, see Table 6.2). That means on average an employment of 7.9 employees for each enterprise. In Poland on the other hand 197,0 thousand employees were working in 85,0 thousand enterprises, resulting in an employment of 2.3 employees per enterprise (see Table 6.2). The structure of the road freight transport industry in the UK therefore is quite different from the structure of the Polish road freight transport industry. The position of the self-employed drivers in both countries is also quite different: 12.7% of the workforce in the UK and 43% of the workforce of the Polish road freight transport industry.⁵

⁵ Data on the share of self-employed in the road freight industry in Poland are lacking. Based on qualitative estimates (Universite Catholique de Louvain, 2004), the number could also be higher.

Table 6.5 Structure of the road freight transport industry in EU-25 countries, shares of enterprises and employment segmented in size classes, percentages, 2003

	Road freight transport enterprises, by number of employees (%)					Employment in road freight transport enterprises, by number of employees (%)				
	1-5	6-9	10-19	20-49	>50	1-5	6-9	10-19	20-49	>50
<i>North</i>										
Denmark ^d	74.3	13.1	7.2	4.4	1.0	22.8	16.6	18.7	25.2	15.8
Finland	88.0	6.2	4.2	1.3	0.4	40.9	12.9	16.0	10.4	19.8
Sweden	68.8	16.6	8.7	4.3	1.6	20.6	17.3	18.5	20.0	23.7
<i>Middle</i>										
Austria ^a	79.8		11.6	6.4	2.2	27.4		18.1	22.4	32.1
Belgium ^b	69.2	27.4	3.0	0.4	0.0	–	–	–	–	–
Germany ^e	59.9	16.4	14.9	7.3	1.6	–	–	–	–	–
Ireland ^e	84.8	8.1	4.9	1.9	0.4	41.7	15.3	16.8	14.7	11.6
Luxembourg	38.9	16.9	18.3	15.1	10.9	4.8	6.4	12.8	22.0	54.0
Netherlands	72.1	8.3	8.2	7.4	4.1	24.2 ^f		34.0 ^f		41.9 ^f
United Kingdom	83.1	7.4	5.8	2.4	1.3	19.6	7.0	10.3	11.5	51.7
<i>South</i>										
France	74.1	9.2	7.6	6.5	2.6	18.9	8.0	11.9	23.0	38.3
Greece ^c	95.2	4.3	0.3	0.2	0.0	–	–	–	–	–
Italy	85.4	5.4	2.5	–	1.4	54.8 ^d	11.2 ^d	11.4 ^d	–	22.7 ^d
Portugal ^f	89.2		6.3	3.2	1.3	52.2		12.4	13.7	21.7
Spain ^a	93.6	2.8	2.2	1.0	0.3	55.1	8.5	12.3	12.1	12.1
<i>NMS</i>										
Cyprus ^c	97.4	1.9	0.4	0.3	0.1	76.2 ^c	6.4 ^c	5.0 ^c	9.3 ^c	3.0 ^c
Czech Republic	93.3	2.8	2.3	1.1	0.1	66.3	11.2	9.3	8.3	4.9
Estonia	78.3		11.9	6.4	3.6	–	–	–	–	–
Hungary	71.7	15.4	7.7	3.6	1.5	12.5 ^d		5.9 ^d	10.0 ^d	71.6 ^d
Latvia	50.2	20.1	18.4	8.9	2.4	14.1	14.5	25.1	26.5	19.8
Lithuania	59.8	14.7	13.4	9.2	2.9	13.3	11.1	18.5	28.4	28.8
Malta	–	–	–	–	–	–	–	–	–	–
Poland	98.4		0.9	0.5	0.2	76.0		5.5	6.4	12.1
Slovakia	88.6	6.2	3.4	1.3	0.6	55.4	9.2	6.1	6.1	23.2
Slovenia	71.9	12.2	7.6	4.8	2.5	16.9	11.0	13.6	19.1	39.4

^a 2002; ^b 2001; ^c 1995; ^d 1997; ^e 1998; ^f 1999.

Source: Eurostat/Country reports

In Table 6.5 we present the structure of the road freight transport industry for the EU-25 countries for 2003 (except where indicated otherwise) in five size classes: 1-5, 6-9, 10-19, 20-49 employees and companies with 50 employees or more. The structure is presented both for the number of firms and for employment, and is based - as much as possible - on Eurostat data.

The structure of the road freight transport industry in the different EU-25 countries is dominated by small enterprises (1-5 employees: Table 6.5, Figure 6.2). In Poland, Cyprus, Greece, Spain and the Czech Republic over ninety percent of all enterprises are small. In most of the other countries 70-90% of all road freight transport firms belong to the smallest size category. Road freight transport in Luxembourg shows a relatively different structure. The smallest firms dominate, but the share of large firms is very high with 10.9%.⁶ Also the medium-sized enterprises are important in Luxembourg.

⁶ The data for Luxembourg are probably distorted by large companies based in Luxembourg for financial reasons and advantages related to fiscal advantages.

Germany, Estonia, Latvia, Lithuania, Slovenia and Hungary are countries characterised by a relatively large share of middle-sized enterprises in the road freight transport industry.

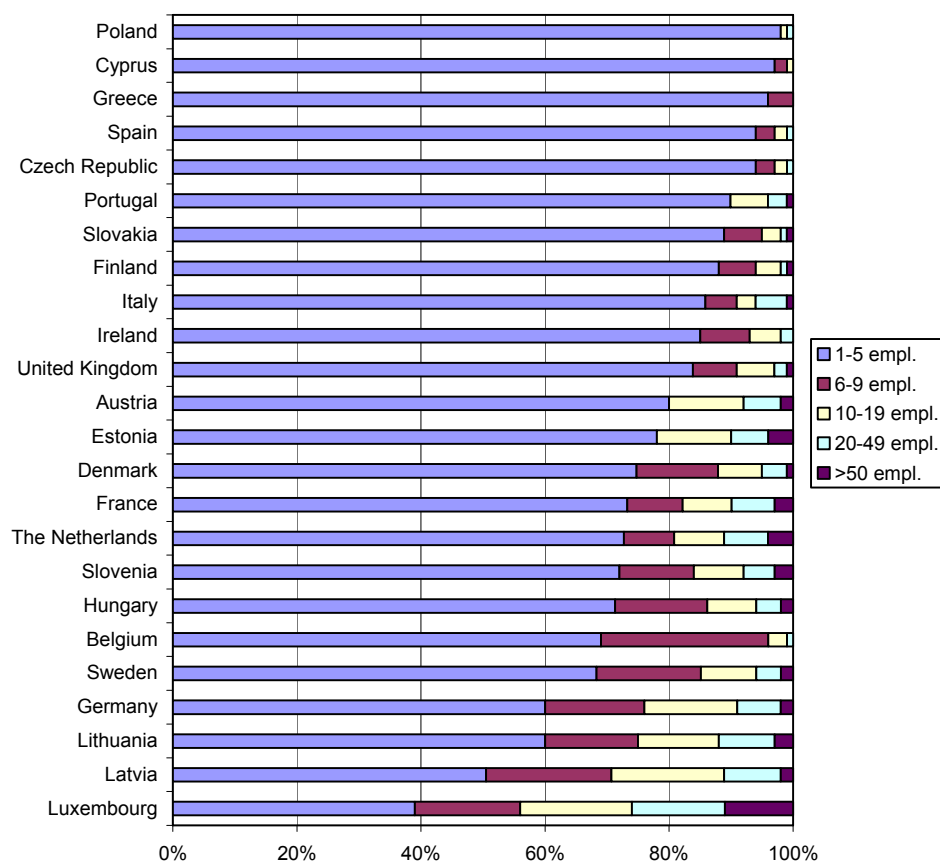


Figure 6.2 Road freight transport enterprises in the EU-25⁷, segmented in size classes (number of employees), 2003. Sources: Table 6.5

Italy, Portugal, Spain, Cyprus, the Czech Republic, Poland and Slovakia (and probably Greece) are countries where more than half of the employment in the road freight transport industry is concentrated in the smallest firms (1-5 employees, see Figure 6.3). In Hungary, Luxembourg and the UK in contrast more than half of the total employment is concentrated in the largest firms (>50 employees). Austria, the Netherlands, France, Lithuania and Slovenia also have a relative high percentage of employment concentrated in the largest enterprises.

The structure of the EU road freight transport industry is characterised by two different situations: fragmentation and consolidation

In Europe two different situations exist, on the one hand countries with a very fragmented structure, both in numbers of firms and employment. In these countries small firms are dominant. On the other hand countries with a concentrated structure characterised by employment concentrated in large firms. An important issue that comes forth out of this analysis is the dynamics behind this structure. Are some of the coun-

⁷ Malta: no data.

tries with a very fragmented structure heading towards a more concentrated or consolidated structure or is it the other way around?

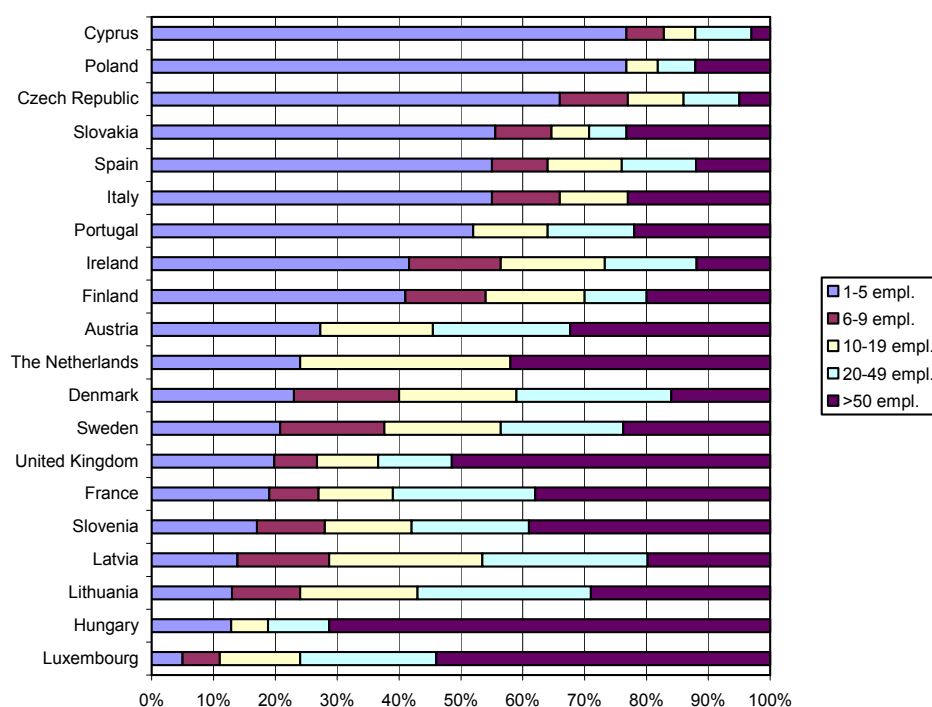


Figure 6.3 Employment in the road freight transport industry in EU-25⁸, segmented in size classes by number of employees, 2003. Source: Table 6.5

Growth dynamics in the EU-25 road freight transport industry

All countries presented - with Slovakia being “the exception that proves the rule” - show an increasing employment in road freight transport. Luxembourg showed the highest absolute increase (9.2% average annual growth: see Table 6.6), followed by Finland (7.7%), Ireland (6.4%) and Austria (6.0%). Spain and Poland - the countries that showed the highest increase in international market share (Table 6.4) - experienced an average growth in total employment of respectively 3.6 and 4.0%. This relates to the relatively large national markets in these two countries (Table 6.3).

When assessing the growth rate of the number of enterprises and employment in the road freight transport industries of the different EU-countries in the period 1995-2003 (Table 6.6), some countries show a clear scattered or fragmented structure of employment. In Estonia, Hungary, Latvia and Lithuania the number of road freight transport enterprises grew by 11-13% in the years 1995-2003, while employment growth increased in the 4-5% range. The Czech Republic and Slovenia also show a tendency to fragmentation of employment.

⁸ Belgium, Germany, Greece, Estonia, Malta: no data.

Table 6.6 Average yearly growth in number of enterprises and employment in the road freight transport industry, EU-25, 1995-2003, percentages

Country cluster	Country	Number of enterprises	Employment
North	Denmark	–	–
	Finland	0.1	6.8
	Sweden	-0.4	1.6
Middle	Austria ^a	4.8	6.0
	Belgium	1.1	–
	Germany ^b	4.1	–
	Ireland ^c	7.0	6.4
	Luxembourg ^d	4.0	9.2
	Netherlands	1.7	1.7
	United Kingdom ^e	-0.4	4.1
South	France	0.3	2.5
	Greece	–	–
	Italy	0.2	–
	Portugal ^f	1.9	5.4
	Spain ^g	-0.9	3.6
New Member States	Cyprus	–	–
	Czech Republic ^h	6.1	1.0
	Estonia ⁱ	11.1	–
	Hungary	12.2	5.5
	Latvia	10.9	4.1
	Lithuania	13.5	5.6
	Malta	–	–
	Poland	3.9	4.0
	Slovakia	-0.2	-2.6
Slovenia	3.5	0.7	

^a 1997-2002; ^b 1995-2001; ^c 1995-1998; ^d 1998-2001; ^e employment: 1995-2002; ^f 1995-1999; ^g 1999-2002; ^h employment: 1995-2000; ⁱ 1997-2005

Source: Eurostat/Country reports

Finland, Sweden, Luxembourg, France, the UK, Portugal and Spain on the other hand showed a much larger employment growth, compared to growth in the number of enterprises. In these countries a consolidation process can be identified. Employment is growing, but these employees are working in a relatively smaller number of companies. Table 6.7 shows the details of the growth structure in road freight transport in the EU-25 countries.

When looking at the details of the growth patterns, the conclusions about consolidation of most countries in North, Middle and South Europe are confirmed (Table 6.7). Growth of the number of smallest companies (1-5 employees) in countries like Finland, Sweden, the UK, France and Spain was negative, while the growth of the largest companies (>50 employees) was high. This pattern can also be observed with respect to the growth in employment: the size category of the largest companies showed clearly the highest growth rate, indicating a further consolidation of employment in the largest companies. Austria and Ireland are exceptions to this growth pattern, both countries showed growth in small as well as in large companies.

In the New Member States, the road freight transport industry is heading towards fragmentation: the number of small companies is growing, and employment growth is concentrated in the smallest size categories (Table 6.7). The share of the largest companies is decreasing, measured both in number of companies as in employment. Employment growth in the largest companies in all New Member States is decreasing in

the 1995-2003 period. Also some exceptions exist in this general trend, like the Czech Republic.

Table 6.7 Average yearly growth of number of enterprises and employment in the road freight transport industry in EU-25 categorized in size classes, 1995-2005, percentages

	Growth of number of enterprises					Employment growth				
	1-5	6-9	10-19	20-49	>50	1-5	6-9	10-19	20-49	>50
<i>North</i>										
Denmark	-	-	-	-	-	-	-	-	-	-
Finland	-0.6	5.4	6.9	6.5	4.9	7.0	5.5	6.8	5.7	7.7
Sweden	-1.1	1.1	1.3	2.4	4.3	-0.9	1.2	1.4	2.4	4.0
<i>Middle</i>										
Austria ^a	9.3	2.4	2.3	4.9	8.0	14.8	2.1	2.3	5.6	12.1
Belgium	-	-	-	-	-	-	-	-	-	-
Germany ^b	-	-	-	-	-	-	-	-	-	-
Ireland ^c	7.2	4.7	7.3	5.3	2.0	7.0	4.7	7.5	5.5	6.3
Luxembourg ^d	1.3	5.8	-0.4	7.3	12.2	0.5	6.4	-0.7	4.4	17.0
Netherlands	3.2	-1.2	-0.6	1.1	2.7	-	-	-	-	-
United Kingdom ^e	-0.9	2.1	0.2	-2.4	1.5	0.4	1.6	0.0	0.4	8.9
<i>South</i>										
France	-0.1	0.4	1.0	2.4	3.6	1.4	0.8	0.9	2.3	4.1
Greece	-	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-	-
Portugal ^f	1.7		3.0	3.2	4.0	4.4		5.3	5.4	8.0
Spain ^g	-1.2	2.8	4.3	5.8	12.4	1.0	3.8	4.9	6.2	15.2
<i>NMS</i>										
Cyprus	-	-	-	-	-	-	-	-	-	-
Czech Republic ^h	6.7	-3.7	2.4	2.6	10.7	1.4	1.0	-0.2	-0.3	-0.1
Estonia ⁱ	14.4		8.9	-7.2		-	-	-	-	-
Hungary	12.7	7.3	4.5	-0.8	-2.5	-	-	-	-	-
Latvia	9.0	16.0	26.7	7.4	-6.1	17.8	15.3	26.4	5.7	-8.4
Lithuania	12.7	22.4	18.9	14.2	-0.6	14.1	22.7	18.4	12.8	-4.1
Malta	-	-	-	-	-	-	-	-	-	-
Poland	4.0		8.6	2.8	-7.7	7.1		3.9	-1.0	-3.8
Slovakia	-0.6	5.8	2.6	-0.8	5.1	5.8	-7.1	1.5	-0.5	-0.7
Slovenia	3.4	4.7	4.3	7.2	-3.5	4.0	4.8	4.8	7.5	-3.8

^a 1997-2002; ^b 1995-2001; ^c 1995-1998; ^d 1998-2001; ^e employment: 1995-2002; ^f 1995-1999; ^g 1999-2002;

^h employment: 1995-2000; ⁱ 1997-2005

Source: Eurostat/Country reports

6.2.2 Analysis: consolidation and fragmentation

The structure and growth dynamics of the European road freight transport industry show two distinctive trends. The first trend is a process of consolidation in most countries in the North, Middle and South of Europe. The second trend is a process of fragmentation in most New Member States.

Consolidation is the result of an increase in the scale of the enterprise. Small - often family owned - enterprises are bought by other, often larger, firms or merge with other firms. The result is an increase in firm size. Consolidation is driven by issues like the continuity of the business, market position or market opportunities, shareholder policies or other strategic issues, interest in the company by potential buyers, etc. (Van

Klink, 2002). Fragmentation is happening when a larger firm disintegrates into smaller firms - like the breaking up of the former state-owned firms in many countries -, or when only the smallest firms - self-employed drivers for instance - are growing.

Although some individual countries may not fit in the trends identified and growth rates differ between countries - some countries like Luxembourg being extreme examples - the majority of EU-25 countries show consolidation or fragmentation of their industry structure. In this paragraph we present an analysis of this trend.

Consolidation

The consolidation trend identified in the road freight transport industry in most countries of North, South and Middle Europe relates to four structural trends.

1. *Rationalisation of suppliers*

First, a number of former road freight transport companies is developed into integrated logistics service providers. Road freight transport is only one of the activities of these logistics service providers, next to warehousing, forwarding or even rail transport. In some cases, traditional 'road freight transport companies' have outsourced physical road transport activities to suppliers. These integrated logistics service providers want to perform 'one stop shopping' activities for their important customers, the shippers. Because these shippers have gone through a process of rationalisation of their suppliers in the 1990s in which they reduced the number of their suppliers, logistics service providers responded with rationalisation processes as well. Large industrial parties downsized the number of suppliers of transport services. In the petrochemical industry, for instance, the number of road freight transport companies providing services for a typical large chemical firm have been reduced from 40-200 to 4-10 in the last decade (Kuipers, 1999).

2. *Increasing professionalism of the logistics industry*

Second, starting from the 1990s, shippers have outsourced a large number of logistics activities, amongst others their former own-account transport but also warehousing or more advanced logistics activities like replenishment and planning functions. Road freight transport companies responded to this outsourcing by becoming 'industrial partners' and by transforming their operations towards increasing levels of professionalism (Kuipers et al., 2002). Logistics suppliers increased their knowledge of the processes of their customers and became aware of the needs of their customers' customers. Larger firms in particular were suited to the needs of becoming an industrial or logistics partner because they were able to invest in high-educated workers. In addition, because of the increased need of supply-chain transparency, visibility and connectivity (Vermunt & Binnekade, 2000), heavy investment in information and communication technology was needed. The larger road freight transport companies and logistics service providers were able to make these investments much more easily than smaller companies.

3. *Geographical expansion of shippers*

Third, in the 1990s shippers were expanding their operations increasingly from the regional or the national geographical level towards the European or global level. They demanded from their logistics service providers to invest in European or global logistics networks. Only the largest companies were able to operate these networks in a profitable way because of the large amount of cargo flows needed. Eastern Europe is an important region for investment in production facilities by many Western European firms. Logistics service providers and road freight transport companies also moved with facilities to the Eastern European market to continue their relations with these firms. In addition, quite a number of logistics service providers and road freight transport firms invested in companies in East-

ern Europe to be able to realise low cost advantages and to anticipate on the free cabotage market in the EU.

4. *Competition and economies of scale*

Fourth, because of the competitive nature of the (international) road freight transport industry it is very important to search for ongoing means to improve the efficiency of operations. Further efficiency improvements are very difficult to realise for smaller businesses. Small companies have already reached the limits of efficiency improvement and they do not have the means to invest in ICT-systems and other technology, aimed at increasing the efficiency of operations. Therefore, consolidation and the search for increasing economies of scale are the main strategies to improve the financial performance in the sector. This results in the growth of larger companies (Berkleef, 2005).

Self-employed drivers: increasing the flexibility of larger transport firms

Self-employed drivers mainly work for larger transport companies in most countries of Middle Europe (including France) in which the structure of the sector is heading towards consolidation. It is estimated that 70-80% of the customers of self-employed drivers are large transport companies and only 20-30% are shippers. Self-employed drivers offer the much needed flexibility in capacity for these larger transport firms (De Wit & Van Gent, 1999). By using self-employed drivers larger firms become less vulnerable to shortfalls in demand. The share of self-employed drivers - 5-12% in most of the countries of Middle Europe and in France - therefore reflects the need for flexibility. Because of this typical flexibility function and because of the four trends presented before, it is expected that the share of self-employed drivers will be relatively stable in the future. By increased growth, the middle-sized companies will show a decreasing growth rate in the future, the larger companies will continue to grow and the smallest firms, in particular the self-employed, will remain stable.

A much discussed issue is the so called 'false self-employed', drivers appearing for most purposes to be employees in that they work regular hours for the same shippers or transport firms on a long-term basis. However, for various reasons (e.g. to reduce tax or health and safety liabilities) they are technically self-employed. When self-employed drivers have close relations with logistics service providers, they may become - intentional or not - false self-employed.

Fragmentation

The fragmentation trend identified in the road freight transport industry in most New Member States is mainly related to the liberalisation in the Eastern European countries after 1989. In most countries this liberalisation process resulted in a large number of new transport enterprises. The former state-owned firms have been broken up and in many cases local branches of these state-owned firms have gained independence. The increasing number of very small enterprises resulted in heavy competition and oversupply. Many of the new road freight transport firms did not have appropriate professional qualifications. In addition, the stock of trucks used by the large amount of new firms was in a poor technical condition. This resulted in complaints of other countries when these trucks crossed the borders. A number of New Member States therefore introduced some new forms of regulation in which permits or quotas were used in international road freight transport and in which conditions and criteria of access were introduced for firms entering the market, such as proven professional qualifications, appropriate financial resources, no criminal record and vehicles meeting technical requirements (ECMT, 2002). Despite these new regulations, the number of small enterprises continued to grow.

Self-employed drivers in fragmented markets: the drive for low-cost operations

A large share of these small enterprises consists of self-employed drivers. These self-employed drivers are active both on the national and on the international market. Self-employed drivers are able to operate a transport business at very low cost to the customer, which is the main rationale behind the large share of self-employed drivers. Rydskowski (in: CEMT, 2000) states that almost half of the total numbers of carriers in Poland have not more than one permit for international road freight transport. Therefore, the vast majority of carriers operating on the market of international transport are small firms with little capital backing or organisational capacity. The self-employed in the new Member States have a much more broader scope compared to the self-employed in Middle European countries.

We expect that the fragmentation-process in the road freight transport industry will not increase much more in the future because:

- The number of small companies, and the employment concentrated in small companies, already is very high;
- In a number of New Member States the number of firms with foreign capital is growing very fast. In general, these firms are relatively large compared to the enterprises of the New Member States;
- Of the introduction of stringent criteria for admission to the profession in terms of professional qualifications, training financial resources, etc.
- Economies of scale will also become relevant in the New Member States;
- Of already high levels of oversupply in most markets of New Member States, making it not very attractive to start an own business.

6.2.3 *Literature on seniority and shortage of personnel in the transport sector*

Age and seniority

In general the transport sector, as well as the freight transport by road is a sector with relatively few young and relatively many old employees (see Figure 6.4).

Some countries, in particularly Finland and to a lesser extent France and Sweden, have less older workers in freight transport. In general the employees in passenger transport are relatively old. On the other hand, working in the transport sector is not generally recognized as an 'old men's job'. It may be expected that older workers may develop health problems and leave the job (see e.g. Houtman et al., 2004) The data as presented here may underestimate the percentage of the workers below the age of 44 years, particularly in freight transport, since the self-employed are missing in the figures presented in Houtman et al. (2004). It can be expected that the self-employed are the more younger drivers, since it is to be expected that the older drivers may want to take less (financial, social benefits) risks themselves, and seek for jobs as an employee. Really young workers are, on the other hand, not expected to have the training to drive large vehicles or the capital to own such vehicles as self-employed. Another reason that the sector seems 'relatively old' may be that several of the countries could not provide data for the freight transport (4-digit-level) and present higher level information. We do know that the workers in passenger transport are generally older than those working in the freight transport. It is even known that when getting older, drivers tend to leave the heavy sector of freight transport to work in the 'better' (public or passenger) transport with a better access to social security and health care (Houtman et al., 2004).

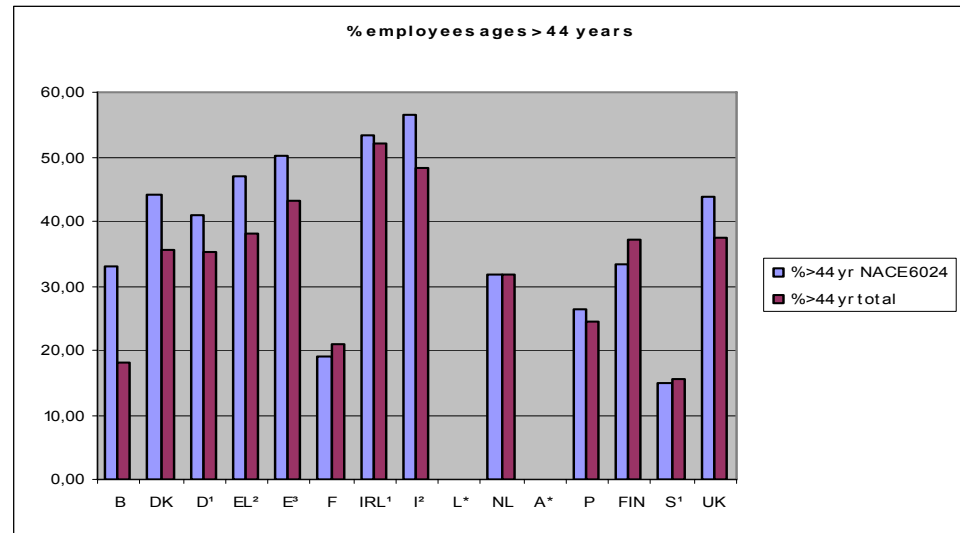


Figure 6.4 Percentage of employees of more than 44 years of age⁹. Source: Houtman et al., 2004

In most countries, there is a lack of data on seniority, the issue of being ‘experienced’ in the sector. In some countries, however, data on seniority are available (e.g. Portugal, Denmark, see Houtman et al., 2004), and indicate that the transport sector, and particularly the freight transport by road, has a low, though increasing level of seniority. This is interpreted as that a lot of knowledge and expertise is quite new and tempting to the sector, but it may also indicate a risk factor for keeping a business alive and going strong in this highly competitive and increasingly international market (Houtman et al., 2004).

Shortage of personnel

A shortage of personnel, particularly of drivers, is mentioned in almost all national reports that are discussed by Houtman et al. (2004). This shortage of personnel may be due to several reasons:

- The fact that being a driver is a hard job (to be discussed in § 6.3). The working conditions are tough, such as spending a long time away from home (in international transport), the long working hours (also in national transport) and the physical demands of the job (sitting in the same position for a long period of time, alternated with heavy work outside when loading or unloading the truck in all kinds of weather). The use of new technologies such as mobile phones and on-board computers, however, has considerably improved the working conditions since the driver can get support whenever difficulties may arise. In several national reports, it was stated that drivers prefer urban transport because that allows them to sleep at home. In other reports it was also stated that it are particularly the younger drivers who are active in international transport, but when getting older, they move into national, more local transport;
- The negative image of the sector, which is partly determined by the tough working conditions, but also by the fact that drivers have the image of low educated workers. Although the initial level of education is rather low, the employers

⁹ For some countries this age boundary could not be put at 44/45 years of age, but data of the sector and national data sets may both refer to another percentage, like 40+ or 50+.

* No data available; ¹ NACE I; ² NACE 60; ³ NACE 602

stressed that the drivers are adequately trained people, driving well equipped vehicles through good roads;

- When economy is or has been rising, the labour market flourished, and people had many alternative choices for ‘better’ jobs and thus do not choose this kind of a job with this negative image;
- In the old days, being a driver was an option to get to know different places. Nowadays people travel on their own, and have the money and time to see different places anyway.

6.2.4 *Situation of the self-employed, possible consequences of the inclusion/exclusion of self-employed*

In the paragraphs before, the existing situation of self-employed in the EU-25 countries has been presented. We identified two segments: first countries - Middle European countries in particular (Table 6.2) - where the share of self-employed was small and the self-employed are mainly used by large transport companies as a flexibility buffer. Second, countries - South European Countries and New Member States in particular - where the share of self-employed was large to very large and where self-employed are mainly used because of their low-cost potential. In this paragraph¹⁰ we elaborate on the effects of the structure of the road freight transport industry of the EU-25 of the inclusion/exclusion of the self-employed in the Directive.¹¹ The central theme of this section is whether the trends as identified above change in the future because of the inclusion/exclusion.

The structure of the road freight transport industry in the EU is characterised by three basic profiles (based on the Tables 6.2 and 6.5):

- I. Countries having a large share of self-employed drivers and a small share of employment in concentrated in the largest firms (>50 employees). Examples are: Ireland, Italy, Portugal, Spain, Cyprus, the Czech Republic and Poland;
- II. Countries having a small share of self-employed drivers and a large share of employment concentrated in the largest firms (>50 employees). Examples are: Luxembourg, the Netherlands, the UK, France and Hungary.
- III. Countries having a small share of self-employed drivers and a small share of employment concentrated in the largest firms (>50 employees). Examples are: Latvia, Lithuania, Sweden and Denmark.

In Figure 6.5 these three profiles are illustrated. The magnitude of the effects of inclusion or exclusion of self-employed drivers will be related to the share of self-employed drivers in the different countries. The effects will be relatively small in countries with a small share of self-employed drivers (profile II and III) and relatively large in countries with a large share of self-employed drivers.

¹⁰ In the literature consulted, we found no information on the relation between self-employed and the impact on the structure of the road freight transport industry. Definitive conclusions on this matter require additional empirical research.

¹¹ The ‘level playing field’ in competition between the different Member States is a very important factor with respect to the effects of inclusion/exclusion of self-employed. For being able to assess the impact, we assume that the self-employed working in the road freight transport industry in all EU-Member States will be either included or excluded. Next, we also assume that there will be ‘sufficient’ means of enforcement.

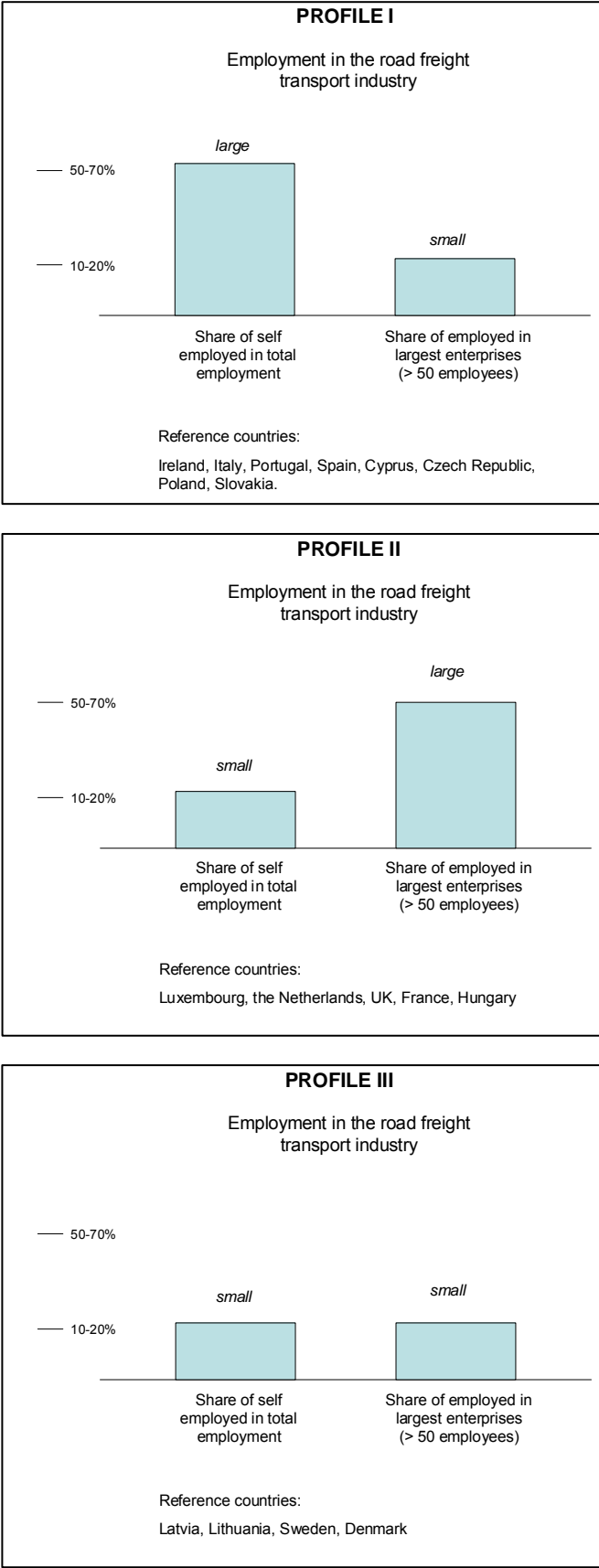


Figure 6.5 Three basic profiles representing the structure of the road freight transport industry in the EU-25

Next to the structure of employment, the dynamics in the structure of employment is also relevant: does the road freight transport sector face a process of fragmentation, or is the sector undergoing processes of consolidation? Based on the growth statistics of employment in road freight transport enterprises (Table 6.7) for each basic profile, a number of dominant growth profiles might be identified:

- I. Countries having a large share of self-employed drivers and a small share of employment concentrated in the largest firms (>50 employees):
 - *consolidation*: low growth (1-5% annual average growth) of the share of the smallest businesses (1-5 employees and self-employed drivers) and high growth of the share of the largest businesses (8-15%). Examples are Spain and Portugal;
 - *fragmentation*: high growth (5-10%) of the share of the smallest businesses and self-employed drivers and negative growth (-3/-5%) of the share of the largest businesses. Examples are Poland and Slovakia;
- II. Countries having a small share of self-employed drivers and a large share of employment concentrated in the largest firms (>50 employees):
 - *consolidation*: low growth (0-5%) of the share of the smallest businesses and self-employed and high growth (10-15%) of the share of the largest businesses. Examples are the UK and Luxembourg;
- III. Countries having a small share of self-employed drivers and a small share of employment concentrated in the largest firms (>50 employees):
 - *fragmentation*: high growth (15-20%) in the share of the smallest businesses and self-employed and a clear negative growth rate (-5/-10%) in the share of the largest businesses. Examples are Latvia and Lithuania.

The three basic profiles depicted in Figure 6.5 are moving towards four growth trends, illustrated in Figure 6.6. With respect to these growth trends, a consolidation trend is visible, starting from a low (profile Ia) and a high (profile IIa) share of employment in the largest enterprises. A consolidation trend is visible, starting from a high (profile Ib) and a low (profile IIIa) share of self-employed.

The basic profiles and the growth trends identified are the starting point to assess the possible consequences for inclusion/exclusion of the self-employed.

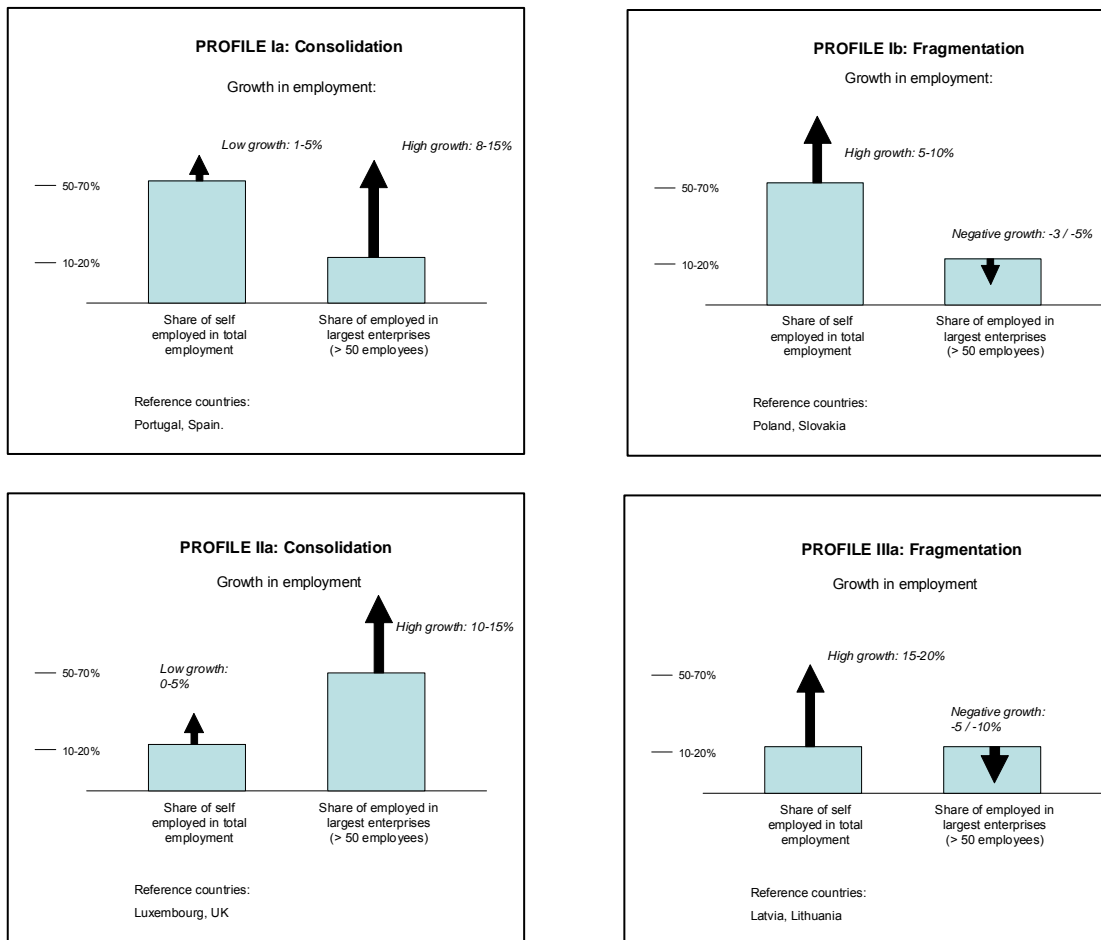


Figure 6.6 Four basic growth trends in the structure of the EU road freight transport industry, starting from three basic profiles

Continued exclusion of self-employed drivers: small increase in share of self-employed
When self-employed drivers remain excluded from the Working Time Directive this will have different consequences for the segments identified.

For self-employed in countries with low shares of self-employed drivers (profile II and III - mostly Middle European countries and some New Member States), the share of self-employed in the total road freight transport industry will show a small increase because of the continued exclusion. A strong growth of self-employed or increased fragmentation will not happen because of the continued consolidation in the road freight transport industry, with the exception of the already strong fragmentation trend visible in some New Member States (Profile IIIa: Figure 6.5). This increase in the share of self-employed in total employment in the road freight transport industry is happening because:

- Self-employed have a cost advantage compared to wage earners because of lower costs related to not being subjected to administrative procedures required by the Directive and because of the possibility of realising longer working weeks compared to other road freight transport firms;
- Self-employed will increase the attractiveness of being a self-employed driver relative to wage earners because of the enduring freedom with respect to the working times;

- Of their cost advantage, the required buffer capacity of self-employed in the road freight transport industry will increase. Competitive pressure of self-employed drivers from New Member States will increase, compared to self-employed drivers from other EU-countries because of their low labour costs.

The share of self-employed will increase, however this increasing share will not be very large because of:

- Barriers of entry for potential self-employed drivers, together with shortages on the labour markets in many EU-countries;
- The continuation of the consolidation trend: larger companies are well suited to anticipate on the Working Time Directive by technological and organisational innovations and a further consolidation trend might be observed because of the continued exclusion.

The effects of the continued exclusion of self-employed drivers will be larger in countries with high levels of self-employed drivers (profile I - mostly New Member States and countries of South Europe), because of the large relative importance of this segment. The road freight transport industry in some countries is dominated by self-employed drivers (Figure 6.1). The number of self-employed in countries with an already large share of self-employed will show a small increase. This increase will be relatively small because of:

- The already high share of self-employed in the countries mentioned (Table 6.2);
- A tight labour market and an ageing labour force in the road freight transport industry in a number of countries;
- Barriers of entry for self-employed drivers;
- Increased competition with self-employed drivers in Middle European countries;
- The logistics trend moving in the direction of consolidation also being relevant for these types of countries.

Inclusion of self-employed: small decrease in number of self-employed

When self-employed drivers are included in the Directive, this also will have different consequences for the segments identified.

For the self-employed in countries with low shares of self-employed drivers (profile II and III), the share in the total road freight transport industry will show a small decrease because:

- The costs of transport operations of self-employed will increase because of the reduced working time and because of the needed administrative formalities. But this cost increase is also happening to non-self-employed drivers and larger firms. Larger firms may be able to realise larger efficiency gains compared to the self-employed, because they are better positioned with respect to return cargo, etc. (Berkley, 2005). Self-employed may also react with innovative ways of information sharing between drivers and by making use of transaction-innovations, like making use of internet-auctions;
- Cost-advantages are only one of the factors relevant for the customers of self-employed drivers. The flexible buffer capacity the self-employed offer to their important customers must also be included in the comparison of (total) costs. Because of the need of this flexibility buffer together with a drive for the lowest costs, customers may start using low cost self-employed drivers from New Member States. But these low cost drivers are only used for relatively standard transport services, for instance container transport or transport between different warehouses. Transport of dangerous materials, transport with a high service content (for instance extreme reliability demands) or transport of very valuable goods will

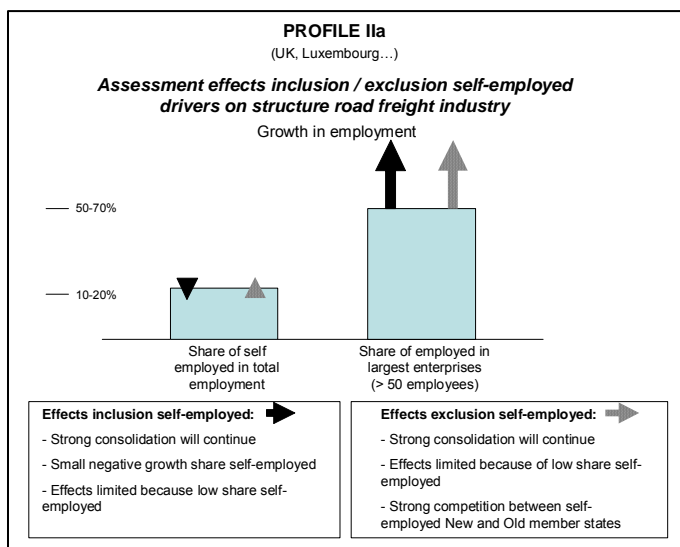
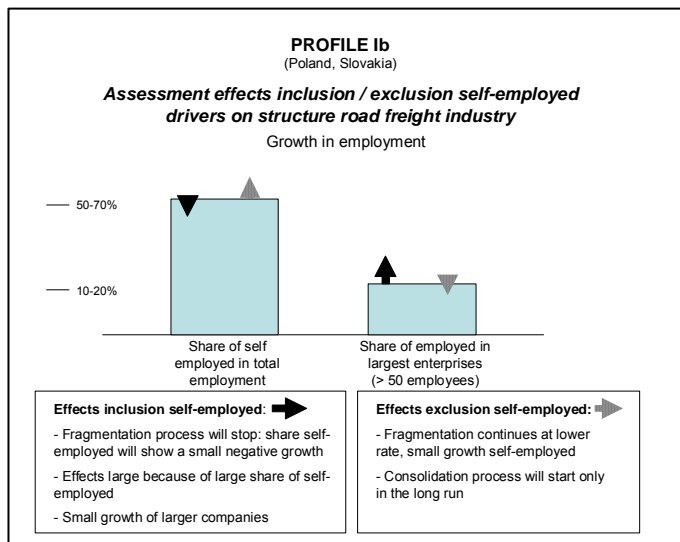
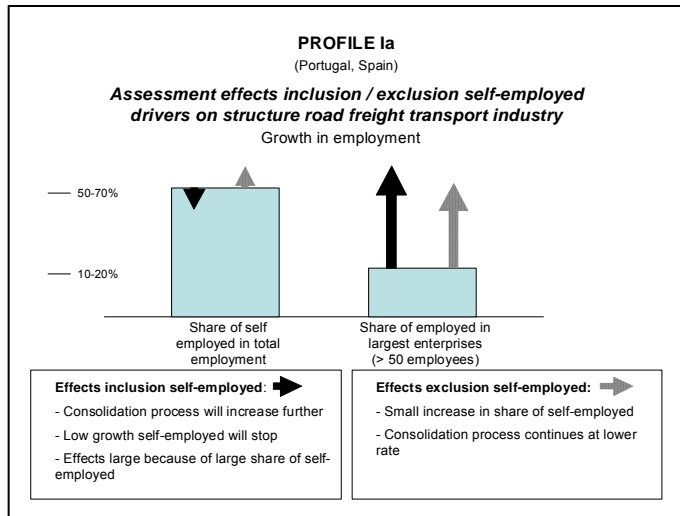
not easily be handed over to these low cost self-employed drivers. However, a part of the total transport market therefore will shift towards low cost self-employed;

- Because of the inclusion, the attractiveness of being a self-employed driver will diminish. Freedom related to working times is one of the important factors in the culture of the self-employed drivers in the transport industry. This will contribute to the existing shortage of truck drivers in many European countries, because potential self-employed drivers may become active in an other self-employed function category instead of starting to work as an employee for a large road freight transport firm. In addition to this the stringent criteria for admission to the profession in terms of professional qualifications, training financial resources, etc. will continue to act as a burden. Therefore, the share of self-employed also will diminish. Furthermore, this will also have an effect on the wages of drivers.

The effects of an inclusion for the self-employed drivers in countries with a high share of self-employed drivers (profile I) will also be a decreased market share of self-employed. This decrease will be small because:

- The cost advantages of the self-employed in profile I-countries - mostly New Member States and Southern European countries - are based to a large degree on low labour costs. The labour costs in road freight transport in Western European countries are on average 21 Euro an hour. For Polish drivers these costs are 4.50 Euro an hour and for drivers from the Czech Republic and Hungary 3.90 and 3.85 Euro respectively (Berkleef, 2005). Because of the inclusion, the additional costs associated with the inclusion will also increase for self-employed in the New Member States, but the level will remain below the cost level of Western European countries. Therefore, self-employed from the New Member States will start to compete with self-employed from Middle European countries. In the future the free European market for cabotage will further strengthen the position of self-employed from New Member States;
- Because of a reduction in working time, wages will become lower as well. Thus, under the scenario of inclusion of self-employed, drivers from the New Member States will seek for other jobs, because the driving profession will become less attractive due to lower income;
- The Directive will have an impact on long haul international transport in particular. The consequences of inclusion for this market segment will mean higher costs. But the increase in higher costs will continue to favour low cost drivers compared to drivers from Middle European countries because the relative differences in costs will roughly stay the same;
- In addition to more stringent criteria for admission to the profession, the Directive will realise a burden for potential self-employed. Being a self-employed driver will become less attractive for entrants to the industry and they will search for alternative job opportunities or enterprises to start. This will result in a better functioning of the transport market, meaning less over-supply and resulting an increase in cost level of New Member States;
- Because of economies of scale and the potential for realising an increased efficiency in total operations, also in New Member States larger firms will increase their market share in response of the inclusion of the Directory.

In Figure 6.7 we present the effects of inclusion/exclusion in schematic form for the different basic growth trends identified.



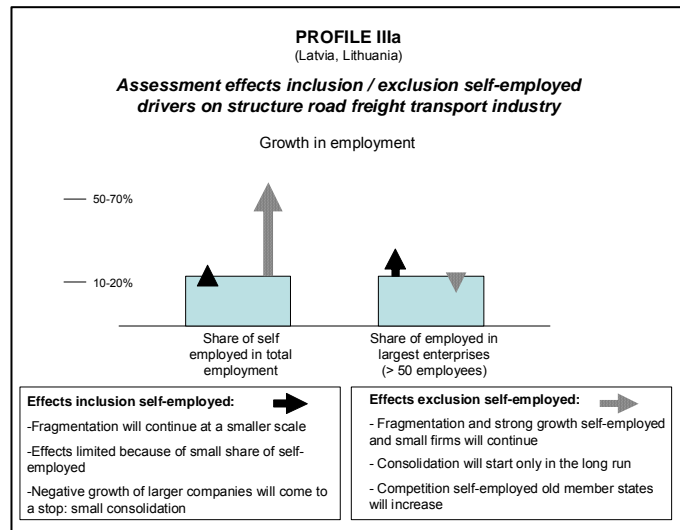


Figure 6.7 Assessment of dominant effects of inclusion/exclusion of self-employed drivers in the structure of the road freight transport industry in EU-25, based on three basic profiles identified

6.2.5 Main findings on structure of the sector and conditions on competition

The findings presented in this paragraph are:

- The number of self-employed employees in EU-25 is about 5-12% in a number of mostly Middle European countries and about 50-85% in a number of Southern European countries and New Member States;
- The market share of New Member States in the international market (presented in ton-kilometres in 2000-2004) showed a substantial increase, in particular because of the large increase in Poland. The decline in market share of France and the increase of Spain in this period is also an important structural characteristic of the EU-25 road freight transport industry;
- A number of countries show a much larger market share in international transport than in the national share of ton-kilometres realised. Luxembourg and Lithuania are the most striking examples. These two countries realise 0.04% and 0.19% of all national ton-kilometres within the EU-25, but are responsible for an international market share of respectively 1.74% and 1.96%. Other countries with a much larger international market share compared to the size of the national market are Denmark, Austria, Belgium, the Netherlands, Portugal, the Czech Republic, Estonia, Latvia, Lithuania, Slovakia and Slovenia;
- The structure of the road freight transport industry in the different EU-25 countries is dominated by small enterprises (1-5 employees). In Cyprus, Greece, Spain and the Czech Republic over ninety percent of all enterprises are small. In most of the other countries 70-90% of all road freight transport firms belong to the smallest size category;
- Italy, Portugal, Spain, Cyprus, the Czech Republic, Poland and Slovakia (and probably Greece) are countries where more than half of the employment in the road freight transport industry is concentrated in the smallest firms (1-5 employees). In Hungary, Luxembourg and the UK in contrast more than half of total employment is concentrated in the largest firms (>50 employees);
- All countries presented - with Slovakia being the exception to the rule - show an increasing employment in road freight transport. Luxembourg showed the highest

absolute increase (9.2% average annual growth), followed by Finland (7.7%), Ireland (6.4%) and Austria (6.0%);

- When assessing the growth rate of the number of enterprises and employment in the road freight transport industries of the different EU-countries in the period 1995-2003, some countries show a clear fragmentation of the structure of employment. This happens when the number of enterprises is growing faster than total employment. In Estonia, Hungary, Latvia and Lithuania the number of road freight transport enterprises grew by 11-13% in the years 1995-2003, while employment growth increased in the 4-5% range. The Czech Republic and Slovenia also showed a fragmentation;
- Finland, Sweden, Luxembourg, France, the UK, Portugal and Spain on the other hand showed a much larger employment growth, compared to growth in the number of enterprises. In these countries a consolidation process can be identified. Employment is growing, but these employees are working in a relatively smaller number of companies;
- When looking at the details of the growth patterns, the conclusions about consolidation of most countries in North, Middle and South Europe are confirmed. Growth of the number of smallest companies (1-5 employees) in countries like Finland, Sweden, the UK, France and Spain was negative, while the growth of the largest companies (>50 employees) was high. This pattern also can be observed with respect to the growth in employment: the size category of the largest companies showed clearly the highest growth rate, indicating a further consolidation of employment in the largest companies;
- In the New Member States, the road freight transport industry is heading towards fragmentation: the number of small companies is growing, and employment growth is concentrated in the smallest size categories. The share of the largest companies is decreasing, measured both in number of companies and in employment;
- In Europe two different situations exist with respect to the structure of the road freight transport industry, on the one hand countries with a very fragmented structure, both in numbers of firms and employment, where small firms dominate. On the other hand countries with a very concentrated structure where employment is concentrated in large firms;
- The consolidation trend as is identified in the road freight transport industry in most countries of North, Middle and South Europe relates to four structural trends: first the rationalisation of suppliers, second an increasing professionalism of the logistics industry, third a geographical expansion of the networks of shippers, and fourth the search for ongoing economies of scale;
- Self-employed drivers work mainly for larger transport companies in most countries of Middle Europe (and France) in which the structure of the sector is heading towards consolidation. It is estimated that 70-80% of the customers of self-employed drivers are large transport companies and only 20-30% are shippers. Self-employed drivers offer the much needed flexibility in capacity for these larger transport firms;
- The fragmentation trend identified in the road freight transport industry in most new Member States is mainly related with the liberalisation in the Eastern European countries after 1989. In most countries this liberalisation resulted in a large number of new transport enterprises. The increasing number of very small enterprises resulted in heavy competition and oversupply;
- We expect that the fragmentation process in the road freight transport industry will not increase much more in the future because:

- a. The number of small companies, and the employment concentrated in small companies, already is very high;
- b. In a number of New Member States the number of firms with foreign capital is growing very fast. In general, these firms are relatively large compared to the enterprises of the New Member States;
- c. The introduction of stringent criteria for admission to the profession in terms of professional qualifications, training financial resources, etc.
- d. Economies of scale will also become relevant in the New Member States;
- e. Already high levels of oversupply in most markets of New Member States, making it not very attractive to start an own business.

When *self-employed drivers are included in the Directive*, this will have different consequences for the two segments identified.

- For the self-employed in the Middle European countries with low shares of self-employed drivers, the share in the total road freight transport industry will show a small decrease. The effects will be very minor because of the already low percentage of self-employed.
- The effects of an inclusion for the self-employed drivers in the South European countries will also lead to continuation of the consolidation process. However, in *the New Member States* there will be a decrease in the market share of self-employed.
- As will be presented in the next paragraph, implementation of the Directive may lead to a reduction in working time, but wages will become lower as well. Thus, under the scenario of inclusion of self-employed, drivers from *the New Member States* will seek other jobs, because the driving profession will become less attractive due to lower income.
- Besides this, the labour market is increasingly greying, which may pose this sector for additional problems in the near future, since the workers in the sector already are relatively old.
- Because the inclusion will result in an increase of the cost burden and a reduction of long working times, the competitive advantage of the road freight transport industry in *the New Member States* - dominated by self-employed drivers - will be reduced. Drivers in these countries rely on low costs and long working hours. Because the larger firms - dominant in Middle European countries - are better suited to cope with reduced working hours by efficiency measures and innovations in working practices, their competitive advantage will increase, resulting in a further strengthening of the consolidation process in the structure of the road freight transport sector.

When *self-employed drivers remain excluded from the Working Time Directive* this also will have different consequences for the two segments identified.

- For the self-employed in the Middle European countries with low shares of self-employed drivers, the share in the total road freight transport industry will show a small increase. Here, the effects will be minor as well, due to the already small percentage of self-employed.
- The continued exclusion of self-employed drivers in South European countries and New Member States will have the effect of a small increase in the market share, meaning an increased fragmentation of the structure of the market in these countries. The trends seen in the recent past are expected to continue.

6.3 Analysis of the road transport profession and social aspects

The objective of the analysis on the structure of the profession is to assess the situation in the EU regarding the working environment of the road transport profession before implementation of the Directive. Unfortunately no data are available regarding the period after implementation of the Directive. Therefore, it is not possible to provide evidence from data in order to identify (possible) impacts of the Directive on the road transport profession. Methods of the analysis of the road transport profession are described in Annex 8.

6.3.1 The sector 'Transport, storage and communication'

In this paragraph we describe the salaries, working time and work-life balance, working environment and health of workers in the sector transport, storage and communication compared to all other sectors taken together. We use data from the European Working Conditions Survey which contains information from 27 EU countries.

Salaries

In the EU-27 workers in the sector transport, storage and communication more often are represented in the higher harmonized income scales (scale 3 and 4) and less often in the lower scales (1 and 2; see Table 6.8). However, Houtman et al. (2004) found that significant variations exist within the transport sector, and that income seems to be lower in the sub-sectors freight transport by road and road transport of persons, compared to other transport sub-sectors and the average private sector income. The relatively low educational level in the freight transport might be an explanation for the low average wage in the sub-sector.

Table 6.8 Salaries in the sector transport, storage and communication, compared to other sectors, percentages

Harmonized income sale	Other sectors	Transport sector
Scale 1	23 ▲	14 ▲
Scale 2	28 ▲	24 ▼
Scale 3	26 ▼	30 ▲
Scale 4	22 ▼	31 ▲

▲: $p < 0,05$ for groups with significant high scores; ▼: $p < 0,05$ for groups with significant low scores.

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

Working time and work-life balance

Regarding working time workers in the sector transport, storage and communication have longer working hours and more irregular working times (working nights, evenings, weekends, more than 10 hours a day, and shifts) compared to workers in other sectors (see Table 6.9). In addition, workers in the transport sector less often report that their work fits well with family and social commitments outside work. Despite these results workers in the sector more often wish to work more hours (35%) compared to workers in other sectors (27%).

Table 6.9 Working time and work-life balance in the sector transport, storage and communication, compared to other sectors, percentages

	Other sectors	Transport sector
Hours work per week		
• <36 hours per week	25 ▲	16 ▼
• 36-48 hours per week	60 ▼	64 ▲
• >48 hours a week	16 ▼	19 ▲
Working one or more nights a month	18 ▼	35 ▲
Working one or more evenings a month	45 ▼	54 ▲
Working on Saturdays and/or Sundays	53 ▼	62 ▲
Working more than 10 hours a day	36 ▼	46 ▲
Working the same number of hours every day	61 ▲	53 ▼
Working the same number of days every week	75 ▲	65 ▼
Working shifts	18 ▲	29 ▼
Work hours fit in very/fairly well with family and social commitments outside work	80 ▲	74 ▼

▲: $p < 0,05$ for groups with significant high scores; ▼: $p < 0,05$ for groups with significant low scores.

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

The same was found for the freight transport by road (Houtman et al., 2004). In this sub-sector relatively many employees work fulltime, while in other transport sub-sectors (e.g. transport of persons) the percentage of part-time work is higher. This may be the result of the low percentage of women in the freight transport by road, and the fact that women more often work part-time. Additionally, Houtman et al. (2004) concluded that employees in the transport sector more often have non-standard working patterns, compared to the national average.

Skill development, job control and job demands

As shown in Table 6.10 the working conditions of workers in the sector transport, storage and communication are less favourable compared to workers in other sectors, although differences are relatively small.

Workers in the sector transport, storage and communication report less skill development and more monotonous tasks, but more training paid for by their employer, compared to workers in other sectors. However, the differences between the transport sector and other sectors are relatively small.

Furthermore, workers in the sector transport, storage and communication experience less job control (ability to choose or change their order of tasks, methods of work and work speed/rate). They also experience less control over their working times and less often have to interrupt a task in order to undertake an unforeseen task, but these differences are relatively small.

The workload (deadlines, work at high speed) also is somewhat higher in the sector transport, storage and communication report, compared to other sectors.

Table 6.10 Skill development, job control and job demands in the sector transport, storage and communication, compared to other sectors

	Other sectors	Transport sector
Skilled work [scale: 5 items; 0=low-1=high skilled work]	0.69 ▲	0.65 ▼
Job involves monotonous tasks	41% ▼	44% ▲
Undergone training paid for/provided by employer (or yourself when self-employed) over the past 12 months	30% ▼	34% ▲
Responsible for product planning, staffing, working schedules [scale: 3 items; 0=low-1=high responsibility]	0.23 ▲	0.18 ▼
Job control [scale: 3 items; 0=low-1=high control]	0.69 ▲	0.57 ▼
You can get assistance from colleagues if you ask for it	85%	85%
Control over working time [scale: 3 items 0=low-1=high control]	0.53 ▲	0.50 ▼
Work pace dependant on other (f)actors [scale: 5 items; 0=low-1=high dependence]	0.39	0.39 ▼
Fairly/very often interrupt a task, in order to undertake an unforeseen task	41% ▲	34% ▼
Job demands [scale: 2 items; 0=low-1=high demands]	0.49 ▼	0.54 ▲
You have enough time to get the job done	81%	80%

▲: $p < 0,05$ for groups with significant high scores; ▼: $p < 0,05$ for groups with significant low scores.

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

The results described above are comparable with the results from previous research (Houtman et al., 2004) which shows that, as far as information was available, drivers' work can be characterized as being fast-paced, relatively low skilled, and with limited learning opportunities. In addition, drivers are able to exercise relatively little control over their work. Just-in-time deliveries have led to an even higher work pressure and less flexibility for drivers to set work pace and plan their own work. Drivers carry a heavy responsibility for their own and other road users' safety, for their vehicle and for the vehicle load. In addition, there are marked differences regarding the work organisation of drivers in public transport and those in freight transport by road. A specific risk factor for drivers in public transport is low task variety. A specific risk factors for drivers in transport of goods, and in particular long distance drivers, is working in isolation.

Ambient condition, physical load, and new risks

Workers in the sector transport, storage and communication more often are exposed to ambient conditions, physical load and new risks compared to workers in other sectors, but the differences are relatively small (see Table 6.11).

Table 6.11 Ambient condition, physical load, and new risks in the sector transport, storage and communication, compared to other sectors

	Other sectors	Transport sector
Exposure to ambient conditions [scale: 7 items; 0=low-1=high exposure]	0.27 ▼	0.28 ▲
Physical workload [scale: 3 items; 0=low-1=high exposure]	0.42 ▼	0.45 ▲
Use of computers, PC, mainframes (never-always)	63%-18%	62%-22%
Dealing with customers, passengers, pupils, patients, etc. (never-always)	36%-44% ▼	31%-46% ▲
Exposed to violence, intimidation and/or discrimination [scale: 10 items, 0=low-1=high exposure]	0.02 ▼	0.03 ▲

▲: $p < 0,05$ for groups with significant high scores; ▼: $p < 0,05$ for groups with significant low scores.

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

Houtman et al. (2004) also found similar results. According to them the physical work environment in the sector is characterized by a specific set of ambient and ergonomic conditions (as far as data were available). Most significant ambient conditions were: noise, vibrations, extreme cold temperatures (especially in Nordic countries), exposure to variations in temperature and air pollutants. Most significant ergonomic conditions were: loading and unloading the vehicle (heavy lifting, strenuous work postures, pulling and/or pushing) and prolonged sitting (increased risk of lower back pain). Road safety was also mentioned as an important issue (although road safety conditions appear to have improved). Furthermore, because of the predominantly individual nature of the work, drivers do not receive a lot of social support from supervisors and colleagues. A specific risk factor for drivers in public transport is exposure to violence and harassment by customers. A specific risk factor for drivers in transport of goods, and in particular long distance drivers, is facing a threat to personal security from theft and physical assault.

Health and safety

In the sector transport, storage and communication workers more often think their health or safety is at risk because of their work, compared to workers in other sectors (see Table 6.12). However, they hardly were more absent in the past year due to health problems caused by their work, compared to employed in other sectors.

Table 6.12 Health aspects of workers in the sector transport, storage and communication, compared to other sectors

	Other sectors	Transport sector
Thinking your health or safety is at risk because of your work	31% ▼	40% ▲
Work affects health in the following ways:		
• problems with your vision	10% ▼	12% ▲
• backache	32% ▼	37% ▲
• headaches	17%	18%
• muscular pains in shoulders and neck and/or upper limbs	28% ▼	30% ▲
• muscular pains in lower limbs	15%	15%
• stress	28% ▼	35% ▲
• overall fatigue	28% ▼	30% ▲
• sleeping problems	8% ▼	12% ▲
Absent in the past year due to accident at work	5% ▼	5% ▲
Absent in the past year due to health problems caused by work	9%	10%

▲: $p < 0,05$ for groups with significant high scores; ▼: $p < 0,05$ for groups with significant low scores.

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

Additionally, Houtman et al. (2004) found that in the sector, especially the sub-sector of freight transport by road, the incidence rate for both accidents and diseases is higher than that observed on national level. The most notable outcome is the high share of fatal accidents in freight transport by road. Moreover, a major cause of accidents is accidents with cars, trucks and similar vehicles.

The major reason for invalidity pensions and early retirement due to a reduced working capacity are musculoskeletal disorders due to long periods of sitting in one position. Other health problems like mental health do not appear to be an issue in the sector. This may, however, be because these health problems are not so acceptable in the sector.

6.3.2 *The situation in the sector transport, storage and communication in 2000 compared to 1996*

In this paragraph we describe the salaries, working time and work-life balance, working environment and health of people from 15 EU countries working in the sector 'transport, storage and communication' for the years 1996 and 2000. We give a description of the sector for the 15 EU countries together.

In the European Working Conditions Survey of 1996 6.0% of the respondents from the EU-15 were working in the sector transport, storage and communication. In the 2000 Survey this percentage was 6.7%.

Salaries

The percentage of workers in the sector transport, storage and communication with a basic fixed salary increased from 85% in 1996 to 93% in 2000. Piece rate payment decreased from 13% in 1996 to 8% in 2000. There were no changes in extra payment for

additional hours. In both years about one third of the workers received this extra payment.

Working time and work-life balance

Working time in the sector transport, storage and communication improved between 1996 and 2000. The length of the working week as well as night work decreased, although differences are relatively small. The percentage of workers working 35 hours or less increased from 11% in 1996 to 18% in 2000. The percentage of workers working one or more nights a month also decreased from 40% in 1996 to 36% in 2000.

Because the length of the working week and night work decreased somewhat, it may be hypothesized that the situation improved somewhat regarding work-life balance. However, in 1996 no questions on this topic were included in the European Working Conditions Survey.

Skill development, job control and job demands

Skill development and job control of workers in the sector transport, storage and communication are less favourable in 2000 compared to 1996. Workers in the sector transport, storage and communication reported a decrease in skilled work, job control and assistance from colleagues between 1996 and 2000 (see Figure 6.8). However, differences between 1996 and 2000 are relatively small.

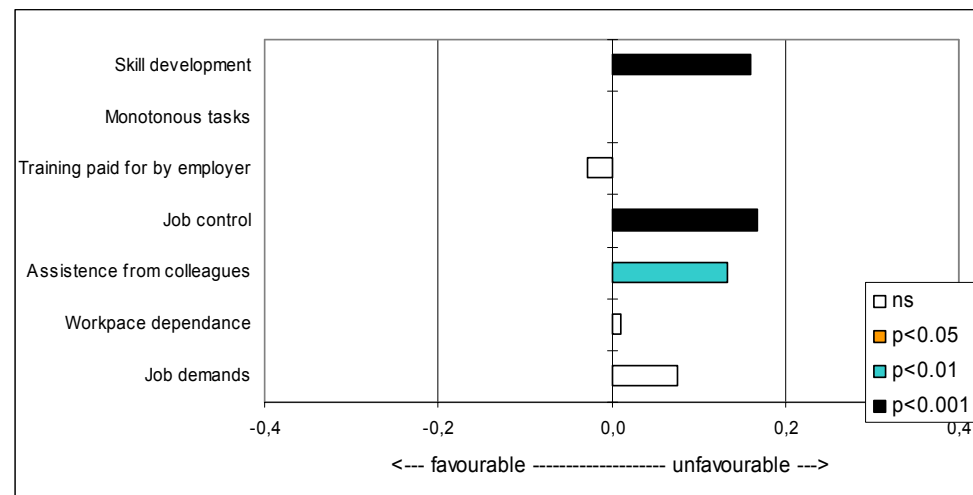


Figure 6.8 Skill development, job control and job demands in 2000 compared to 1996 (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable in 2000 compared to 1996

Regarding training and learning opportunities Houtman et al. (2004) concluded the opposite. According to them the learning and training opportunities seem to be improving over the years. Access to training has improved in a number of countries. In addition, Houtman et al. (2004) concluded that the intensity of the work appears to be increasing, while in the European Survey data job demands seem to be comparable in 1996 and 2000. On the other hand Houtman et al. (2004) conclude that control over their work appears to be reducing, due to both organizational and technological developments. This is in line with the European Foundation results in Figure 6.8. On the whole, Houtman et al (2004) conclude that available indicators suggest that the quality of the work organisation appears to be worsening.

Ambient condition, physical load, and new risks

Between 1996 and 2000 there were some relatively small changes in physical load and new risks in the sector transport, storage and communication. The exposure to physical work load and violence slightly increased between 1996 and 2000, while the percentage of workers that had to deal with customers, passengers, patients, etcetera slightly decreased between 1996 and 2000.

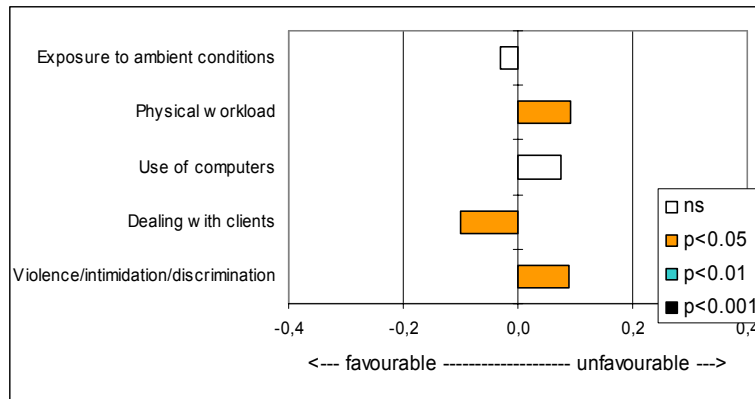


Figure 6.9 Ambient conditions, physical load, and new risks in 2000 compared to 1996 (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable in 2000 compared to 1996

Health and safety

Sickness absence in the sector was significantly lower in 2000 compared to 1996. In 2000 88% of the workers in the sector transport, storage and communication had not been absent in the past year. In 1996 this was 74%. The percentages of workers absent for 1-9 days have decreased from 11% to 5% over the same period, and the percentage of workers absent for 10 days or longer decreased from 14% in 1996 to 7% in 2000. The percentage of workers reporting their health or safety is at risk because of their work did not change between 1996 and 2000 (see Figure 6.10). However, in 2000 workers more often report their work causes them headaches, stress, overall fatigue, and sleeping problems.

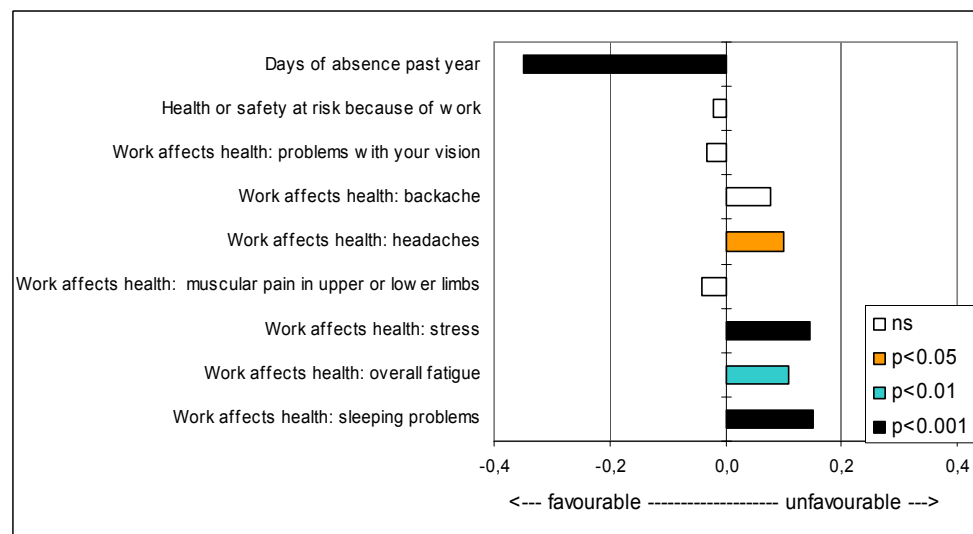


Figure 6.10 Health in 2000 compared to 1996 (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable in 2000 compared to 1996

6.3.3 Characterization of the self-employed in the sector transport, storage and communication

In this paragraph we describe the salaries, working time and work-life balance, working environment and health of self-employed and workers who are not self-employed (mainly employees) from 27 EU countries working in the sector 'transport, storage and communication'. We give a description for the 27 EU countries together.

In the European Working Conditions Survey 10% of the respondents working in the sector transport, storage and communication were self-employed.

Salaries

In the sector transport, storage and communication self-employed workers seem to earn more than other workers. They more often are represented in the highest harmonized income scale (scale 4; 44% versus 30%) and less often in one of the lower harmonized income scales (scale 2; 17% versus 25%).

Working time and work-life balance

Self-employed in the sector transport, storage and communication have longer working hours and more irregular working times (working nights, evenings, weekends, more than 10 hours a day) compared to other workers. Self-employed more often work 49 or more hours a week (61% versus 15%), and less often 36-40 hours (26% versus 68%). Regarding irregular working hours there is one exception: self-employed less often work in shifts (21%) compared to other workers (30%).

Not surprisingly self-employed more often wish to work less hours (29%), compared to other workers (8%). They also are less satisfied with the fit between their working hours and their family and social commitments outside work. According to 40% of the self-employed their work does not fit at all or does not very well with family commitments, compared to 25% of the other workers.

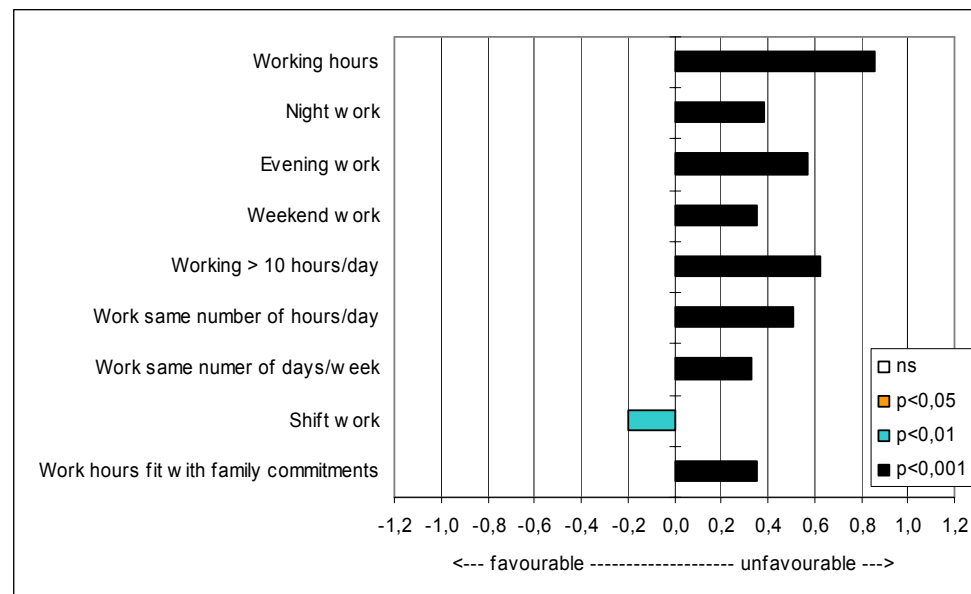


Figure 6.11 Working time and work-life balance of self-employed compared to other workers (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for self-employed compared to workers otherwise employed

When we look at self-employed in general (regardless of the sector) it can be noticed as well that self-employed have longer working hours and more irregular working hours compared to other workers (Smulders, 1999).

Skill development, job control and job demands

Regarding skill development, job control and job demands of self-employed in the sector, we can see that self-employed less often receive training and assistance from colleagues, compared to other workers. 88% of the self-employed receive no training at all, compared to 63% of the workers who are not self-employed. 60% of the self-employed can get assistance from colleagues when needed, compared to 88% of other workers.

On the other hand they more often are responsible for production planning, staffing and working schedules, experience higher job control and control over working times, their work pace less often is dependent on other factors or actors, and they less often get interrupted during a task in order to take an unforeseen task.

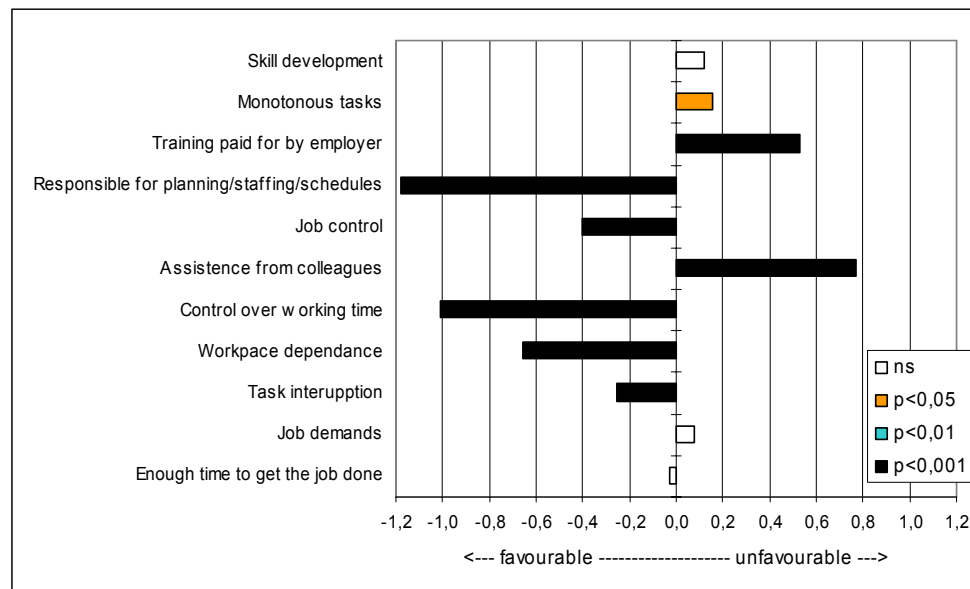


Table 6.12 Skill development, job control and job demands of self-employed compared to other workers (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for self-employed compared to workers otherwise employed

The finding that self-employed in the sector experience higher job control or autonomy compared to other workers, also counts for self-employed in general (regardless of the sector). Compared to self-employed in other sectors self-employed in the sector transport, storage and communication report relative low job control and relative high time pressure (Smulders, 1999).

Ambient condition, physical load, and new risks

Self-employed in the sector more often have to deal with customers, passengers, etcetera, more often are exposed to violence, intimidation and/or discrimination, and report higher physical work load, compared to other workers. In relation to exposure to violence self-employed more often are subject to intimidation (16% versus 11%), and to physical violence from people from their workplace (4% versus 1%) and from other people (13% versus 4%). On the other, hand self employed less often use computers.

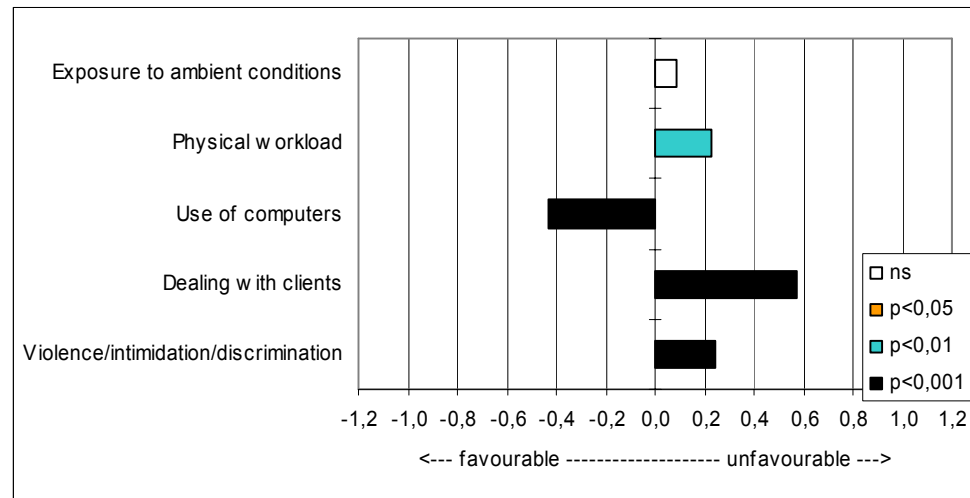


Figure 6.13 Ambient conditions, physical load, and new risks of self-employed compared to other workers (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for self-employed compared to workers otherwise employed

Higher physical workload and more often dealing with customers are characteristics of self-employed in general (regardless of the sector) as compared to other workers. When we compare self-employed in different sectors, it appears that self-employed in the sector transport, storage and communication report relatively high exposure to ambient conditions, physical workload and aggression (Smulders, 1999).

Health and safety

Self-employed more often report that their health or safety is at risk because of their work (58%) compared to other workers (37%). They more often report their work causes them backache, stress, and overall fatigue. However, self-employed were not more often absent in the past year due to health problems caused by work.

Self-employed in general (regardless of sector) report more physical and mental health problems compared to other workers. Self-employed in the sector transport, storage and communication more often report their health and safety is at risk because of their work, physical health problems due to work, and being absent from work compared to self-employed in other sectors (Smulders, 1999).

6.3.4 *Characterization of people working nights in the sector transport, storage and communication*

In this paragraph we describe the salaries, working time and work-life balance, working environment and health of people who work nights and people who do not from 27 EU countries working in the sector 'transport, storage and communication'. We give a description for the 27 EU countries together.

In the European Working Conditions Survey 35% of the respondents working in the sector transport, storage and communication work nights.

Salaries

In the sector transport and telecommunication workers who work one or more nights a month earn more compared to workers who do not work nights. They more often are

represented in the higher harmonized income scales (scale 3 and 4) and less often in the lower harmonized income scales (1 and 2; see Table 6.13).

Table 6.13 Salaries of workers who work one or more nights a month and workers who do not work nights in the sector transport, storage and communication, percentages

Harmonized income sale	Not working nights	Working nights
Scale 1	18 ▲	7 ▼
Scale 2	27 ▲	20 ▼
Scale 3	28 ▼	34 ▲
Scale 4	27 ▼	39 ▲

▲: $p < 0,05$ for groups with significant high scores; ▼: $p < 0,05$ for groups with significant low scores.

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

Working time and work-life balance

People who work one or more nights a month in the sector transport and telecommunication have longer working hours and more irregular working times (working evenings, weekends, more than 10 hours a day, shift work) compared to workers who do not work nights (see Figure 6.14). Night workers more often work 49 or more hours per week (32% versus 13%) and less often 36-48 hours (55% versus 70%) or 35 or less hours (13% versus 18%).

Not surprisingly, night workers less often wish to work more hours (19%), compared to people who do not work nights (38%). In addition, night workers more often report that their working hours do not fit with their family and social commitments outside work. About 43% of the night workers mention their working hours do not fit at all/very well. For people who do not work nights this is 17%.

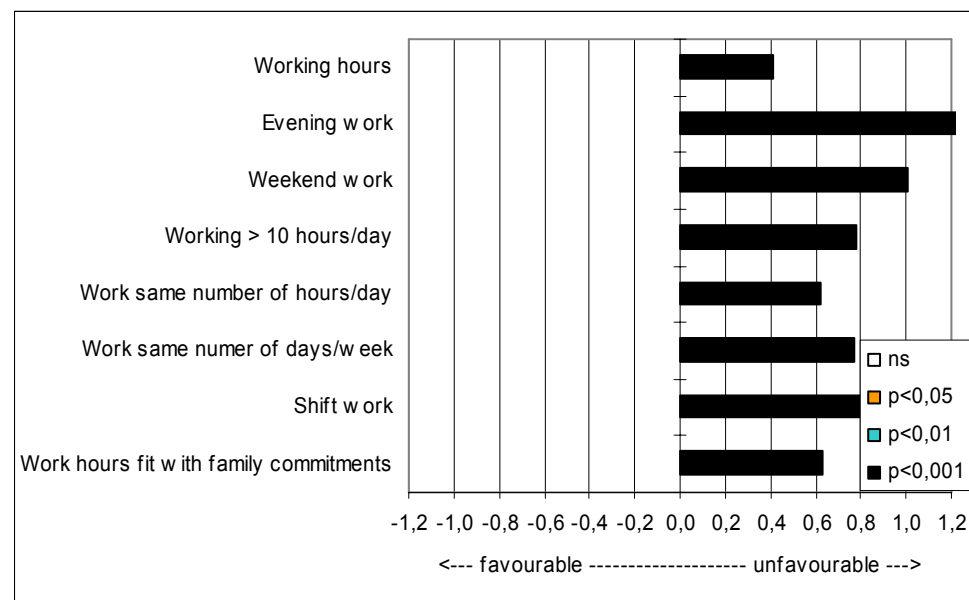


Figure 6.14 Working time and work-life balance of night workers (working one or more nights a month) compared to workers who do not work nights (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for night workers compared to workers who do not work nights

Skill development, job control and job demands

Regarding skill development, job control and job demands there are some relatively small differences between night workers and workers who do not work nights in the sector more often report that their job involves monotonous tasks, that they experience lower job control and control over working times, and higher job demands, and less often can get assistance from colleagues when needed (see Figure 6.15) However, night workers less often have to interrupt a task in order to take an unforeseen task, but when they get interrupted these interruptions are more often disruptive. However, the differences are relatively small.

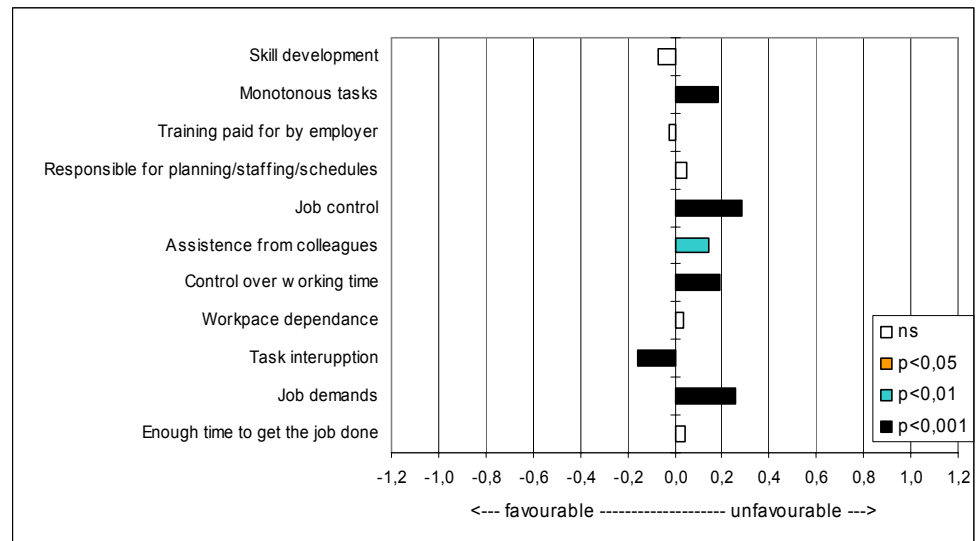


Figure 6.15 Skill development, job control and job demands of night workers (working one or more nights a month) compared to workers who do not work nights (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for night workers compared to workers who do not work nights

Ambient condition, physical load, and new risks

Compared to people who do not work nights night workers more often are exposed to ambient conditions, higher physical workload, and violence (see Figure 6.16). Night workers more often are subject to physical violence from people from their workplace (3% versus 1%) or from other people (9% versus 2%). They also more often are subject to intimidation (17% versus 8%), unwanted sexual attention (3% versus 1%), and discrimination linked to sexual orientation (1% versus 0%). On the other hand they less often use computers.

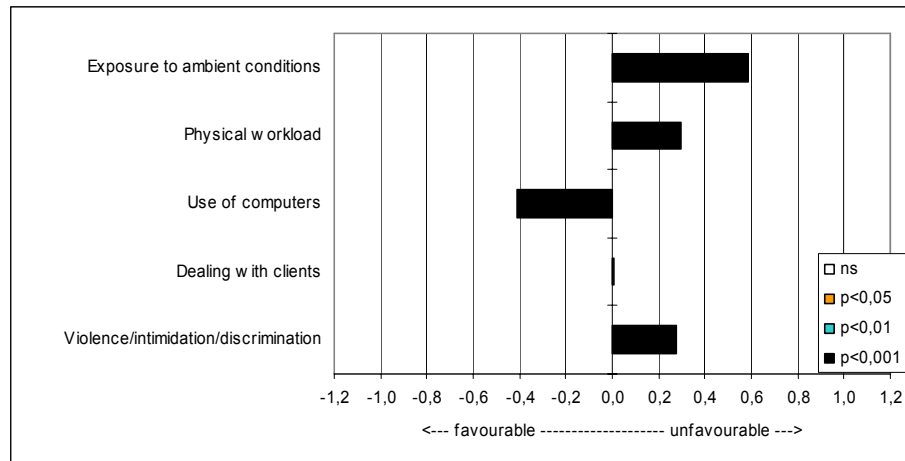


Figure 6.16 Ambient conditions, physical load, and new risks of night workers (working one or more nights a month) compared to workers who do not work nights (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for night workers compared to workers who do not work nights

Health and safety

Night workers more often report to think their health or safety is at risk because of their work compared to people who do not work nights (see Figure 6.17). They more often report backache, headache, muscular pain, stress, overall fatigue and sleeping problems due to their work. Not surprisingly, night workers more often reported sick in the past year due to an accident at work and due to health problems caused by work, compared to people who do not work nights. Of the night workers 7% were absent in the past year due to an accident and 14% were absent due to health problems caused by work. For people who do not work nights these percentages were 4% and 9% respectively. Notice, however, that differences between night workers and workers not working nights are relatively small.

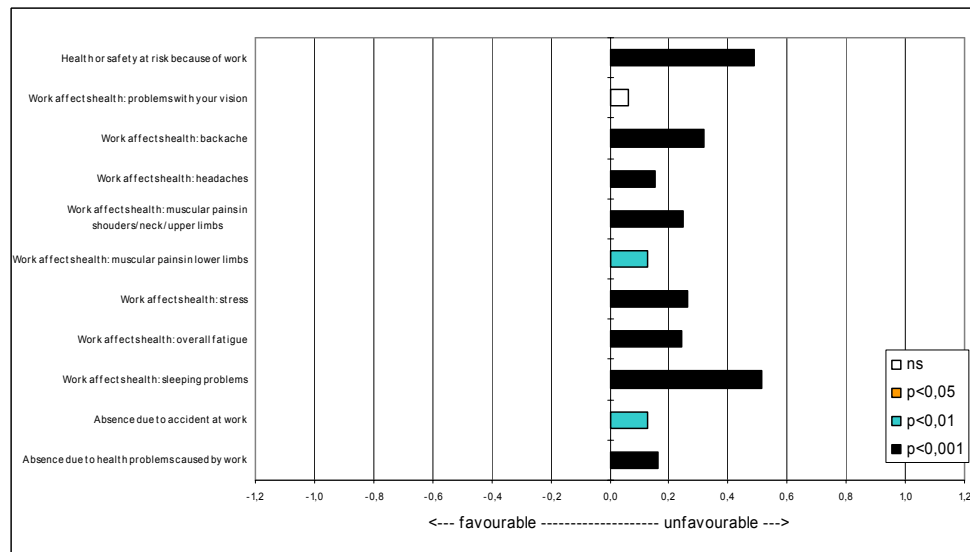


Figure 6.17 Health of night workers (working one or more nights a month) compared to workers who do not work nights (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for night workers compared to workers who do not work nights

6.3.5 Long working week versus no long working week

In this paragraph we describe the salaries, working time and work-life balance, working environment and health of people who work 49 or more hours a week and people who work 48 or less hours a week in the sector ‘transport, storage and communication’. We give a description for the 27 EU countries together. This profile is rather comparable with the profile of self-employed, since most of the workers who are not self-employed (85%) work 48 hours or less a week, while most of the self-employed (61%) work 49 hours or more a week.

Salaries

Employed in the sector transport, storage and communication who make long working weeks (49 hours or more per week) more often are represented in the highest harmonized income scale (scale 4) and less often in the lower income scales (scale 3 and 1).

Working time and work-life balance

Not surprisingly workers who make long working weeks (49 or more hours) in the sector transport, storage and communication have longer working weeks. They also have more irregular working times. Additionally, they more often would like to work less hours (67% versus 7%) and more often are dissatisfied with the fit between their working hours and their family and social commitments. Half of the employed who make long working weeks experience that their working hours do not fit at all/very well, compared to 20% of the employed who work 48 or less hours a week.

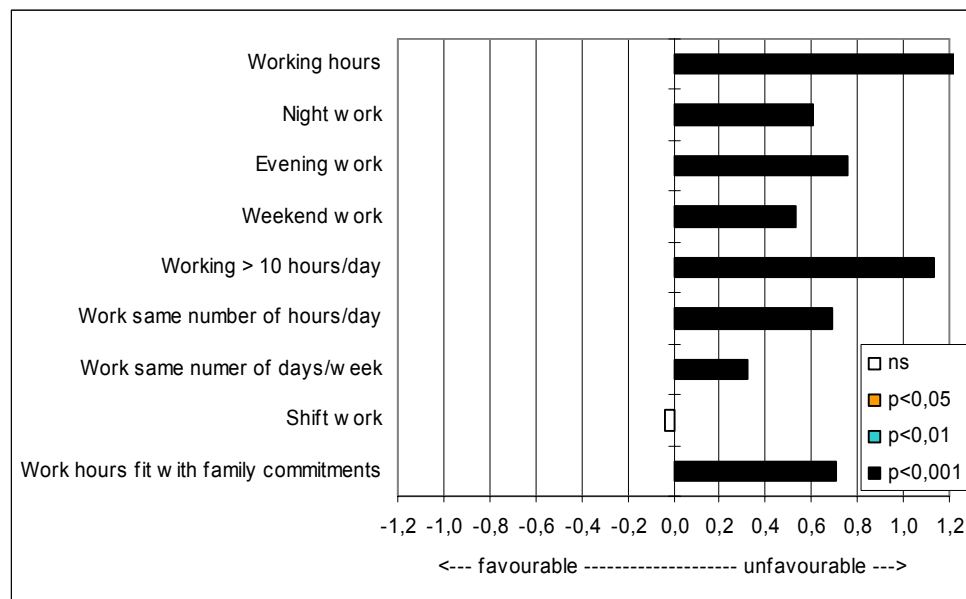


Figure 6.18 Working time and work-life balance of employed with a long working week (49 or more hours/week) compared to workers with short working weeks (<49 hours/week) (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for workers with long working weeks compared to workers with short working weeks

Skill development, job control and job demands

When we look at the skill development, job control and job demands of workers in the sector who make long working weeks (49 or more hours), it can be noticed that these workers more often are responsible for production planning, staffing, and working

schedules, report more control over their working times, and their work pace is less often dependant on other factors or actors.

On the other hand workers with long working weeks less often receive training paid for by their employer and assistance from colleagues when needed, and have higher job demands, compared to workers with short working weeks (48 hours/week or less). 75% of the workers with long working weeks never receive training, compared to 63% of the workers with working weeks of 48 hours or less. 77% of the workers with long working weeks receive assistance from their colleagues when necessary, compared to 87% of workers with short working weeks (see Figure 6.19).

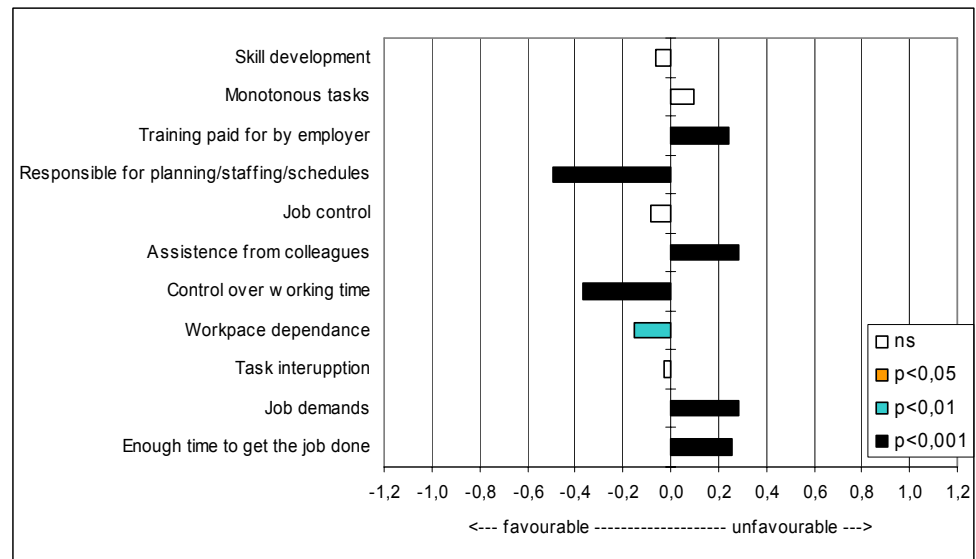


Figure 6.19 Skill development, job control and job demands of employed with long working weeks (49 or more hours/week) compared to workers with short working weeks (<49 hours/week) (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for workers who work long working week compared to workers with short working weeks

Ambient condition, physical load, and new risks

Workers with long work weeks employed in the sector transport, storage and communication more often are exposed to ambient conditions, physical workload, dealing with customers, passengers, etcetera and more often are exposed to aggression compared to workers with short work weeks (see Figure 6.20). With regard to aggression workers with long working weeks more often are subject to violence from people from their workplace (4% versus 1%) or from other people (10% versus 3%), to intimidation (18% versus 10%), and to unwanted sexual attention (4% versus 2%). On the other hand they less often use computers, PC or mainframes for their work.

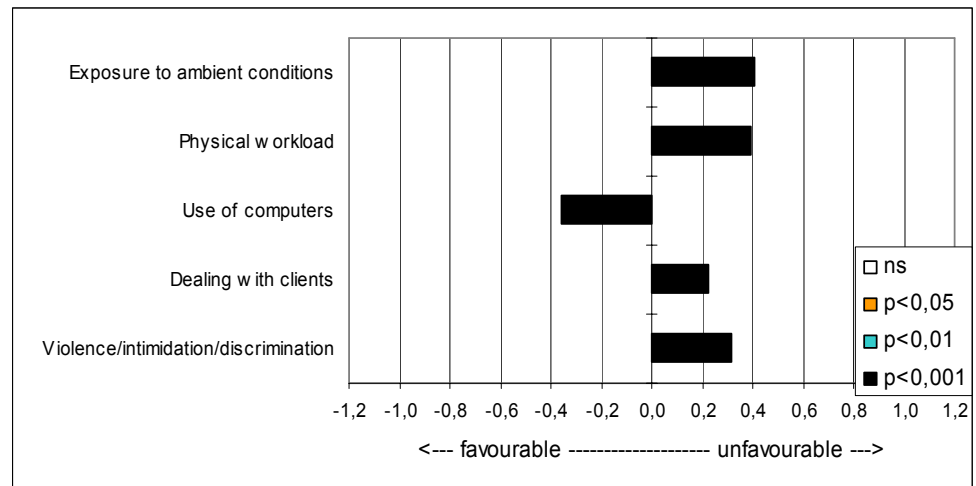


Figure 6.20 Ambient conditions, physical load, and new risks of employed with a long working week (49 or more hours/week) compared to workers with a short working week (<49 hours/week) (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for workers with long working weeks compared to workers with short working weeks

Health and safety

In the sector transport, storage and communication employed with long work weeks more often report to think that their health or safety is at risk because of their work compared to people who do not work nights (see Figure 6.21). They more often report backache, headaches, muscular pains, stress, overall fatigue and sleeping problems due to their work. They also more often reported sick in the past year due to an accident at work (8% versus 5%), although the difference is relatively small.

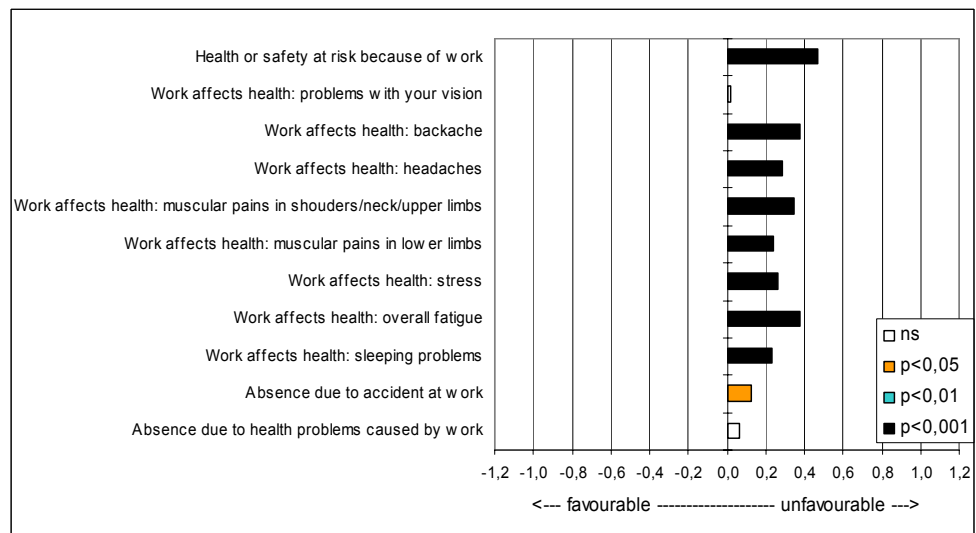


Figure 6.21 Health of employed with long working weeks (49 or more hours/week) compared to workers with short working weeks (<49 hours/week) (0-axis) in the sector transport, storage and communication. To the left of the 0-axis are all variables that are more favourable for workers with long working weeks compared to workers with short working weeks

6.3.6 *Comparison between country clusters*

In this paragraph we describe the salaries, working time and work-life balance, working environment and health of people from different country clusters working in the sector ‘transport, storage and communication’.

We distinguish the following country clusters:

1. *North*: Denmark, Sweden, and Finland (N=335; 15%);
2. *Middle*: Belgium, Germany, Luxemburg, Austria, The Netherlands, United Kingdom, and Ireland (N=690; 31%);
3. *South*: Spain, Portugal, France, Italy, and Greece (N=429; 19%);
4. *NMS+CC2*: Bulgaria, Cyprus, Estonia, Lithuania, Latvia, Hungary, Malta, Poland, Romania, Slovenia, Slovakia, and the Czech Republic (N=755; 34%).

While making these clusters we consulted other reports and documents in which European countries are clustered to describe labour relations and welfare states (see Soede et al., 2004 and Ebbinghaus, 1998). We also, took into consideration the number of countries in each group.

In Annex 5 we also give an overview of self-employed and workers who are not self-employed in the sector ‘transport, storage and communication’ for each country cluster. Although the number of self-employed in the different country clusters is low, it can be noticed that for the different country clusters we find the same patterns as for the total EU27 countries together as is presented in this paragraph. Despite this overall finding, there are indications that there are some differences in working time, working conditions and health between the self-employed in the different country clusters. However, since the number of self-employed in each country cluster is relatively low, these figures are no more than an indication, and are not given much weight in this chapter.

North

Workers in the sector transport, storage and communication in the North EU countries more often report irregular working times (working nights, evenings, working more than 10 hours a day) (see Table 6.14 to Table 6.18).

They also report higher job demands and more often have to interrupt a task in order to take on an unforeseen task. On the other hand they report higher skill development, more often receive training, and more often are responsible for product planning/staffing/working schedules.

Furthermore, they experience higher physical workload, more often use computers/mainframes/etcetera for work, and more often deal with customers/passengers/etcetera. They less often report that their health or safety is at risk because of their work. However, they more often were absent from work in the past 12 months due to an accident or due to other health problems caused by work.

Middle

In the Middle EU countries workers in the sector transport, storage and communication more often are represented in the lower income scales (scale 1 to 3) and less often in the highest income scale (scale 4) (see Table 6.14 to Table 6.18).

These workers report more regular working times; they less often work more than 10 hours a day and more often work the same number of hours every day and the same number of days a week. In addition, they more often report their working hours fit in very/fairly well with family and social commitments outside work.

Regarding skilled work, job control and job demands workers in Middle EU countries report higher job demands, more often have to interrupt a task in order to take on an-

other task, and less often are responsible for product planning, staffing and work schedules. On the other hand, experience more control over working times. Additionally, they less often are exposed to ambient conditions, but more often use computers, deal with customers, passengers, etcetera and are exposed to aggression. When we look at their health, workers in the Middle EU countries less often report that their health or safety is at risk because of their work, but more often were absent from work in the past 12 months due to an accident.

South

In the sector in the South EU countries there are relative more self-employed workers (17% versus 8% and 9% in other country clusters).

The workers in these countries less often are represented in the lower income scales (scale 1 and 3) and more often in the highest income scale (scale 4) (see Table 6.14 to Table 6.18).

Working hours are somewhat more regular; they less often work 10 hours or more a day, and more often work the same hours every day. Surprisingly, they less often report their working hours fit in very/fairly well with family and social commitments outside work.

Their work requires less skill development, has more monotonous tasks, they receive less training, and experience lower job control. On the other hand, they more often can get assistance from colleagues when needed and experience lower job demands.

When we look at skill development, physical workload and new risks it can be noticed that workers in the South EU countries report higher physical workload.

Regarding their health these workers more often report that their health or safety is at risk because of their work (vision, backache, stress, overall fatigue).

New Member States and Candidate Countries (NMS)

Results regarding irregular working times of workers in the sector in the NMS are mixed; they more often work more than 10 hours a day, but less often work evenings and more often work the same number of hours every day (see Table 6.14 to Table 6.18). These workers more often like to work more hours compared to workers in other EU country clusters (48% in the NMS, 44% in the South EU countries, 24% in the Middle EU countries and 28% in the North EU countries).

Furthermore, these workers report higher job control, and lower job demands, and less task interruptions. On the other hand their work requires less skill development, they experience less control over working times and less often can get assistance from colleagues when needed.

When we look at the ambient conditions, physical workload and new risks these workers report higher physical workload, but less often use computers, and contact with customers/passengers/etcetera, and less often report being exposed to aggression.

Finally, they more often report their health or safety is at risk because of their work, but less often were absent from work in the past 12 months due to an accident or due to other health problems caused by work.

Table 6.14 Salaries in the sector transport, storage and communication by four EU country clusters

Harmonized income scale	North	Middle	South	NMS
Scale 1	7% ▼	18% ▲	8% ▼	18% ▲
Scale 2	25%	28% ▲	21%	23%
Scale 3	33%	34% ▲	26% ▼	28%
Scale 4	34%	20% ▼	45% ▲	32%

▲: p<0,05 for groups with significant high scores; ▼: p<0,05 for groups with significant low scores

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

Table 6.15 Working time and work-life balance in the sector transport, storage and communication by four EU country clusters

	North	Middle	South	NMS
Hours work per week				
• <36 hours/week	14%	19% ▲	18% ▼	14% ▼
• 36-48 hours/week	66%	64%	60%	66%
• >48 hours/week	20%	17%	22%	20%
Working one or more nights a month	46% ▲	32%	34%	32%
Working one or more evenings a month	64% ▲	52%	57%	48%
Working on Saturdays and/or Sundays	62%	62%	65%	61%
Working more than 10 hours a day	61% ▲	41% ▼	39% ▼	49% ▲
Working the same number of hours every day	36% ▼	54% ▲	57% ▲	58% ▲
Working the same number of days every week	57% ▼	66% ▲	68%	65%
Working shifts	30%	28%	31%	29%
Work hours fit in very/fairly well with family and social commitments outside work	71%	79% ▲	69% ▼	72%

▲: p<0,05 for groups with significant high scores; ▼: p<0,05 for groups with significant low scores

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

Table 6.16 Skill development, job control and job demands in the sector transport, storage and communication by four EU country clusters

	North	Middle	South	NMS
Skilled work [scale: 5 items; 0=low-1=high skilled work]	0.72 ▲	0.67 ▲	0.62 ▼	0.62 ▼
Job involves monotonous tasks	45%	42%	52% ▲	42%
Undergone training paid for/provided by employer (or yourself when self-employed) over the past 12 months	51% ▲	36%	22%	32%
Responsible for product planning, staffing, working schedules [scale: 3 items, 0=low-1=high responsibility]	0.23 ▲	0.16 ▼	0.19	0.17
Job control [scale: 3 items, 0=low-1=high control]	0.60	0.56	0.50 ▼	0.61 ▲
You can get assistance from colleagues if you ask for it	11% ▼	17%	28% ▲	8% ▼
Control over working time [scale: 3 items, 0=low-1=high control]	0.52	0.53 ▲	0.49	0.47 ▼
Work pace dependant on other (f)actors [scale: 5 items, 0=low-1=high dependence]	0.38	0.40	0.40	0.39
Fairly/very often interrupt a task, in order to take on an unforeseen task	47% ▲	38% ▲	34%	24% ▼
Job demands [scale: 2 items, 0=low-1=high demands]	0.64 ▲	0.57 ▲	0.51 ▼	0.49 ▼
You have enough time to get the job done	73% ▲	81%	79%	84% ▼

▲: p<0,05 for groups with significant high scores; ▼: p<0,05 for groups with significant low scores

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

Table 6.17 Ambient condition, physical load, and new risks in the sector transport, storage and communication by four EU country clusters

	North	Middle	South	NMS
Exposure to ambient conditions [scale: 7 items, 0=low-1=high exposure]	0.28	0.26 ▼	0.29	0.29 ▲
Physical workload [scale: 3 items, 0=low-1=high exposure]	0.47 ▲	0.44	0.50 ▲	0.41 ▼
Use of computers, PC, mainframe				
• (almost) never	53% ▼	59% ▼	65%	67% ▲
• 1/4 to 3/4 of the time	26% ▲	16%	15%	14%
• (almost) all the time	21%	26% ▲	21%	18% ▼
Dealing with customers, passengers, pupils, patients, etc.				
• (almost) never	24% ▼	28% ▼	33%	36% ▲
• 1/4 or 3/4 of the time	31% ▲	24%	17% ▼	20% ▼
• (almost) all of the time	46%	48%	49%	44%
Exposed to violence, intimidation and/or discrimination [scale: 10 items, 0=low-1=high exposure]	0.03	0.04 ▲	0.02	0.02 ▼

▲: $p < 0,05$ for groups with significant high scores; ▼: $p < 0,05$ for groups with significant low scores

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

Table 6.18 Health of people employed in the sector transport, storage and communication by four EU country clusters

	North	Middle	South	NMS
Thinking your health or safety is at risk because of your work	24% ▼	29% ▼	51% ▲	49% ▲
Work affects health in the following ways:				
• problems with your vision	4% ▼	7% ▼	17% ▲	18% ▲
• backache	41% ▲	26% ▼	45% ▲	37%
• headaches	22% ▲	12% ▼	19%	22% ▲
• muscular pains in shoulders and neck and/or upper limbs	52% ▲	21% ▼	31%	28%
• muscular pains in lower limbs	18%	9% ▼	17%	17% ▲
• stress	38%	29% ▼	45% ▲	34%
• overall fatigue	18% ▼	16%	42% ▲	40% ▲
• sleeping problems	16% ▲	11%	10%	11%
Absent in the past year due to accident at work	8% ▲	7% ▲	5%	3% ▼
Absent in the past year due to health problems caused by work	17% ▲	12%	8%	8% ▼

▲: $p < 0,05$ for groups with significant high scores; ▼: $p < 0,05$ for groups with significant low scores

Source: European Survey on Working and Living Conditions 2000 and 2001 (EU-27)

6.3.7 Main findings on profession and social aspects

Characterization of the sector in general

- Compared to workers in other sectors, workers in the transport (and communication) sector earn an income that is above average. However, there are large differences within this sector.
- They have long working days, work (far) more hours than average, and have more irregularity in their work. In addition, they report more problems with the fit between work and family/social commitments outside work. Despite these findings, on average workers in this sector want to work more.
- Between 1996 and 2000 there is a small decrease in the extent of the working week and the amount of night work.
- The psychosocial working conditions profile in this sector is somewhat unfavourable as compared to that in many other sectors (low skill discretion, low control, high demands). Specific risks are little variation in work (transport of persons), and isolation (freight transport). The development in psychosocial risks across 1996-2000 is unfavourable, although training opportunities are increasing.
- Workers in this sector have a relatively high exposure to physical load and violence.
- Workers in this sector also indicate that their health is at risk relatively more than average. They do not report to be absent more than workers in other sectors.

Characterization of self-employed in the transport sector

- Self-employed earn relatively more than employees in the transport (and communication) sector.
- They also work more hours, have more irregularity in their work, but report to have less shifts!
- Self-employed would like to work less extra hours.
- They are less satisfied with the fit between work and family life.
- Their psychosocial profile within this sector is somewhat mixed: they have relatively much control and responsibility for planning/staffing/schedules. However, they experience low training opportunities, high time pressure and low support.
- They also experience a high exposure to physical load and violence and intimidation.
- They report more work-related health problems, but less absenteeism.

Characterization of workers who work at night in the transport sector

- This is a large group: 35% of the sector works nights!
- These workers earn relatively more than those workers who do not work nights.
- They also make more hours (>49 hours/week) and more often have irregular working times.
- They more often would like to work less extra hours.
- They are less satisfied with the fit between work and family life.
- They have a relatively poor psychosocial profile: high demands and low control.
- They also experience more exposure to physical risks like exposure to ambient condition, physical workload and violence and intimidation.
- They report more work-related health problems and absence from work.

Characterization of workers who make many hours (>49 hours/week) in the transport sector

- This group has a long working week, and a relatively high income.
- Not surprisingly they make many hours, but they also have a lot of irregularity in their work.
- They more often would like to work less extra hours.
- They are less satisfied with the fit between work and family life.
- Their psychosocial risk profile is somewhat mixed: job demands and time pressure are high and training opportunities are less favourable, but they have relatively much control (also about working time), responsibility for planning.
- These workers experience a high exposure to physical risks like a high physical workload, and a lot of violence and intimidation.
- They report to have relatively many work-related health problems.

Comparison/profiles of transport workers in country clusters

- North (Denmark, Sweden, and Finland):
 - More irregularity;
 - More demands and skill development;
 - More physical load, more ICT;
 - Less work-related health problems, but more absence from work.
- Middle (Belgium, Germany, Luxemburg, Austria, The Netherlands, United Kingdom, and Ireland):
 - Workers in this sector have a relatively lower income;
 - More often regular working times;
 - Better fit work-family life;
 - Less responsibilities, higher job demands;

- More exposure to ambient conditions, more ICT, and more exposure to violence and intimidation;
- Less often work-related health problems, but more absence from work.
- South (Spain, Portugal, France, Italy, and Greece):
 - Many self-employed;
 - Relatively high income;
 - More often regular working times;
 - Irrespective of the above a poor fit between work and family life;
 - Less control and less skilled work (including training opportunities), but also lower job demands. More physical risks, but not more violence and intimidation;
 - More work-related health problems.
- New Member States (Bulgaria, Cyprus, Estonia, Lithuania, Latvia, Hungary, Malta, Poland, Romania, Slovenia, Slovakia, and the Czech Republic):
 - Long working days, but less often in the evening/nights;
 - They would like to work even more hours;
 - They more often are exposed to ambient conditions, but report lower physical workload and violence and intimidation and less ICT;
 - Mixed profile on psychosocial risks: less skilled work, more control, low on demands, although they report to have low control over working times.

Social aspects

- When we look at the main findings described above, we can make the following remarks regarding the social aspects:
- Compared to workers in other sectors, workers in the transport (and communication) sector earn an income that is above average. However, there are large differences within this sector. Furthermore, self-employed in the sector have a relatively high income compared to the other workers in the sector. The same goes for workers who work at night, workers with long working hours and workers in the South EU; these workers have a relatively high income.
- Workers in the sector transport, storage and communication report more problems with the fit between work and family/social commitments outside work, compared to workers in other sectors. This is especially the case for the self-employed in the sector, workers who work at night, workers with long working hours and workers in the Middle EU.

6.4 Analysis of road safety

The objective of the analysis of road safety is to assess the situation in the EU regarding road safety before the implementation of the Directive. At this moment no accident data are available in the EU Member States of the year(s) after the implementation of the Directive and consequently the safety benefit of the Directive can not be determined. In addition, data about driving hours of professional drivers are not available in the accident databases. Therefore we use an indirect approach in order to describe the expected impact: we describe literature on working hours including night work, fatigue and road accidents.

6.4.1 *Figures on road accidents*

Method

On a national level traffic accident data are gathered from the Netherlands, Germany, Spain, France and the United Kingdom (source: Cappon et al., 2006). Limitations regarding these national road accident data are:

1. Professional drivers are not coded in the database, but we can assume that the vehicle types trucks and busses can be used as an alternative for professional drivers;
2. It will be very difficult or even impossible to determine statistic significant causes of accidents since the number of truck accidents with injured or killed persons is very low;
3. Self-employed professional drivers are not coded in the database;
4. Data about working or driving time of professional drivers are not available in the databases.

On EU level data regarding road accidents are gathered from a database called CARE (Community database on Accidents on the Roads in Europe). The major difference between CARE and most other existing international databases is the high level of disaggregation, i.e. CARE comprises detailed data on individual accidents as collected by the Member States. This structure allows for maximum flexibility and potential with regard to analysing the information contained in the system and opens up a whole set of new possibilities in the field of accident analysis.

The CARE database contains corresponding detailed variables of fatal or injured road accidents from the national databases/data sources of EU-Member States. With the CARE database the total number of accidents as well as number of fatal and injured accidents with heavy goods vehicles (gross vehicle weight of over 3.5 tonnes) and buses per country and for the whole of EU can be obtained. However, this database does not contain detailed information on accident causation like sleepiness or loss of attention. Merging and/or inflating the accident variables of individual countries by using CARE data can actually not be performed due to differences in reporting accidents, different distributions, different road infrastructure, absence of exposure data (to calculate accident risk), etc.

Results

The data in Table 6.19 show that in all countries the number of fatal truck accidents as a percentage of the total number of fatal accidents is higher than the number of truck accidents as a whole as a percentage of the total number of accidents. This indicates that accidents in which trucks are involved are more severe. Reducing the number of truck accidents will have a great benefit with respect to the number of killed and (severely) injured persons. Furthermore, we can see that the number of accidents in the Netherlands is considerably lower in the Netherlands compared to other countries. In the Netherlands 1,542 accidents with trucks are reported and 141 fatal accidents. In Germany most truck accidents are reported: 38,085 accidents and 843 fatal accidents.

Table 6.19 Number and percentage of accidents and fatal incidents involving trucks for the Netherlands, Germany, Spain, France and the United Kingdom

	All accidents involving trucks		Fatal accidents involving trucks	
	N	As a % of the total number of accidents	N	As a % of the total number of accidents
Netherlands (2003)	1,542	3.96	141	15.0
Germany (2003)	38,085	11.8	843	16.1
Spain (2004)	5,439	5.8	616	16.9
France (2003)	4,475	4.9	640	12.3
United Kingdom (2002)	14,428	7.5	230	18.38

Source: Cappon HJ, Ruijs PAJ, Vries YWR, Hoogvelt RBJ. (2006). Characteristics of Heavy trucks versus Passenger cars. Only oblique and side impacts. Statistical distributions of main parameters and description of typical crash types. APROSYS Report AP-SP83-D836.

Table 6.20 shows the number of road accidents in 2002 for the EU-15, Germany, France, The Netherlands, Spain and the United Kingdom. In the EU-15 there were 1,253,216 road accidents in 2002. Most road accidents took place in Germany and the UK, with respectively 362,054 and 228,534 road accidents. Both countries also have the highest number of victims (killed and injured) and injured; Germany counts 483,255 victims and 476,413 injured and the UK 314,519 victims and 310,938 injured. However, accident severity is highest in France (7.3%) and Spain (5.4%).

In the EU-15 812 persons were killed (within 30 days of the road accident) in road accidents involving heavy goods vehicles in 2002. Spain and Germany have the highest number of fatalities respectively 173 and 132.

Table 6.20 Number of road accidents, victims, accident severity, number of fatal road accidents (killed within 30 days) by road user type, gender, vehicle group and age group for the whole EU-15, Germany, the Netherlands, Spain and the United Kingdom for the year 2002

	Countries (table limited to five individual countries)					
	EU-15	DE	FR	NL	ES	UK
Accidents ¹	1,253,216	362,054	105,476	33,538	98,433	228,534
Vehicles in accidents	2,229,279	667,732	182,027	63,138	173,193	421,191
Victims (killed + injured)	1,734,843	483,255	145,081	41,669	152,264	314,519
Accident severity ¹	3,1%	1,9%	7,3%	2,9%	5,4%	1,6%
Injured	1,696,206	476,413	137,426	40,682	146,917	310,938
• seriously	221,656	88,382	24,091	11,018	26,849	37,502
• slightly	1,129,395	388,031	113,748	29,664	120,761	273,436
Killed at 30 days	38,637	6,842	7,655	987	5,347	3,581
• driver	24,793	4,717	5,421	731	3,139	2,053
• passenger	8,060	1,239	1,549	159	1,431	720
• pedestrian	5,771	873	866	97	776	808
• female	9,560	1,889	1,869	246	1,263	915
• male	29,098	4,952	5,786	734	4,008	2,662
• car or taxi	21,800	4,005	4,864	479	3,117	1,832
• motor cycle ²	6,594	1,044	1,450	191	784	628
• bus or coach	123	12	11	1	15	26
• pedal cycle	1,993	583	223	169	96	133

	Countries (table limited to five individual countries)					
	EU-15	DE	FR	NL	ES	UK
• agricultural tractor	178	25	20	2	16	1
• heavy goods vehicle	812	86	132	11	173	63
• lorry, under 3.5 tonnes	1,013	126	80	36	342	72
• age <14 years	1,140	216	221	32	126	139
• age 14-17 years	1,561	318	278	67	197	215
• age 18-25 years	8,016	1,550	1,824	222	1,075	798
• age 26-50 years	14,957	2,560	2,980	352	2,220	1,336
• age 51-65 years	5,304	962	952	108	801	431
• age +65 years	6,979	1,236	1,315	205	780	631

¹ Not comparable between countries due to different (self) reporting of accidents.

² Including mopeds.

Source:

http://ec.europa.eu/transport/care/statistics/most_recent/detailed_breakdown/index_en.htm

6.4.2 *Literature on working hours, fatigue and road safety*

As described in the previous paragraph accident databases do not contain information on working or driving time of professional drivers and accident causation like working in the middle of the night and sleepiness or loss of attention. However, in the literature information regarding working hours, including night work, fatigue and road safety is available. In this paragraph we will describe this literature. We will start this literature review with fatigue, since this is the central topic. Next, we will discuss working time and night work. We will end the literature review with an overview of work and driver related factors that may result in fatigue related accidents and ways for prevention.

Fatigue

There are different definitions of fatigue. Fatigue can be defined in more general ways as being tired, bushed, or exhausted. Fatigue can also be defined as cognitive or physical impairment, or sleepiness (tendency to fall asleep), or lack of motivation or lack of activity. According to Meijman (1991) a distinction can be made between acute fatigue and cumulative or chronic fatigue. Acute fatigue is limited to the effects of a single duty period, such as a 9 to 5 hours working day, which may result in a 'micro sleep' (just being away for a split second) or actually falling asleep. Cumulative fatigue occurs when there is inadequate recovery between duty periods resulting in an accumulation of fatigue. Thus, cumulative fatigue usually presents a picture of day-to-day changes for the worse. In order to actually fall asleep, one often is chronically fatigued and has accumulated a sleep deficit over time. Chronic fatigue therefore, is considered often to be a precursor of acute fatigue.

A variety of behaviours have been associated with fatigue. These behavioural manifestations were obtained from laboratory experiments (including perceptual, motor and cognitive tests, sleep propensity, reaction time and simulations), as well as field experiments. Using a neurobiological model, behaviours were sorted into the following categories (see e.g. Philips, 1998; Table 6.21):

1. Activation problems - attention failures, slips and lapses;
2. Perception limitations - limiting visual and auditory sensation;
3. Information processing problems - interpretation, encoding and correlational deficits;
4. Aversion to effort - failure to act;

5. Differing effort - failure to act properly.

Table 6.21 Fatigue behaviours (after Philips, 1998; Dinges, 1995; Dawson & McCulloch, 2005)

Fatigue behaviour	Primary reference
<i>1. Activation problems</i>	
Decreased vigilance (during a constant task)	Mackworth, 1950; Krueger, 1989
Decreased alertness (to a possible problem)	Akersteds & Folkard, 1990; 1994; Condon et al., 1988; Folkard & Monk, 1979; Froberg et al., 1975; Haworth et al., 1988; Hockey, 1986; Stokes & Kite, 1988; Broughton, 1988; Vidacek et al., 1993
Gaps, lapses or blocks	Brown, 1989; Haworth et al., 1988; Hockey, 1986
<i>2. Perception (and sensory input) limitations</i>	
Reliance on visual (eyes and radar) inputs	Bryant, 1991
Decreased attention to peripheral instruments	Hockey, 1986
Uncertainty of observations	Bohnen & Gaillard, 1994
Decreased night time communication	Bryant, 1991; Graeber, 1989; Ohashi & Morikiyo, 1974
<i>3. Information processing problems</i>	
Decreased encoding/registration of recently acquired information	Hockey, 1986
Failure to interpret information as part of a single, integrated system	McFarland, 1971
Decreased ability to correlate dynamic processes	Luczak, 1991
Information processing deficiencies in secondary task	Gaillard & Steyvers, 1988; Sablowski, 1989
<i>4. Aversion to effort</i>	
Low effort, low probability of success	Hockey, 1986
Easy, but risky alternatives	Hockey, 1986
Response latency/decreased speed of execution	Hockey, 1986
Lower standards of accuracy and performance	McFarland, 1971
<i>5. Differing effort</i>	
Increased variability of timing actions	Dinges, 1992; Dinges, 1995; Hockey, 1986
Decreased performance with lower/peripheral processes	Gaillard & Steyvers, 1988
General performance decrement	Akerstedt, 2004; Akerstedt & Folkard, 1990; 1994; Belenky, 1998; Brown, 1989; Condon et al., 1988; Dinges et al., 1997; Greandjean, 1970; Folkard & Monk, 1979; Haworth et al., 1988; Hockey, 1986; How et al., 1994; Stokes & Kite, 1994; Neri et al., 1992; Parasuraman, 1986; Philip et al., 2005

From this table it is apparent that the study of the relation between fatigue and performance goes back several decades. Through these decades these studies result in the

conclusion that performance decrements are to be expected in cases of fatigue, whereas the performance decrements are related to all stages of information processing, i.e. to activation, perception, information processing, aversion to effort and differing effort as well.

Not surprisingly fatigue is one of the causal factors of accidents. Previous research shows that more than 50% of the drivers operating on the international transport routes actually reported to have been falling asleep behind the wheel (European Transport Safety Council, 2001; Van Schagen, 2002). Furthermore, in several literature reviews an estimate is given of the percentage of truck accidents at which fatigue or sleepiness is a main contributing factor. According to Amundsen and Sagberg (2003) fatigue or sleep is a contributing factor in about 15-20% of truck accidents. The European Transport safety Council (2001) found that in about 20% of the commercial road transport crashes driver fatigue is a significant factor. Van Schagen (2002) concluded that fatigue was an important factor in 10-25% of the traffic accidents based on in-depth analyses. In official statistics the estimates are much lower, due to underreporting of driver fatigue or sleep in accident reports (Amundsen & Sagberg, 2003).

There are several factors that contribute to driver fatigue. One of these factors is working time.

Working time and driving time

Scientific literature in general shows an increase in fatigue and a decrease in performance after the 8th or 9th hour of the shift and after four to five days a week (Caruso et al., 2004; European Foundation, 2000). According to Nachreiner et al. (2005) there is a relationship between long working hours and health. They found that:

- Psychosocial complaints increase with the length of the working week (very strong increase above 40 hours), in particular in psychosocial demanding professions. These complaints increase even more when working more long shifts (>10 hours) in a month;
- Physical complaints (back, shoulder, neck) increase - but less steep - with the length of the working week, in particular in physically demanding professions. These complaints increase even more, when one works 6-10 long shifts (>10 hours) in a month;
- Autonomy over work pace can prevent or diminish this impact;
- Important aspects of working time are number of shifts in a row, long working weeks, high job demands, time of work (early shift or night shift), lack of sleep before or during shift, backwards rotating shift.

Researchers also show that 12-hour shifts are related to safety risks, in particular during the night after the 9th hour of the shift (Caruso et al., 2004). However, there are no general limits to be given. Some researchers found a positive impact of 12-hours shifts, due to the long periods of rest in between shifts. Impact on health and safety are not only dependent on the number of hours worked, but on the total work schedule. For road transport driving and resting times are important.

There is only limited information regarding actual driving hours and accident risk. However, Häkkänen and Summala (2001) found that after four hours of continuous driving the accident risk is doubled, and after eight hours of continuous driving this risk is 10 times higher. There are, however, many studies that demonstrate an increased crash risk during longer hours of work (Dawson et al., 2001). According to Nachreiner et al. (2000) there is a reliable and substantial increase in the risk of fatal accidents at work beyond the 9th hour at work, and this result is consistent with earlier results on non-fatal accidents at work, and with data from different countries and different times. The European Transport safety Council (2001) concluded that most studies show an increased accident risk after 9 to 10 hours driving or 11 hours at work.

According to Häkkänen and Summala (2001) a working time of more than 14 hours increases the accident risk by 2.5.

Night work

Another important aspect of working time is the time of the day the work is done. During the night (between 12.00 a.m. and 06.00 a.m.) - especially during early morning hours (between 02.00 a.m. and 05.00 a.m.) - the human body normally is asleep and functional capability is reduced due to a lowered metabolic rate. Additionally, there is increased need of sleep and dip in performance between 02.00 p.m. and 04.00 p.m. (after lunch). During these periods fatigue related accident risk is higher as a result of reduced alertness (Van Schagen, 2003; European Transport Safety Council, 2001; Canadian Trucking Association, 1996; Häkkänen & Summala, 2001; Brookhuis & Vlaskveld, 2003; Campbell, 2001).

However, working time is not the only factor that may cause fatigue and increase the accident risk. There are several other factors that contribute to driver fatigue. These factors can be related to the driver as well as the driver's work (see Figure 6.22).

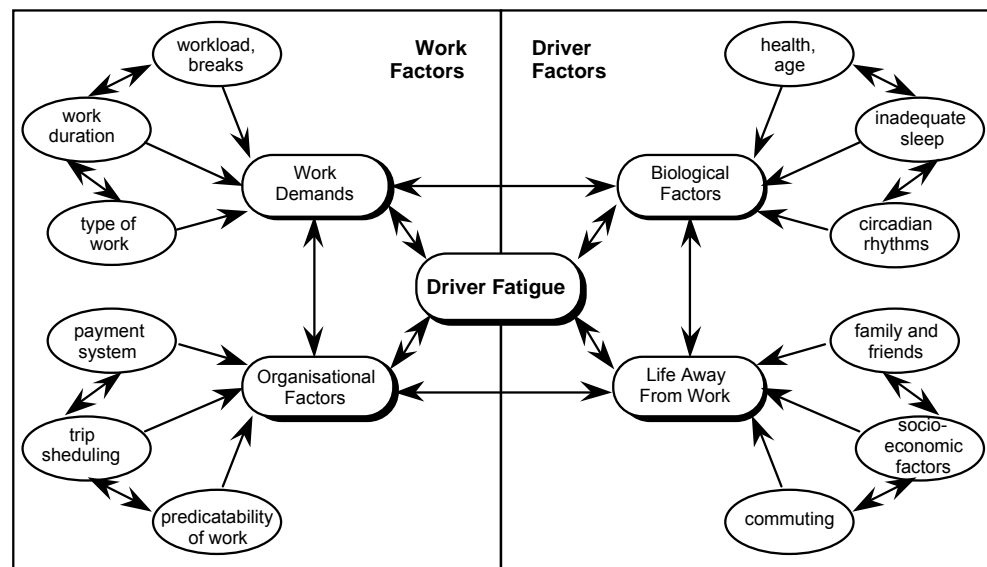


Figure 6.22 Factors contributing to driver fatigue: Source: Dawson et al., 2001

Work factors

Short breaks: The evidence on short breaks as a fatigue prevention measure is inconclusive. This also is the case regarding the evidence to support a specific length and timing of short breaks. However, boredom, monotony and the need for respite from the driving task are the main reasons why breaks should be available (Dawson et al., 2001).

Trip scheduling: The road transport industry is typified by factors that have led to the development of working schedules that can lead to fatigue. These factors include competitive pressures based on utilization of assets, reduction in inventory levels and a 24-hour service orientation, consumer demands, productivity and flexibility methods to reduce workforce numbers and increase intensification of labour process, and employees' financial and lifestyle expectations (Dawson et al., 2000).

Payment system: The payment system for drivers often promotes long working hours and therefore indirectly causes fatigue. Research results from Williamson and Feyer (2000) showed that of nearly two-thirds of the drivers their wage was based on a payment on results basis (by kilometre or by load taken). This system is likely to encourage drivers to work long hours in order to maximize their income.

Long distance driving: Long distance drivers (e.g. international drivers) often drive for long periods of time on a monotonous highway (monotonous, lack of variety, boredom), which causes fatigue and performance impairment (Canadian Trucking Association, 1996; Brookhuis & Vlakoveld, 2003). Performance decrements due to fatigue after relatively short periods of work have shown to be more likely in tasks involving low levels of demand, such as is common in driving, as tired drivers do not apply effort as effectively as when the task is more demanding, such as on a difficult road (Mathews et al., 1996).

Physical workload: Fatigue may be caused by performing other tasks than driving (Van Ouwerkerk et al., 1986; McCart et al., 1999), such as loading and unloading the truck. According to De Croon et al. (2000) drivers report relatively high physical workload. A higher physical work load seems to be related to a higher need for recovery.

Transport of perishables: Driving a refrigerator truck or transport of perishables (such as vegetables, fruit, and flowers) implies the need to attend to tight deadlines, because the cargo needs to be delivered within a specific time limit. This aspect of work may cause higher work pressure, violating regulations on working time, and fatigue (Sangster et al., 1999; De Croon et al., 2000).

Many delivery addresses: Drivers with many delivery addresses more often have to deal with high amounts of traffic, traffic jams, long waiting times at the border, 'just in time deliveries', and city centres which are hard to reach and sometimes only available during limited hours for trucks. These aspects of work may cause delays and therefore may lead to higher work pressure, violating regulations on working time, and fatigue (De Croon et al., 2000; Dam et al., 1991).

Environmental factors: Factors such as temperature, noise and vibrations may cause fatigue (Van Schagen, 2002). People sooner feel fatigued when it is too warm or too cold, or when temperature is stable (Canadian Trucking Association, 1996; Sangster et al., 1999). In addition, driving during night times and in bad weather conditions requires more concentration and effort, and may therefore be more fatiguing.

Driver factors

Insufficient (good quality of) sleep: This can be the result of one night of poor or insufficient sleep (acute sleep deficit) or of poor or insufficient sleep over a longer period of time (chronic sleep deficit). The preferred amount of sleep varies somewhat amongst persons, but on average people need 7 to 8 hours of sleep per night (Dawson et al., 2001; Van Schagen, 2003; Amundsen & Sagberg, 2003). If this individual "sleep need" is not met, the consequences are reduced alertness and performance capacity (mental or physical). For most people, getting two hours less sleep than they need on one night is enough to consistently impair their functioning the next day (Dawson et al., 2001). Reduction in sleep has been shown to increase the accident risk (Van Schagen, 2003; Amundsen & Sagberg, 2003). Not only the amount of sleep, but also the quality of sleep can have important effects on fatigue. Sleep that is restless and fragmented by frequent awakenings can also result in reduced alertness and performance capacity (Dawson et al., 2001). Quantity and quality of sleep is poorer when drivers sleep away from home (Sangster et al., 1999), especially when drivers sleep in their truck, either in a stationary or moving sleeper berth. Problems mentioned by drivers regarding sleeping in a moving vehicle were partly related to the physical environment (vehicle motion, noise, poor ventilation and insulation) and partly to the other driver's driving ability and driving style (e.g. inability to drive smoothly). Two-up drivers were more likely to be awakened during sleep in moving vehicles. Problems with sleeping in a stationary sleeper berth have to do with the public rest parking areas. There often are not enough of these parking facilities, or rest areas are inadequate due to noise

from other vehicles and drivers (e.g. passing highway traffic and/or vehicles entering or leaving the facility, pets or people talking), and concerns that facilities are unsafe (nefarious activities like prostitution, drug dealing, and theft). In addition, heavy vehicles generally must be left idling during rest periods to provide ventilation and temperature control, with some resulting noise and vibration (Knippling, 2006; Neale et al., 2001).

Age: Older drivers are less often involved in traffic accidents. However, they are more susceptible to fatigue. Older drivers experience more problems with driving during the night and due to irregular hours, and more often have sleep disorders (European Transport Safety Council, 2001; Canadian Trucking Association, 1996; Van Schagen, 2002; Sangster et al., 1999; Baas et al., 2000). In addition, the (physical) coping capacity of older drivers decreases as a result of the aging process (De Croon et al., 2000).

Inexperience: Inexperienced drivers are more often involved in traffic accidents, compared to more experienced drivers. Inexperience also might lead to fatigue, because the driving tasks take more effort and are less routine. Furthermore, experienced drivers are more capable to compensate their fatigue during irregular hours (European Transport Safety Council, 2001; Van Schagen, 2002; Sangster et al., 1999).

Lifestyle: Drivers with an unhealthy lifestyle are less fit and less healthy and as a result are fatigued sooner, compared to drivers with a healthy lifestyle (Canadian Trucking Association, 1996; Van Schagen, 2002; Sangster et al., 1999; Baas et al., 2000; Neale et al., 2001). The drivers' lifestyle was found to be comparable to that of the average worker in the Netherlands, although the drivers use less alcohol. On the other hand, drivers exercise less, have unhealthy eating habits and show (considerably) more overweight (Jettinghoff et al., 2003).

Diseases and medicine use: Drivers who have a disease, such as epilepsy, heart disease, diabetes, sleep apnoea (sleep disturbances and fragmentation due to impaired breathing), insomnia, or narcolepsy report more fatigue complaints. The same goes for drivers who take medicine that influences driving ability, such as sleep medication and tranquillisers (Sangster et al., 1999).

Measures to prevent fatigue

There are several types of measures to prevent driving while fatigued. Some of these measures are aimed at all road users, such as campaigns, infrastructural measures (e.g. rumble strips, divided high ways, profiled lane marking), and technical measures (e.g. technical devices to monitor driving behaviour and physical functions of the driver, and to signal or alarm when the driver is falling asleep behind the wheel). Other measures are aimed at professional drivers (and their employers), such as education and training programs and fatigue management systems (Jettinghoff et al., 2005).

An example of an education/training program is the 'Alertness and Managing Driver Fatigue' program from the USA. The training was aimed at teaching drivers how to recognize fatigue and after that take some adequate countermeasures. This program is also used as example in Germany to make a comparable training program called 'Alertness and management programme'.

An example of a management fatigue program is Fatigue Audit InterDyne (FAID) from Australia. Fatigue Audit InterDyne (FAID) is designed for use by individuals, dispatchers or administrators involved in scheduling workers and constructing rosters. With an increasing corporate recognition of the risks involved with roster-related fatigue, and the public awareness of the impact of these risks, there is a need to proactively address the problem of fatigue-inducing work practices.

FAID can be used as part of a fatigue risk management system to improve worker alertness and workplace safety. It is suited to many uses including the aviation indus-

try, railways, truck transport and other areas where shift work and extended hours are potential problems.

6.4.3 *Main findings on road safety*

Accidents in which trucks are involved are more severe. In 2002 there were 1,253,216 road accidents in the EU-15, and 812 persons were killed (within 30 days of the road accident) in road accidents involving heavy goods vehicles.

According to the literature fatigue is an important factor in 10-25% of the traffic accidents. There are several factors that contribute to driver fatigue. One of these factors is working time. There is a reliable and substantial increase in the risk of fatal accidents at work beyond the 9th hour at work. There is also evidence that a working time of more than 14 hours increases the accident risk by 2.5. Additionally there is an increased need for sleep and dip in performance between mid night and 6.00 a.m. However, there are more factors that contribute to fatigue and that can be related to the driver (e.g. insufficient sleep, age, inexperience, lifestyle, and medicine use) as well as the driver's work (e.g. duration of the work day, trip scheduling, payment system, type of transport).

6.5 **Summary and final conclusions**

6.5.1 *Summarising the main chapter findings*

Summary of the structure of the European road transport including conditions of competition

Regarding the structure of the European road transport industry, including the conditions of competition, three country 'Profiles' can be distinguished. The first profile consists of many self-employed and few large companies. This profile is to be found in southern Europe and in the New Member States.

The development of the sector structure is, however, somewhat different for countries in the south of Europe and in the New Member States. Generalizing from the Spanish and Portuguese data (only for these countries data on development were available) we conclude that there is a growth in large companies, i.e. consolidation, in Southern Europe (Profile Ia; figure 6.23a). However, in some of the New Member States we see a further growth in self-employed and a decrease in large companies, indicating a further fragmentation of the labour market (Profile Ib in figure 6.23b).

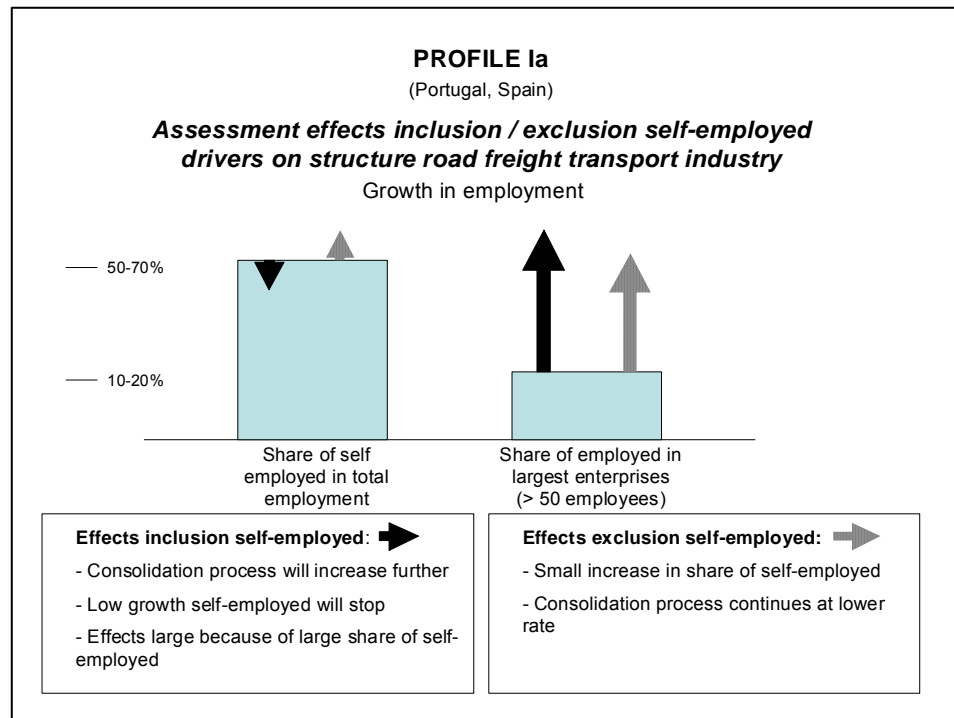


Figure 6.23a Assessment of dominant effects of inclusion/exclusion of self-employed drivers in the structure of the road freight transport industry in the EU: Profile Ia

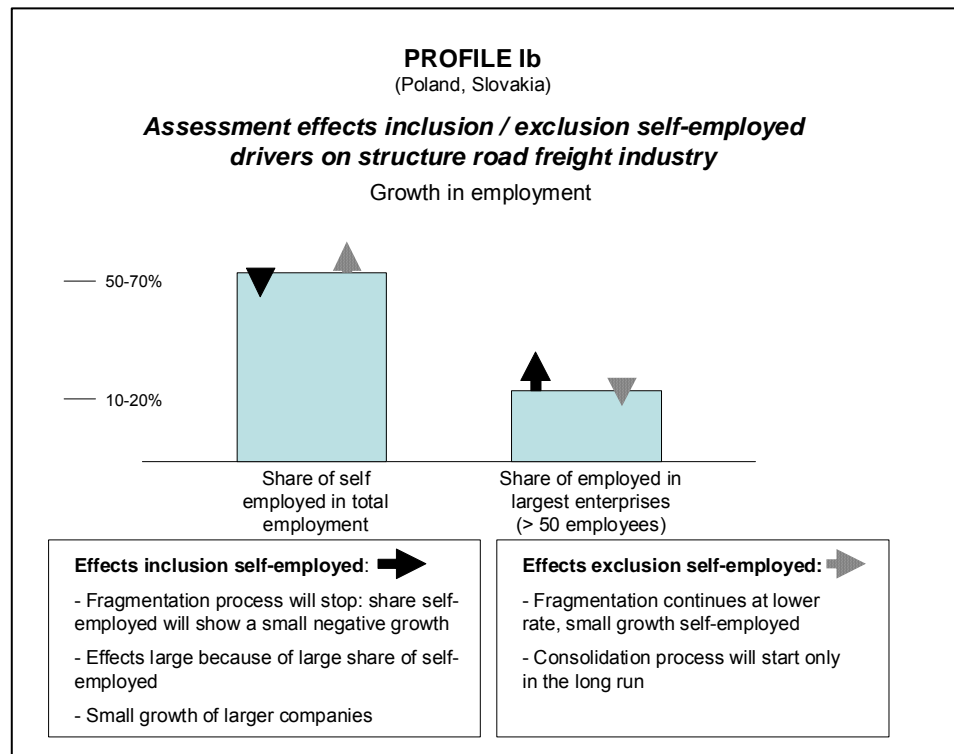


Figure 6.23b Assessment of dominant effects of inclusion/exclusion of self-employed drivers in the structure of the road freight transport industry in the EU: Profile Ib

A second profile can be identified in the middle of Europe (excluding Ireland) and is the reverse of the first profile. This profile is characterised by few self-employed and many large companies (see Figure 6.23c, Profile IIa). Countries where the structure of the road transport can be characterised as such show a continuing increase of large companies, i.e. a further consolidation.

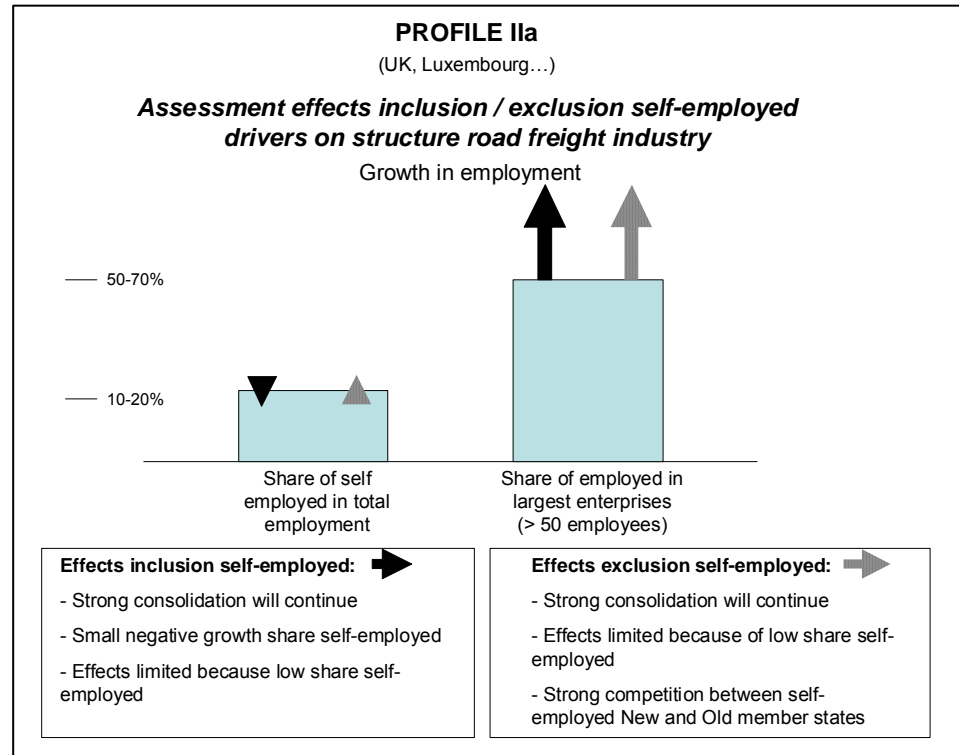


Figure 6.23c Assessment of dominant effects of inclusion/exclusion of self-employed drivers in the structure of the road freight transport industry in the EU: Profile IIa

A third profile (Figure 6.23d) shows a relatively small road transport sector with few self-employed and few large companies. We find this profile in Northern Europe (Denmark and Sweden and in the northern New Member States of Latvia, Estonia and Lithuania). The changes of the sector structure in northern Europe, and particularly in the northern New Member States also show an increase in self-employed, indicating a further fragmentation.

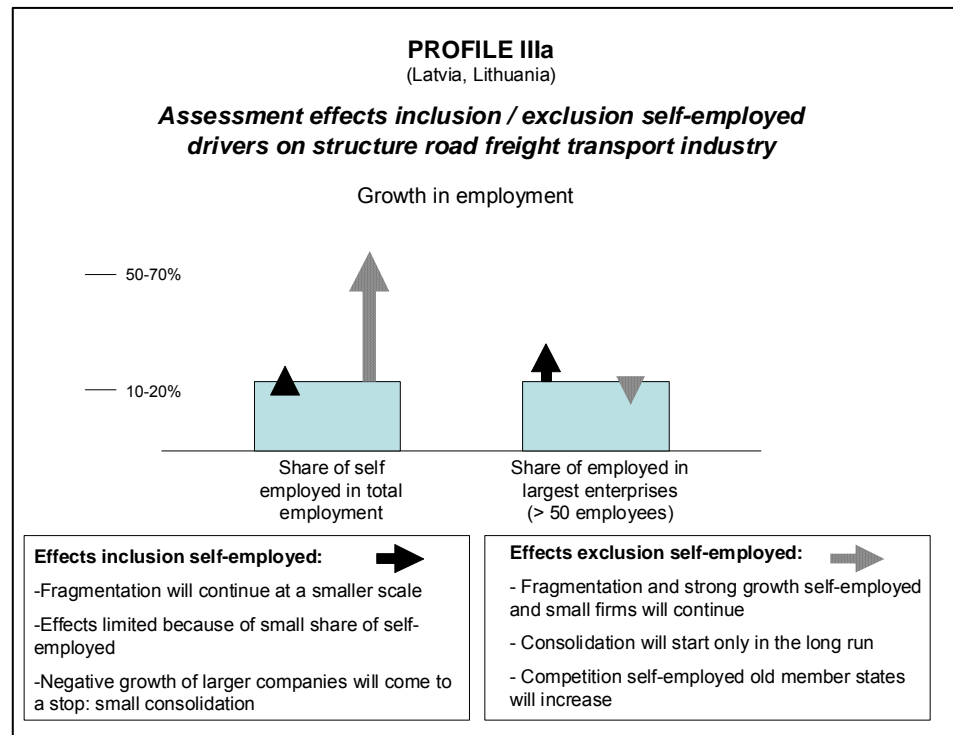


Figure 6.23d Assessment of dominant effects of inclusion/exclusion of self-employed drivers in the structure of the road freight industry in the EU: Profile IIIa

Anticipating the inclusion or exclusion of self-employed in the Working Time Directive will lead to different effects for the different country profiles identified.

Inclusion of the self-employed will have relatively strong effects in those countries where the road sector can be characterized as Profile I, because there are relatively many self-employed. However, the effect will differ between southern Europe and the New Member States (Profile Ia, versus Ib). In southern Europe there will be a reduction in self-employed and consolidation will proceed more strongly. In the New Member States the increase in self-employed will stop, and the advantages in competition of the self-employed from the New Member States as compared to the road transport sector in the 'old-Europe' will be reduced. Because of a reduction in working time, wages will become lower as well. Thus under the scenario of inclusion of self-employed, drivers from the New Member States will seek other jobs, because the driving profession will become less attractive due to a lower income.

Inclusion of the self-employed will have small effects on the road transport sector in countries with Profile II, because there are relatively few self-employed. Consolidation will proceed more strongly.

Inclusion of self-employed will also have relatively small effects on the road transport sector in countries with Profile III because there are relatively few self-employed as well. Fragmentation will stop (data available from Latvia and Lithuania), and, like the New Member States in Profile I, the profession will become less attractive because drivers will have to work shorter hours and thus will earn less.

In general, exclusion of self-employed from the working time directive will lead to a continuation of the trends in the sector structure that are presently seen. In Profile I this will mean a consolidation, less strongly in southern Europe. The sector in these coun-

tries will increasingly feel the competition of the New Member States. In most of the New Member States fragmentation will proceed even more strongly. It will still be very attractive to become a self-employed driver, particularly in the New Member States. For the sector in Profile II, consolidation will continue to proceed. Self-employed in these countries will increasingly feel the competition pressure from the New Member States. The sector in countries under Profile III will show a further fragmentation. The self-employed in the northern New Member States will compete with the self-employed in the other countries on their strong selling points (long working hours and low costs).

Greying of the work force makes inclusion of self-employed less desirable

Greying of the work force is an additional problem of the work force in general, but may be of special importance to the road transport sector since the sector is relatively old. When the sector becomes less attractive e.g. because of income loss due to a reduced number of working hours, self-employed drivers may look for other jobs to compensate for the expected income loss. Because the work in the road transport sector is physically heavy, many drivers may have stopped driving before reaching their old-age pension. The fact that drivers in road transport generally are overweight, driving a truck is a sedentary job, drivers take little physical exercise, and often do not have healthy meals when they are on the road, does not add to being very fit for driving until old age.

To counteract the greying work force, it will therefore be necessary to find ways to make working in the road transport sector attractive. Including the self-employed in the Working Time Directive will have the opposite effect and drive new (and older) workers away from the sector, and may eventually disrupt the sector, particularly in the New Member States.

Summary on the profession and social aspects

Quality of work in the road transport sector appears relatively poor as compared to other sectors in the 'old' EU, and showed a further decrease at the end of the last decade. In general workers in the road transport sector can be characterized:

- To have a relatively good salary, particularly in the south of Europe, but significantly less good in the middle of Europe;
- To work long hours;
- To have more irregularity at work, but less often work in shifts;
- To have a less well fit between work (hours) and the family and social commitments outside work;
- To have less opportunities for skill development, more monotony, less control en more psychosocial demands;
- To have more ambient risks;
- To have a high physical workload;
- To less often deal with customers, passengers, or pupils;
- To be more exposed to violence;
- To experience more work-related health problems (backache and other musculoskeletal problems, more stress, overall fatigue and sleeping problems, as well as more problems with vision).

Although no trend information is available for the 'new' Member States, it was shown that workers in the 'new' Member States sector appear to have longer working days, but report less irregularity, experience more physical work load from ambient and ergonomic factors, as well as more aggression and violence as compared to the 'old'

Member States. The psychosocial profile of the sector is somewhat mixed, both in the 'old' and 'new' Member States.

Despite these differences between 'old' and 'new' Member States, the relative income of workers in the road transport sector in the 'new' Member States is more favourable as compared to the old 'middle European countries'.

Self-employed in the sector work more hours and more irregular hours compared to other workers (mainly employees). Their psychosocial profile is somewhat mixed with relatively high control and responsibility for planning/staffing/scheduling, but high time pressure and low support from colleagues. Furthermore they report higher exposure to physical workload and violence and intimidation. With regard to their health self-employed report more work-related health problems, but less absenteeism. In the different country clusters the same patterns were found regarding the differences in profession of self-employed and other workers (mainly employees) as for the total EU. The inclusion of self-employed in the Working Time Directive will cause working hours to decline, which in principle is a good thing. However, this does mean that the earnings will be poorer. As a result chances are high that workers employed in this sector will seek to increase their earnings, either by increasing the amount of work done and thus increasing their work pressure and reducing control, or by taking on additional jobs. The latter was already quite normal in the former eastern European countries. The pressure to avoid legislation will increase strongly and enforcement of the law will be under pressure.

Summary on road safety

Statistical data available - although not optimal - suggest that the prevalence of accidents with trucks is relatively low. Research indicates that accidents are viewed as more often caused by other road users than by the truck drivers. However, when an accident occurs, the consequences are more severe when a truck is involved, accidents are more often fatal. Since there are no data on road accidents for the self-employed, inclusion of self-employed in the Working Time Directive cannot directly be linked to changes in road accidents. However, it may be hypothesized that the number of accidents due to fatigue will be reduced in case the working times of self-employed are reduced resulting in less fatigue. It is no fact yet that fatigue of self-employed will be reduced when working times are reduced, since self-employed may try to do the same amount of work in less working time in order to keep the loss of income as small as possible, resulting in higher demands and less control. Thus, less working time in self-employed may even result in more stress, fatigue and (mental) health problems.

6.5.2 *Final conclusions on inclusion or exclusion of self-employed*

Inclusion of self-employed will have relatively small effects in the North and Middle of Europe, because there already are relatively few self-employed in these areas. Inclusion of self-employed will increase the consolidation already seen in the South of Europe. In the discussion as presented above, most arguments raised suggest that inclusion of self-employed will have a negative, and even disruptive effect on the road transport sector, particularly in the New Member States. A major argument is the expected deterioration of the attractiveness of the sector, particularly for those who want to start in this sector as self-employed. This will become even more of a problem when the greying of the work force will further develop in the New Member States in particular. The fact that the work is physically heavy and the unhealthy lifestyle of the drivers - partly forced on them because of the sedentary job, lack of exercise and having to use not so healthy meals in road restaurants - result in overweight and do not

add to the fact that they will be easily and healthy working in this sector until old age. A reduction of working hours may be hypothesized to result in less fatigue, less exposure to the risks of the job, as well as in less health problems and road accidents (as far as the drivers are the cause of these). However, dependent on the way the (self-employed) driver seeks to compensate for his income loss, these benefits will be counteracted, and a less favourable psychosocial risk profile (more demands and less control), more health problems and more fatigue and road accidents may be the consequence. Exclusion of the self-employed from the Working Time Directive will result in a continuation of the trends that have been described, which indicate consolidation in Europe except for the situation in the New Member states. In the latter a further fragmentation is to be expected, and the sector will keep on growing, mainly by the fact that more people will start working as a self-employed driver.

6.5.3 *Final conclusions on night time rules within the Directive*

The issue on night time rules in this sector was approached by both secondary analyses on the European Working Conditions Survey and by way of a literature study.

Analyses on data from this Survey show that workers who work nights in the sector transport, storage and communication have a relatively unfavourable profile regarding working hours (more working hours and more irregular working times), psychosocial factors (e.g. high demands and low control), exposure to physical risks (e.g. more exposure to ambient conditions, physical workload and violence and intimidation) and health (e.g. more work-related health problems and absence from work).

Furthermore, literature on working hours, fatigue and road safety shows that during the night (between 12.00 a.m. and 06.00 a.m.) fatigue related accident risk is higher as a result of reduced alertness. In this time frame the human body normally is asleep, and the functional capability is reduced due to a lower metabolic rate. However, recommendations as to the optimal night frame for which specific rules should be applied are found to slightly differ.

With respect to the time frame of night work, the main issue is that it is important to take into account that workers (employees and self-employed) in the road transport sector will have an increased risk of fatigue and fatigue-related accidents at night. More important, though, is that the regulations of driving and resting times are taken into account. After four hours of continuous driving, the accident risk is doubled, and after eight hours of continuous driving it is ten times higher. Also a reliable and substantial increase of risk of fatal accidents at work is reported after the 9th hour of work, whereas a working time of more than fourteen hours increases the accident risk by 2.5.

Annex

The final report, the Management Summary and the following annexes can be found on the enclosed CR-rom.

- Annex 1 Directive 2002-15-EC
- Annex 2 National reports: existing rules and legislation in all 25 Member States
- Annex 3 National reports: structure of road transport industry
- Annex 4 Minutes of the stakeholders meeting
- Annex 5 EU report: Characteristics of self-employed in road transport
- Annex 6 Method: National case studies
- Annex 7 Method: Questionnaires
- Annex 8 Method: Quality assessment of the data and plan for analysis
- Annex 9 Overview: Available data
- Annex 10 Overview: Literature and other references
- Annex 11 Project team